

Strategies to Improve Employee Exercise Participation in Corporate Fitness Centres

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James Karl Brandner

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Abstract

Corporate fitness centres are popular employee fringe benefits, where employees participate in exercise to derive physical, mental, and social benefits (Mathes, McGivern, & Schneider, 1992); and improve productivity and reduce absenteeism for employers (Swayze & Burke, 2013). Employee participation in corporate fitness centres, however, is low and ranges between 10% - 60% of an employee population (e.g. Clark et al., 2011; Mathes et al., 1992), which is insufficient from the perspective of corporate fitness centre stakeholders (Goetzel & Ozminkowski, 2008; Schwetschenau, O'Brien, Cunningham, & Jex, 2008). To date, little is known about the factors that contribute to employee exercise participation in corporate fitness centres, and this indicates a need for research, especially in Australia, where there is a paucity of information (Hunter, Gordon, Lythgo, Bird, & Benson, 2017). Thus, the purpose of this research was first, to explore what factors contribute to employee exercise participation in corporate fitness centres and second, to develop strategies that could improve participation.

A dominant qualitative, mixed methods approach addressed the research purpose. Phase-one was qualitative and employed a case study to triangulate three data sources: documents (n = 18), semi-structured interviews with managers (n = 8), and three focus groups with employees (n = 10). Phase-two was quantitative and used an online questionnaire of employees across Australia to predict what factors contribute to employee exercise participation in corporate fitness centres. The data strands were synthesised together to develop a comprehensive understanding on what factors contribute to employee exercise participation in corporate fitness centres.

Results showed the a priori core themes of constraints, negotiation, and motivation contributed to exercise participation. Specifically, structural constraints, skill acquisition, and identified regulation were, respectively, the main constraint factor, negotiation strategy, and motivation

dimension to independently predict employee exercise participation. Additionally, facilitators inductively emerged as another contributing factor in the data. This research contributes to the limited available information on what factors contribute to employee exercise participation in corporate fitness centres globally, and within Australia, specifically (Hunter et al., 2017).

Several strategies to improve employee exercise participation emerged in this research, with management potentially concentrating their efforts to minimise structural constraints, such as considering corporate fitness centre design and program scheduling. Identified regulation significantly predicted exercise participation, and indicates management could promote exercise participation outcomes in promotional materials. Further increasing employee motivation levels may translate into more employee efforts to negotiate constraints to exercise participation. This could be achieved by management instilling values at the policy level that further facilitate employee exercise participation.

This research adds to the body of knowledge about employee exercise participation in corporate fitness centres by describing the lived experiences of employee constraints, use of negotiation strategies, and motives that underpin exercise participation. This research also contributes the first user-friendly resource of the key strategies when establishing and managing corporate fitness centres.

Student Declaration

I, James Karl Brandner, declare that the Ph.D. thesis entitled Strategies to Improve Employee Exercise Participation in Corporate Fitness Centres is no more than 100,000 words in length including quotes and exclusive of tables, figures, appendices, bibliography, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

Signature:

A solid black rectangular box used to redact the signature of the student.

Date: 10 August 2018

Dedication

Dear Herman Karl Brandner:

Your passing was an obstacle,
I endured and persevered,
You will always be my inspiration,

You are the perfect father.

Acknowledgements

The involvement of numerous people contributed to this thesis. I would like to acknowledge Professor Bob Stewart and Assistant Professor Peter Ochieng for their assistance with the initial phase of this research. I would like to express my appreciation to my principal supervisor, Associate Professor Clare Hanlon, who continually encouraged me to think critically and progress with passion. I express my thanks to Associate Professor Melinda Craike, whose quantitative expertise made the quantitative challenges much easier to endure! Thank you to Dr. John Tower, as your unrivalled support, constructive criticism, and enthusiasm for the research topic was critical to completing the thesis. I also would like to acknowledge Dr. Grant O'Sullivan, who helped contextualise the research topic, assisted with writing, and helped with data analysis. I cannot thank you all enough for your contributions.

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To my best friends – Katie, Matt, Daniel, and Catherine – thank you for your friendship and support throughout this journey. I will always be there for you all, as you all have been there for me. To my beautiful girlfriend, Steph. Thank you for persevering through this challenge. I can't wait to move to Canada, eh!

I would like to acknowledge all the Australian organisations and employees involved in this thesis. Without participants, there would be no thesis to complete.

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Preface

The basis for this contribution to knowledge stemmed from two sources: professional and personal. I managed employee exercise programs and corporate fitness centres, in one of my previous jobs, and often asked myself and organisational leaders asked of me: *How do we get more employees to participate?* It was this question that motivated me to explore what was known about employee exercise participation in corporate fitness centres. However, I found minimal information, so I approached a Victoria University professor who suggested I convert this question into a research project. Approximately four years later, I have answers to the original question and have more questions to answer that emerged through this journey.

There was also a personal motivation for me to engage in this educational process. My father was the second eldest of eight siblings who grew up in Europe during the post-World War II era. He was conscripted, and thus did not have the opportunity to receive a formal education. Similarly, my mother, the eldest of six siblings, was raised in one of the world's poorest countries, and had to engage in the struggle to not only fund her own primary and secondary education, but also to provide for her family after her father passed away. She, just like my father, had minimal educational prospects. In Australia, they saw educational opportunities for me, the type of opportunities they never had. They wanted me to have a prosperous life and viewed a university qualification as means to that end.

Presentations

Four presentations have been associated with this research.

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Table of Contents

Abstract	i
Student Declaration	iii
Dedication	iv
Acknowledgements	v
Preface	vi
Presentations	vii
Table of Contents	viii
List of Tables	xvi
List of Figures	xviii
CHAPTER ONE: INTRODUCTION	1
1.1 Definitions of Key Terms	3
1.2 Statement of the Problem	5
1.3 Research Purpose	11
1.4 Significance and Contribution to Knowledge	12
1.5 Delimitations	14
1.6 Thesis Structure	15
1.7. Chapter Summary	16
CHAPTER TWO: POSITIONING CORPORATE FITNESS CENTRES WITHIN THE HUMAN RESOURCE MANAGEMENT LITERATURE.....	18
2.1 Setting the Scene of Physical (In)Activity	19

2.2 Viewing Physical Activity in the Workplace.....	23
2.3 Strategic Human Resource Management.....	25
2.3.1 Reward management.....	28
2.3.2 Employee benefits.....	31
2.3.3 Employee wellbeing programs.	35
2.4 Corporate Fitness Centres	40
2.5 Chapter Summary	43
CHAPTER THREE: FACTORS THAT CONTRIBUTE TO EMPLOYEE EXERCISE	
PARTICIPATION IN CORPORATE FITNESS CENTRES	45
3.1 Theories to Potentially Examine Participation in Corporate Fitness Centres	46
3.2 Constraints	47
3.2.1 Intrapersonal.	50
3.2.2 Interpersonal.	54
3.2.3 Structural.....	56
3.3 Negotiation.....	64
3.3.1 Cognitive.....	65
3.3.2 Behavioural.	66
3.4 Motivation.....	70
3.4.1 External regulation.....	74
3.4.2 Introjected regulation.	77
3.4.3 Identified regulation.....	77
3.4.4 Integrated regulation.	79

3.4.5. Intrinsic motivation	79
3.5 Participation	80
3.6 Constraints, Negotiation, Motivation, and Participation	82
3.7 The Need to Advance Knowledge	86
3.8. Chapter Summary	88
CHAPTER FOUR: METHODOLOGY	91
4.1 Mixed Methods	92
4.1.1 Epistemological debate.	92
4.1.2 Strengths and weaknesses of mixed methods.	93
4.1.3 Selecting a mixed methods design.	95
4.2 Phase One: Qualitative Phase	99
4.2.1 Case study research.	101
4.2.2 Study one: Document review.	113
4.2.3 Study two: Semi-structured interviews.	119
4.2.4 Focus groups.	123
4.3 Phase Two: Quantitative Phase.....	129
4.3.1 Questionnaire	130
4.3.2 Sample.....	138
4.3.3 Data analysis procedures.....	140
4.4 Chapter Summary	147
CHAPTER FIVE: QUALITATIVE RESULTS	148

5.1 Study One: Document Review	149
5.1.1 Constraints.	151
5.1.2 Motivation.	153
5.1.3 Facilitators.....	155
5.1.4 Summary.	158
5.2 Study Two: Semi-Structured Interviews.....	158
5.2.1 Constraints.	160
5.2.2 Motivation.	162
5.2.3 Facilitators.....	165
5.2.4 Summary.	167
5.3 Focus Groups	168
5.3.1 Constraints.	170
5.3.2 Negotiation.....	174
5.3.3 Motivation.	176
5.3.4 Facilitators.....	180
5.3.5 Summary.	181
5.4 Triangulation of Phase-One Results	182
5.4.1 Step-one: Data sorting.....	182
5.4.2 Step-two: Convergence coding.	183
5.4.3 Step-three: Convergence assessment.	195
5.4.4 Step-four: Completeness comparison.	196

5.4.5 Step-five: Researcher comparison.	198
5.4.6 Step-six: Feedback.	198
5.5 Chapter Summary	199
CHAPTER SIX: QUANTITATIVE RESULTS	201
6.1 Screening and Cleaning the Data File	201
6.2 Data Exploration, Missing Data and Data Normality	202
6.2.1 Type of missing data.	202
6.2.2 Determine the extent of the missing data.	202
6.2.3 Diagnose the randomness of the missing data process.	203
6.2.4 Data normality.	203
6.2.5 Sample descriptive statistics.	205
6.3 Manipulating Data	207
6.3.1 Constraint variables.	207
6.3.2 Negotiation variables.	207
6.3.3 Motivation variables.	208
6.3.4 Dependent variable.	208
6.4 Assessing Scale Reliability	209
6.5 Assessing the Influence of Covariates	210
6.6 Conducting Multiple Logistic Regression	211
6.6.1 What constraints hinder employees from exercising in corporate fitness centres?	211

6.6.2 How do employees negotiate constraints to exercise in corporate fitness centres?	212
6.6.3 What motivates employees to exercise in corporate fitness centres?	212
6.7 Chapter Summary	213
CHAPTER SEVEN: DISCUSSION	215
7.1 What Constraints Hinder Employees from Exercising in Corporate Fitness Centres?	216
7.1.1 Intrapersonal.	217
7.1.2 Interpersonal.	218
7.1.3 Structural.	219
7.2 How do Employees Negotiate Constraints to Exercise in Corporate Fitness Centres?	222
7.2.1 Cognitive.	223
7.2.2 Behavioural.	223
7.3 What Motivates Employees to Exercise in Corporate Fitness Centres?	225
7.3.1 External regulation.	225
7.3.2 Identified regulation.	227
7.3.3 Intrinsic motivation.	228
7.4 What Facilitates Employees to Exercise in Corporate Fitness Centres?	229
7.5 Integration of Findings	234
7.6 Limitations Influencing the Discussion	236
7.7. Chapter Summary	240
CHAPTER EIGHT: CONCLUSION	242

8.1 Overview of Key Findings.....	242
8.2 Contribution to Knowledge.....	245
8.2.1 Implications for other employee wellbeing programs.	248
8.3 Recommendations for Management	250
8.3.1 Reducing constraints.	251
8.3.2 Increasing negotiation efforts.	254
8.3.3 Improving motivation.	254
8.3.4 Facilitating participation.	257
8.3.5 Strategic guide for management.	258
8.4 Key Limitations and Future Research.....	261
8.5 Final Conclusion.	264
REFERENCES	267
APPENDIX A: Victoria University ethics approval for document review and semi-structured interviews.....	276
APPENDIX B: Semi-structured interview schedule	276
APPENDIX C: Semi-structured interviews information to participants involved in research form	277
APPENDIX D: Semi-Structured Interview Consent Form	279
APPENDIX E: Focus group schedule	281
APPENDIX F: Focus group information pack	282
APPENDIX G: Leisure Constraints Scale	287
APPENDIX H: Leisure Constraint Negotiation Scale.....	289

APPENDIX I: Self-Regulation Exercise Questionnaire.....	291
APPENDIX J: Questionnaire information pack	292
APPENDIX K: Email template for organisations without a contact number.....	294
APPENDIX L: Follow-up email template	295
APPENDIX M: Results of covariates analyses	297
APPENDIX N: Focus Group Ethical Approval.....	298
APPENDIX O: Constraint item scores	299
APPENDIX P: Negotiation item scores	300
APPENDIX Q: Motivation item scores	301

List of Tables

Table 1. Global Mandatory Benefits	33
Table 2. List of Potential Fringe Benefits	34
Table 3. Examples of Small-Scale Employee Wellbeing Programs	38
Table 4. Examples of Large-Scale Employee Wellbeing Programs	39
Table 5. Summation of Intrapersonal, Interpersonal, and Structural Constraints Identified in the Literature Review	62
Table 6. Summary of Negotiation Strategies Identified in the Literature Review	69
Table 7. Summation of Motives Identified Through the Literature Review	80
Table 8. Summation of Constraints, Negotiation Strategies, and Motives to Exercise Participation in Corporate Fitness Centres Identified Through the Research	89
Table 9. Variables and Associated Sections in the Questionnaire	132
Table 10. Categorisation of Organisational Documents	150
Table 11. A Priori Open Codes Identified in Document Review	151
Table 12. Documents Pertaining to Constraints	151
Table 13. Documents Pertaining to Motivation	153
Table 14. Emergent Open Codes Identified Through Document Review	157
Table 15. Documents Pertaining to Facilitators	157
Table 16. Interviewee Characteristics	159
Table 17. A Priori Open Codes Identified Through Semi-Structured Interviews	160
Table 18. Emergent Open Codes Identified Through Semi-Structured Interviews	166
Table 19. Characteristics of Focus Group Participants	169
Table 20. A Priori Open Codes Identified in Focus Groups	170
Table 21. Emergent Open Codes Identified in Focus Groups	180
Table 22. Triangulation Matrix of Constraints in Phase-One Data	184

Table 23. Triangulation Matrix of Negotiation Open Codes in Phase-One Data	187
Table 24. Triangulation Matrix of Motivation Open Codes in Phase-One Data	189
Table 25. Triangulation Matrix of Facilitator Open Codes in Phase-One Data	193
Table 26. Sample Characteristics	205
Table 27. Categorical Variables	206
Table 28. Constraint Scale Means and Standard Deviations	207
Table 29. Constraint Negotiation Scale Means and Standard Deviations	208
Table 30. Motivation Scale Means and Standard Deviations	208
Table 31. Results of Dichotomising the Dependent Variable	209
Table 32. Scale Reliability Scores	210
Table 33. Logistics Regression of Constraints Predicting Likelihood of Reporting Corporate Fitness Centre Participation	211
Table 34. Logistics Regression of Negotiation Predicting Likelihood of Reporting Corporate Fitness Centre Participation	212
Table 35. Logistics Regression of Motivation Predicting Likelihood of Reporting Corporate Fitness Centre Participation	213
Table 36. Research Questions, Findings, and Recommendations	243
Table 37. Recommendations for Management	251

List of Figures

Figure 1. Conceptual model of the main strategic human resource management practices adapted from Taylor et al. (2008).....	27
Figure 2. Conceptual model of total reward systems adapted from Armstrong (2006) and Dressler (2013)	30
Figure 3. Six strategies to recruit and retain employees in employee wellbeing programs.....	37
Figure 4. Interaction between intrapersonal constraints, preferences, and participation adapted Crawford and Godbey (1987).....	51
Figure 5. The three-way interaction between interpersonal constraints, preferences, and participation adapted from Crawford and Godbey (1987)	55
Figure 6. The interaction between preferences, structural constraints, and participation adapted from Crawford and Godbey (1987)	57
Figure 7. Hierarchical model of constraints to employee exercise participation in corporate fitness centres adapted Crawford, Jackson, and Godbey (1991)	63
Figure 8. The role of motivation in employee exercise participation in corporate fitness centres adapted from Jackson, Crawford, and Godbey, (1993).....	70
Figure 9. Conceptual model of self-determination theory based on literature review.....	73
Figure 10. Constraints-effects-mitigation mode adapted from Hubbard & Mannell (2001) ...	84
Figure 11. A conceptual model of the convergent mixed methods design in this research.....	98
Figure 12. Conceptual model of triangulation in this research.....	107
Figure 13. Document collection process.....	115
Figure 14. A conceptual model of the coding protocol and a priori codes	118
Figure 15. Focus group data collection protocol	128
Figure 16. Sampling protocol	139
Figure 17. Quantitative data analysis protocol used in this research from Pallant (2010)	142

Figure 18. Histogram of the dependent variable's normality test.....	204
Figure 19. Constraints-negotiation-motivation-facilitators model of employee exercise participation in corporate fitness centres	235
Figure 20. Conceptual model of the strategic guide for corporate fitness centre management	258

CHAPTER ONE: INTRODUCTION

“Fitness amenities are a growing staple for Fortune 500 companies and local businesses alike” (Morton, 2011, p. 40).

The purpose of this introductory chapter is to contextualise the research topic. The chapter begins with definitions of key terms used in this research, with the next section including a brief history on corporate fitness centres, and the current problem related to employee participation. The following section constitutes the research purpose, and then leads to the three questions that guided this research. Significance and contribution to knowledge is the following section, with research delimitations and an explanation of the thesis structure from chapters two to eight concluding this chapter.

This research employed a convergent mixed methods design to increase understanding of employee exercise participation in corporate fitness centres, and from this information, develop management strategies to improve employee exercise participation in corporate fitness centres. Phase-one adopted a case study design that gathered qualitative information to gain an external and internal perspective, representing views from managers and employees on what factors contribute to employee exercise participation in corporate fitness centres. Phase-two was quantitative and recruited a convenience sample of employees from organisations located in Australia to measure which constraint factor, negotiation strategy, and motivation dimension significantly predicted employee participation. The two data strands were analysed separately, then converged and synthesised together to provide a comprehensive understanding of employee exercise participation. This understanding assisted in developing management strategies to potentially enhance employee exercise participation in corporate fitness centres.

Tumultuous economic circumstances in the early part of the twenty-first century stimulated organisations to efficiently use employee benefits to improve the recruitment, motivation, and retention of talented employees (e.g. Robbins, Bergman, Stagg, & Coulter, 2012). Providing company cars, mobile phone packages, and recreation services are examples of incentives often included in employee benefits schemes (Dressler, 2013). These employee benefits – among many others – constitute an important business practice, as benefits comprise approximately one-third of operating costs (Dressler, 2013). Additionally, employee benefits are likely to increase in importance through continued globalisation and change in employee attitudes, both of which translate into organisations seeking novel benefits that retain motivational power (Gupta & Shaw, 2014; Robbins et al., 2012; Xavier, 2014). Consequently, the future importance of employee benefit schemes places more pressure on organisations to consider, offer, and implement unique benefits as part of strategic human resource management (SHRM) practices that maintain motivation and address the needs of rapidly changing workforces (Nankervis, Baird, Coffey, & Shields, 2017).

The corporate fitness centre is an employee benefit expected to increase in supply over the next five years, with the purpose to improve the recruitment, motivation, and retention of talented employees (Pridham, 2013). Stakeholders, such as human resource specialists and corporate fitness centre service providers, would like a minimum participation percentage of 50% (Goetzel & Ozminkowski, 2008; Schwetschenau et al., 2008). Academic data, however, suggests 10% - 60% of employees participate in corporate fitness centres (Clark et al., 2011; Mathes et al., 1992), with the vast majority of studies skewed to the lower end of the range (Burton, McCalister, Chen, & Edington, 2005; Heaney & English, 1995; Lewis, Huebner, & Yarborough III, 1996; Lynch, Golaszewski, Clearie, Snow, & Vickery, 1990; Shephard, Morgan, Finucane, & Schimmelfing, 1980; Steinhardt & Young, 1992). These data indicate employee engagement in corporate fitness centres is below desired participation levels, and

thus suggests employees experience constraints to exercise participation in corporate fitness centres. These data also raise questions whether management encourages or discourages participation, and further signals a need to develop strategies that improve exercise participation in corporate fitness centres.

This research addressed a significant gap in the literature by exploring what constraints, negotiation strategies, and motives contribute to employee exercise participation in corporate fitness centres. These findings informed management strategies that could potentially enhance corporate fitness centre participation. This research is timely due to the anticipated increase in corporate fitness provision (Pridham, 2013), and to diversify the knowledge base as the vast majority of information originates from the United States, with minimal information derived in Australia (Hunter et al., 2017).

This research sought to describe what constrains participation, how employees negotiate constraints, and what motivates participation, to develop management strategies that could improve employee exercise participation in corporate fitness centres. An Australian focus on constraints, negotiation, and motivation provided new methodological, conceptual, and practical knowledge. The specific management strategies derived from this research could further encourage employee exercise participation in a country with limited available data (Hunter et al., 2017).

1.1 Definitions of Key Terms

Clarifying key terms minimises misinterpretation when writing a thesis and comparing and contrasting the findings of this research, with the findings in other studies. The key terms requiring clarification are:

Physical activity: Physical activity refers to skeletal muscular contraction that results in energy expenditure for any type of human movement (World Health Organization, 2016).

Exercise: Exercise is planned and structured physical activity, with the purpose to either improve or maintain physical fitness (Scott Lyons, Jackson, Hey, & Bannon, 2016).

Leisure: Leisure is the act of engaging in freely chosen, non-work related activity (Roberts, 1978).

Leisure-time physical activity: Leisure-time physical activity is the act of engaging in recreational or sport-based activities, for the purpose of enjoyment, social, or competition, during one's discretionary time (T. Armstrong, Bauman, & Davies, 2000).

Corporate fitness centre: The corporate fitness centre is a space at the workplace dedicated to physical activity and exercise (Tharrett & Peterson, 2008).

Constraints: Constraints are factors that minimise one's ability to establish a preference and/or enjoy an activity in question to its full capacity (Jackson, 2000).

Intrapersonal constraints: Intrapersonal constraints are the psychological reasons why one does not establish a preference to participate in an activity in question (Crawford & Godbey, 1987).

Interpersonal constraints: Interpersonal constraints are factors that develop between individuals, and thus hinder participation in activities in question (Crawford & Godbey, 1987).

Structural constraints: Structural constraints are factors that interfere with participation when a preference for an activity has been formed (Crawford & Godbey, 1987).

Negotiation: Negotiation refers to efforts used to alleviate the negative influence constraints have on activities in question (Jackson & Rucks, 1995).

Cognitive negotiation strategies: Cognitive negotiation strategies refer to efforts used to alleviate the psychological dissonance constraints have on participation in activities in question (Jackson & Rucks, 1995).

Behavioural negotiation strategies: Behavioural negotiation strategies refer to observable behaviour changes that assist in alleviating the negative influences constraints have on participation in activities in question (Jackson & Rucks, 1995).

Motivation: Motivation is any stated reasons(s) to participate in physical activity (Biddle, Mutrie, & Gorely, 2015).

Extrinsic motivation: Extrinsic motivation is behaviour directed by external factors separable from the physical activity itself (Ryan & Deci, 2000).

External regulation: External regulation is a controlling behaviour type to comply with external demands (Ryan & Deci, 2000).

Introjected regulation: Introjected regulation is another controlling behaviour type in which one does not completely internalise the behaviour, yet acts to avoid negative feelings, avoid guilt, or to seek approval from others (Ryan & Deci, 2000).

Identified regulation: Identified regulation is behaviour acted through conscious valuing of an outcome separable from the physical activity itself (Ryan & Deci, 2000).

Integrated regulation: Integrated regulation refers to the act that is integrated into one's identity to align with values and needs (Ryan & Deci, 2000).

Intrinsic motivation: Intrinsic motivation is behaviour acted for the “inherent pleasure of the activity itself” (Ryan & Deci, 2000, p. 71).

1.2 Statement of the Problem

The 1970s was the decade when fitness centres first entered the corporate domain (Bourque, 2011; Pridham, 2013). During the period, the corporate fitness centre was an executive's perk, which included amenities such as saunas and relaxation lounges (Bourque, 2011). The corporate fitness centre's establishment led to the first academic studies in the 1980s

(e.g. Shephard & Corey, 1981; Shephard et al., 1980). This initial research focused on the relationship between corporate fitness centres and organisational effectiveness indicators, such as productivity and absenteeism, regardless of job status. These studies found a positive association between participation in corporate fitness centres and improved organisational effectiveness (Shephard et al., 1980), which potentially provided the first indication to incorporate corporate fitness centre provision in SHRM practices. In the late 1980s, however, a review of corporate fitness and exercise programs reported most of the empirical research had major design flaws, such as minimal rigor when developing experiments, and therefore challenged the positive associations identified in the foundation studies (Falkenberg, 1987).

The 1990s marked the expansion of research on the outcomes of participation in corporate fitness centres, with a focus on organisational and employee benefits. Reduced turnover and absenteeism, and improved employee relations were the recognised organisational benefits (Lynch et al., 1990). The employee benefits associated with participation were improved job satisfaction, and enhanced physical and mental health (Mathes et al., 1992). Consequently, human resource specialists modified recruitment strategies to make corporate fitness centres more accessible for employees (Bourque, 2011). As an example, human resource specialists replaced cumbersome health risk assessments with simpler questionnaires and advised employees with obvious health risks, to obtain clearance from physicians to participate in corporate fitness centres (Bourque, 2011).

The 1990s was also the period when organisations started to emphasise workplace wellbeing. A potential reason for the increased focus on wellbeing was that researchers and human resource specialists acknowledged an increase in prevalence of sedentary jobs, with the largest increase of approximately 20% between the 1950s and the 1970s (Brownson, Boehmer, & Luke, 2005). During the 1990s, researchers such as Sallis and Owen (1999) recognised the workplace had the structures to enhance incidental physical activity, and is a view

acknowledged by researchers in contemporary studies (e.g. Edmunds & Clow, 2015; Persson, Cleal, Jakobsen, Villadsen, & Andersen, 2017; van Dongen et al., 2011). Accordingly, managers use strategies, such as wellness seminars and internal communication systems, to motivate participation in these centres (Bourque, 2011).

The turn of the millennium further expanded knowledge on corporate fitness centres. Organisations could advantageously emphasise employee wellbeing as a recruitment, motivation, and retention strategy to differentiate themselves from competing organisations, and therefore retain talented employees (Loyle, 2012; Nankervis et al., 2017). Emphasising employee wellbeing in SHRM practices included introducing gym subsidies as part of employee benefits schemes is an example to address physical health and further assist in retaining talented staff (Loyle, 2012). However, only 8% - 10% of employees, usually use the subsidy (Pridham, 2013). Therefore, a potentially more effective option is to continue investing in corporate fitness centres, based on the greater return for organisations and that corporate fitness centres theoretically have a larger catchment of employees compared to gym subsidies (Pridham, 2013).

The 2000s was also the period researchers revisited the relationship between corporate fitness centres and organisational effectiveness. Researchers provided the first objective measurement of a relationship between participation in corporate fitness centres and improved organisational productivity (Burton et al., 2005). The results were encouraging, however, follow-up studies are yet to either support or contrast the positive findings. While the relationship between corporate fitness centre participation and organisational productivity is yet to be confirmed in other studies, the relationship between leisure-time physical activity (i.e. not specifically participation in corporate fitness centres) and physical and mental health outcomes is stronger (Biddle et al., 2015). Physical activity is known to reduce non-communicable disease (Lee et al., 2012) and improve mental health (Biddle, 2016), which is

explored further in section 2.1. Thus, encouraging employees to exercise in corporate fitness centres is an important SHRM activity and a pertinent endeavour to improve employee health that potentially contributes to organisational productivity (Burton et al., 2005).

Exercise participation in corporate fitness centres is the current research problem, as evidence suggests that current levels of participation are low. As previously discussed, organisational staff, such as human resource specialists who oversee the management of corporate fitness centres, would like at least 50% of the employee population participating (Goetzel & Ozminkowski, 2008; Schwetschenau et al., 2008). Historical data, however, suggests participation is variable, with the majority of research identifying participation rates well-below the 50% desirability level (Burton et al., 2005; Clark et al., 2011; Heaney & English, 1995; Lewis et al., 1996; Lynch et al., 1990; Mathes et al., 1992; Schwetschenau et al., 2008; Shephard et al., 1980; Steinhardt & Young, 1992). The discrepancy between the desirable participation percentage and the historical data presents several problems and subsequent areas of inquiry.

The participation discrepancy has implications for organisations and employees. The participation discrepancy indicates that neither employee health and wellbeing, nor organisational effectiveness indicators have been maximised through corporate fitness centres. This suggests current management strategies could be enhanced to encourage higher rates of participation. Encouraging employee exercise participation, however, is challenging, as individual, social, and environmental factors potentially contribute to employee behaviour (McLeroy, Bibeau, Steckler, & Glanz, 1988). Thus, management potentially plays a role in employee behaviour, among the other individual, social, and environmental contributors. Understanding and combining these factors could thus maximise organisational effectiveness.

Corporate fitness centre service providers are potentially affected by low employee participation. Employees' continually low participation in exercise in corporate fitness centres could create reluctance for human resource specialists to renegotiate contracts with these providers when participation neither meets nor exceeds expectation. Therefore, losing a contract - potentially worth up to several hundreds of thousands of dollars per year (Matthews, Personal Communication, 25 April 2018) – could result in lost revenue and reduced profitability for service providers.

Other individuals and organisations could be affected by the loss of a corporate fitness centre contract. When corporate fitness centre contracts are not renewed, this is likely to result in job losses for exercise professionals who staff corporate fitness centres; and lost revenue for external fitness organisations, such as equipment suppliers, equipment maintenance staff, and fitness program sub-contractors who rely on corporate fitness centre contracts as income sources. These practical problems demonstrate that continually low employee participation in corporate fitness centres potentially threaten the existence of established markets in the United States and Canada (Halvorson, 2015; Pridham, 2013), and emerging markets such as Australia (IBISWorld, 2013).

The practical problems associated to low participation in exercise in corporate fitness centres provides several research opportunities. The literature review (refer to chapters two and three) revealed the majority of corporate fitness centre studies used quantitative methods (e.g. Alexy, 1991; Hubbard & Mannell, 2001; Schwetschenau et al., 2008). These studies provide valuable measurements regarding barriers, motivation, and participation variables. A key limitation, however, is these findings neither describe nor explain employees' lived experiences of factors that influence exercise participation. These studies also focus on the employee perspective, and neglect managers' views as to how they potentially influence participation, as managers are known to contribute to employee behaviour (McLeroy et al., 1988). Therefore, a

qualitative gap in knowledge presents an opportunity for researchers to use interview and focus group methods. These methods could gather information about employees' lived experiences and managers' views on how they influence employee exercise participation in corporate fitness centres. This type of information would subsequently advance knowledge on the topic and could inform management strategies that improve employee participation levels. This is described in more detail in section 3.7.

Relatively small and skewed samples is another limitation of the dominant quantitative focus on corporate fitness centres. Samples are generally small, with a vast majority of respondents being female (e.g. Alexy, 1991; Hubbard & Mannell, 2001; Schwetschenau et al., 2008). These data offer unique insights on participation from females' perspective. The main weaknesses of these studies, however, are the small samples likely minimise the variability of results, produces response bias, and the research outcomes might not be applicable to males (Bryman, 2012).

Additionally, assessing employee exercise participation in corporate fitness centres in the Australian context is another research opportunity. The majority of information derived from the United States (e.g. Burton et al., 2005; Huddleston, Fry, & Brown, 2012; Shephard et al., 1980), despite the anticipated increase in corporate fitness centre supply in Australia and Canada over the next five years (IBISWorld, 2013; Pridham, 2013). Australian-based research, however, is limited, and therefore emphasises the need to investigate participation in an Australian context (Hunter et al., 2017), and to sophisticate the minimal knowledge base (Heppner, 2006). This could inform strategies that improve employee exercise participation in corporate fitness centres. These problems informed the purpose of this research.

1.3 Research Purpose

This mixed methods research explored the factors that contributed to employee exercise participation in corporate fitness centres. The information was subsequently used to develop strategies that inform SHRM, and could thus improve employee participation levels. A convergent parallel mixed methods design comprised qualitative and quantitative data that were collected separately and then synthesised together to develop management strategies that could be incorporated into SHRM practices, such as employee benefits and reward management, to enhance participation levels (reward management and employee benefits are respectively explained in more detail in sections 2.3.1 and 2.3.2). The qualitative phase comprised document review, semi-structured interviews, and focus groups to gather data from managers and employees that provided an external and internal view of participation, respectively, at a single case study. The quantitative phase comprised questionnaire data to examine which constraint factor, negotiation strategy, and motivation dimension significantly predicted participation among a convenience sample of Australian employees who have access to a corporate fitness centre. The justification for collecting qualitative and quantitative data was to synthesise the two data strands and to develop a complete understanding of exercise participation in corporate fitness centres. Converging the two data strands provided greater insights on participation than would be obtained by either data type separately, and therefore provided triangulation in the development of strategies to better inform SHRM practices. This could consequently improve employee exercise participation in corporate fitness centres.

The findings from this research informed management strategies to improve employee exercise participation in corporate fitness centres (refer to chapter eight). Three research questions were posed to address the research purpose:

1. What constraints hinder employees from exercising in corporate fitness centres?
2. How do employees negotiate constraints to exercise in corporate fitness centres?

3. What motivates employees to exercise in corporate fitness centres?

These questions were equally weighted in this research, with the answers to the questions logically leading to management strategies to improve employee participation. Each question provided data on three factors that can be used to understand exercise participation in corporate fitness centres: constraints, negotiation, and motivation (Hubbard & Mannell, 2001). The qualitative phase provided the descriptive data to answer each research question, while the quantitative data was used to predict the most important constraint factor, negotiation strategy, and motivation dimension pertaining to employee exercise participation in corporate fitness centres. The investigator synthesised the two data strands to develop evidence-based management strategies that could be implemented into SHRM practices, and thus potentially improve employee participation in these centres. This would contribute new academic and practical knowledge for managing corporate fitness centres. This is particularly salient, given human resource managers and corporate fitness centre service providers rely on workplace physical activity (e.g. Kilpatrick et al., 2017), employee wellbeing (e.g. Catrine Tudor-Locke et al., 2014), and leisure-time physical activity (e.g. MacIntosh & Barbi, 2015) literature to inform employee participation strategies. Relying on this literature is pragmatic, however, uncertainty remains whether this information is specifically applicable to corporate fitness centres.

1.4 Significance and Contribution to Knowledge

Limited research has examined what factors contribute to employee exercise participation in corporate fitness centres. Previous research categorised respondents into participant and non-participant groups, and revealed participants perceive more benefits of participation, whereas non-participants perceive more barriers that hinder their participation in exercise (Alexy, 1991; Edmunds, Hurst, & Harvey, 2013). Additionally, constraints to exercise participation have been categorised into distinct groups (Hubbard & Mannell, 2001;

Schwetschenau et al., 2008). Although leisure research demonstrates intrapersonal constraints are the most powerful constraint factor (Crawford, Jackson, & Godbey, 1991), studies specific to corporate fitness centre participation revealed structural as the most influential constraint factor (Hubbard & Mannell, 2001; Schwetschenau et al., 2008). These studies revealed structural constraints were the most salient barrier type. Furthermore, a line of research has focused on the motives for participation in corporate fitness centres, with particular attention on either the influence of motivational climate or social support on participation (Edmunds & Clow, 2015; Huddleston et al., 2012; Hunter et al., 2017).

Although these previous research efforts contributed to the corporate fitness centre literature, the current research employed several differentiation strategies to make a unique contribution to knowledge. Previous research (e.g. Hubbard & Mannell, 2001; Hunter et al., 2017; Schwetschenau et al., 2008) either primarily or completely concentrated on a single theme, such as barriers or motives to participation in corporate fitness centres. This research incorporated both positive (motivation) and negative (constraints) factors that therefore provided a new approach to the study of employee exercise participation in corporate fitness centres that is yet to be achieved – generally - and specifically within the Australian context.

Using mixed methods is also a strength of this study and addresses weaknesses of previous research. Previous research on employee exercise participation in corporate fitness centres used either qualitative (Edmunds, Hurst, et al., 2013) or quantitative methods (Alexy, 1991), or focused on specific factors that contributed to understanding the participation process (Hubbard & Mannell, 2001). This research, however, employed mixed methods to develop a holistic understanding on exercise participation in corporate fitness centres. Each research approach provided partial and complementary perspectives on participation, and synthesising the data strands together provided a more complete understanding on exercise participation (Creswell & Plano Clark, 2011). The investigator in this research synthesised the participation

data that made the information more meaningful for management by developing strategies and a guide for management that can be used to potentially improve employee exercise participation in corporate fitness centres. The approach of either developing management strategies or user-friendly resources is yet to be achieved in past studies (Edmunds, Hurst, et al., 2013; Schwetschenau et al., 2008), and was therefore unique to this research. While this research contributed new knowledge, several considerations delimited the research.

1.5 Delimitations

The investigator considered several strategies to delimit the research and submit the thesis in a timely manner and within the available budget. First, this research used a case study design in the qualitative phase to gather descriptive information about what factors contributed to employee exercise participation in the corporate fitness centre. The use of a multiple case study design may have improved the level of description. The investigator, however, determined that the research duration, financial budget, and research purpose did not permit examining multiple organisations.

A second delimitation was limiting the quantitative phase to multiple logistic regression analyses. The data collected through the questionnaire permitted the use of statistical techniques such as structural equation modelling to create complex path-models to calculate the processes and relationships between constructs (Tabachnick & Fidell, 2013). The research purpose of the quantitative phase, however, was to predict what factors contributed to employee exercise participation in corporate fitness centres, rather than to examine the utility of theoretical perspectives of behaviour. Therefore, creating complex models and understanding processes were outside of the research scope.

Last, the focus on constraints, negotiation, and motivation as core themes limited the research focus, considering that these three constructs are known to contribute to employee

exercise participation in corporate fitness centres (Hubbard & Mannell, 2001). This research could have incorporated other constructs, such as negotiation self-efficacy (Loucks-Atkinson & Mannell, 2007) or personality traits such as extraversion (Lyu, Oh, & Lee, 2013), to provide a more nuanced understanding of employee exercise behaviour. These additional constructs, however, were outside the research scope, as significant time and financial resources would have been required to conduct a project of that size. Thus, constraints, negotiation, and motivation were the key core themes used in this research.

1.6 Thesis Structure

This chapter included an overview of this research, with a particular focus on the background of corporate fitness centres, the problem of employee exercise participation, and how this research sought to address the problem. The chapter also included research significance and contribution to knowledge, and delimitations. The seven remaining chapters comprise this thesis.

Chapter two is part-one of the literature review. The literature has a specific focus on physical activity, human resource management, employee benefits, and employee wellbeing programs to emphasise where corporate fitness centres fit within the general body of literature. Chapter three is part-two of the literature review and includes a review of constraints, negotiation, and motivation (self-determination theory) that underpinned analysis and interpretation of results in this research. Chapter four is the methodology chapter and explains why mixed methods was the most effective approach for this research. It also explains qualitative and quantitative research approaches, and the specific data collection and analysis protocols associated to each method.

Chapters five and six present the qualitative and quantitative results, respectively. In chapter five, constraints, negotiation, and self-determination theories guide the chapter's

structure and presentation of results. It includes several tables to visually demonstrate the connection between open, axial, and core themes identified through the research phase. The chapter concludes with findings pertaining to data triangulation. Chapter six includes the quantitative results, and emphasises the data analysis results that contributed to identifying the main constraint factor, negotiation strategy, and motivation dimension that predicted participation in exercise in corporate fitness centres.

Chapter Seven is the discussion chapter and includes a convergence, synthesis, and explanation of results in relation to the identified literature presented in chapters two and three. The chapter also answers the three research questions related to this research, and then concludes with an integration of findings that visually displays the results of this mixed methods research. Chapter eight draws the thesis to a conclusion, with a summary of the main findings, strategies to improve the employee exercise participation in corporate fitness centres, and then finishes with limitations and prospective research directions.

1.7. Chapter Summary

Over the last 30 to 40 years, the corporate fitness centre has developed from an executive's perk, to a common amenity in organisations, especially in the United States (Bourque, 2011). During the last decade, organisations in developed nations continually provide these centres as part of their human resource management strategies (Pridham, 2013). Employee participation, however, fails to reach adequate levels (Goetzel & Ozminkowski, 2008; Schwetschenau et al., 2008), and therefore raises questions as to what factors contribute to employee exercise participation in corporate fitness centres. Literature to date fails to adequately explain low employee participation and signifies the need for research in this field, especially in Australia, as there is a paucity of information (Hunter et al., 2017) and anticipated growth of these centres (IBISWorld, 2013).

The convergent mixed methods approach used in this study was an effective research strategy to develop knowledge and address key knowledge gaps. Synthesising qualitative and quantitative data strands were transferred into management strategies to potentially improve employee exercise participation in corporate fitness centres.

CHAPTER TWO: POSITIONING CORPORATE FITNESS CENTRES WITHIN THE HUMAN RESOURCE MANAGEMENT LITERATURE

“In today’s competitive work environment, employers are looking for strategies to attract and retain skilled employees, boost engagement, and be viewed as an employer of choice”

(Pridham, p. 48).

The current chapter reviews the literature pertaining to corporate fitness centres, to provide an overview of where corporate fitness centres fit within the physical activity and human resource management literature. The complex nature of participation in physical activity sets the scene, with the next section demonstrating the workplace as a domain where physical activity participation is potentially increased. The following section concentrates on the two different perspectives that view physical activity in the workplace – public health and human resource management - with human resource management as the lens used in this research. Human resource management views physical activity as a unique reward management and employee benefit strategy to recruit and retain talented employees (M. Armstrong, 2006). The corporate fitness centre is an employee benefit expected to increase in worldwide provision (Pridham, 2013). There is, however, limited research on corporate fitness centres and even less information explaining why the participation levels are low.

Human resource specialists use unique reward management strategies, such as employee benefits, to differentiate themselves from other organisations, to attract, motivate, and retain talented employees (Dressler, 2013). The differentiation becomes an exclusive attraction tool for organisations who compete against other organisations for talented employees in the same candidate pool (Nankervis et al., 2017), with corporate fitness centre

provision being a popular employee benefit that emphasises the difference (Pridham, 2013). Employee exercise participation in corporate fitness centres, however, is a contemporary problem that needs investigation to maximise the corporate fitness centre's full potential as a recruitment and retention tool.

2.1 Setting the Scene of Physical (In)Activity

Approximately 23% of the global population do not meet the minimum physical activity guidelines (J. Sallis et al., 2016). Thus, there is a need to understand physical activity behaviour. The minimum physical activity guideline states adults should either participate in at least 150 minutes of moderate-intensity or 75 minutes of vigorous-intensity physical activity, or an accumulation of both throughout the week, with muscle strengthening exercises performed at least twice per week (Commonwealth of Australia, 2017). This level of physical activity participation is associated with physical, mental, and social benefits, which are discussed in detail in this section.

In developed countries, approximately 32% of the population do not meet the minimum physical activity recommendations. Approximately half of Australian adults met the physical activity recommendations (Australian Bureau of Statistics, 2015); less than half of the United States' population reached the physical activity minimum (Schiller, Lucas, & Peregoy, 2012); one in five Canadians were considered physically active (Statistics Canada, 2017), with similar physical activity participation trends identified in Great Britain (Luzak et al., 2017). These data indicate a salient need to transition significant proportions of the global population out of a state of inactivity, otherwise, physical inactivity will have a continual burden on society.

Physical inactivity has a significant financial burden on society. Specifically, physical inactivity has been estimated to cost private and public healthcare systems approximately US\$54 billion dollars per year (Ding et al., 2016). These costs are used to treat physical and

mental health conditions that otherwise would be prevented by meeting the minimum physical activity recommendations (Lee et al., 2012; World Health Organization, 2016). While these data provide an indicator of the costs of physical inactivity, these data do not account for the other potential, indirect burdens on society.

The costs to treat physical and mental health conditions at the individual-level, could otherwise be invested into public services that assist larger population segments. The reinvestment of funds could be invested into the public education sector, emergency services, and transportation. Hence, physical inactivity has both a direct and indirect financial burden on society and individuals, which indicates a need for continual capital investment into research to improve physical activity levels. It is research that will help improve the understanding of physical activity, and conceptually leads to the development of effective strategies to improve physical activity behaviours (Biddle et al., 2015; J Sallis & Owen, 1999). The transition from physical inactivity to a physically active lifestyle minimises the burden on society, and provides individuals with several health benefits (Bauman, Merom, Bull, Buchner, & Fiatarone Singh, 2016; Lee et al., 2012).

Findings demonstrate sufficient levels of physical activity – defined as meeting the minimum physical activity recommendations - contributes many benefits to an individual's quality of life (Lee et al., 2012). There is strong evidence of improvements to chronic disease and risk prevention, functional status, mental health and wellbeing, and social outcomes (Bauman et al., 2016; United States Health and Human Services, 2008).

Physical activity reduces the risk of and can also assist in the management of chronic disease. A recent review revealed individuals who participate in sufficient physical activity levels had a 30% reduction in the risk of developing non-communicable diseases, such as coronary heart disease, type II diabetes, and some cancers (e.g. breast and colon) (Lee et al.,

2012). Physical activity can also assist in managing chronic diseases, including arthritis and multiple sclerosis. These benefits were also identified among populations with physical conditions (Biddle et al., 2015), with these findings therefore indicating sufficient physical activity has a dual role in health improvement, whether one's health ranges from a state of complete sickness to a state of health. First, physical activity acts as a preventative measure behaviour for adverse health conditions and second, helps individuals manage their health conditions.

Improved functional status is another benefit of sufficient physical activity. Physical activity enhances cardiorespiratory responses that enable individuals to improve lung and heart efficiency during prolonged, moderate-intensity physical activity (Porcari, Brant, & Comana, 2015). Additionally, strength training enables the body to recruit more motor-neurons that innervate musculoskeletal contractions (Baldwin, 2012). The recruitment of more motor-neurons assists an individual to lift heavier objects without the need to increase muscle mass (Baldwin, 2012). Physical activity improves the effectiveness of the human body, sustains movements for longer periods of time at higher intensities, and effectively engages the individual in more complex human movements requiring more than a single flexion or extension of one muscle group (Murray & Kenney, 2016). Along with physiological benefits, individuals also derive psychological benefits from physical activity.

Physical activity is consistently associated with psychological health benefits. Physical activity was identified to have moderate effect sizes on depression and anxiety among adults (Rebar et al., 2015; Wegner et al., 2014). Similarly, physical activity has positive effects on cognitive function (Bherer, Erickson, & Liu-Ambrose, 2013; Wegner et al., 2014). Physical activity appears to act as an antidepressant throughout the lifespan (Martinsen & Morgan, 2013), maintains cognitive function during a time of psychological decline (Bherer et al.,

2013), and provides individuals with a sense of assurance as they proceed with their daily activities of living (Rebar et al., 2015).

Physical activity is associated with social benefits among different population groups and contexts. The social element of physical activity decreases loneliness among older adults (McAuley et al., 2000; Smith, Banting, Eime, O'Sullivan, & van Uffelen, 2017), and provides social support in sport and exercise settings (Eime, Harvey, Brown, & Payne, 2010; Fraser & Spink, 2002; Seippel, 2006). Additionally, the social support inherent in group physical activity contexts acts as a motivator, with some research demonstrating significant relationships between social support and retained participation in physical activity (Mendonça, Cheng, Mélo, & de Farias Júnior, 2014; Silva, Lott, Mota, & Welk, 2014). Together, these findings show social health improvement is an outcome of physical activity in group physical activity contexts, and appears to attract individuals to group-based physical activity that could retain participation in these beneficial behaviours. Therefore, the evidence not only indicates the social health benefits of physical activity, but also that the social component maintains physical activity behaviours, and likely leads to physical and mental health benefits.

There is no doubt physical inactivity is a global problem that needs to be addressed in all nations (Al-Zalabani, Al-Hamdan, & Saeed, 2015; Australian Bureau of Statistics, 2015; Luzak et al., 2017; Medina, Janssen, Campos, & Barquera, 2013; Schiller et al., 2012; Statistics Canada, 2017). If individuals abided to the minimum physical activity recommendations, Governments would not have to devote billions of dollars per year to treat - what is for the most part - preventable health ailments (Ding et al., 2016; Lee et al., 2012). Those individuals that meet and exceed the minimum physical activity recommendations, however, derive a variety of physiological, psychological, and social benefits that improve quality of life (Baldwin, 2012; Biddle et al., 2015; Eime et al., 2010). Thus, physical activity is a valuable behaviour with many individual and community-based benefits. A setting where individuals

can potentially connect with these beneficial behaviours is the workplace (J Sallis & Owen, 1999).

2.2 Viewing Physical Activity in the Workplace

Employees spend a large proportion of their day sitting. Some research estimates that employees spend up to 1824 hours per year in the seated position (J Sallis & Owen, 1999). This statistic excludes physical inactivity in other settings, such as domestic life and commuting from one place to another, and therefore demonstrates the extremely inactive nature of individuals, workplaces, and jobs. The workplace is also a setting where physical activity is potentially increased (J Sallis & Owen, 1999). The public health and SHRM perspectives assist researchers and practitioners to understand the role of promoting physical activity in these settings.

The important role of promoting physical activity in workplace settings is acknowledged by public health researchers. Public health researchers deem the workplace as a setting where physical activity is potentially improved, considering that employees spend approximately one-third of their lives in the workplace (J Sallis & Owen, 1999). Therefore, public health researchers acknowledge the workplace has an important role in facilitating physical activity to improve population health (Biddle et al., 2015).

Public health researchers conduct studies with various designs, such as interventions (Irvine, Philips, Seeley, Duncan, & Moore, 2011; J. Mayer, Nuzzo, & Dagenais, 2013), cross-sectional research (Donaldson-Feilder et al., 2017; Williams, Noblet, & Owen, 1997), and reviews (Glasgow, McCaul, & Fisher, 1993; Olsen & Chaney, 2009) to gain a complete understanding on the state of physical activity in and around the workplace. The public health perspective of physical activity in the workplace provides important information on workplace

physical activity behaviours and how these behaviours could be changed to improve population health.

SHRM is another perspective that assists understanding physical activity in the workplace. The primary purpose of SHRM is to engage in several practices to attract, motivate, and retain talented employees (Torrington, Hall, Taylor, & Atkinson, 2014), which is an integrated process explained in more detail in section 2.3. One method that SHRM addresses physical activity is through a practice called employee benefits (Michael Armstrong, 2016), where human resource specialists provide employees with structured and unstructured opportunities to participate in physical activity and exercise (Wilson, Griffin-Blake, & DeJoy, 2002). Physical activity opportunities include, but are not limited to employee recreation clubs, off-site group exercise training, and corporate fitness centres (Wilson et al., 2002). Providing physical activity opportunities differentiates one organisation from another, and therefore could enhance the attraction, motivation, and retention of talented employees (Robbins et al., 2012). Thus, the SHRM perspective views physical activity as a strategy to appeal to new employees and to retain their talents.

Public health and SHRM provide different, although equally important viewpoints on the unique role of promoting physical activity in workplaces. Public health is one perspective suggesting physical activity improves population health (J Sallis & Owen, 1999). Conversely, SHRM views physical activity as a strategic advantage for organisations to strengthen the attraction, motivation, and retention of talented human resources (Nankervis et al., 2017). Organisations that avoid the provision of physical activity – now and into the future - disadvantage themselves in the labour market, given that employee benefits, such as providing physical activity opportunities, will have a more pertinent role in the attraction, motivation, and retention process (Gupta & Shaw, 2014; Nankervis et al., 2017; Xavier, 2014). For this reason, the SHRM perspective of physical activity was employed in this research.

2.3 Strategic Human Resource Management

SHRM acknowledges its internal resources – its employees – as non-replicable capital that provides organisations an advantage in competitive markets (M. Armstrong, 2006). Employees are important resources, as they are the asset that collect and synthesise information, and then make key business decisions that either fail or accomplish organisational objectives. As employees are the focus in SHRM, human resource specialists employ a range of reward management and employee benefit schemes to attract, motivate, and retain their talents (Nankervis et al., 2017).

SHRM is a cumbersome practice for human resource specialists in the twenty-first century. Human resource specialists fundamentally engage in SHRM to hire talented employees for a specific position, to keep employees motivated to perform efficiently and effectively, and to keep the employee with the organisation, to retain intellectual property that therefore sustains strategic advantage in the market (Michael Armstrong, 2016). In the twenty-first century, however, a myriad of uncontrollable factors, such as fluctuating economic circumstances, advancements in technology, globalisation, and the changing needs of consumers, influence human resource specialists' fundamental role in decision-making (Dressler, 2013; Richbell & Wood, 2009; Robbins et al., 2012). The decision-making has shifted to have a larger focus on the employee, which is a key difference of SHRM versus personnel management practices from the past.

Personnel management is the preceding type of employee management practice. It is a single-dimensional activity, where managers hire employees for the sole purpose to complete a particular job that contributes to organisational operations (Torrington et al., 2014). Personnel management, however, evolved towards the end of the twentieth century, as the practice was more than about hiring, firing, and retaining staff (Torrington et al., 2014). Managing employees included developing them as unique resources that implement complex decisions

and eventually achieve organisational goals in competitive markets (Dressler, 2013; Stimpson & Smith, 2011). The shift in focus transferred personnel management practices into SHRM, to encompass the range of practices that attract employees, keeps them happy and satisfied, and retains their talents for the future (Taylor, Doherty, & McGraw, 2008).

The shift in perspective from personnel management to SHRM has resulted in a shift in focus from hiring and firing to attracting, motivating, and retaining employees. The employee is now the focus as a result of the shift in perspective from personnel management to SHRM. A “committed, skilled, and flexible workforce” (Taylor et al., 2008, p. 26) are the terms that recognise employees are the resources that develop long-term, sustainable advantages for organisations, given that one firm cannot replicate their internal resources in comparison to another (Michael Armstrong, 2016). It is the focus upon this resource that makes the employee central in SHRM practices.

SHRM is an elaborate, integrated set of practices that achieve the fundamental purpose of attracting, motivating, and retaining talented employees. Researchers (e.g. Michael Armstrong, 2016; Dressler, 2013; DuBrine, 2012; Hendry, 2012; Nankervis et al., 2017; Noe, Hollenback, Gerhart, & Wright, 2011; Steen, Noe, Hollenback, Gerhart, & Wright, 2009) incorporate SHRM practices, such as planning, recruitment, training, reward management, and performance appraisals – among many others – into numerous SHRM models. The key benefit of incorporating many practices into SHRM models is so that students, practitioners, and researchers can observe and articulate the discrete connections between practices.

Examination and use of the nuances in SHRM models (e.g. Michael Armstrong, 2016; Dressler, 2013), however, was beyond the scope of this research, as this research focussed on reward management, which is described in detail in section 2.3.1. Therefore, the investigator in this research employed a simplified conceptual model of SHRM for two reasons. First, the

other models were too complex, as the intricate connections between practices are outside of the purpose of this research and second, the simplified model includes a small set of common practices that stimulate organisational performance (Taylor et al., 2008). The smaller set of practices make interpretation of SHRM easier, as this research focused on a single practice: reward management.

The conceptual model used in this research places reward management in the context of the other practices known to stimulate organisational performance. The conceptual model includes the following practices: organisation strategy, employee recruitment and selection, training, reward management, and performance management. The conceptual model of SHRM is presented in Figure 1.

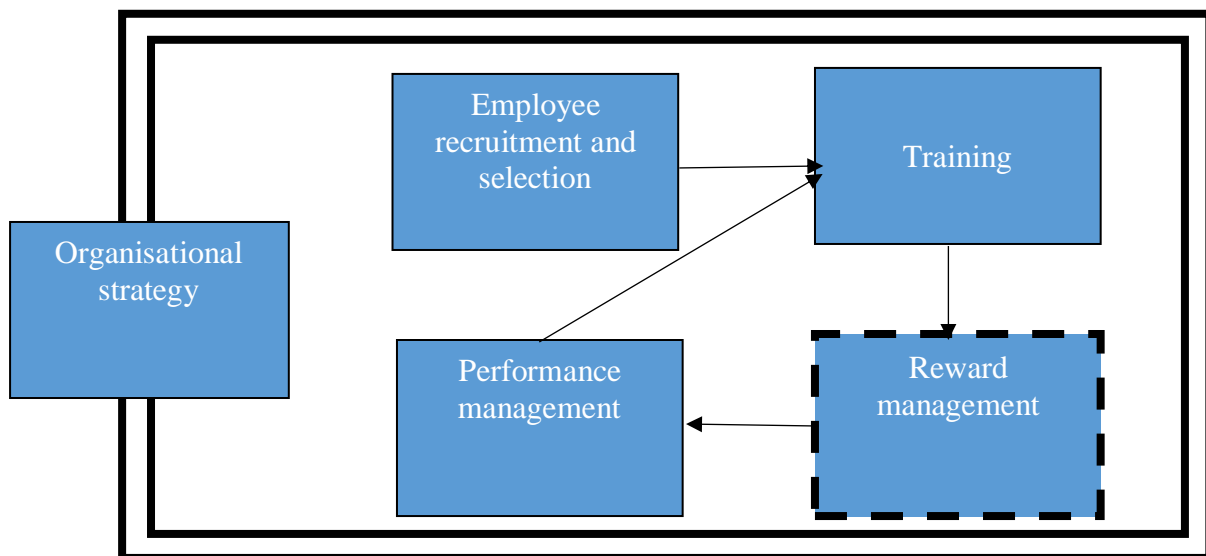


Figure 1. Conceptual model of the main strategic human resource management practices adapted from Taylor et al. (2008)

The five key human resource management practices each have a unique role in SHRM. Organisational strategy is the first practice, and dictates how human resource specialists engage with the subsequent practices (Nankervis et al., 2017). Organisational strategies, such as to either downsize or expand operations into another major city, influence decision-making of employee recruitment and selection.

Recruitment and selection involves specific tasks, such as creating and advertising job descriptions internally, online or through recruitment agencies, to attract and hire talented employees to the organisation (Dressler, 2013). Employee recruitment and selection is followed with employee training. Training involves specific tasks, such as developing employees' competencies, so they can complete jobs with precision (Noe et al., 2011). Training is followed with reward management, and involves providing financial and non-financial compensation, according to the employment agreement (DuBrine, 2012). Performance management is the next practice, and involves assessing whether employees are over or underperforming in comparison to their key performance indicators (Torrington et al., 2014). The comparison supplies management with information to decide whether the organisation will retain the employee beyond the current employment agreement (Torrington et al., 2014). Those retained employees bypass recruitment and selection, and proceed to training, which restarts the training, reward, and performance management cycle.

There is a dearth of evidence specific to reward management, despite the general literature on SHRM (Gupta & Shaw, 2014). Researchers (e.g. Gupta & Shaw, 2014; Nankervis et al., 2017; Xavier, 2014) anticipate compensation will have a more prominent role in SHRM in the future, and therefore indicates a need to advance knowledge on this specific human resource management practice. Subsequently, this research focussed upon reward management, and therefore provides knowledge on a topic that has a paucity of information.

2.3.1 Reward management.

There are two foundational types of reward management strategies that compensate employees for the work they complete: direct and indirect compensation (Dressler, 2013). Direct compensation refers to financial pay, such as wages and bonuses, by contrast, indirect compensation involves providing unique strategies, such as employee benefits and paid leave to enhance the attraction, motivation, and retention process (Dressler, 2013). Direct and

indirect reward management strategies create challenges for human resource specialists, as the two compensation types combine to form unique total reward systems (M. Armstrong, 2006). The total reward system consequently differentiates one organisation from another in an attempt to entice talented employees to organisations and to retain their talents (Dressler, 2013). Therefore, implementing inimitable reward management strategies provides organisations with strategic advantages to attract, motivate, and retain employees.

Cognitive response is one of the strategic advantages of inimitable reward management strategies. Cognitive responses, such as psychological commitment to the organisation, derive from reward management provisions that satisfy the needs of talented employees (Gupta & Shaw, 2014). Financial needs are satisfied with the provision of an hourly rate (Torrington et al., 2014), or a family need is satisfied by the provision of on-site childcare facilities (Rose, 2014). The examples suggest providing rewards develop cognitive responses that ideally transfer into behavioural responses.

Behavioural response is the second advantage of inimitable reward management strategies. When compensation satisfies employee needs, they develop behavioural responses that are of advantage for organisations (Torrington et al., 2014). A behavioural response example is for employees to engage in behaviours that address and exceed individual and team goals, which improve the likelihood of attaining organisational goals. These behavioural responses act as one of the connections between reward management provision and the accomplishment of key performance objectives (Gupta & Shaw, 2014).

To further stimulate behavioural responses, human resource specialists develop total reward systems. The total reward system is a holistic framework that assists in managing direct and indirect compensation (M. Armstrong, 2006; Dressler, 2013), and thus maximises the cognitive and behavioural responses. Researchers (e.g. Nankervis et al., 2017) and human

resource specialists recognise pay is a valuable source of attraction, motivation, and retention. However, based on the inadequate financial resources to satisfy employees' financial needs, human resource specialists create total reward systems as a unique strategy to retain talented employees (Nankervis et al., 2017).

The total reward system separates financial and non-financial rewards into two distinct groups. Financial rewards include monetary benefits, such as base pay, contingency pay, and hourly rates (Dressler, 2013). In contrast, non-financial rewards are non-monetary, such as job design, recognition, and employee benefits (M. Armstrong, 2006). The combination of these two reward types develop employees' total reward; triggers cognitive and behavioural responses; and contributes to the attraction, motivation, and retention of talented employees (Dressler, 2013). Creating an exclusive total reward system differentiates organisations, address employee needs, and retains their talents. Figure 2 illustrates the total reward system.

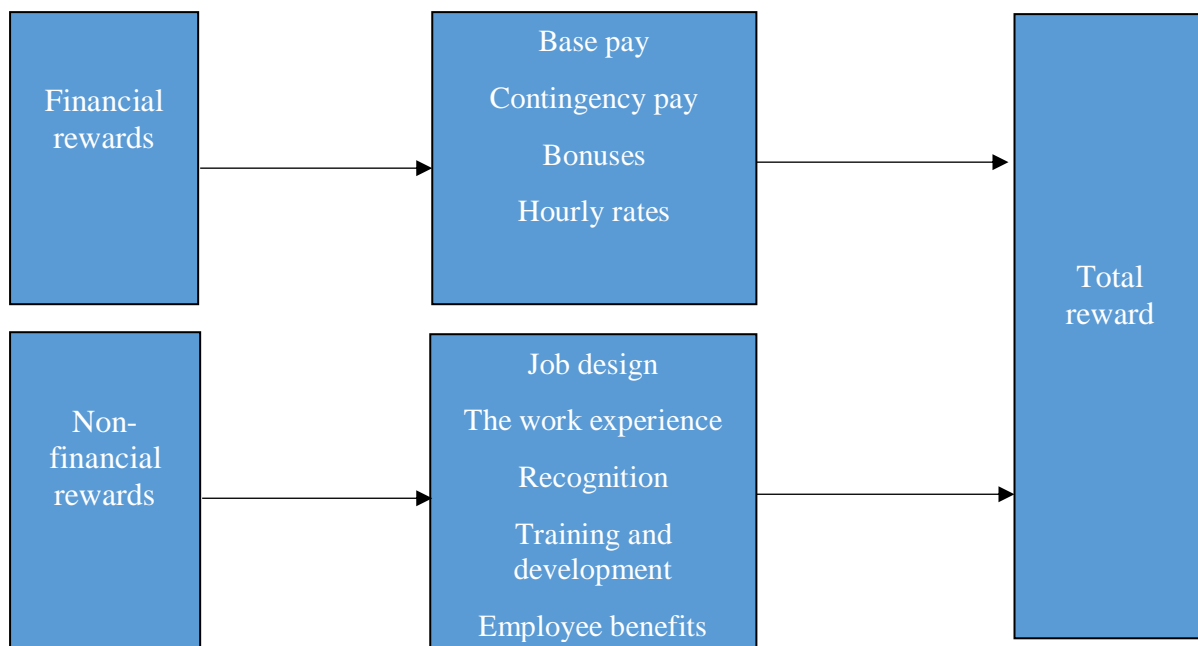


Figure 2. Conceptual model of total reward systems adapted from Armstrong (2006) and Dressler (2013)

Reward management is an important SHRM practice, especially as reward management is the key practice that focuses on the employee, and is the main element to attract, motivate,

and retain talented human resources (Dressler, 2013). Reward provision is vital, considering that financial and non-financial rewards develop an employee's psychological contract and initiates important behaviours that contribute to organisational performance (Gupta & Shaw, 2014). Although much needs to be investigated on relation to reward management (Gupta & Shaw, 2014), there is a specific call for research to assess the important role of employee benefits in total reward systems, as organisations in the future look to implement cheaper employee benefits that retain motivational power (Gupta & Shaw, 2014; Xavier, 2014).

2.3.2 Employee benefits.

Most employees now and in the future expect to receive some form of employee benefit to attract and retain their talents (Robbins et al., 2012). Human resource specialists had easier payment structures in past, as stable economic situations influenced them to compensate employees based on either seniority or job-level (Robbins et al., 2012). The more recent fluctuations in economic circumstances, however, inspired human resource specialists to initiate contemporary payment schemes that do not entirely reflect the traditional compensation methods (Nankervis et al., 2017). Hence, employee benefits is evolving and considered an important activity that forms part of total reward systems and reward management practices (Xavier, 2014).

Employee benefits are a set of activities that form part of the larger reward management practice, and thus contribute more generally to employee attraction, motivation, and retention (Dressler, 2013). The employee benefits activity engages human resource specialists into considerations as to what non-traditional rewards they offer employees, which include but are not limited to providing mobile phones, company cars, and subsidised cafeterias. These employee benefits are in addition to traditional financial rewards, such as base pay or hourly rates (Noe et al., 2011). The other noteworthy employee benefit aspect is that the activity contributes to long-term financial security and enhances employee wellbeing (M. Armstrong

& Taylor, 2014; Nankervis et al., 2017). Thus, employee benefits not only act as a value-add for employees and to differentiate one organisation from another, but also performs a social responsibility by contributing to employees' financial dimension of wellbeing (Scott Lyons et al., 2016).

Not all employee benefits are offered at the discretion of the employer, as some countries have legal requirements that mandate employee benefit provision. Most Western countries (e.g. Australia, England, and the United States) transferred from a tax-payer funded security program, to financial security programs mandated through the employment relationship (Nankervis et al., 2017). Australian laws provide a useful example, with superannuation being the most prominently known initiative. Australian laws mandate organisations in Australia to contribute to employee superannuation accounts that provide financial sustainability during retirement (Nankervis et al., 2017). Similarly, the Social Security Act 1985 in England focusses on employee pensions, with a set of measures protecting an employee's pension value in the case they choose to switch employers (Torrington et al., 2014). Another useful example originates in the United States, as The Protection and Affordable Act 2010 mandates mid-sized and large organisations to incorporate life, health, and disability insurance programs into employee benefits schemes (Dressler, 2013; DuBrine, 2012; Noe et al., 2011).

One of the serious limitations of mandatory benefits, however, is that they are standardised provisions between organisations. This therefore limits how organisation can differentiate themselves from other organisations competing for talented employees. Table 1 lists the mandatory benefits identified through this literature review.

Table 1.
Global Mandatory Benefits

Australia	England	United States
Worker's compensation	Occupational pension	Social security
Superannuation	Statutory sick pay	Unemployment insurance
Vacation leave	Occupational sick pay	Worker's compensation
Paid public holidays		Unpaid family leave
Sick leave		Unpaid medical leave

Source: Armstrong (2006); Armstrong & Taylor (2014); Burrows et al. (2008); Dressler (2013); Du Plessis (2012); Nankervis et al. (2011); Noe et al. (2011); and Torrington et al. (2014).

In contrast to mandatory benefits, the fringe benefit provides the difference between organisations, and thus contributes to employee attraction, motivation, and retention. Organisations have the flexibility to voluntarily provide fringe benefits that develop value propositions and further enhance employee retention (Nankervis et al., 2017). Researchers (e.g. Dressler, 2013; Noe et al., 2011; Rose, 2014) discuss the advantages of fringe benefits which include, but are not limited to family-friendly services, such as subsidised child and elder care; work-life balance benefits such as flex-time and compressed work weeks; and a range of other services, such as relocating expenses, product discounts, and recreation services. Table 2 lists commonly recognised fringe benefits. While creativity and financial capital are obvious limits of fringe benefit provision, another, yet subtle drawback worthy of discussion, is tax.

Table 2.
List of Potential Fringe Benefits

Free or low-cost parking	Subsidised cafeterias
On-site childcare services	On-site healthcare services
‘Bring –your-pet-to-work days	Cover for relocation costs
Weekend company trips	Recreation and fitness services
Company cars and petrol	Employee wellness programs
Fitness facilities	Mobile phone provision

Source: Armstrong (2006); Armstrong & Taylor (2014); Burrows et al. (2008); Du Plessis (2012); Nankervis et al. (2011); Noe et al. (2011); and Dressler (2013).

Tax is an important limitation of fringe benefit provision. Employees are exempt from paying taxes on financial fringe benefits in Australia, with organisations incurring the expense (Nankervis et al., 2017). To avoid paying additional taxes, organisations gravitate to group, or service-based benefits that either target employee wellbeing or work-life balance (Torrington et al., 2014). These wellbeing and work-life balance benefits do not incur taxes, and are consequently viewed favourably by organisations (Nankervis et al., 2017). This could be one of the key reasons why employee wellbeing is a growing human resource management agenda item; it not only minimises tax but can also be used to attract, motivate, and retain employees (Torrington et al., 2014).

In sum, employee benefit provision contributes to employee attraction, motivation, and retention. There are two types of benefits: mandatory and fringe. Mandatory benefits derive from government legislation (Nankervis et al., 2017). In contrast, an organisation’s creativity and financial stocks inform fringe benefit provision, and subsequently differentiate one organisation from another (M. Armstrong, 2006). Although some fringe benefits incur taxes, others such as employee wellbeing programs, are exempt, and therefore motivate organisations to offer health-based programs to their employees (Nankervis et al., 2017). A call for research on the topic of employee wellbeing programs (Xavier, 2014), however, proclaimed for more

examination on the topic, given that global provision is increasing, and the need to completely understand the contribution of these programs on organisational performance. Thus, employee wellbeing programs are worthy of examination.

2.3.3 Employee wellbeing programs.

The key purposes of employee wellbeing programs are to contribute to employee attraction, motivation, and recruitment; facilitate employees to maintain behaviours that reduce health risks; and to improve organisational effectiveness (Berry, Mirabito, & Baun, 2010). These purposes demonstrate that employee wellbeing programs exhibit a dual role in organisations. The first is at the employee-level, to promote and encourage employee wellbeing (M. Armstrong, 2006). The second is at the organisational-level, which is to transfer employee-level benefits into organisational performance outcomes (Swayze & Burke, 2013), which are described in more detail later in this section. The organisational performance outcomes are one reason employee wellbeing programs are an important element in contemporary organisations (Gupta & Shaw, 2014; Torrington et al., 2014; Xavier, 2014).

Return on investment is one of the key justifications for employee wellbeing programs. Studies that examined the return on investments for organisations offering employee wellbeing programs show that they can either save up to US\$1.65 for every dollar spent on programs (Naydeck, Pearson, Ozminkowski, Day, & Goetzel, 2008) or and receive up to 6:1 return on investment (Berry et al., 2010). These findings are promising, as investing in employee wellbeing suggests organisations become more productive, and therefore more profitable. However, the methods used to investigate return on investment of employee wellness programs have been questioned. Evidence shows the previous studies included biased results and methodologically weak designs that could have inflated the positive returns on investment (Falkenberg, 1987; Lerner, Rodday, Cohen, & Rogers, 2013; van Dongen et al., 2011), and thus evidence of the financial returns of employee wellbeing programs is inconclusive.

Although the return on investment of employee wellbeing programs have been yet to be quantified, employee wellbeing programs have the potential to provide benefits at two different levels. The employee-level is one benefit type and this refers to the health improvements employees derive from participating in employee wellbeing programs. Program participation is known to improve physical, mental, and social health in a range of activities, such as physical activity and smoking cessation programs (Swayze & Burke, 2013). The employer-level is the second benefit type. Benefits such as reduced absenteeism, and enhanced employee-employer relationships contribute to organisational productivity, and thus organisational profitability (Swayze & Burke, 2013). To achieve employee and employer benefits, human resource specialists and employee wellbeing service providers engage in several strategies to recruit and retain employee participation in these programs.

There are six strategies to recruit and retain employees in wellbeing programs that were identified in the literature. These strategies were thematically derived and do not reflect a specific sequence to recruit and retain employees. Organisational culture is first strategy, and involves incorporating the wellbeing programs into the norms and values of the organisation. The wellbeing program thus becomes an “extension” (Berry et al., 2010, p. 5) of organisational operations. Organisational culture corresponds with supportive policies, which is the next strategy, and comprises implementing rules that increase participation opportunities (Carnethon et al., 2009; Goetzel et al., 2014; Zula, 2014). Implementing supportive policies leads to providing accessible physical environments, which is the next strategy. The strategy involves altering the physical workplace to minimise barriers that further enables employee participation (Berry et al., 2010; Carnethon et al., 2009; Goetzel et al., 2014; Hill & Korolkova, 2014; Mattke et al., 2013; Zula, 2014). Interpersonal support is another strategy, and entails developing positive relationships that condone employee participation in programs (Carnethon et al., 2009; Hill & Korolkova, 2014; Mattke et al., 2013). Communication is the next strategy,

and has the purpose to supply continuous and targeted information that makes employees aware that the program exists and effectively educates them about the benefits of participation (Berry et al., 2010; Hill & Korolkova, 2014; Zula, 2014). Evaluation is the final strategy, and involves continuous program assessment to address program weaknesses and to ensure the program meets key performance indicators (Mattke et al., 2013; Zula, 2014). Figure 3 illustrates the six strategies to recruit and retain employees in employee wellbeing programs.

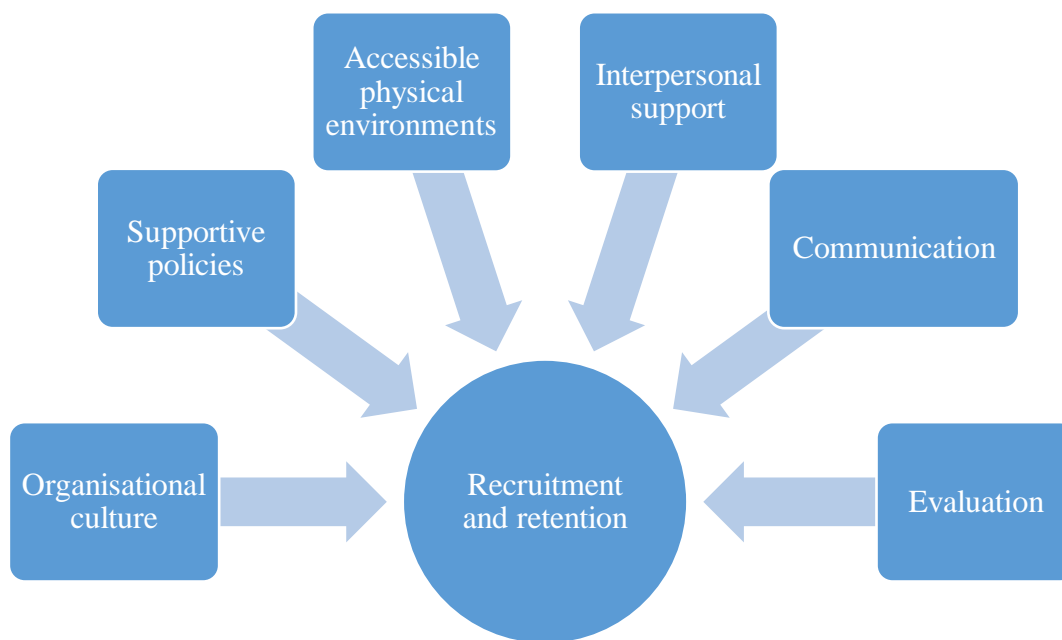


Figure 3. Six strategies to recruit and retain employees in employee wellbeing programs

The six strategies to recruit and retain employees in wellbeing programs provide a foundation to develop strategies that enhance participation. These strategies, however, are yet to be empirically tested, and thus provides inconclusive evidence whether these strategies translate into enhanced employee participation. The focus of these strategies on employee wellbeing programs and the minimal empirical testing provides uncertainty whether these strategies are applicable to corporate fitness centres, specifically.

Although the six strategies provide management direction to improve participation, this research separated employee wellbeing programs into two categories to recognise the

differences in program provision. Small-scale wellbeing programs are easily introduced into organisations and include employee lounges, community libraries, and standing desk provision (Chenoweth, 2011; Shour, 2015). Human resource specialists typically have passive views for these programs, meaning they provide limited efforts to communicate, lead, and provide access to the wellbeing opportunities (Noe et al., 2011). Table 3 lists some of the small-scale employee wellbeing programs identified through this review.

Table 3.
Examples of Small-Scale Employee Wellbeing Programs

Productivity	Physical activity	Challenges	Perks and fun	Mental health
Collaborative spaces	Walking meetings	Scavenger hunts	Extended breaks	Community library
Flexible work hours	Sport equipment provision	Impromptu contests	Birthday day-off	Wellness wall
Remote work days	Gym discounts		Employee lounge	Wellness speaker

Source: Chenoweth (2011); O'Donnell (2002); Shour (2015)

By contrast, large-scale wellbeing programs require comprehensive management plans. Smoking cessation, nutrition, and employee assistance programs require coordinated communication strategies, management's leadership, and accessibility to facilitate participation and behaviour change (Berry et al., 2010; Goetzel & Ozminkowski, 2008; O'Donnell, 2002). Corporate fitness centres, however, are not recognised as large-scale employee wellbeing programs. Instead, literature suggests corporate fitness centres require limited organisational involvement, with this information therefore aligning the corporate fitness centres with small-scale employee wellbeing programs (Noe et al., 2011). Table 4 lists the large-scale employee wellbeing programs identified through this research.

Table 4.
Examples of Large-Scale Employee Wellbeing Programs

Nutrition programs	Weight management	Stress management	Physical activity programs
Tobacco cessation	Medical self-help	Employee assistance programs	

Source: Chenoweth (2011); O'Donnell (2002); Shour (2015)

This research endeavoured to advance knowledge on employee participation in corporate fitness centres, which could be transferable and thus assist human resource specialists and employee wellbeing service providers improve participation in large-scale programs. The strategies from this research were related to physical activity, exercise, and participation in group exercise programs (Wilson et al., 2002).

Overall, providing employee wellbeing programs offers a unique point of difference between organisations that compete for talented human resources (Berry et al., 2010). Program provision delivers benefits to the employee and transfers into benefits for the employer (Swayze & Burke, 2013). Although there are both small and large-scale programs, management could implement six strategies to recruit and retain employees in large-scale employee wellbeing programs to maximise participation (e.g. Mattke et al., 2013; Zula, 2014). The focus of these strategies on employee wellbeing programs and limited empirical evidence connecting the strategies with improved participation does not provide sufficient confidence to transfer these strategies to managing employee participation in corporate fitness centres. The limited data therefore indicates a particular need to examine what factors contribute to employee exercise participation in corporate fitness centres, to thus develop effective management strategies that improve participation levels.

2.4 Corporate Fitness Centres

A 10% worldwide increase in corporate fitness centre provision is anticipated over the next five years (Pridham, 2013). Changes in employee demographics and attitudes could be a reason for this increase in worldwide supply. Data indicates 23% of employees would like either a corporate fitness centre or related exercise services to form part of their total reward system (Miller, 2010), which potentially reflects one of the attitudinal changes from sheer financial compensation, to compensation comprised of financial and non-financial benefits as illustrated in Figure 2.

Twenty-three percent of employees desiring a corporate fitness centre might not appear as a significant percentage, however, it is important for two reasons. First, 23% is a large percentage in comparison to the range of other small or large-scale employee wellbeing programs organisations could offer employees (refer to Tables 3 and 4). Second, the statistic represents an employee need to be satisfied for approximately eight million and 74 million employees in Canada and the United States labour markets, respectively. These statistics and the changes in attitude could explain why there is an anticipated 10% growth of corporate fitness centres in countries such as the United States, Canada, and Australia over the next five years (Halvorson, 2015; IBISWorld, 2013; Pridham, 2013).

The vast majority of corporate fitness centre data originates from the United States, with a small data set focussing on the association between participation in corporate fitness centres and organisational effectiveness indicators, such as absenteeism and employee productivity. The data indicated employees that participate in corporate fitness centres experience up to five fewer sick days per year (Baun, Bemacki, & Tsai, 1986; L Lechner, de Vries, Adriannsen, & Drabbels, 1997). Other evidence, however, showed absenteeism was consistent between corporate fitness centre participants and non-participants (Shephard & Corey, 1981). The findings provide some insights on the relationship between participation and

absenteeism, however, the inconsistent findings indicate alternative factors, such as personality, values, and lifestyle could be stronger predictors of absenteeism (Baun et al., 1986).

Similarly, the data is mostly inconclusive regarding participation in corporate fitness centres and employee productivity. Studies from as early as the 1980s indicated participation in corporate fitness centres had a strong association with job performance ratings (Bernacki & Baun, 1984; Leutzinger & Blanke, 1991). By contrast, other data revealed relatively small improvements to worker performance (Shephard & Corey, 1981). A later review demonstrated most of the earlier studies had design flaws that biased these findings, and thus challenged the relatively positive relationship between corporate fitness centre participation and performance (Falkenberg, 1987).

The limited data on employee benefits of participating in corporate fitness centres correspond with physical activity outcomes as described in section 2.1. Data indicates employees participate in exercise in corporate fitness centres to improve physical (Mathes et al., 1992; Shephard & Corey, 1981; Shephard et al., 1980), mental, and social health (Mathes et al., 1992), with these health outcomes conceptually motivating employees to participate in corporate fitness centres. Participation, however, rarely exceeds 50% of an employee population, which is the minimum participation percentage from the perspective of human resource specialists and corporate fitness centre stakeholders (Goetzel & Ozminkowski, 2008; Schwetschenau et al., 2008).

Research that has examined exercise participation in corporate fitness centres has rarely been theory-based. Instead of incorporating a perspective through which to view their data, researchers collected responses using predetermined instruments, and analysed the data with factor analyses to group various motives (Mathes et al., 1992) and barriers to participation

(Alexy, 1991; Schwetschenau et al., 2008) with aggregate concepts. These research efforts provided a baseline as to what motivates and prevents participation in exercise in corporate fitness centres. These research findings, however, could have contributed more knowledge to the literature, if a theoretical perspective was incorporated into the study design. Theory use could have connected several known constructs that influence employee exercise behaviour to provide an understanding based on previous research (Bryman, 2012). This presents a future research opportunity, which is discussed in more detail in section 3.7.

Previous research on participation in corporate fitness centres has tended to focus on single factors that contribute to employee participation in corporate fitness centres. Barriers to participation has been the major focus in previous research (Alexy, 1991; Edmunds, Hurst, et al., 2013; Schwetschenau et al., 2008), with a small data set adopting a constraints perspective (Hubbard & Mannell, 2001). Regardless of perspective, these studies focused on the negative factors that prevent participation in corporate fitness centres. Likewise, researchers concentrated their efforts on motivation, with particular attention on social support (Edmunds & Clow, 2015; Hunter et al., 2017) or motivational climates (Huddleston et al., 2012). These concentrated research efforts provide in-depth information as to what positively contributes to participation in corporate fitness centres. These data, however, excluded other potential motives that underpin employee exercise participation, and thus could be the focus for future research. This is explained further in section 3.7.

In sum, corporate fitness centres are expected to increase in number in developed nations, such as Australia, the United States, and Canada (Halvorson, 2015; IBISWorld, 2013; Pridham, 2013). Most of the available information stems from the United States, and indicates inconclusive evidence regarding participation and reduced absenteeism (Baun et al., 1986; L Lechner et al., 1997; Shephard & Corey, 1981) and participation and improved worker productivity (Bernacki & Baun, 1984; L Lechner et al., 1997; Leutzinger & Blanke, 1991).

These inconclusive findings contrast with the known benefits of physical activity, given that physical activity improves physical, mental, and social health (Biddle et al., 2015; Lee et al., 2012). The past research examining corporate fitness centre participation provides some evidence of what encourages (Alexy, 1991; Edmunds & Clow, 2015) and prevents employee exercise participation (Edmunds, Hurst, et al., 2013; Schwetschenau et al., 2008). These efforts, however, had shortcomings such as lack of theoretical perspective, and thus influenced the investigator in this research to adopt three separate, yet complementary theories to examine what factors contribute to employee exercise participation in corporate fitness centres: constraints, negotiation, and self-determination theories. These theories are the focus in chapter three.

2.5 Chapter Summary

Physical activity has positive physical, psychological, and social health benefits. However, most people in developed countries, including Australia, do not meet recommended levels of physical activity (Australian Bureau of Statistics, 2015). This has led to focussed efforts to improve physical activity in a range of settings, including workplaces (e.g. Persson et al., 2017).

The workplace is a setting that can be used to intervene and encourage physical activity (J Sallis & Owen, 1999). Improvements to physical activity address the public health agenda (J Sallis & Owen, 1999), whereas, the SHRM perspective advantageously adopts physical activity as a reward management strategy to compete for talented employees (Michael Armstrong, 2016). Physical activity thus forms part of employees' total reward and contributes to attracting, motivating, and retaining employees more generally (Dressler, 2013).

One of the fringe benefits of particular attention in this research is the corporate fitness centre, which is growing in global popularity despite less than optimal employee participation

(Goetzel & Ozminkowski, 2008; Pridham, 2013; Schwetschenau et al., 2008). There is little known about corporate fitness centres generally, and on what factors contribute to participation, specifically (e.g. Hunter et al., 2017; Schwetschenau et al., 2008). While the literature provides a knowledge base on participation, the weaknesses of previous research such as minimal theory use provide future research directions. Thus, this research employed constraints, negotiation, and self-determination theories to assess employee participation and to inform management strategies that potentially improve employee exercise participation in corporate fitness centres. The next chapter comprises a review of constraints, negotiation, and self-determination theories in relation to employee exercise participation in corporate fitness centres.

CHAPTER THREE: FACTORS THAT CONTRIBUTE TO EMPLOYEE EXERCISE PARTICIPATION IN CORPORATE FITNESS CENTRES

“...to understand individuals’ leisure choices and behaviour requires investigation of all the factors, both positive (e.g. motivations, anticipated benefits) and negative (e.g. constraints) that influence these choices” (Mannell, Iwasaki, & Jackson, 2005, p. 3).

The purpose of this chapter is to present the literature pertaining to constraints, negotiation, and motivation in relation to employee exercise participation in corporate fitness centres. The review identified a dearth of literature related to corporate fitness centres, with the vast majority incorporating quantitative methods. The researcher sought corporate fitness centre literature as the main information source and then sought workplace physical activity, employee wellbeing program, leisure-time physical activity, and exercise behaviour information as secondary literature sources.

The chapter begins with a short summary of alternative theories through which to view physical activity participation, with an explanation why constraints, negotiation, and self-determination theories were adopted in this research. The remaining sections are guided by previous recommendations (i.e. Creswell, 2014), which was to review each factor included in this research. Constraints, negotiation, and self-determination theories (self-determination theory represents the motivation factor in this research) are reviewed separately, and thus comprise sections two to four. The purpose is to individually review the three independent factors, and the theoretical underpinnings used in this research. Participation in corporate fitness centres is the focus of the following section, given that participation was the dependent factor. Studies that included all four factors - constraints, negotiation, motivation, and

participation – comprise the next section, with the purpose to demonstrate the known relationships among factors. An explanation for the need to advance knowledge concludes the chapter.

3.1 Theories to Potentially Examine Participation in Corporate Fitness Centres

Several perspectives were considered for this research to understand employee exercise participation in corporate fitness centres. The socio-ecological model is one of the most prominent human behaviour theories, which is a framework recognising that the sum of different layers of influence, such as individual, social, and institutional layers, would contribute to employee exercise participation (McLeroy et al., 1988). Similarly, the theory of planned behaviour was considered in this research, which posits attitudes, subjective norms, and perceived behavioural control would explain an employee's intention to exercise in corporate fitness centres (Ajzen, 2011). Self-efficacy theory was another lens considered for this research. It posits an individual's self-belief determines the effort with which to achieve prospective goals, with higher self-efficacy levels resulting in higher efforts and lower self-efficacy levels resulting in lower efforts to complete key objectives (Bandura, 1997).

These theories, among many others such as social cognitive theory (Bandura, 1989) and the health belief model (Janz & Becker, 1984), could have provided a unique insight in relation to employee exercise participation in corporate fitness centres. This research, however, adopted constraints, negotiation, and self-determination theories. The rationale was that constraints, negotiation, and motivation were identified as key factors contributing to employee exercise participation in corporate fitness centres (Hubbard & Mannell, 2001), and thus represent the key factors on which management can focus their energies. Management could focus on minimising constraints to participation and develop strategies to improve motivation (Loucks-Atkinson & Mannell, 2007) that theoretically assist employees to use more negotiation resources to overcome constraints to participation... This research also adopted a

leisure/sport management approach. The leisure/sport management approach was defined as overseeing and coordinating organisational activities so the activities are addressed effectively and with precision (Robbins et al., 2012). Previous organisational research focussing on constraints (K. Mayer, Morse, Eddy, & Love, 2017), negotiation (Alexandris, Kouthouris, Funk, & Tziouma, 2013), and motivation (Alexandris & Tsorbatzoudis, 2002) in leisure-time physical activity contexts used their data to inform strategies that potentially improve LTPA consumption, which was a comparable approach in this research. The other theories, such as social cognitive and theory of planned behaviour, are derived from behavioural and public health research contexts to typically address population health (Biddle et al., 2015). Further rationale for constraints, negotiation, and self-determination theories are provided in section 3.7. The next section focuses on constraints.

3.2 Constraints

Nearly thirty years of examining constraints to leisure assisted researchers and practitioners to understand the different reasons why individuals either participate or avoid leisure-time physical activity. Initially, researchers (e.g. Jackson & Searle, 1985) in the 1980s used the term barriers to describe the reasons for individuals' non-participation in leisure pursuits. Those seminal studies provided a foundational understanding of leisure behaviour, and specifically on what hinders participation to leisure-time physical activity. The barriers perspective, however, further developed in the 1990s.

The term constraints in the 1990s replaced barriers, as barriers was considered narrowly focussed, and often associated with either participation or non-participation in leisure-time physical activity (Crawford et al., 1991). In contrast, constraints were a broader concept. Constraints do not necessarily result in non-participation, and instead could result in an altered version of the activity, such as decreased satisfaction, intensity, and type of leisure-time physical activity (Jackson, Crawford, & Godbey, 1993). Consequently, researchers in different

fields, such as leisure (Boo, Carruthers, & Busser, 2014; Lamont, Kennelly, & Wilson, 2012), sport (Alexandris, Funk, & Pritchard, 2011; Alexandris et al., 2013), and tourism (Chung, Baik, & Lee, 2016; Funk, Alexandris, & Ping, 2009), adopted a constraints perspective to continually investigate what hinders participation and to develop strategies to improve consumption levels (e.g., participate in more travel or leisure-time physical activity).

The majority of past and recent employee wellbeing program studies continue to the focus on use of a barriers (e.g. Kilpatrick et al., 2017; Olsen & Chaney, 2009) despite leisure research moving from a barriers to a constraints perspective. The barriers perspective is prevalent in both qualitative and quantitative studies, to either describe what hinders participation in employee wellbeing programs or to measure the relationship between barriers and other factors, such as participation in these programs (e.g. T. Bredahl, Særvoll, Kirkelund, Sjøgaard, & Andersen, 2015; Kilpatrick et al., 2017; Passey et al., 2014; C. Tudor-Locke et al., 2014). Continually using barriers to frame research questions potentially limits advancements in knowledge, considering constraints views challenges to leisure-time physical activity participation as negotiable obstacles that result in modified participation, opposed to a binary outcome of either non-participation or participation (Crawford et al., 1991).

A focus on correlates to leisure-time physical activity is a potential explanation why researchers continually use a barriers perspective to frame their studies. Correlates refer to factors that are either unchangeable or changeable (Biddle et al., 2015). Unchangeable correlates are factors such as age and gender that help to identify at-risk population groups, conversely, changeable correlates such as a lack of time and lack of partners with whom to participate, become the focus of intervention studies (Biddle et al., 2015). Changes to these correlates theoretically result in alterations to behaviour (Biddle et al., 2015), and thus appears to be a pragmatic approach to study employee physical activity behaviours.

The correlates perspective, however, has limitations. The assumption is that modifications to the changeable correlates result in increased physical activity. A recent intervention study demonstrated otherwise (Hunter et al., 2017). Specifically, exercise supervision – a changeable correlate - was the focus in a corporate fitness centre study, and revealed exercise supervision did not induce long-term behaviour change (Hunter et al., 2017). Instead, some participants reverted to their initial physical activity levels at approximately six-months after the intervention (Hunter et al., 2017). A second limitation of only examining correlates in isolation is that correlates overlook how barrier types interact with one another. A useful example is in relation to insurmountable external constraints that create feedback loops that suppress the desire to participate at the intrapersonal-level (Jackson et al., 1993). A more rigorous perspective on understanding leisure-time physical activity behaviour acknowledges how different barrier types interact, and thus contribute to physical activity participation. This presents an opportunity for future research and is one of the key reasons why constraints was adopted in this research. This is explained further in section 3.7.

Constraints theory posits that individuals experience a hierarchy of three different constraints that interact with leisure-time physical activity preference or participation: intrapersonal, interpersonal, and structural (Crawford et al., 1991). Intrapersonal constraints comprise the psychological reasons, such as depression, stress, and low perceived skill that hinder preference development (Crawford & Godbey, 1987). Interpersonal constraints develop as a consequence of either social interactions or characteristics between individuals (Crawford & Godbey, 1987). This type of constraint either hinders individuals from developing a preference or interferes with participation when a preference is formed. Examples include incompatible schedules or competing preferences in group activities (Samdahl & Jekubovich, 1997). Structural constraints encompass all the external factors, such as a lack of time, weather,

and financial capital that interfere between the preference-participation relationship (Laura Wood & Karen Danylchuk, 2015).

Approximately thirty years of constraints research provides a foundation for the examination of employee exercise participation in corporate fitness centres for three reasons. First, the theory separates constraints into three discrete categories; second, the theory posits employees will experience a hierarchy of constraints; and third, constraints interact with each other (Jackson et al., 1993). Literature on intrapersonal, interpersonal, and structural constraints provide useful background information to assess what potentially hinders employees' exercise participation in corporate fitness centres that could inform effective management strategies to enhance employee participation levels. The following three sub-sections include a review of the intrapersonal, interpersonal, and structural constraints in relation to employee exercise participation in corporate fitness centres.

3.2.1 Intrapersonal.

Intrapersonal constraints are conceptualised as the most powerful of the three constraint factors, and therefore comes first in the constraints hierarchy. Intrapersonal constraints, such as family values, religiosity, and anxiety interact with individuals' preferences (Crawford & Godbey, 1987), and thus dominate "the will to act, or motivation for participation" (Crawford et al., 1991, p. 314).

Constrained preferences initiate individuals' subjective evaluation of participation in leisure-time physical activity. Individuals assess their beliefs about what they should do, what they would like to do, and whether they can complete the behaviour with precision (Hutson & Ashmore, 1986). These evaluations are decisive factors, given that individuals' significant experience of intrapersonal constraints means they most likely will not progress along the constraints hierarchy, and thus encounter neither interpersonal nor structural constraint factors

(Crawford et al., 1991). Therefore, intrapersonal constraints are important in this research, as subjective evaluations potentially constrain employees' attitudes, interests, and self-beliefs regarding their exercise participation in corporate fitness centres. The interaction between intrapersonal constraints, preferences, and participation is illustrated in Figure 4.



Figure 4. Interaction between intrapersonal constraints, preferences, and participation adapted Crawford and Godbey (1987)

Intrapersonal constraints feature in corporate fitness centre studies as hindrances to exercise participation (e.g. Hubbard & Mannell, 2001; Schwetschenau et al., 2008). Demotivation, confidence, and embarrassment are some constraints reported in previous studies (Brown, Volberding, Baghurst, & Sellers, 2014; Edmunds, Hurst, et al., 2013). These findings indicate intrapersonal constraints inhibit employees from developing a preference to exercise in corporate fitness centres, and thus suggests intrapersonal constraints are not limited to a few psychological attributes. Consequently, the intrapersonal constraints identified and discussed in this literature review include: motivation, cost-benefit analysis, disinterest, and embarrassment.

Motivation – or lack thereof – has been shown to consistently constrain participation in physical activity in and around the workplace. Motivation emerged as a constraint to exercise participation in quantitative research, specific to corporate fitness centres (Alexy, 1991; Hunter et al., 2017; Schwetschenau et al., 2008), and also featured as a constraint to physical activity participation in and around the workplace (Olsen & Chaney, 2009). These data provide useful insights regarding the role and relationship between motivation and physical activity participation. The findings, however, measured relationships between variables and neither explained nor described how a lack of motivation developed in the lived experience of

employees. This indicates a need to adopt qualitative methods to describe how a lack of motivation develops in employees' lives, and thus hinders their exercise participation in corporate fitness centres. This matter is explained further in section 3.7. Although lack of motivation was recognised as a constraint to participation, motivation might be better conceptualised with motivational theories, given that theory categorises and explains different motivation dimensions that provide a complete understanding of behaviour (Ryan & Deci, 2000). Thus, this research used self-determination theory to conceptualise motivation (refer to section 3.4).

There was little literature relating to cost-benefit analysis as a constraint to corporate fitness centre participation (Schwetschenau et al., 2008). Information from workplace physical activity programs, however, suggested cost-benefit analysis constrained participation in these physical activity programs (Abraham, Feldman, Nyman, & Barleen, 2011; T. Bredahl et al., 2015; Hannon, Hammerback, Garson, Harris, & Sopher, 2012). These findings suggest employees assess the pros and cons of participation, with more cons potentially resulting in more constraints to their engagement with the programs. Although this information provides insights into employee participation in workplace physical activity and employee wellbeing programs, it is inconclusive whether cost-benefit is applicable to employee exercise participation in corporate fitness centres.

There was minimal literature identified in relation to disinterest as a constraint to employee exercise participation in corporate fitness centres (Edmunds, Hurst, et al., 2013). Disinterest, however, is a heterogeneous concept referring to an employee's lack of interest in exercise participation in corporate fitness centres. Three disinterest categories separated the heterogeneous concept, and included the following: antecedent constraints, genuine disinterest, and perceived sufficient exercise (Jackson et al., 1993). Antecedent constraints, such as stress and depression, refer to the intense experience of intrapersonal constraints that supersede other

psychological attributes, and therefore contributes to a state of disinterest (Jackson et al., 1993). Genuine disinterest indicates some employees might perceive exercise in corporate fitness centres as a boring activity that subsequently hinders their participation (Edmunds, Hurst, et al., 2013). Last, perceived sufficient exercise is a subjective observation, meaning an employee believes their exercise participation level meets their needs (Mathes et al., 1992). The disinterest potentially gained by employees suggests corporate fitness centres do not target the entire employee population.

Embarrassment was another complex constraint hindering employee exercise participation in corporate fitness centres. Literature suggested that three key situations developed feelings of embarrassment: comparison, confidence, and anxiety.

Comparison was an embarrassment constraint to exercise participation in corporate fitness centres, when employees compared their exercise abilities to that of their colleagues (Brown et al., 2014; Edmunds, Hurst, et al., 2013; Rossing & Jones, 2015). Comparison was also evident among women, when they changed into exercise clothing in front of colleagues (Schwetschenau et al., 2008). These findings indicate comparison develops in the psyche of employees, and thus hinders participation in corporate fitness centres. Although these studies employed qualitative methods (Brown et al., 2014; Edmunds, Hurst, et al., 2013; Rossing & Jones, 2015), it is unclear whether comparison is a significant constraint to employee participation in corporate fitness centres, considering that these are subjective lived experiences opposed to objective reality. This presents an opportunity to objectively measure the relationship between comparison and participation.

Evidence suggests that lack of confidence to exercise in corporate fitness centres results from two situations. It developed when employees were uncertain how to perform exercise movements in the corporate fitness centre (Edmunds, Hurst, et al., 2013) and when instructors

supplied inadequate instruction to perform exercises with precision (Fletcher, Behrens, & Domina, 2008). This indicates that first, employees' own self-efficacy could constrain participation and second, interactions at the interpersonal-level potentially develops an intrapersonal constraint, as per the feedback loop discussed in section 3.2.

Social physique anxiety is another participation constraint that was shown to develop in workplace physical activity program contexts when locker rooms were located near communal areas. Anxiety was created in the employee's psyche, as they needed to walk through crowded work spaces in exercise clothing to get to the physical activity program (T. Bredahl et al., 2015). Social physique anxiety was particularly evident among female employees (Banwell, Sargent, Dixon, & Strazdins, 2017; Edmunds, Hurst, et al., 2013), with these findings indicating how anxiety interferes with the desire to participate in workplace physical activity programs. While these findings demonstrate the influence of anxiety on participation in these programs, yet it is questionable whether anxiety is applicable to corporate fitness centre participation, specifically. Qualitative methods in future research could ascertain whether anxiety is a prominent constraint in the lived experience of employees (refer to section 3.7).

3.2.2 Interpersonal.

Interpersonal constraints are the second of the three constraint factors. While intrapersonal constraints only interfere with preferences, interpersonal constraints interfere with preference and participation (Crawford & Godbey, 1987). Therefore, interpersonal constraints not only prevent employees from making subjective decisions to participate in corporate fitness centres, but also constrains continual participation. The three-way interaction is illustrated in Figure 5.

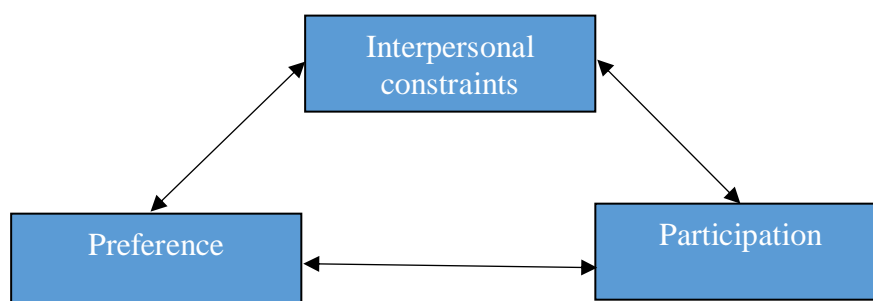


Figure 5. The three-way interaction between interpersonal constraints, preferences, and participation adapted from Crawford and Godbey (1987)

Interpersonal constraints develop between individuals, such as through conflicting attitudes regarding participation in cooperative leisure-time physical activity and discouragement from others (Crawford & Godbey, 1987). Examples of interpersonal constraints specific to exercise participation in corporate fitness centres include a lack of partners with whom to participate and coordination between employees (T. Bredahl et al., 2015; Brown et al., 2014; Fletcher et al., 2008). The three interpersonal constraints that featured most prominently in this literature review were managers, colleagues, and family.

Lack of manager support had little associated literature as a specific constraint to exercise participation in corporate fitness centres (Edmunds, Hurst, et al., 2013), however, literature pertaining to workplace physical activity programs identified lack of manager support as a constraint to participation (J. Mayer et al., 2013; C. Tudor-Locke et al., 2014). A study of workplace physical activity adherence found that the limited support from managers made employees feel unpermitted to participate in the exercise programs (J. Mayer et al., 2013), and employees perceived managers' subtle cues (e.g. gestures and language) as hindrances to participation (C. Tudor-Locke et al., 2014). These findings suggest a manager's negative view of participation in physical activity potentially suppresses an employee's desire to use the corporate fitness centre.

Colleagues had minimal related literature as a constraint to corporate fitness centre participation (Edmunds, Hurst, et al., 2013), however, information from workplace physical activity programs indicated colleagues constrained participation in these programs for three

reasons (e.g. T. Bredahl et al., 2015; Nöhammer, Stummer, & Schusterschitz, 2014). First, employees did not have colleagues with whom to participate in exercise; second, employees experienced coordination issues when trying to identify an amicable time to participate in joint exercise; and last, colleagues provided minimal support to participate in exercise (T. Bredahl et al., 2015; Brown et al., 2014; Edmunds, Hurst, et al., 2013; Fletcher et al., 2008; J. Mayer et al., 2013; Nöhammer et al., 2014). These findings emphasise that colleagues hindered participation, however, it is yet to be confirmed if colleagues are a source of constraint to corporate fitness centre participation specifically, and thus warrant future research in light of the growing supply of these exercise opportunities (Pridham, 2013).

Family obligations commonly constrained employee exercise participation in corporate fitness centres (e.g. Alexy, 1991; Mathes et al., 1992; Wong, Gilson, Bush, & Brown, 2014). Family was a priority in employees' lives, given they opted to spend time with family when presented with an opportunity to exercise (Banwell et al., 2017; Wong et al., 2014). This information also aligns with constraints to leisure-time physical activity, as familial obligations such as child-caring interfered with exercise preferences (MacIntosh & Barbi, 2015; Withall, Jago, & Fox, 2011). These findings indicate to the importance of family in the lived experience of individuals, with the importance subsequently engaging them in cost-benefit analyses to determine whether they participate in exercise.

3.2.3 Structural.

Structural constraints are the third constraint factor, and typically the most commonly cited constraint to leisure-time physical activity participation in general (Brown et al., 2014; MacIntosh & Barbi, 2015). Structural constraints refer to external reasons beyond the individual's control that subsequently constrains participation when individuals establish a preference to participate (Crawford & Godbey, 1987). The relationship is illustrated in Figure 6.

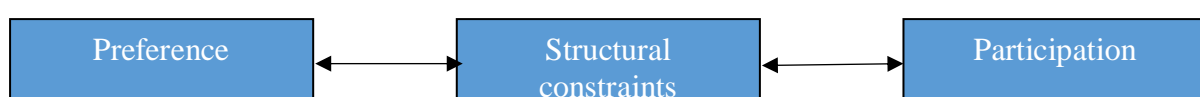


Figure 6. The interaction between preferences, structural constraints, and participation adapted from Crawford and Godbey (1987)

Several structural constraints hinder leisure-time physical activity participation. Examples include insufficient financial capital, weather, and scheduling of activities (Crawford & Godbey, 1987). In total, seven structural constraints to exercise participation in corporate fitness centres and workplace physical activity programs emerged in this review. The structural constraints were physical impairment, employment status, organisational culture, overcrowding, lack of promotion, location and design, and time (e.g. Edmunds, Hurst, et al., 2013; Rossing & Jones, 2015).

Physical impairment, which were considered physiological ailments (Hubbard & Mannell, 2001), constrained employee exercise participation in corporate fitness centres. Examples of physical impairments included past and present injuries, and physical disabilities. This was a structural constraint, as employees neither experienced intrapersonal nor interpersonal constraints to exercise participation (Brown et al., 2014; Kilpatrick et al., 2017; Wong et al., 2014). This was thus considered a structural constraint, and indicates that adverse health conditions outside an individual's control hinders exercise participation in corporate fitness centres.

Employment status has little associated literature as a constraint to corporate fitness centre participation (Schwetschenau et al., 2008), however, information from workplace physical activity and employee wellbeing programs indicated employment status constrained participation in these programs (e.g. Banwell et al., 2017; Edmunds, Hurst, et al., 2013; Kilpatrick et al., 2017). Evidence suggested that shift, part-time, and casual employees experienced hindrances to participation in these programs, given that these employees'

consistently changing work patterns created difficulties in establishing an exercise routine (Banwell et al., 2017; Edmunds, Hurst, et al., 2013). A specific study of participation in employee wellbeing programs demonstrated 11% of shift and part-time employees indicated their employment status constrained their participation in these programs (Kilpatrick et al., 2017). These findings indicate shift, part-time, and casual employees may be inadvertently excluded from corporate fitness centres based on their employment status.

Organisational culture received minimal recognition in the literature as a specific constraint to exercise participation in corporate fitness centres (Edmunds, Hurst, et al., 2013), however, literature pertaining to workplace physical activity programs identified organisational culture as a constraint to participation (T. V. G. Bredahl, Særvoll, Kirkelund, Sjøgaard, & Andersen, 2014; Rossing & Jones, 2015). Organisational culture refers to the internally shared norms and beliefs of an organisation. Working cultures in particular, manifested competitiveness between employees, and made them prioritise work over participating in exercise opportunities (T. V. G. Bredahl et al., 2014; Rossing & Jones, 2015). The findings suggest employees who are embedded in these working cultures potentially prioritise their time into what they believe is their highest priority. This reinforces how employees engage in subjective cost-benefit analyses, as explained in section 3.2.1. Although the decisions regarding working culture align with cost-benefit analyses, these studies were conducted in the context of workplace physical activity programs. Thus, it is inconclusive whether working culture is an applicable constraint to exercise participation in corporate fitness centres and warrants empirical attention in future research (refer to section 3.7).

Overcrowding was identified as a specific constraint to employee exercise participation in corporate fitness centres (Brown et al., 2014; Mathes et al., 1992) and workplace physical activity programs, more generally (C. Tudor-Locke et al., 2014). Overcrowding developed when employees decided to participate in exercise during convenient times, which created

congestion in the corporate fitness centre (C. Tudor-Locke et al., 2014). Further, overcrowding was the fourth most commonly cited constraint to exercise participation in a corporate fitness centre study (Mathes et al., 1992). These findings indicate overcrowding is a comparable issue between corporate fitness centres and commercial gymnasiums (Comereski, 2013). Most of these studies (Mathes et al., 1992; C. Tudor-Locke et al., 2014), however, were quantitatively focussed, and thus do not provide adequate explanation how overcrowding featured in the lived experience of employees. Adopting qualitative methods could bridge this knowledge gap and complement current literature (refer to section 3.7).

Lack of promotion has not been examined in the corporate fitness centre literature, however, evidence from research on workplace physical activity programs indicated lack of promotion was a consistent constraint to employee participation (e.g. Person, Colby, Bulova, & Eubanks, 2010; Toker, Heaney, & Ein-Gar, 2014). The minimal promotional efforts contributed to a lack of awareness of the location of physical activity opportunities and processes to purchase memberships. Two studies calculated that between 16% - 42% of employees were unaware of employee physical activity programs (Person et al., 2010; Toker et al., 2014). These findings correspond with the leisure-time physical activity studies that also identified a lack of promotion as a constraint to participation (Withall et al., 2011). These findings signal a large proportion of employees are unaware of physical activity opportunities. These studies, however, concentrated on workplace physical activity, and future research is required to determine whether a lack of promotion is a constraint to employee exercise in corporate fitness centres. This might contribute new knowledge on strategies to promote corporate fitness centres, and workplace physical activity and wellbeing programs, all of which potentially advances reward management practices.

There is minimal literature on inconvenient location and design specific to corporate fitness centres (Edmunds, Hurst, et al., 2013), however, corresponding information from

workplace physical activity and employee wellbeing program literature suggests inconvenient design and location was a constraint to program participation (e.g. T. Bredahl et al., 2015; Brown et al., 2014; Passey et al., 2014; Person et al., 2010). Previous studies have shown that employees consider the location to engage in opportunities to be inconvenient, parking insufficient, and programs and equipment did not support employee needs (T. Bredahl et al., 2015; Brown et al., 2014; Passey et al., 2014; Person et al., 2010). These findings partially align with information identified in general leisure-time physical activity, considering that inconvenient location of a commercial gymnasium resulted in clients discontinuing their membership (MacIntosh & Barbi, 2015). While these studies indicate amenities influence physical activity and employee wellbeing program participation, future qualitative research on corporate fitness centres could determine whether these amenities have similar contributions to employee exercise behaviour (refer to section 3.7).

Time is a commonly reported structural constraint to employee exercise participation in corporate fitness centres (Alexy, 1991; Schwetschenau et al., 2008), workplace physical activity and wellbeing programs (Fletcher et al., 2008; Kilpatrick et al., 2017; Persson et al., 2017), and leisure-time physical activity, more generally (Withall et al., 2011). Several studies (e.g. Fletcher et al., 2008; Kilpatrick et al., 2017) indicated lack of time was the most frequently cited constraint to participation, with other research showing up to 51% of employees having inadequate time to participate in workplace physical activity and wellbeing programs (Persson et al., 2017; Toker et al., 2014).

Lack of time might be a valid constraint to exercise participation in corporate fitness centres. Other factors, however, might explain why individuals develop perceptions of lack of time, and thus provide additional details as to what develops time-related constraints. This review identified two reasons why employees potentially experience time constraints: program scheduling and work overload.

There is limited literature on program scheduling in the corporate fitness centre context (Schwetschenau et al., 2008), however, related literature from workplace physical activity and employee wellbeing programs indicates program scheduling was a time constraint to employee participation (Sargent, Banwell, Strazdins, & Dixon, 2016; C. Tudor-Locke et al., 2014). Program schedules were incompatible with employee work schedules, with some organisations offering programs at the busiest time of the day (Sargent et al., 2016), and health consultants offering services during what employees perceived as problematic times (T. Bredahl et al., 2015; Brown et al., 2014; Person et al., 2010; Persson et al., 2017; Sargent et al., 2016). These findings suggest management offered wellbeing opportunities at inopportune times, and thus created a perception of insufficient time that interfered in the preference-participation relationship (Crawford et al., 1991). These studies contributed valuable knowledge in relation to program scheduling in workplace physical activity and wellbeing programs, however, it is yet to be determined if program scheduling is a relevant constraint to corporate fitness centre participation, specifically. Future qualitative research could be a prudent strategy to ascertain the managers' decision-making processes involved in providing exercise programs to employees (refer to section 3.7).

There is little literature on work overload as a time constraint in the corporate fitness centre context (Brown et al., 2014), however, related literature from physical activity and employee wellbeing programs suggests work overload was another time constraint to participation (Banwell et al., 2017; Kilpatrick et al., 2017; Sargent et al., 2016). Excessive workloads meant employees dedicate more time to the completion of work, despite the opportunity to participate in programs (Banwell et al., 2017; Brown et al., 2014; Sargent et al., 2016), with some research identifying significant relationships between work overload and non-participation in programs (Kilpatrick et al., 2017). The literature indicates work overload makes employees reassign their time to work duties, a process similar to that of a cost-benefit

analysis (refer to section 3.2.1), and therefore develops the perception of insufficient time to participate in programs. Although these studies contributed knowledge to the workplace physical activity and employee wellbeing literature, these findings do not provide adequate confidence that work overload is a constraint to corporate fitness centre participation. Thus, the limited knowledge indicates a need to examine work overload with qualitative methods to provide an in-depth account of employees' lived experience of this potential constraint to exercise participation (refer to section 3.7).

In summary, constraints theory provides a useful perspective to examine the many factors that constrain employee exercise participation in corporate fitness centres. Specifically, intrapersonal constraints, such as motivation and embarrassment constrain the establishment of preferences; interpersonal constraints such as family and colleagues, interfere with preferences and participation; and structural constraints, such as employment status and time, interfere in the preference-participation relationship. Although these constraint factors contributed new knowledge to employee behaviour, the review identified limited constraints research specific to corporate fitness centre participation (Schwetschenau et al., 2008). Thus, it is unclear whether these intrapersonal, interpersonal, and structural constraints are applicable to exercise participation in corporate fitness centres. Additionally, the quantitative focus of most studies in section 3.2 does not provide a complete understanding of the lived experience of constraints. These limitations are explained further in section 3.7. The complete list of constraints to employee exercise participation identified through this review is presented in Table 5.

Table 5.
Summation of Intrapersonal, Interpersonal, and Structural Constraints Identified in the Literature Review

Intrapersonal	Interpersonal	Structural
Motivation	Managers	Physical impairment

Cost-benefit analysis	Colleagues	Employment status
Disinterest	Family	Organisational culture
Embarrassment		Overcrowding
		Lack of promotion
		Inconvenient location and design
		Time

Not all constraints result in non-participation. The experience of insurmountable interpersonal or structural constraints potentially leads to intrapersonal constraints, and could thus suppress the desire for employees to exercise in corporate fitness centres (Jackson et al., 1993). Constraints theory, however, posits constraints are negotiable obstacles and do not necessarily result in non-participation (Jackson et al., 1993). Instead, the outcomes of constraint negotiation result in a modified version of the activity in question (Jackson et al., 1993), with an employee potentially using a perseverance strategy to mitigate the psychological dissonance experienced during a physically demanding corporate fitness centre exercise program. The hypothetical example indicates employees negotiate constraints, which is why intrapersonal constraints are experienced first, interpersonal constraints second, and then structural constraints last. A visual illustration of the hierarchical constraints model is presented in Figure 7, with negotiation theory presented in the upcoming section.

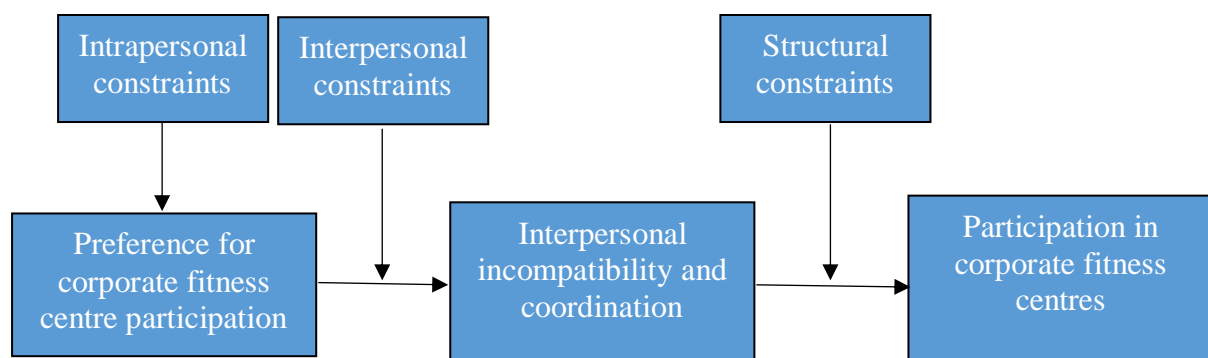


Figure 7. Hierarchical model of constraints to employee exercise participation in corporate fitness centres adapted Crawford, Jackson, and Godbey (1991)

3.3 Negotiation

Constraint negotiation assists the understanding that employees might not necessarily act passively when they experience constraints (Jackson et al., 1993). In fact, constraint negotiation suggests employees might modify either their behaviours, or their specific involvement in exercises in corporate fitness centres to respond actively to the challenges on their participation. Two negotiation strategies, cognitive and behavioural, are evident in the literature, and could explain how employees negotiate constraints.

Cognitive and behavioural strategies are the two negotiation strategies evident in the leisure-time physical activity literature. Cognitive strategies involve modifications to an employee's psychology to negotiate the cognitive dissonance derived from experiencing constraints (Jackson & Rucks, 1995). Common cognitive strategies identified in the leisure-time physical activity literature included perseverance and remaining positive (Dimmock & Wilson, 2011; Fendt & Wilson, 2012). By contrast, behavioural strategies involve the observable modifications to behaviour that offset the negative influences of constraints on participation (Jackson & Rucks, 1995). Common behavioural strategies identified in the leisure-time physical activity literature include time management, skill acquisition, interpersonal coordination, and enhancing financial capital resources (e.g. Jackson & Rucks, 1995; L. Wood & Danylchuk, 2012; Laura Wood & Karen Danylchuk, 2015).

Although studies in leisure-time physical activity provide evidence and descriptions of cognitive and behavioural negotiation strategies, there is minimal evidence to suggest the research is relevant in the context of employee exercise participation in corporate fitness centres. Only one study (i.e. Hubbard & Mannell, 2001) specifically examined negotiation strategies in corporate fitness centres. The main purpose, however, was to investigate the constraints-negotiation process, with the research neither describing how employees negotiate constraints nor developing recommendations to potentially increase employee exercise

participation in corporate fitness centres. The limited research on how employees negotiate constraints provides an opportunity to employ qualitative methods such as semi-structured interviews and focus groups in future studies (refer to section 3.7). The following section includes a review of cognitive and behavioural negotiation strategies that might be relevant to employee exercise participation in corporate fitness centres.

3.3.1 Cognitive.

Two cognitive negotiation strategies emerged in the review: persevere and priority. Persevere was a strategy to cope with the cognitive discomfort of constraints to participation, and was evident in multiple domains. Individuals persevered through psychological dissonance in workplace physical activity programs (Lenneis & Pfister, 2017; Rossing & Jones, 2015) and during leisure-time physical activity (Alexandris, Du, Funk, & Theodorakis, 2017; Dimmock & Wilson, 2011; Laura Wood & Karen Danylchuk, 2015). These consistent findings indicate employees potentially respond actively to constraints, and could therefore employ perseverance strategies to cope with psychological constraints to exercise participation in corporate fitness centres. The literature, however, provides minimal description as to the type of constraints that trigger perseverance strategies and could be an opportunity for future research prospects (refer to section 3.7).

Prioritisation had not been examined in corporate fitness centre participation, however, workplace physical activity program (Banwell et al., 2017; Lenneis & Pfister, 2017) and leisure-time physical activity literature (Craike, 2007; Kennelly, Moyle, & Lamont, 2013) suggested prioritisation is a strategy to negotiate constraints. Individuals with multiple life priorities entered subjective decision-making processes to determine what life priority was of most significance (Banwell et al., 2017; Craike, 2007; Kennelly et al., 2013; Lenneis & Pfister, 2017). The outcome of the decision-making process meant individuals allocated resources (e.g. time and social) to the most important priorities. The prioritisation enabled individuals to cope

with the psychological dissonance imposed by the constraint. The findings indicate individuals make compromises to accommodate life priorities and then relegate secondary and tertiary priorities down their priority list. The findings suggest employees might assess their personal circumstances, and thus determine whether their participation in corporate fitness centres is a primary, secondary, or tertiary priority.

3.3.2 Behavioural.

Activity modification, financial strategies, interpersonal coordination, skill acquisition, and time management are examples of behavioural negotiation strategies identified in the literature. Activity modification had limited available information specific to corporate fitness centre participation, however, workplace and leisure-time physical activity literature indicated that activity modification assisted individuals to negotiate constraints (e.g. Banwell et al., 2017; Samdahl & Jekubovich, 1997). Activity modification involved the observable alterations in behaviour to negotiate constraints to participation. Several activity modification strategies assisted individuals to negotiate constraints, such as replacing vigorous intensity physical activity with lower intensity activities (Banwell et al., 2017), divergent leisure choices encourage couples to make compromises on their leisure activities (Samdahl & Jekubovich, 1997), and individuals modified rules to accommodate those with lower skill levels. The findings indicate when individuals and groups experience constraints to their participation in workplace and leisure-time physical activity, they respond actively, and thus identify strategies to modify the activity to accommodate either themselves or those around them. These findings provide valuable information on activity modification, however, it is inconclusive whether activity modification is applicable to corporate fitness centre participation. Therefore, qualitative research methods could be a prudent strategy to advance knowledge on behavioural negotiation in corporate fitness centres (refer to section 3.7).

The use of financial strategies had only been examined in one study in relation to corporate fitness centres, which showed that financial strategies were the fourth most frequently used strategy to negotiate constraints to participation in corporate fitness centres (Hubbard & Mannell, 2001). In the broader leisure literature, financial strategies have had a variable influence on behaviour (Boo et al., 2014; Tan, Der Yeh, & Chen, 2015). Financial strategies were the second most frequently used negotiation strategy to attend a festival event (Boo et al., 2014), whereas financial strategies were the least frequently used strategy in other leisure activities (Tan et al., 2015). These findings contribute information to recognise the frequency with which individuals engage in financial strategies to negotiate constraints. These data, however, measured the relationships between variables and do not examine the lived experience of negotiation strategies neither in corporate fitness centres nor in general leisure-time physical activity pursuits. Thus, qualitative methods such as semi-structured interviews and focus groups could add description to the limited quantitative knowledge base, and potentially inform better total reward systems (refer to section 3.7).

Examination of interpersonal coordination was limited in the corporate fitness centre literature (Hubbard & Mannell, 2001), however, other studies in relation leisure-time physical activity suggested that individuals used interpersonal coordination to fulfil their need to recreate (e.g. Hubbard & Mannell, 2001; Scott, 1991). Interpersonal coordination involved altering social relationships to negotiate constraints, and to thus experience a desired leisure pursuit (Scott, 1991). Additionally, individuals coordinated work schedules to participate in joint leisure activities such as tennis (Samdahl & Jekubovich, 1997). These findings indicate interpersonal coordination is a pertinent strategy to connect individuals, especially when there is a desire to participate in joint leisure activities. While these data provide insights as to how individuals coordinate relationships to experience leisure, it is unclear whether these strategies apply to the corporate fitness centre context. Thus, qualitative methods could provide insights

whether interpersonal coordination is an important strategy in relation to exercise participation in corporate fitness centres (refer to section 3.7).

Minimal literature exists on skill acquisition as a negotiation strategy in the corporate fitness centre context (Hubbard & Mannell, 2001), however, related literature from the leisure-time physical activity context suggests skill acquisition was used to negotiate constraints (Loucks-Atkinson & Mannell, 2007; Laura Wood & Karen Danylchuk, 2015). Although these specific studies contributed knowledge to constraint negotiation, the wider physical activity literature demonstrates skill proficiency is a key determinant of behaviour (Kalaja, Jaakkola, & Liukkonen, 2010; Overdorf, Coker, & Kollia, 2016). Despite skill acquisition being a salient determinant of physical activity, it is yet to be confirmed in the corporate fitness centre context, and thus indicates a need to quantitatively measure the importance of this behavioural negotiation strategy in future studies (refer to section 3.7).

There is minimal literature pertaining to time management as a negotiation strategy to participate in corporate fitness centres (Hubbard & Mannell, 2001), however, relevant literature from the workplace physical activity literature indicates time management assists employees to negotiate constraints (Rossing & Jones, 2015). Time management involves behavioural modifications that resulted in efficient time use that subsequently negotiates constraints to participation (e.g. Hubbard & Mannell, 2001; Rossing & Jones, 2015). Several time management strategies were evident in the literature, with strategies including the following: reduction of exercise duration (Hubbard & Mannell, 2001), staying up later or waking up earlier to accommodate physical activity (T. Bredahl et al., 2015), and working beyond scheduled shifts to incorporate program participation into the day (Rossing & Jones, 2015). The findings suggest some employees can restructure their day and modify shift structures to enable their participation in either physical activity or exercise. Although these studies contributed to the corporate fitness centre knowledge base, only one study specifically

examined negotiation using quantitative methods (Hubbard & Mannell, 2001). Therefore, future researchers could employ qualitative and quantitative methods to sophisticate the knowledge base on corporate fitness centre participation that could better inform human resource management strategies, and potentially encourage improved employee exercise participation.

In sum, previous research on cognitive and behavioural negotiation strategies provides a foundational understanding as to how employees might respond actively to constraints to exercise participation in corporate fitness centres. Some employees might experience insurmountable constraints that lead to non-participation in exercise, with other employees combatting their constraints by adopting strategies that either mitigate psychological dissonance or engage in behavioural strategies to accommodate participation into their lifestyles. The vast majority of negotiation strategies presented in this section were specific to overall leisure-time physical activity, and thus might not be transferrable as negotiation strategies specifically in corporate fitness centres. Therefore, there is a need to accommodate qualitative and quantitative research methods to advance knowledge on constraint negotiation specific to exercise participation in corporate fitness centres (refer to section 3.7). This could improve management strategy development, and thus enhance employee exercise participation levels. A complete list of negotiation strategies identified in the literature review is presented in Table 6.

Table 6.
Summary of Negotiation Strategies Identified in the Literature Review

Cognitive	Behavioural
Perseverance	Activity modification
Priority	Financial strategies
	Interpersonal coordination
	Skill acquisition

3.4 Motivation

The outcome of negotiation is based on the relative strength of motivation outweighing the strength of constraints is the sixth proposition of negotiation theory, and thus indicates to the salience of the motivation factor in human behaviour (Jackson et al., 1993). It is therefore important that this research considers the role of motivation in employee exercise participation in corporate fitness centres. The role of motivation in the hierarchical constraints model is illustrated in Figure 8.

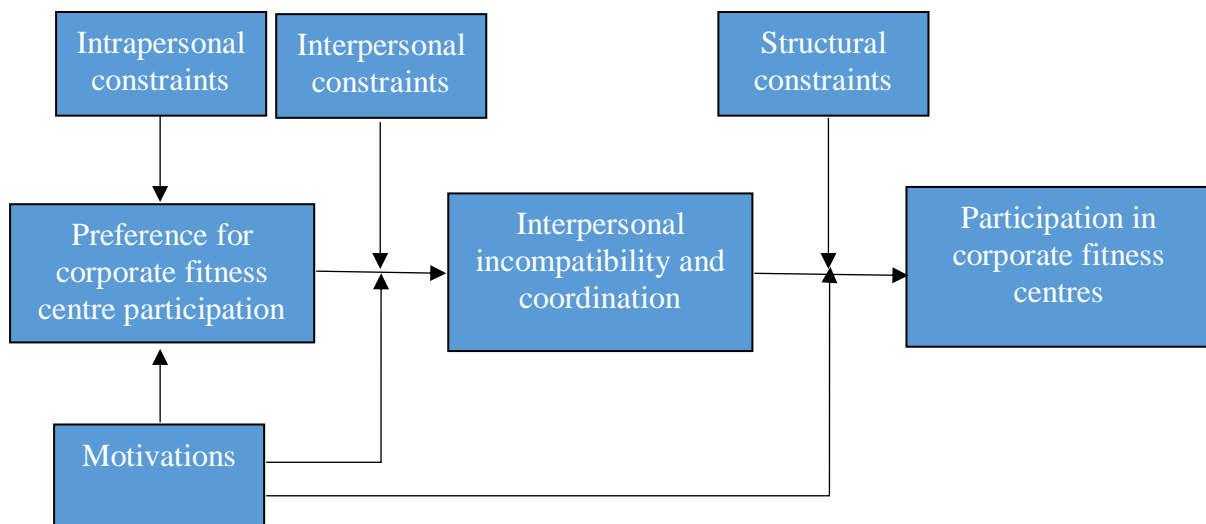


Figure 8. The role of motivation in employee exercise participation in corporate fitness centres adapted from Jackson, Crawford, and Godbey, (1993)

Motivation, which refers to either a key reason or set of reasons, explains why individuals engage in certain behaviours in different contexts, such as education, work, or physical activity (e.g. Biddle et al., 2015; Gallucci, 2013; Weinberg & Gould, 2015). The limited literature on motivation related to employee exercise participation in corporate fitness centres provides limited understanding as to what encourages employees to engage in the exercise opportunities in this context. The limited information on motivation pertaining to corporate fitness centre participation is quantitative (e.g. Mathes et al., 1992), and focussed on

specific concepts such as motivational climates (Huddleston et al., 2012) and social support (Hunter et al., 2017).

Self-determination theory is a unique perspective through which to view the different motives underpinning human behaviour. Fundamentally, self-determination theory recognises motives are positioned along a continuum from extrinsic to intrinsic motivation (Ryan & Deci, 2000). The theory conceptualises external stimuli such as rewards and outcomes that are separable from the activity in question, as extrinsic motivation (Ryan & Deci, 2000). Thus, motivational climate and social support are recognised as extrinsic motivations (Ryan & Deci, 2000).

Motivation, however, is a multifaceted factor, explaining that behaviours are underpinned by various motivation dimensions that range from a state of control to a state of autonomy (Ryan & Deci, 2000). This perspective recognises that employee exercise participation in corporate fitness centres potentially extends beyond extrinsic motivations, and could incorporate other dimensions that recognise corporate fitness centre participation as either a need to comply with external demand or to participate for the inherent satisfaction of exercise. Improving this understanding of the entire spectrum of motives that contribute to employee exercise participation in corporate fitness centres will likely lead to more effective strategies to improve participation.

Four motivation dimensions comprise extrinsic motivation. The first two dimensions are considered controlled forms of motivation: external regulation and introjected regulation. External regulation refers to behaviour to comply with external demand, such as coercion and contingency rewards (Deci & Ryan, 1985). Introjected regulation refers to behaviours to either avoid negative feelings or receive social recognition (Ryan & Deci, 2000). These controlled forms of motivations are known to initiate short-term behaviour, not sustain it (Biddle et al.,

2015). However, the other two extrinsic motivation dimensions are considered to be the more autonomous forms of motivation (Teixeira, Carraça, Markland, Silva, & Ryan, 2012). Identified regulation is one of the more autonomous extrinsic motivation types, with personal value and utility underpinning behaviours (Gallucci, 2013). A useful example is an individual valuing physical activity outcomes such as health benefits. Integrated regulation is the most autonomous of the extrinsic motivation dimensions, as the individual integrates the behaviour into either one's identity or sense of self (Ryan & Deci, 2000). These individuals sustain exercise behaviours, as exercise forms part of their identity (Biddle et al., 2015).

By contrast, intrinsic motivation refers to behaviour performed for the activity itself (Ryan & Deci, 2000). Individuals participate in physical activities, as the behaviour develops a sense of enjoyment, is challenging, or to learn and accomplish new physical activities (Biddle et al., 2015; Gallucci, 2013; Weinberg & Gould, 2015). Examination of intrinsic and extrinsic motivation for exercise participation in corporate fitness centres will provide management with the knowledge base to more effectively develop strategies to improve employee exercise participation, as management can recognise what motives are underpinned by either control or freedom, and thus develop strategies accordingly. Self-determination theory is illustrated in Figure 9, and incorporates motivational dimensions that range from a state of control to a state of autonomy.

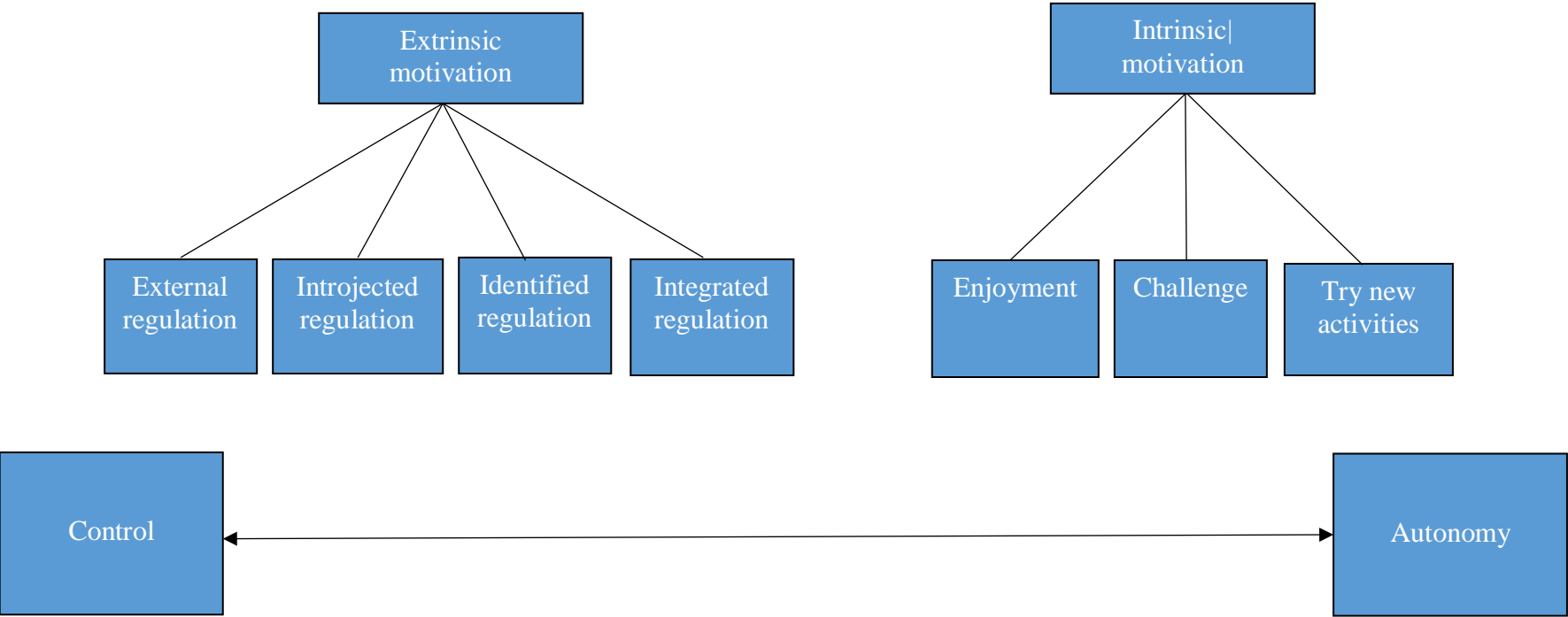


Figure 9. Conceptual model of self-determination theory based on literature review

In sum, motivation is an important factor that helps to explain what contributes to human behaviours, whether the behaviour is performed in different stages of the lifespan (Biddle, 2007; Brunet & Sabiston, 2011; Gavin, Keough, Abravanel, Moudrakovski, & Mcbrearty, 2014), in different leisure contexts and activities (Alexandris, Kouthouris, & Girgolas, 2007; Alexandris & Tsorbatzoudis, 2002; Kim, Lee, Kim, & Kim, 2014), or in commercial gymnasiums (Lim, Ting, Loh, Loo, & Shaikh, 2013; MacIntosh & Barbi, 2015; Partridge, Knapp, & Massengale, 2014). Limited research, however, focussed on the spectrum of motives to participate in exercise in corporate fitness centres (e.g. Hubbard & Mannell, 2001; Huddleston et al., 2012; Hunter et al., 2017). The limited understanding on motivation demonstrates a need to conduct research to more comprehensively understand the motives that range from control to autonomy. Future research efforts potentially develop findings that advance knowledge (refer to section 3.7), and inform effective management strategies to improve employee participation levels. The following section employs self-determination theory to review the motives that contribute to employee exercise participation in corporate fitness centres.

3.4.1 External regulation.

Rehabilitation, incentives, and interpersonal encouragement were the external regulators identified through this research. These three regulations are reviewed in more detail in this section.

Rehabilitation had limited information associated to corporate fitness centres (Rossing & Jones, 2015), however, workplace physical activity (T. Bredahl et al., 2015) and leisure-time physical activity (MacIntosh & Barbi, 2015) literature suggested rehabilitation underpinned exercise behaviour. Doctors' recommendations encouraged employees to use workplace physical activity opportunities as strategies to rehabilitate and prevent the onset of future physical health problems (T. Bredahl et al., 2015; Rossing & Jones, 2015). These data

corresponded with findings identified in the general leisure-time physical activity literature, with medical practitioners recommending individuals to engage in exercise during leisure time (MacIntosh & Barbi, 2015). The findings suggest employees with either physical health conditions or in physically demanding jobs could be coerced by trusted sources to participate in exercise in corporate fitness centres. These findings also indicate to the lived experience of rehabilitation as an external regulator. This information, however, does not measure the importance of rehabilitation in relation to corporate fitness centre participation, and thus suggests quantitative research could complement these qualitative findings. This is a matter discussed in detail in section 3.7.

There is minimal literature pertaining to incentives as an external regulator to employee exercise participation in corporate fitness centres (Brown et al., 2014), however, the workplace physical activity literature suggests incentives have mixed influences on employee physical activity participation. Incentives are the financial inducements management use to encourage employee physical activity participation. Some research (e.g. Brown et al., 2014; Persson et al., 2017; Toker et al., 2014) shows offering free physical activity and employee wellbeing programs encourages employees to engage in these opportunities. Other research (e.g. Abraham et al., 2011; Sargent et al., 2016), however, demonstrates incentives have minimal influence on employee exercise participation. Recent studies suggest that external regulators, such as financial, free programs, and tax incentives, improve short-term physical activity (Biddle et al., 2015). The mixed findings indicate financial incentives have a potentially variable contribution in stimulating employee exercise participation in corporate fitness centres. This could be a challenging concept to incorporate into total reward systems, as a financial reward of retained participation could be based on a non-financial employee benefit such as corporate fitness centre provision.

Interpersonal encouragement is the social interaction that inadvertently pressures employees' decision to participate in exercise in corporate fitness centres. Three sources of interpersonal encouragement featured in the review: instructors, colleagues, and managers.

Encouragement from instructors were rarely reported in literature related to corporate fitness centres, however, workplace (T. Bredahl et al., 2015) and leisure-time physical activity (Comereski, 2013; Ferrand, Robinson, & Valette-Florence, 2010) literature indicated that instructors externally regulated exercise participation. Instructors motivated clients when they provided clear introductions, had high-energy levels, and participated in the exercises themselves (T. Bredahl et al., 2015). These findings are similar to that observed in commercial gymnasiums, and reinforces the need to have quality instructors to continually motivate exercise participation (Comereski, 2013). These findings, however, are not specific to corporate fitness centres, and it is thus unclear whether instructors are important employee exercise regulators in this context. Future qualitative research could help elicit this type of information that will advance knowledge on corporate fitness centres (refer to section 3.7).

Encouragement from colleagues is another source of external regulation that might influence employee participation in corporate fitness centres. One study showed that colleagues used verbal and email communication strategies to motivate employees to participate in exercise (Hannon et al., 2012; Renton, Lightfoot, & Maar, 2011). Another found that management used physical activity champions to support social interactions to further supplement interpersonal encouragement (Edmunds & Clow, 2015). The findings signify the important role of colleagues as external support systems.

There was minimal literature relating to encouragement from managers in relation to corporate fitness centre participation (Brown et al., 2014), however, workplace physical activity programs literature indicated that managers were an external source of motivation (T.

Bredahl et al., 2015; Kilpatrick et al., 2017). When managers proclaimed their support for participation, the encouragement legitimised the program. The act of legitimising programs acted as a form of extrinsic motivation from the perspective of employees, and thus contributed to employee participation (e.g. T. Bredahl et al., 2015; Kilpatrick et al., 2017).

3.4.2 Introjected regulation.

There was limited research relating to the role of introjected regulation specific to corporate fitness centres (Mathes et al., 1992), however, the broader gymnasium (Lim et al., 2013) and leisure-time physical activity literature indicated introjected regulation can positively influence physical activity behaviour (Biddle et al., 2015; Gallucci, 2013; Weinberg & Gould, 2015). A specific corporate fitness centre study showed respondents had the need to appear attractive to others (Mathes et al., 1992), which is an introjected regulator consistent to that found in the broader gymnasium literature (Lim et al., 2013). The general physical activity information reinforced introjected regulation as a key motivation dimension in this research, considering that variables, such as avoidance of guilt and needing to receive recognition, are prevalent in the general physical activity literature (Biddle et al., 2015; Gallucci, 2013; Weinberg & Gould, 2015). The minimal understanding of introjected regulation in relation to corporate fitness centre participation demonstrates a need to explore and measure its importance in employees' lives to better inform strategies that improve participation (refer to section 3.7).

3.4.3 Identified regulation.

Teambuilding and health benefits were the identified regulators that featured through this review. These two identified regulators are explained in more detail in this section.

Teambuilding had limited literature associated to corporate fitness centres, however, workplace (T. Bredahl et al., 2015; Edmunds & Clow, 2015; J. Mayer et al., 2013) and leisure-

time physical activity (Ryan Shuda & Feito, 2017) literature suggested that teambuilding underpinned exercise behaviour. Team building was recognised as a valuable outcome of participating in exercise in workplace physical activity, as it contributed to group cohesion. Employees shared exercise experiences with like-minded colleagues, who all contributed to a common goal (T. Bredahl et al., 2015; Edmunds & Clow, 2015; J. Mayer et al., 2013). These findings are similar to that identified in the leisure-time physical activity context, given that individuals who participated in group-based exercises did not want to be perceived as the physically weakest individual among the group (Ryan Shuda & Feito, 2017). These findings reinforce the social benefits of exercise described in chapter two, and the need to advance knowledge regarding corporate fitness centre participation, as these findings do not specifically pertain to corporate fitness centres. Advancing knowledge could be effectively achieved with a mixed methods design (refer to section 3.7), and could contribute to reward management practices.

Health benefits had minimal literature pertaining to corporate fitness centres (Mathes et al., 1992), however, the workplace (e.g. Renton et al., 2011; C. Tudor-Locke et al., 2014) and leisure-time physical activity (MacIntosh & Barbi, 2015) literature indicated health benefits underpinned exercise participation. Physical and mental health benefits were recognised as valuable outcomes that regulated employee exercise participation (T. Bredahl et al., 2015; Mathes et al., 1992). Physical health benefits were the physiological outcomes of participating in exercise, such as weight maintenance, increases to physical performance, and prevention of physical health conditions (T. Bredahl et al., 2015; MacIntosh & Barbi, 2015; Mathes et al., 1992; J. Mayer et al., 2013; Partridge et al., 2014; C. Tudor-Locke et al., 2014). By contrast, mental health benefits were the improvements to psychological wellbeing, including stress reduction, relaxation, and to cope with challenging circumstances (Das, Rinaldi-Miles, & Evans, 2013; Mathes et al., 1992; Renton et al., 2011; C. Tudor-Locke et al.,

2014). These findings of physical and mental health benefits reinforce the salient health outcomes described in chapter two.

3.4.4 Integrated regulation.

Few researchers have examined integrated regulation in the context of corporate fitness centres. Integrated regulation, however, is known to underpin behaviour in leisure-time physical activity (Biddle et al., 2015; Gallucci, 2013; Weinberg & Gould, 2015), and is likely to be one of the four extrinsic motivation dimensions that underpin employee exercise participation in corporate fitness centres. The general leisure-time physical activity literature indicates that identity potentially underpins integrated regulation in corporate fitness centres (Biddle et al., 2015). The limited available information thus signals the need to further explore identity with qualitative and quantitative methods to gather a complete understanding of this motive in the employee exercise context (refer to section 3.7).

3.4.5. Intrinsic motivation.

Intrinsic motivation had limited literature associated to corporate fitness centre participation (Huddleston et al., 2012), however, group exercise (Burn & Niven, 2018; Partridge et al., 2014) and the general leisure-time physical activity literature suggested that intrinsic motivation underpinned maintenance of leisure-time physical activity (Biddle et al., 2015; Gallucci, 2013; Weinberg & Gould, 2015). The consistent findings across different physical activity domains indicate that intrinsic motivation likely underpins employee exercise behaviour, with enjoyment, challenge, and trying new exercises (Biddle et al., 2015; Burn & Niven, 2018) specifically motivating employees. The limited literature indicated a need to explore the importance of intrinsic motivation in relation to employee exercise participation.

In summary, there is substantial evidence regarding motivation in the boarder workplace and leisure-time physical activity literature, however, the knowledge base specific

to corporate fitness centres is limited. The studies in this review provided evidence that some motives controlled employee exercise participation (e.g. Hunter et al., 2017; Rossing & Jones, 2015), and thus indicated behaviour underpinned by extrinsic motivation. In contrast, other findings showed motives were autonomous (e.g. Burn & Niven, 2018; Huddleston et al., 2012). More importantly, the findings align with self-determination theory; employee participation in corporate fitness centres can range from control to state of autonomy. Exploring the motivational spectrum is important for management, as they can use the information to inform better strategies that potentially improve employee participation levels in corporate fitness centres. A summation of motives identified through the literature review is presented in Table 7.

Table 7.
Summation of Motives Identified Through the Literature Review

External	Introjected	Identified	Integrated	Intrinsic
Rehabilitation	Avoid guilt	Teambuilding	Identity	Enjoyment
Incentives	Receive recognition	Health benefits	Sense of self	Challenge
Interpersonal encouragement				Try new exercises

3.5 Participation

The previous three sections comprised a review of literature pertaining to the three independent factors in this research: constraints, negotiation, and motivation. The purpose of this section is to present the literature on the dependent factor: participation in corporate fitness centres. A range of methods have been used to measure participation in corporate fitness centres. Participation measurements included single items, such as monthly and yearly participation (e.g. Tsai, Baun, & Bernacki, 1987); percentage of the employee population who use the corporate fitness centre (e.g. Clark et al., 2011); and participation categories, such as

low and high levels (e.g. Steinhardt & Young, 1992). Each measurement is explained in more detail.

Single items have been used to measure employee exercise participation in corporate fitness centres in past studies (e.g. Alexy, 1991; Tsai et al., 1987). The purpose of this measurement was to determine whether employees are either yearly or monthly participants of corporate fitness centres (Alexy, 1991; Burton et al., 2005; Tsai et al., 1987). This method enables calculation of vague participation trends on a monthly or a yearly basis, yet excludes detailed participation data such as frequency per week. These studies also excluded reliability and validity criteria, and thus limits the measurement of participation.

Percentage of the employee population who participate in the corporate fitness centre was another method of measuring employee exercise (e.g. Heaney & English, 1995; Schwetschenau et al., 2008). The purpose of these measures was to determine what proportion of employees were recruited as participants into the corporate fitness centre. Research from as early as 1980s demonstrated that participation ranged from 10% - 60% of employees (Burton et al., 2005; Clark et al., 2011; Heaney & English, 1995; Lewis et al., 1996; Lynch et al., 1990; Mathes et al., 1992; Schwetschenau et al., 2008; Shephard et al., 1980; Steinhardt & Young, 1992). Percentage of the employee population is a quick measure of overall employee participation in corporate fitness centres, however, the measure excludes finer details such as the frequency and length of participation in exercise within the corporate fitness centre. This weakness reinforces the need to employ a method of collecting descriptive statistics to accurately measure exercise participation in corporate fitness centres. Similarly with the previous participation measurement method, validity and reliability is questionable as researchers (e.g. Heaney & English, 1995; Lewis et al., 1996) did not provide reliability and validity scores.

Categories is the third method of measuring employee exercise participation in corporate fitness centres. Categories are discrete groups that describe different participation types. Several categories featured in past research and included the following: non-members, non-exercisers, and exercisers (Bernacki & Baun, 1984); low-active, moderately-active, and highly-active (Steinhardt & Young, 1992); and low exercise adherence and high exercise adherence groups (Lilian Lechner & De Vries, 1995). These past research efforts easily assign employees to discrete exercise categories, however, the method of measuring is not without limitation. This method is unable to quantitatively describe participation, and also limits data analysis to non-parametric statistics, which are a set of weaker measurements in comparison to parametric statistics (Field, 2009). These findings indicate a need to use a quantitative measure of corporate fitness centre participation that enables parametric statistical analysis (Gravetter & Wallnau, 2013) (refer to section 3.7).

In sum, the studies in this review demonstrated the vague methods of measuring employee participation in corporate fitness centres. Single items, percentages of the employee population, and use of participation categories provide some insights as to how previous researchers attempted to measure exercise participation in corporate fitness centres. The measures of participation, however, have several limitations that influence the need to gather descriptive statistics about employee exercise in corporate fitness centres. Descriptive statistics enable using more sophisticated statistical techniques that provide a greater contribution to knowledge in comparison to previous research attempts. There is an additional need to measure exercise participation with a valid and reliable measurement instrument. A detailed description is explained in section 3.7.

3.6 Constraints, Negotiation, Motivation, and Participation

The previous four sections included a review of the four factors in this research: constraints, negotiation, motivation, and participation. The purpose of the current section is to

review studies that incorporated these four factors, and the relevance of previous findings for developing strategies to potentially improve employee exercise participation in corporate fitness centres.

To recognise the relationships between the four factors, a brief review of the constraints-effects-mitigation model is warranted. The constraints-effects-mitigation model is recognised as one of the most significant contributions to knowledge in the field of constraints research (Mannell et al., 2005). The constraints-effects-mitigation model was one of four constraint-negotiation models tested to ascertain the interactions between constraints, negotiation, motivation, and participation (Hubbard & Mannell, 2001). The data corresponded with the constraints-effects-mitigation model, with the model informing research on participation in several leisure-time activities, such as travel and leisure-time physical activity (e.g. Chung et al., 2016; Hung & Petrick, 2012; Lyu & Oh, 2014; White, 2008).

Researchers (e.g. Loucks-Atkinson & Mannell, 2007; Son, Kerstetter, & Mowen, 2009; White, 2008) included psychological constructs into the model to extend its applicability and to enhance the understanding of the constraints-negotiation process. Negotiation self-efficacy and extraversion are examples of the psychological constructs researchers included (Lyu et al., 2013). The psychological constructs provide an improved understanding as to how individuals' self-belief, personal affinity, and personality traits influence the relationships between constraints, negotiation, motivation, and participation in leisure. Exploring other psychological constructs, such as neuroticism (Lyu et al., 2013), provides a more holistic understanding of human behaviour in general, and could emphasise the important role psychology plays in participating in corporate fitness centres. Exploring other psychological constructs, however, was a delimitation of this research (refer to section 1.5), with constraints, negotiation, motivation, and participation being the constructs of focus.

There are several relationships evident in the constraints-effects-mitigation model. First, constraints has a dual role in the model. Constraints has a direct, negative influence on participation, while also triggering the use of negotiation strategies that mitigate some of the negative influences constraints has on participation (Hubbard & Mannell, 2001). In contrast, motivation has a direct, positive influence on participation, while also triggering the use of negotiation strategies (Hubbard & Mannell, 2001). Whether constraints or motivation trigger negotiation, negotiation has a positive influence on participation (Hubbard & Mannell, 2001). Each relationship is reviewed, with the constraints effects-mitigation model presented in Figure 10.

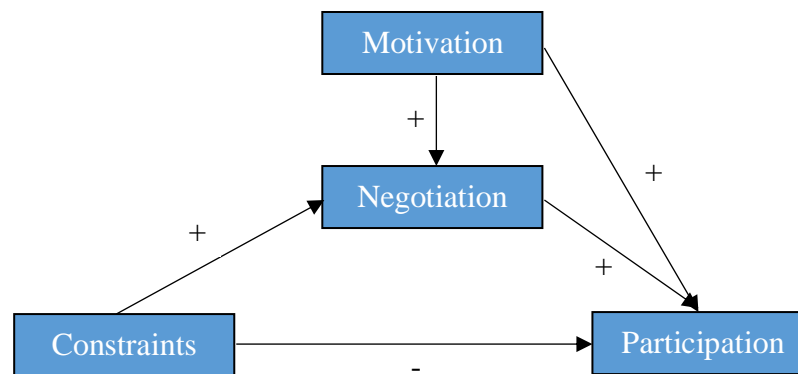


Figure 10. Constraints-effects-mitigation mode adapted from Hubbard & Mannell (2001)

Constraints have a consistent, negative influence on participation in multiple leisure activities. These include participating in corporate fitness centres (Hubbard & Mannell, 2001), leisure-time physical activity (Loucks-Atkinson & Mannell, 2007; White, 2008), and travel (Chung et al., 2016; Hung & Petrick, 2012). These consistently negative findings reinforce the need to examine what hinders exercise participation in corporate fitness centres, and to assist management to effectively develop strategies to reduce the negative influences of constraints on participation.

Research on the constraint-negotiation relationship has shown inconsistent findings. Research indicated constraints triggered negotiation strategies that mitigated some of the negative influences constraints had on participation (Hubbard & Mannell, 2001; Loucks-Atkinson & Mannell, 2007; White, 2008). By contrast, other research showed constraints did not trigger negotiation strategies, instead, constraints only had direct negative effects on participation (Hung & Petrick, 2012; Lyu et al., 2013; Son, Mowen, & Kerstetter, 2008). The only study, to the investigator's knowledge, that has examined the constraint-negotiation process in corporate fitness centres revealed negotiation mediates the constraint-participation path (Hubbard & Mannell, 2001) with this finding yet to be replicated in other studies.

Motivation is consistently associated with positive influences on participation in multiple activities, such as leisure-time physical activity (White, 2008) and travel contexts (Chung et al., 2016; Hung & Petrick, 2012). These consistent findings reinforce the notion that when the strength of motivation exceeds the strength of constraints, the outcome is participation (Jackson et al., 1993). More importantly, these findings indicate that despite constraints to participation, sheer motivation could result in participation in corporate fitness centres. The findings reinforce the need to include the motivation construct in this research, and to examine the spectrum of motives that underpin employee exercise.

Negotiation consistently mediates the motivation-participation path in several physical activity contexts, such as corporate fitness centres (Hubbard & Mannell, 2001), outdoor recreation (White, 2008), and among individuals with musculoskeletal conditions (Loucks-Atkinson & Mannell, 2007). These findings indicate highly motivated employees potentially use more negotiation efforts to participate in exercise in corporate fitness centres. The findings also reinforce the salient role of motivation not only to participate directly, but also to exert efforts that negotiate constraints, and thus indirectly influence participation. This further supports the need to incorporate negotiation in this research.

3.7 The Need to Advance Knowledge

The literature review indicated minimal research on what factors contribute to employee exercise participation in corporate fitness centres, and is a matter that warrants research attention. The review indicated a general dearth of available information specific to corporate fitness centres (e.g. Mathes et al., 1992; Schwetschenau et al., 2008). Most of the findings derived from either workplace physical activity (e.g. T. Bredahl et al., 2015; Kilpatrick et al., 2017) and wellbeing programs (C. Tudor-Locke et al., 2014), or leisure-time physical activity literature (e.g. Craike, 2007; MacIntosh & Barbi, 2015). This information contributed valuable knowledge to these three research contexts, however, it is uncertain whether the available information is applicable specifically to corporate fitness centres. Thus, this timely research focused on corporate fitness centre participation to advance knowledge on a largely neglected physical activity context, given the expected rise in the number of corporate fitness centres (Halvorson, 2015; Pridham, 2013).

The review revealed minimal application of theory use to examine employee participation in corporate fitness centres in past research. Previous research efforts used factor analysis to combine barrier items, and thus develop discreet barrier categories (Alexy, 1991; Schwetschenau et al., 2008). Similarly, research concentrated of specific extrinsic motives that encouraged employee exercise participation (Huddleston et al., 2012; Hunter et al., 2017). These studies could have contributed valuable knowledge to improve the understanding of corporate fitness centre participation, had these previous efforts adopted a theoretical perspective in their research designs. Adopting theory presents a systematic approach of analysing the known interrelated factors that contribute to the activity in question (Bryman, 2012). This deficiency in these previous studies presented this research with an opportunity to incorporate constraints, negotiation, and self-determination theories to rigorously interpret

employee participation, and subsequently advance knowledge that becomes more meaningful for the managers to improve exercise participation in corporate fitness centres.

The general paucity of available corporate fitness centre literature indicated a need to adopt both qualitative and quantitative methods in future research. This review specifically sourced literature from different physical activity contexts that could inform what constrains corporate fitness centre participation, what strategies employees adopt to negotiate constraints, and what motives underpin exercise participation. The vast majority of specific information presented in relation to corporate fitness centre participation, however, adopted quantitative methods (e.g. Alexy, 1991; Hubbard & Mannell, 2001; Schwetschenau et al., 2008). Therefore, this research adopted qualitative methods, such as semi-structured interviews and focus groups, to examine the lived experiences of employees' constraints, negotiation strategies, and motives to participate in corporate fitness centres. These methods could complement the available quantitative information, by providing description and potential processes (Bryman, 2012) as to how constraints, negotiation, and motives are experienced in employees' lives. The inductive nature of qualitative research could also enable other insights to emerge that otherwise would not be assessed with deductive methods (Creswell, 2014). Quantitative methods are also warranted in future research to objectively measure the lived experiences of constraints, negotiation strategies, and motivation. This research employed qualitative and quantitative methods, into a mixed methods research approach described in more detail in section 4.1.3.

This review also recognised the need to employ descriptive statistics to measure employee exercise participation in corporate fitness centres. The previous methods of measuring participation adopted single items, used percentages of the employee population, and assigned employees to participation categories that had limited reliability and validity in measuring corporate fitness centre participation. These three methods limit the understanding of employee exercise participation, and also preclude the use of many types of statistical

analyses, such as regression, to further measure the nuances associated to employee participation. Thus, this research included a participation measure that accommodated collecting descriptive statistics, was reliable in measuring participation, and facilitated employing a parametric analyses that contributed knowledge beyond that of the methods used in past research (refer to section 4.3).

3.8. Chapter Summary

This chapter presented a literature review on employee exercise participation in corporate fitness centres. The review identified a general paucity of information specific to corporate fitness centres (e.g. Hubbard & Mannell, 2001; Hunter et al., 2017). Consequently, this review incorporated workplace physical activity and wellbeing programs, and leisure-time physical activity literature to recognise the potential constraints, negotiation strategies and motives pertaining to employee exercise participation in corporate fitness centres.

The chapter commenced with an explanation of other potential theories considered for this research. Constraints was the focus of the next section, and included a review of intrapersonal, interpersonal, and structural constraint factors. Negotiation followed the review on constraints, considering that negotiation is an active response to the negative influences constraints has on participation (Hubbard & Mannell, 2001; Jackson et al., 1993). The review included data on both cognitive and behavioural negotiation strategies. This led to a discussion on motivation, with a specific focus on self-determination theory, which indicated employee participation potentially involves motives ranging from complete control to complete autonomy (Biddle et al., 2015). Table 8 is a summation of constraints, negotiation strategies, and motives identified through the literature review.

Table 8.

Summation of Constraints, Negotiation Strategies, and Motives to Exercise Participation in in Corporate Fitness Centres Identified Through the Research

Constraints				
<u>Intrapersonal</u>		<u>Interpersonal</u>		<u>Structural</u>
Motivation		Managers		Physical impairment
Cost-benefit analysis		Colleagues		Employment status
Disinterest		Family		Organisational culture
Embarrassment				Overcrowding
				Lack of promotion
				Location and design
				Time
Negotiation				
<u>Cognitive</u>		<u>Behavioural</u>		
Perseverance		Activity modification		
Priority		Financial strategies		
		Interpersonal coordination		
		Skill acquisition		
		Time management		
Motivation				
<u>Identified regulation</u>	<u>Introjected regulation</u>	<u>Identified regulation</u>	<u>Integrated regulation</u>	<u>Intrinsic motivation</u>
Rehabilitation	Avoid guilt	Teambuilding	Sense of self	Enjoyment
Incentives	Receive recognition	Health benefits	Identity	Challenge
Interpersonal encouragement				Try new activities

While these constraints, negotiation strategies, and motives provide a starting point to examine what factors contribute to employee participation, a common theme was the general lack of both qualitative and quantitative information. The recognition of the three independent factors also led to a review on the measurement methods of participating in corporate fitness

centres. The review revealed a need to quantitatively measure participation with reliable and valid measures.

Studies that included the four factors in this review were presented, following the review on participation measurements. The purpose was to review the relationship between the four constructs and to ascertain how these relationships are potentially relevant in this research and in the context of devising strategies that improve employee exercise participation levels.

The final section of this chapter discussed the need to advance knowledge on employee exercise participation in corporate fitness centres, by identifying four key knowledge gaps. First, there was minimal available empirical evidence specific to constraints, negotiation strategies, and motives to participate in corporate fitness centres. Second, there was minimal theory use to examine what constraints hinder participation, how employees negotiate constraints, and what motives underpin employee exercise. Third, the available corporate fitness centre literature was predominantly quantitative, which identified a need to explore the lived experiences of employees' constraints, negotiation strategies, and motives to participate in corporate fitness centres. Last, the review of methods to measure corporate fitness centre participation revealed that a robust measure of participation that accommodates parametric analyses that is reliable and valid would advance knowledge and improve the understanding of employee exercise participation in corporate fitness centres.

Consequently, and to bridge these research gaps, this research employed constraints, negotiation, and self-determination theories within a convergent mixed methods design to explore what factors contribute to employee exercise participation in corporate fitness centres that informed management strategies to potentially improve employee participation levels. The next chapter explains the methodology to achieve this research purpose.

CHAPTER FOUR: METHODOLOGY

“...the combination of quantitative and qualitative data provides a more complete understanding of the research problem than either approach by itself” (Creswell & Plano Clark, 2011, p. 8).

The purpose of this chapter is to provide a comprehensive explanation of the research approach and methods used to address the research purpose: to explore what factors contribute to employee exercise participation in corporate fitness centres, and from this information, develop management strategies that potentially improve employee participation levels. The chapter is separated into three key sections. Mixed methods is the focus in section one. It begins with a thorough discussion of the mixed methods approach, and also includes an explanation of the epistemological debates, strengths, weaknesses, and safeguards associated to the mixed methods approach used in this research. The section also describes the specific mixed methods design employed in this research.

The qualitative research approach is the focus of the next section, as it was the first data collection phase. It includes a detailed explanation why a case study was the most effective design to explore employee exercise participation in corporate fitness centres, and describes the three data collection methods, with associated trustworthiness and analysis protocols.

The quantitative research approach is the last key section in this chapter, as it was the second data collection phase in this research. The section discusses the strengths, weaknesses, and safeguards employed in this research, and then explains the protocol associated to developing and distributing the national online questionnaire. The sections also includes

reliability and validity discussions, with quantitative data analysis protocols concluding the chapter.

4.1 Mixed Methods

Mixed methods combines qualitative and quantitative approaches to answer a research question(s). Several mixed methods designs exist (e.g. convergent, explanatory, exploratory, transformative), with researchers providing different definitions of the mixed methods approach (e.g. Bryman, 2012; Creswell, 2014; Creswell & Plano Clark, 2011; Hesse-Biber, 2010; Plano Clark & Ivankova, 2016). The Creswell (2014) definition, however, provides a succinct account of the many features associated with the mixed methods approach:

Mixed methods research is an approach to inquiry involving collecting both quantitative and qualitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks (Creswell, 2014, p. 4).

4.1.1 Epistemological debate.

The mixed methods approach has attracted much debate over the years. Qualitative and quantitative methodologies represent different perspectives, leading some to suggest that neither qualitative nor quantitative research approaches should be combined (Bryman, 2012). The qualitative approach is associated with certain philosophical worldviews, such as interpretivism and constructionism, which posits that individuals interpret and construct their realities (Creswell & Plano Clark, 2011). The quantitative approach is associated with other philosophical worldviews, such as positivism and objectivism, which posits that reality is scientific and objectively measured (Creswell & Plano Clark, 2011). The two research approaches are situated at opposite ends of the paradigm continuum, and therefore combining the approaches is incompatible for single research projects (Bryman, 2012).

The *technical* argument, however, supports the mixed methods approach (Bryman, 2012). Researchers (e.g. Bryman, 2012; Hesse-Biber, 2010; Plano Clark & Ivankova, 2016) suggest those who employ mixed methods recognise that combining qualitative and quantitative methods mitigates the weakness of using each approach alone, while simultaneously intensifying the strength of each approach (refer to section 4.1.2). Mixed methods researchers acknowledge the differences in epistemological perspectives and believe the approaches are fusible to develop a holistic understanding of phenomena (Creswell, 2014). Subsequently, the mixed methods approach is pragmatic for the study of complex political and business related problems, which could explain why the approach's use increased, particularly over the last decade (Hesse-Biber, 2010; Morgan, 2014). This research considered the technical argument, and therefore employed mixed methods, as the approach was effective to explore what factors contribute to employee exercise participation in corporate fitness centres.

4.1.2 Strengths and weaknesses of mixed methods.

Mixed methods has many strengths that provide valuable research outcomes (e.g. Bryman, 2012; Creswell & Plano Clark, 2011; Hesse-Biber, 2010). Mixed methods offsets the weakness of using a single approach in a study (Bryman, 2012; Creswell & Plano Clark, 2011; Hesse-Biber, 2010). While the qualitative strategy provides detailed description of the subject matter, sample sizes are limited, and thus generalising results beyond the sample is a challenging exercise for researchers. Therefore, a study incorporating a questionnaire to generalise the qualitative findings offsets the weakness of the small qualitative sample. Similarly, quantitative questionnaires use large samples with limited explanation. A study incorporating qualitative methods such as semi-structured interviews offsets the quantitative weakness and provides explanation, subject context, and potentially new information overlooked by the quantitative method (Creswell, 2014).

Mixed methods gathers two data strands that develop a more complete data set. Completeness refers to the holistic account of the studied phenomenon, as a researcher is not bound to a single philosophical worldview, and therefore has different methods at their disposal to collect multiple data strands (Creswell & Plano Clark, 2011). The multiple data strands are converged and synthesised together to provide a more complete account of the inquiry, as opposed to being limited to single research approaches (Bryman, 2012).

The mixed methods approach is not without weaknesses (e.g. Creswell & Plano Clark, 2011; Hesse-Biber, 2010). An obvious weakness is the demand for researchers to be skilled with both qualitative and quantitative approaches. Researchers must have the requisite skills to collect, analyse, and report results of each research approach separately (Creswell & Plano Clark, 2011). Mixed methods researchers must also be well-versed with the strengths and weaknesses of qualitative interviews, focus groups, and coding techniques; and quantitative questionnaires and statistical analyses (Bryman, 2012). The experiences in both qualitative and quantitative approaches provides a foundation for researchers to combine the data collection, analyses, and reporting structures required in the mixed methods approach (Hesse-Biber, 2010). In this research, the investigator recognised these weaknesses, and subsequently acquired the requisite skills to collect and analyse qualitative and quantitative data strands separately, while also learning how to converge and synthesise the data strands as per the mixed methods approach (Creswell, 2014).

Time and financial resources are another weakness associated to mixed methods (e.g. Creswell & Plano Clark, 2011; Hesse-Biber, 2010). These significant resources are related to researcher development, data collection, and analysis (Hesse-Biber, 2010). Consequently, researchers embarking on a mixed methods project must consider the following questions:

- Is there ample time to collect and analyse two data strands?

- Is there sufficient financial resources to collect and analyse two data strands?
- Does the researcher and team have the necessary skills to complete the research?

(Creswell & Plano Clark, 2011).

The investigator in this research considered these questions and identified sufficient time and financial resources to complete this mixed methods inquiry. The investigator had four years to complete the research, with a research budget sufficient to collect and analyse qualitative and quantitative data strands. Last, the investigator completed various qualitative and quantitative workshops to develop research skills, with the research supervisors having the necessary skills to facilitate a mixed methods project.

In sum, the mixed methods approach was employed in this research, based on its distinct advantages, while being aware of its weaknesses. Safeguards such as up-skilling the student researcher were implemented. Ultimately, the mixed methods approach was selected to effectively answer the three research questions (refer to section 1.3) that advanced knowledge on reward management and employee benefits practices in general, and on the factors that contribute to employee participation in physical activities in corporate fitness centres, specifically.

4.1.3 Selecting a mixed methods design.

The mixed methods approach engages researchers in the challenge of selecting an appropriate design that best answers their research questions. Several mixed methods designs with different purposes can inform research questions differently, such as convergent, explanatory, exploratory, embedded, transformative, and multi-phase designs (Creswell & Plano Clark, 2011). Researchers review the body of knowledge on their chosen research topic, decide what type of knowledge they wish to gain, and then adopt the most appropriate design (Bryman, 2012). Selecting an appropriate design, however, is challenging, considering that

mixed methods designs incorporate priority and sequence features (Bryman, 2012). Priority refers to whether the qualitative or quantitative approach is of more importance than the other, or are equally weighted (Creswell, 2014). Priority is visually represented with capital letters, whereas secondary data collection is visually represented with lower case letters to signal the weighting of each data strand (Creswell & Plano Clark, 2011). The following example shows the qualitative strand was given priority, with the quantitative data used as a secondary information strand: *QUALITATIVE + quantitative*. By contrast, sequence refers to whether the researcher collects data concurrently, or sequentially with qualitative research in phase-one informing the quantitative design in phase-two, or vice versa (Creswell, 2014). The following example shows qualitative research was prioritised and led to collecting quantitative data as a secondary data source: *QUALITATIVE > quantitative*. These features were recognised in deciding an appropriate mixed methods design for this research.

The convergent parallel mixed methods design was adopted in this research. The predominantly qualitative gap in the literature (refer to section 3.7) lead to priority being given to the qualitative phase to explore what factors contribute to employee exercise participation in corporate fitness centres. The decision rendered the quantitative phase as a smaller, secondary data strand. Prioritising the qualitative data strand and combining the results with a smaller quantitative data strand, partially aligns with an exploratory mixed methods design (Creswell & Plano Clark, 2011). The key principles of the exploratory design are the qualitative results inform the development of a questionnaire to generalise the qualitative findings (Creswell, 2014; Creswell & Plano Clark, 2011). The purpose of this research, however, was neither to inform the development of a questionnaire, nor to generalise the results. This reinforces why the convergent design was an appropriate design for this research. It is represented with the following priority and sequence features: *QUALITATIVE + quantitative*.

The main purpose of the convergent mixed methods design is to combine different, yet complementary data on a research topic. This flexibility enables researchers to collect qualitative and quantitative data either concurrently or separately (Creswell & Plano Clark, 2011). Additionally, collecting two data strands enables comparison between data to corroborate and validate findings (Creswell & Plano Clark, 2011). It specifically raises questions whether the two data strands either complement or contrast one another, whether quantitative data accurately measures how many people either agree or disagree with the themes arising in the qualitative study, and whether the qualitative data either helps explain or contextualise the relationships in the quantitative study (Creswell, 2014). These are the key considerations of the convergent design.

The investigator decided to separate the data collection into two phases. Phase-one was the primary phase in this research and involved qualitative data collection and analysis. A case study with an organisation experiencing low employee exercise participation in the corporate fitness centre was recruited into this research (refer to section 4.2.1.3). The methods included document review, semi-structured interviews, and focus groups (the qualitative phase is described in detail in section 4.2). Phase-two was the secondary phase in this research and involved quantitative data collection and analysis. The investigator distributed a questionnaire to a national sample to measure what constraint factor, negotiation strategy, and motivation dimension predicted employee exercise participation in corporate fitness centres (the quantitative phase is described in more detail in section 4.3). The decision to separate the data collection phases enabled the investigator to concentrate efforts on one research phase at a time, and thus gain foundational experiences with each research approach independently to effectively integrate data as per the mixed methods approach (Creswell & Plano Clark, 2011; Hesse-Biber, 2010). The convergent mixed methods design employed in this research is illustrated in Figure 11.

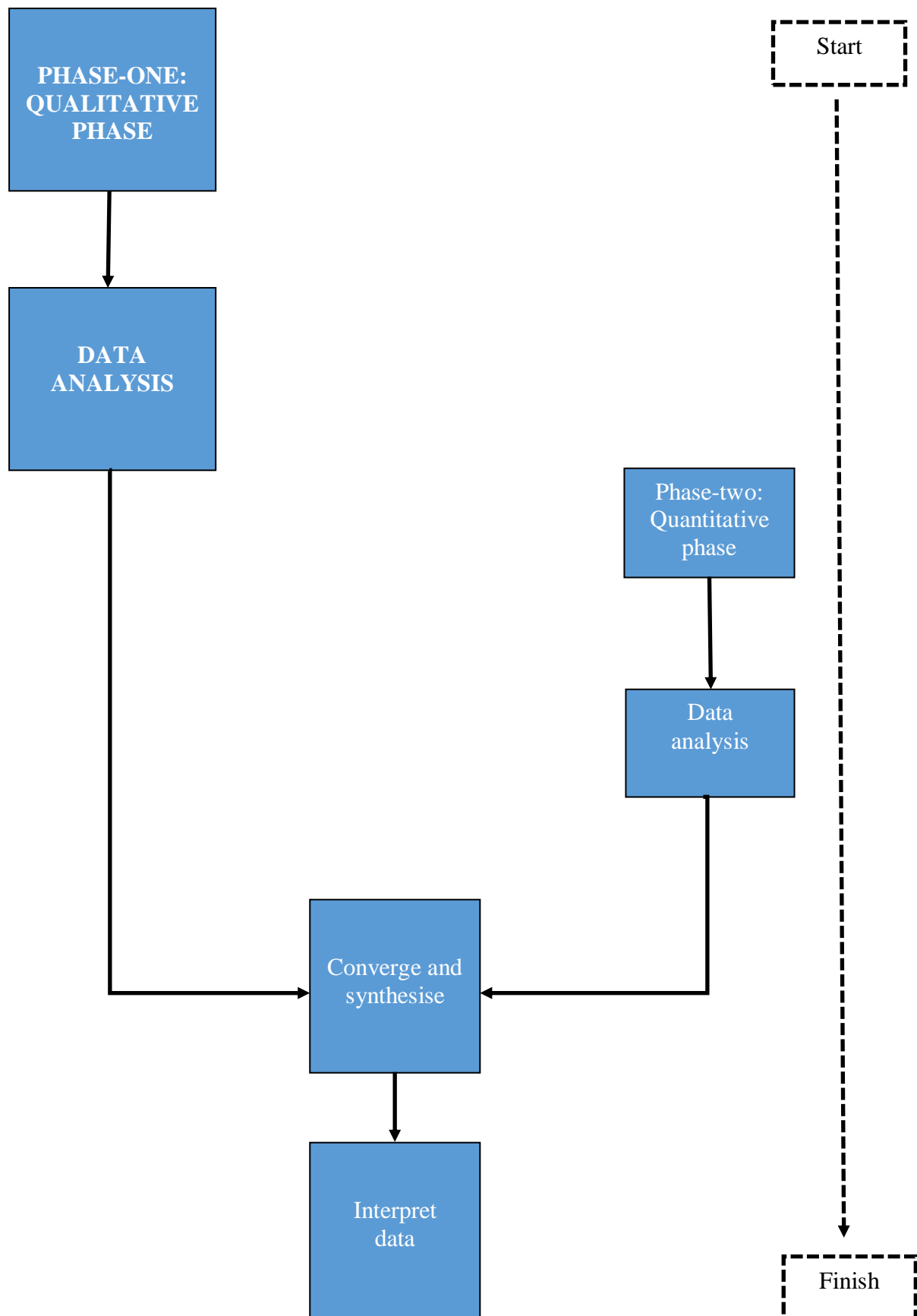


Figure 11. A conceptual model of the convergent mixed methods design in this research

4.2 Phase One: Qualitative Phase

Qualitative research is a valuable approach to examine a range of social, interpersonal, and intrapersonal phenomena. The approach uses methods to collect data that describes the everyday lived experiences and meanings that research participants associate to numerous contexts, such as education, business, domestic, and social life (Cooper & Schindler, 2014; Creswell, 2014).

Thick description of raw data is a key strength of the qualitative approach (e.g. Bryman, 2012; Creswell, 2014). Thick description emphasises context in which phenomena occur, and demonstrates the complexities of human values and behaviour (Bryman, 2012), while producing precise information on the meanings research participants ascribe to challenges and successes in their lives (Creswell, 2014). These features provide ample reasoning to employ the qualitative approach in this research. The qualitative phase sought to describe how the constraints, negotiation strategies, and motives contributed to employee exercise participation in corporate fitness centres, and was particularly salient, as limited previous research examined the subjective lived experiences of employees in this context. Therefore, employing the a dominant qualitative approach that described corporate fitness centre participation, would enable participants to provide new insights, and consequently the means to advance knowledge , without the need to advance theory.

Process is another feature of the qualitative approach (e.g. Bryman, 2012; Creswell, 2014). Process refers to the nuances in the data that explain what happens before, during, and after the phenomenon in question (Bryman, 2012), while also supplying an holistic account on the range of factors that contribute to the complexity of social and human behaviours (Creswell, 2014). The need to understand how constraints, negotiation, and motivations develop in the lived experiences of employees addresses what factors contribute to exercise participation in

corporate fitness centres, and thus encouraged the investigator to employ the approach in this research.

Data classification is an additional feature of qualitative research (e.g. Minichiello, Aroni, & Hays, 2008; Patton, 2002). Data classification reorganises information to develop a complete understanding of factors that contribute to the phenomenon in question (Minichiello et al., 2008). To reorganise information, researchers condense information-rich data into core and sub-themes (Patton, 2002), which was essential in this research. The constraints, negotiation, and self-determination theories determined the *a priori* core and axial sub-codes in this research, with the investigator developing open codes from the literature review (refer to Table 8) to provide a starting point for data analysis. While this data classification strategy helped deduce raw data from documents, interviews, and focus groups, the investigator also enabled new open codes to inductively emerge in the data (refer to section 4.2.2.2). The data classification protocol, inherent in qualitative research, assisted to discern what factors contribute to employee exercise participation in corporate fitness centres.

The qualitative approach, however, is not without limitations. Subjectivity is one of the key limitations associated to the approach, as human error through data analysis potentially creates biased results (Bryman, 2012). Bias is a pertinent issue, considering that developing inaccurate results that inform ineffective recommendations wastes financial and energy resources; and is of limited value for business, political, and social solutions (Cooper & Schindler, 2014). The triangulation protocol is a strategy to minimise bias and improve the trustworthiness of qualitative findings (Yin, 2014), which is explained in more detail in section 4.2.1.4.

Lack of transparency is another weakness of the qualitative approach (e.g. Bryman, 2012; Yin, 2014). Unclear information, such as how researchers recruited participants and

came to their conclusions, is common in qualitative research studies (Bryman, 2012). Therefore, qualitative researchers must provide candid information as to how the research was conducted, as this clarifies the protocol and provides a trail of evidence from data collection, to data analysis, and to study outcomes (Yin, 2014). The investigator in this research acknowledged the transparency problem and incorporated strategies to mitigate the limitation. Being clear about the qualitative protocol and explaining the data collection methods, analyses, and challenges that contributed to the research outcomes on what factors contribute to employee exercise participation in corporate fitness centres, addressed any issues about transparency.

In sum, the qualitative phase offered contextual information on the subjective lived experiences of employees in relation to their exercise participation in corporate fitness centres. The qualitative methods provided thick description and illuminated processes relevant to employee exercise participation. While there are inherent weaknesses with the strategy, safeguards were employed to minimise bias and improve transparency. Overall, the qualitative phase provided a type of information missing from the body of knowledge on what factors contribute to employee exercise participation in corporate fitness centres.

4.2.1 Case study research.

The qualitative phase of this research took the form of a case study. The case study is a research design focussing on the intense study of a single example. The example could either be a single organisation, a group of people, or social phenomena just to name a few possibilities (Cooper & Schindler, 2014; Punch, 2005; Yin, 2014). A single organisation was the case study in this research, with the intense study focussing on employee exercise participation in the corporate fitness centre. There are a range of case study designs to select from, including *single*, *extreme*, and *embedded* case studies (Yin, 2014). While case study findings are commonly perceived as non-generalisable to other cases, replication of findings to other units is plausible

(Yin, 2014). The extreme case study design was selected for this research, and employed different methods to collect different data sources that were triangulated, as per case study protocols (Yin, 2014). The upcoming sections discuss the advantages of the case study approach, case study limitations, and justifies why an extreme unit of study was employed to achieve the research purpose.

4.2.1.1 Strengths.

Four key strengths encouraged selecting a case study for this research. First, case studies are beneficial in circumstance where “our knowledge is shallow, fragmented, or non-existent” (Punch, 2005, p. 147). The literature review presented in chapter three emphasised a dearth of empirical data on what factors contribute to employee exercise participation in corporate fitness centres. Thus, the investigator recognised that the case study was an appropriate design in the qualitative phase to advance knowledge about employee exercise participation in corporate fitness centres and also to develop management strategies that could transfer to other workplace physical activity and wellbeing programs.

The capacity to answer *what*, *how*, and *why* research questions is another advantage of case studies (e.g. Saunders, Lewis, & Thornhill, 2009; Yin, 2014). The what and how questions tend to be associated with the qualitative approach, as these types of questions enable research participants to describe their lived experiences of social phenomenon in length (Saunders et al., 2009). The investigator in this study employed what (RQ 1 & 3) and how (RQ 2) questions to explore the constraints, negotiation strategies, and motives that contribute to employee exercise participation in corporate fitness centres. The exploratory nature of this research aligned with previous recommendations (e.g. Saunders et al., 2009; Yin, 2014), and therefore encouraged the investigator of this research to adopt the case study to answer the research questions.

Collecting multiple data sources is a third advantage in using case studies (e.g. Bryman, 2012; Saunders et al., 2009; Yin, 2014). Potential data sources include: observations, interviews, focus groups, and documents (Bryman, 2012). These data sources have inherent weaknesses, when treated as single information sets (Babbie, 2016). Therefore, researchers triangulate raw data with other data sources to minimise the weaknesses and improve the trustworthiness of findings (Bryman, 2012). This process ensures “the data are telling you what you think they are telling you” (Saunders et al., 2009, p. 146). The investigator obtained documents, and conducted interviews and focus groups to collect three data sources, and then employed the triangulation protocol (refer to section 4.2.1.4) to reduce the limitations of each data source and to improve the trustworthiness of findings.

Last, investigating contemporary phenomenon is associated with the case study design (e.g. Saunders et al., 2009; Yin, 2014). A useful example is in organisational research, where case study results create innovative solutions for contemporary business problems (Cooper & Schindler, 2014). The literature review in this research revealed employee exercise participation in corporate fitness centres is a contemporary problem, as participation ranged from 10% - 60%, with the vast majority of studies displaying participation percentages towards the lower end of the range (e.g. Burton et al., 2005; Clark et al., 2011; Heaney & English, 1995; Lewis et al., 1996; Lynch et al., 1990; Mathes et al., 1992; Schwetschenau et al., 2008; Shephard et al., 1980; Steinhardt & Young, 1992). Participation has been the focus of a growing line of research (e.g. Edmunds, Hurst, et al., 2013; Schwetschenau et al., 2008), and is intensified with corporate fitness centre provision expected to increase over the next five years across the corporate sector (Pridham, 2013). These data highlight a contemporary business-related problem requiring urgent attention. Therefore, the investigator selected the case study as an appropriate design to potentially identify management strategies that enhance the employee exercise participation in corporate fitness centres.

4.2.1.2 Limitations.

The case study, however, is not without limitations. Lack of rigor is one of the limitations of case studies (Kothari, 2004; Yin, 2014). Case study researchers collect non-scientific data from sources such as documents and interview participants (Bryman, 2012). Analysing these data sources is subjective, given that the researcher is the analysis instrument (Bryman, 2012), and therefore does not provide an objective view of the phenomenon (Kothari, 2004). Data triangulation is a strategy to mitigate subjectivity and improve objectivity of findings (Yin, 2014). The investigator in this research collected multiple data sources (documentary evidence, and interview and focus group data) to triangulate findings that addressed the issue of subjectivity versus objectivity (Yin, 2014).

Generalisability is another weakness of the case study design, as single case results cannot generalise to other units. This subsequently challenges the merit of case studies (Kothari, 2004; Yin, 2014), however, case studies have transferability, which means findings from one case are transferable to other units with similar characteristics (Bryman, 2012; Yin, 2014). The similar characteristics indicate the findings are replicable to similar cases, not generalisable (Bryman, 2012). The investigator of this research acknowledged this weakness, and sought an effective strategy to address generalisability.

Two key strategies addressed generalisability in this research. The first strategy was acknowledging that generalisability was not a key research aim. The knowledge gained can only be transferred to other corporate fitness centre contexts that are similar to the one used in this research. Subsequently, the research contributed to the paucity of knowledge without the need to generalise findings. The second strategy was not to generalise the data, but instead to generalise the theories used in this research. The research integrated constraints, negotiation, and self-determination theories within a single study of an Australian corporate fitness centre,

as there is a need to examine whether these theories generalise to under-researched domains and geographical contexts (Hubbard & Mannell, 2001).

In sum, the case study design has several weaknesses. The current research, however, addressed the weaknesses with different safeguards and recognised how the strengths advance knowledge pertaining to employee exercise participation in corporate fitness centres.

4.2.1.3 Case study selection.

Different case study designs can influence the selection process of a unit of study. Case study designs include: critical, extreme, representative, revelatory, and longitudinal cases (Yin, 2009). The investigator of this research employed the extreme case to investigate what factors contribute to employee exercise participation in corporate fitness centres. Extreme cases represent exceptionally rare phenomenon that any identified case is worth examining (Bryman, 2012). These types of cases advance knowledge, considering that the problem is intensified in these types of units, and are likely to extract more data on the phenomenon of interest (Bryman, 2012). The inadequate employee exercise participation percentage identified in the literature review emphasised a significant participation problem at corporate fitness centres.

The investigator of this research used Australian fitness industry contacts, and thus identified a case with a severe participation problem. Participation at the case study site had a 5% participate rate of all employees (McDougall, Personal Communications, 20 June 2014), which is lower than the 10% - 60% range identified in the literature review. This discrepancy indicated the unit is an extreme case, and therefore encouraged the investigator to believe this case warranted investigation to advance knowledge on what factors contribute to employee exercise participation in corporate fitness centres.

The selected organisation was a multinational corporation that originated from Europe, and has operated out of its Australian headquarters located in Victoria, Australia for several

decades. The organisation employs approximately 1000 employees – inclusive of contractors - spread across different departments, such as business, operations, and laboratory. Approximately half of the employees are shift workers.

In the early part of this decade, the organisation hired the services of an external fitness organisation to deliver structured exercise programs three times per week, under the premise of the general manager who was concerned by the physical health of the organisation's employees. The success of these exercise programs led to the organisation purchasing and then joining two portables to establish the corporate fitness centre. The corporate fitness centre currently contains cardio equipment, such as treadmills, rowers, and exercise bikes, with structured exercise programs held Monday to Friday from approximately 12pm to 1pm. The structured programs include group training and Yoga programs, with external service providers delivering these activities. Employees who have completed and passed a medical clearance are available to use the corporate fitness centre at any time (McDougall, Personal Communications, 20 June 2014).

4.2.1.4 Data collection.

The aim of this case study was to synthesise and triangulate multiple sources of data to create a broad and comprehensive understanding of what factors contribute to employee exercise participation in the selected corporate fitness centre. Four triangulation techniques are associated to case study research (Bryman, 2012). These techniques are data, investigator, theoretical, and methodological triangulation (Bryman, 2012). To gain rich qualitative data in the context of this research, data and methodological triangulation were employed. The purpose was twofold. First, to observe employee exercise participation from multiple perspectives and second, to compare the collected data to maximise the benefits and minimise the weaknesses associated to each method.

To acknowledge the features of data and methodological triangulation, a brief explanation why the investigator collected three data sources is presented. The investigator employed document review, as the method is required in case study research to provide background information on the research topic (Yin, 2014). Semi-structured interviews were used to gather data from managers, who may not be the primary corporate fitness centre users, but could have an important role as potential facilitators of how employees participate in the corporate fitness centre. The documentary and interview data were synthesised together (Bryman, 2012) and provided an *external* perspective – which represented the view of managers – on what factors contribute to employee participation in the corporate fitness centre. Focus groups were used to gather data from staff, who were the primary users of the corporate fitness centre, and thus represented an *internal* perspective on what factors contribute to their participation. Triangulating external and internal perspectives (data triangulation) with multiple methods (methodological triangulation) created a trail of evidence that connected the data, the results, and the research conclusions in phase-one. Triangulation in this research is exhibited in Figure 12.

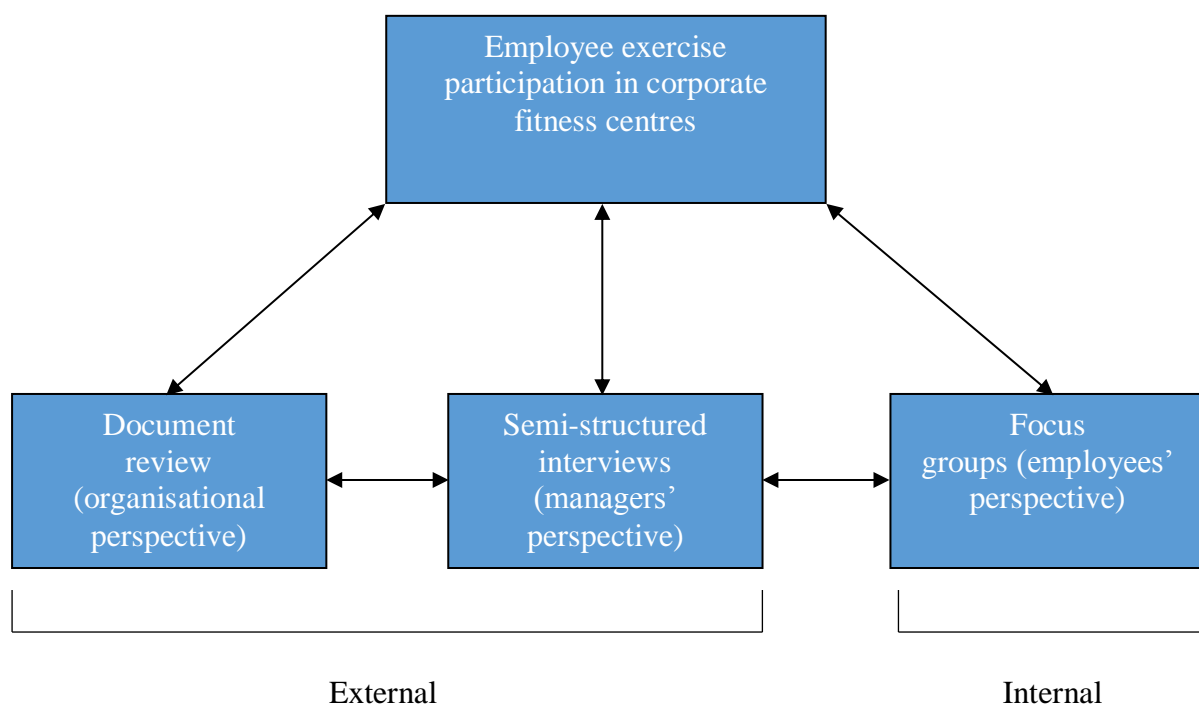


Figure 12. Conceptual model of triangulation in this research

Triangulation also enabled the investigator to address the trustworthiness concept that is embedded in the qualitative approach. Trustworthiness refers to whether the research findings are reliable and valid, which resemble quantitative-based measurement concepts (Bryman, 2012) (refer to section 4.3.1.1). In the qualitative approach, four criteria comprise trustworthiness: credibility, transferability, dependability, and confirmability.

Credibility refers to the extent to which the research findings reflect reality (Shenton, 2004). The triangulation of multiple data sources enabled the investigator in this research to address credibility, considering that combining the methods limited each methods' weaknesses, while also intensifying each methods' strengths (Shenton, 2004). Triangulating the semi-structured interview and focus group data with the document review provided further context of these data sources, which is a procedure recommended by other researchers (Liamputtong, 2013; Yin, 2014).

Transferability refers to whether findings from one study are applicable to situations with similar characteristics (Shenton, 2004). Hence, the researcher has the responsibility to supply sufficient background information of the context (Yin, 2014) and the lived experience of research participants for practitioners and researchers to determine if the study results are applicable to their situation (Merriam, 2009). This is achieved by providing explicit information regarding data collection and analysis protocols, and to recognise that bias is inherent in the qualitative approach (Bryman, 2012). This investigator addressed transferability by providing organisational background information (refer to section 4.2.1.3) and triangulating thick description of management strategies and lived experiences of constraints, negotiation, and motives for exercise participation in corporate fitness centres through the qualitative results chapter (refer to chapter five).

Dependability is the third trustworthiness criteria, and refers to the repeatability of a study to gather similar findings with similar methods and research samples (Shenton, 2004). Researchers employ complementary methods that provide different data on a single phenomenon to gather corresponding information from different viewpoints, such as using semi-structured interviews and focus groups (Shenton, 2004). Researchers also provide in-depth explanations in relation to data gathering, sampling, and analysis protocols to provide other researchers with a potential research template that explores similar problems (Shenton, 2004). Triangulation assisted the investigator to address dependability in this research. Specifically, employing three complementary data collection methods in this research (document review, semi-structured interviews, and focus groups) provided three data sources to explore what factors contribute to employee exercise participation in corporate fitness centres. The investigator also supplied in-depth data collection, sampling, and analysis protocols (refer to chapter four), which could assist future researchers examine other participation problems pertaining to employee wellbeing programs, exercise, and physical activity contexts. Thus, triangulating data from the complementary methods and describing the associated protocols addressed the dependability criteria.

Confirmability is the final trustworthiness criteria, and refers to minimising subjectivity and maximising objectivity through the qualitative research approach (Shenton, 2004). Providing an account of the strengths, weaknesses, and safeguards for the selected methods is an approach to address confirmability, as the account provides clarity on the decision-making processes to effectively address the qualitative research problem (Merriam, 2009). Consequently, the investigator limited subjectivity and maximised objectivity in this research by describing the strengths, weaknesses, and safeguards of document review, semi-structured interviews, and focus groups, respectively. Additionally, safeguards were explained in accordance with each method (refer to section 4.2.2, 4.2.3, and 4.2.4). Moreover, triangulation

assists researcher to interpret the meaning of the data with increased objectivity, whereby complementary evidence provides different viewpoints of the phenomena (Saunders et al., 2009). This was achieved through the data and methodological triangulation.

Triangulation protocol.

Triangulating qualitative data is a multi-step protocol, involving sorting, convergence coding, convergence assessment, completeness comparison, researcher comparison, and feedback (Farmer, Robinson, Elliott, & Eyles, 2006). The six steps used in this research are explained in the upcoming sections

Step-one: Sorting.

Sorting involves independent analysis of the multiple data sources (refer to section 4.2.2.2), and then categorising the information to address the research questions (Farmer et al., 2006). This enables investigators to determine areas of overlap. The investigator in this research analysed documents, interviews, and focus group data independently (refer to section 5.1, 5.2, and 5.3, respectively), and created a triangulation matrix pertaining to the core themes identified in this research. Columns in the matrix represented the data source, whereas, the rows in the matrix represented the specific open code. Each cell included a brief summary of the open code to assist the investigator in identifying subtle differences and similarities between each data source.

Step-two: Convergence coding.

Convergence coding involves identifying similarities and differences on a single open code, across data sources (Farmer et al., 2006). Four potential outcomes are associated to convergence coding. Agreement occurs when multiple data sources have the same interpretation of a single open code (Farmer et al., 2006). Partial agreement occurs when multiple data sources provide complementary information on one open code (Farmer et al.,

2006). Divergence occurs when multiple data sources feature the same code, albeit with opposing views (Farmer et al., 2006). Last, silence occurs when an open code features in only one data source. These labels were assigned to each open code during the convergence coding step.

The investigator analysed each triangulation matrix created in the previous step to identify the similarities and differences in meanings of each open code, across document review, interview, and focus group data. Each open code was assigned a label, whether the code agreed, partially agreed, diverged, or remained silent. These findings are presented in section 5.4.2.

Step-three: Convergence assessment.

This step involves providing a “global assessment” (Farmer et al., 2006, p. 383) of convergence, by calculating the percentage of agreement, partial agreement, divergence, and silence through the convergence coding step. The investigator summed the number of open codes identified in this research, and used this number as the denominator. The agreement and partial agreement codes were summed together, and then divided into the denominator to obtain a decimal number. This was multiplied by 100 to ascertain the percentage. This process was replicated for divergence and silence open codes, independently. These results are presented in section 5.4.3.

Step-four: Completeness comparison.

This step involves comparing each data set to ascertain the scope of information, which provides a comprehensive understanding on the research topic (Farmer et al., 2006). Investigators identify either the overlap or silence of codes in each data set and then interpret the information to explain the topic of interest (Farmer et al., 2006). The investigator in this research compared the open codes, and identified where these codes either overlapped or

remained silent. This provided the means to explain employee exercise participation in corporate fitness centres of this case study. This is presented in section 5.4.4.

Step-five: Researcher comparison.

This step involves examining the completeness comparison in step-four among the research team, and to therefore ascertain agreement in relation to the triangulated findings (Farmer et al., 2006). This enables research teams to establish congruence through the triangulation protocol from different perspectives and to manage disagreements from the completeness comparison in step-four that could subsequently influence the final interpretation of research outcomes (Farmer et al., 2006). The investigator in this research presented the completeness assessment to the three research supervisors for their independent review. Each supervisor provided their comments on the completeness assessment. A minimum coding agreement of 70% provides researchers with confidence in coding interpretation (Miles & Huberman, 1994). This is presented in section 5.4.5.

Step-six: Feedback.

The final step involves sharing the write-up of triangulated findings with colleagues to gain and address feedback (Farmer et al., 2006). This enables research teams to clarify information and confirm whether interpretation is either accurate or needs improvement (Farmer et al., 2006). The investigator in this research provided supervisors with numerous chapter drafts of the triangulation results, and sought their feedback. Feedback was addressed and resubmitted for further supervisor analysis, with this process continuing through multiple iterations until the point at which the investigator and supervisors were confident in the interpretation of findings. The first data source collected for triangulation purposes was document review.

4.2.2 Study one: Document review.

The purpose of document review was to gather background information about the organisation and the strategies used to encourage employee exercise participation in the corporate fitness centre. Document review is a necessary protocol in every case study to “corroborate and augment evidence from other sources” (Yin, 2014, p. 107). Documents have specific value, as documentation of histories, policies, and norms remain static and can be compared to the lived experiences of individuals in the context (Bryman, 2012). The results of multiple data sources are combined to develop inferences of the studied phenomenon that help to elucidate the specific social and organisational realities (Bryman, 2012; Liamputtong, 2013). Thus, document review was a necessary protocol in this research. The organisation’s documents provided a brief history of management strategies used in the past to encourage participation in the corporate fitness centre. The documentary evidence served to give context and corroboration to discuss what contributes to employee exercise participation in the corporate fitness centre in the subsequent semi-structured interviews with managers in the case study organisation (refer to section 4.2.3 for semi-structured interview details).

Document review has several strengths that contribute to effective qualitative research outcomes (e.g. Bryman, 2012; Punch, 2005; Silverman, 2011). Document review is an unobtrusive method (Punch, 2005). This means researchers collect organisational documents and review the contents without organisational interference, which enables the steady progression of data analysis (Silverman, 2011). Documents are also non-reactive data sources (Bryman, 2012), as the text does not change, which is challenging with other qualitative research methods, such as interviews and focus groups, as participants tend to provide socially desirable answers and responses that satisfy the researcher’s questions (Yin, 2014). Documents are usually easy to obtain (Silverman, 2011). The ease of access enables researchers to

commence with analysis early in the research process (Silverman, 2011). These features contributed to using document review in this research.

Document review, however, is not without limitations (e.g. Bryman, 2012; Liamputtong, 2013; Yin, 2014). Limitations include retrievability and time. Retrievability refers to organisational personnel withholding specific documents related to the research topic (Yin, 2014). Organisational personnel could bias the supply of documents to researchers, and therefore creates an incomplete illustration of phenomena (Bryman, 2012). Time is a precious resource, considering that organisational personnel could supply an overabundance of documents, and thus challenges the researcher's data analysis, interpretation, and discussion timeline (Yin, 2014). Safeguards are required to address these issues.

In this research, two strategies mitigated the weaknesses inherent in document review. First, the investigator requested for a range of organisational documents to minimise biased selectivity, and therefore asked for documents pertaining to the corporate fitness centre, employee wellbeing programs, human resource management, and organisational strategy. The Facilitator (a senior level employee who mediated correspondence between the investigator and the organisation) supplied a range of documents pertaining to employee exercise participation in the corporate fitness centre. Second, the investigator separated documents into primary, secondary, and tertiary categories. These categories were based on the type of information related to the corporate fitness centre, with important information considered a primary document and auxiliary information considered tertiary documents. This process enabled the investigator to be time-efficient.

4.2.2.1 Document collection process.

Document collection was a four-step process in this research. The first step was to receive ethical approval (refer to Appendix A), which was granted in 2014. The second step

was to contact the Facilitator, and thus request the organisational documents. The investigator began to receive documents in early 2015, at which time the investigator commenced data analysis. Steps three and four were second and final reminders, respectively, to supply additional documents that the Facilitator located after the initial documents were sent to the investigator. The document collection process is illustrated in Figure 13.

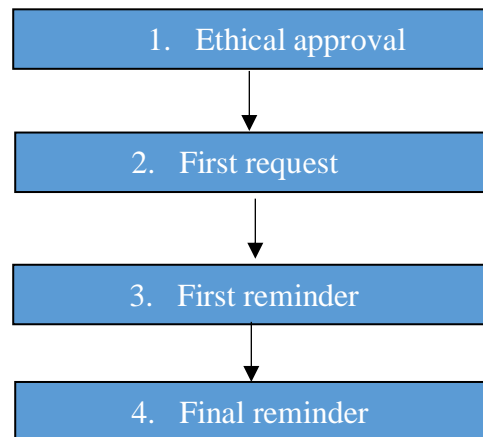


Figure 13. Document collection process

4.2.2.2 Analysis.

Similar to other forms of qualitative research, document analysis requires collating text into meaningful themes and sub-themes through a process called coding. Several coding protocols exist, each with a different research purpose. Examples of coding protocols include: induction (Liamputtong, 2013), deduction (Miles & Huberman, 1994), narrative (Bryman, 2012), and emergent (Strauss & Corbin, 1990). The text coding process in this research involved a dual coding protocol comprising deduction and emergent methods. The purpose of this research was neither to use grounded theory nor to story-tell, which is why induction and narrative coding methods were deemed ineffective to answer questions as to what factors contribute to employee exercise participation in corporate fitness centres.

Deduction involves developing an a priori codes list that provides an objective starting point at data analysis (Miles & Huberman, 1994). The literature review identified constraints,

negotiation strategies, and motives as useful factors that might help to understand what contributes to employee exercise participation in corporate fitness centres (refer to Table 8). These constraints, negotiation strategies, and motives acted as the a priori open codes in this research. By contrast, emergent involves assigning codes to portions of data, when the data does not fit the a priori codes (Strauss & Corbin, 1990). When text did not fit the a priori codes, the text was assigned a new code, thus creating emergent codes (Strauss & Corbin, 1990). This emergent coding process was applied specifically to the research questions and to address the general aim of the research. The strategy enabled open codes and core themes to inductively emerge through the data that were not identified through the literature review. The dual protocol provided a holistic understanding of the different themes and sub-themes, enabling the investigator of this research to compare data with the existing literature and theory, in addition to identifying potentially new information on employee exercise participation in corporate fitness centres.

Analysis involves three coding levels: open, axial, and core (Bryman, 2012). Open coding is the first coding level, and involves reading and re-reading documents to ensure familiarity with the text (Bryman, 2012; Kuckartz & McWhertor, 2014). The investigator in this research then used the a priori codes to identify “chunks” (Liamputtong, 2013, p. 242) of relevant information that corresponded with literature in the review, and then assigned new codes to information that did not fit the a priori codes, as per the emergent protocol (Strauss & Corbin, 1990). The investigator considered the “chunks” (Liamputtong, 2013, p. 242) of information a code, when similar information emerged in at least three documents (Creswell & Plano Clark, 2011).

Axial is the second coding level, and involves collapsing the open codes into higher-order themes to emphasise the connections, causes, and interactions between the coded data (Bryman, 2012). The coded data were collapsed into axial codes, based on the sub-themes of

constraints, negotiation, and motivation. Intrapersonal, interpersonal, and structural formed the axial constraint codes (Crawford et al., 1991). Cognitive and behavioural formed the negotiation codes (Jackson & Rucks, 1995). Finally, external regulation, introjected regulation, identified regulation, integrated regulation, and intrinsic motivation formed the axial motivation codes (Biddle et al., 2015). The emergent open codes were also collapsed into the respective axial codes.

Selective coding is the third coding level, and involves collapsing axial codes into core themes to describe “the central issues or focus around which all other categories are integrated” (Bryman, 2012, p. 569). Constraints, negotiation, and motivation were the selective a priori codes in this research. Thus, intrapersonal, interpersonal, and structural axial codes were collapsed into the constraints selective code, and subsequently described how constraints hinder employee exercise participation in corporate fitness centres. The process was replicated for negotiation, where cognitive and behavioural axial codes were collapsed together. Similarly, external regulation, introjected regulation, identified regulation, integrated regulation, and intrinsic motivation axial codes were collapsed into the selective motivation code. Additionally, emergent axial codes were collapsed into a selective emergent code. The coding process used in this research is illustrated in Figure 14.

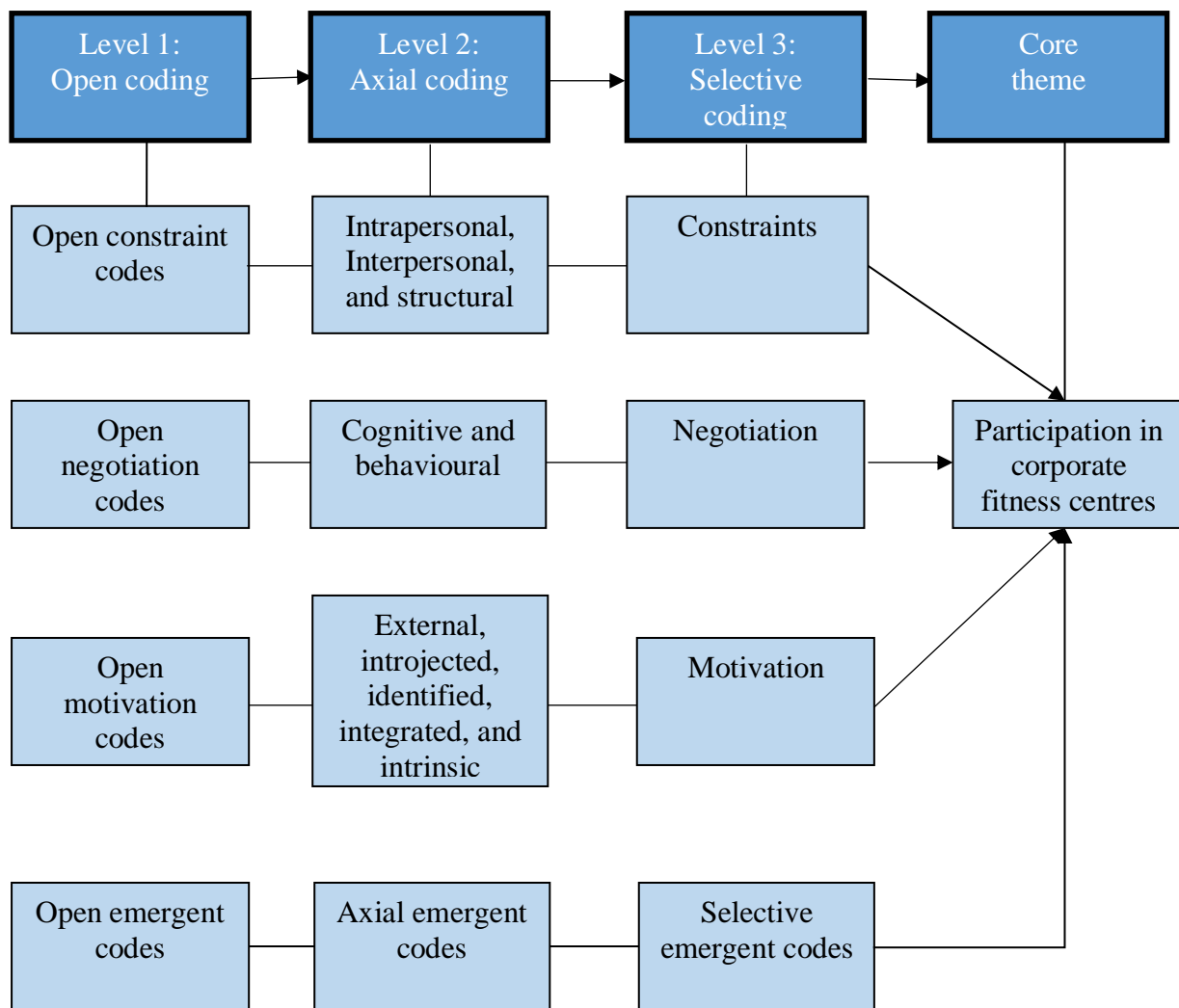


Figure 14. A conceptual model of the coding protocol and a priori codes

4.2.2.3 Qualitative data analysis software.

The investigator used QSR Nvivo Version 11 to assist the coding and analysis protocol. Electronic copies of documentary evidence were uploaded onto the software program. The investigator used Nvivo to read and review the data, and then used the *Nodes* application to assign the a priori and emergent codes to the data. Concept maps were then developed to visually illustrate the connections between open, axial, and selective codes (Bryman, 2012). Completion of the document review was followed with semi-structured interviews.

4.2.3 Study two: Semi-structured interviews.

The purpose of semi-structured interviews was to gather subjective experiences on the management strategies that contributed to employee exercise participation in the corporate fitness centre. Interviewing managers provided an external perspective on participation in the centre. Managers described how they minimised constraints and encouraged motivation for employees to participate in exercise in the corporate fitness centre. Semi-structured interviews followed the document review study to triangulate findings and, through this, minimised the biases inherent with semi-structured interviews (Bryman, 2012).

Semi-structured interviews have several strengths that contribute to qualitative research outcomes. They can extract special information from interviewees, and enables researchers to “enter into the other person’s perspective” (Patton, 2002, p. 341). Semi-structured interviews provide structure and flexibility. Structure comes from being able to ask questions that target information on a particular topic (Bryman, 2012), whereas flexibility allows interviewees to digress and discuss matters important from their perspective, which can be relevant matters the researcher did not consider at the onset of the research (Brinkmann, 2013). Flexibility also enables modifying question delivery to adapt the interview direction organically and ask a combination of probing, clarification, and contrasting questions to elucidate further meaningful information (Harrell & Bradley, 2009). These strengths led to semi-structured interviews being adopted in this research.

In this research, semi-structured interviews were used to elicit the perspective of the organisation’s managers on what strategies contribute to employee exercise participation in the corporate fitness centre. The a priori selective codes from the document review study provided the investigator with structure, in the form of a set of interview questions for each interview. Flexibility enabled interviewees to deviate from these set questions, and to discuss other important matters related to management of the corporate fitness centre.

Semi-structured interviews, however, also have limitations. The flexibility is a limitation of interviews, considering that interviewees potentially digress from the research topic to unrelated subject matter (Brinkmann, 2013). The transition creates time, energy, and financial pressures to transcribe, read, and analyse the unnecessary information (Brinkmann, 2013). Trust is another limitation that can inhibit data generation. Interviewees might feel uncomfortable, especially when the interview is the first encounter between the interviewee and researcher. Interviewees could therefore be less candid with the perspectives they present in the interview (Merriam, 2009). Thus, the need to address issues of flexibility and trust to assist with optimal semi-structured interview data elicitation.

The investigator in this research employed safeguards to mitigate the weaknesses of semi-structured interviews. While the investigator allowed interviewees to digress, the investigator also carefully redirected conversations when digression entered unrelated topics. Redirecting the conversation involved acknowledging the interviewee's perspective on the unrelated topic, and then delicately connecting the unrelated topic to the next question in the interview schedule (Brinkmann, 2013). Regarding trust, starting the interview with a neutral, easy to answer question helped gain the interviewee's trust (Merriam, 2009). The topic enabled the interviewee to comfortably discuss their perspectives and contexts in detail to build the trust and rapport necessary to proceed with the more targeted interview questions (Brinkmann, 2013). These safeguards helped address the weaknesses of semi-structured interviews.

In summation, semi-structured interviews offer many benefits that influenced its inclusion in this research. Although semi-structured interviews have potential limitations such as flexibility and trust, the investigator incorporated strategies to safeguard against these weaknesses. Ultimately, the interviews gathered information from management's perspective on what strategies contribute to employee exercise participation in the corporate fitness centre, thereby potentially gaining new insights on the topic.

4.2.3.1 Interview schedule.

The interview schedule provided a starting point, discussion direction, and consistency between interviews (Kvale & Brinkmann, 2015) (refer Appendix B). Five main questions comprised the schedule. While the first question was broadly focused to settle the interviewee, question two focused on the corporate fitness centre, and asked about where the corporate fitness centre fits within the organisational strategies and human resource management policies. The next question inquired about strategies to minimise the constraints to exercise participation in the corporate fitness centre, with probing questions prepared to further clarify and emphasise the importance of the topic from the manager's perspective (Minichiello et al., 2008). In the case of this research, probing questions corresponded with the axial constraint codes to determine whether the strategies minimised the experience of constraints at either intrapersonal, interpersonal, or structural levels (Crawford et al., 1991). The next question concentrated on the strategies to enhance motivation to participate exercises in the corporate fitness centre, with probing questions prepared to further elicit whether the motivation strategies either controlled participation or facilitated autonomous behaviour. These questions corresponded with the external regulation, introjected regulation, identified regulation, integrated regulation, and intrinsic motivation axial codes (Ryan & Deci, 2000). The final question concluded the interview, where the investigator gave the interviewee a final opportunity to discuss other thoughts (Kvale & Brinkmann, 2015) on the strategies that contribute employee exercise participation in the corporate fitness centre.

4.2.3.2 Interview sample.

The sample consisted of information rich cases, each representing key informants that held unique and specific knowledge pertaining to the research topic (Minichiello et al., 2008; Punch, 2005). The investigator identified key informants through the document review process, which identified specific employees who had particular roles associated to the corporate fitness

centre. The Facilitator invited these prospective key informants to participate in the semi-structured interviews (refer to section 4.2.3.3).

Recommended sample sizes for semi-structured interviews are ambiguous (e.g. Creswell, 2012; Minichiello et al., 2008; Patton, 2002). For example, five interviews is sufficient for case studies (Creswell, 2012), on the other hand data needs to be collected until thematic saturation is reached (Minichiello et al., 2008), and another perspective suggests the research purpose, credibility of findings, time, and the number of available key informants dictates the sample size (Patton, 2002). In this research, the sample size was restricted by the available number of key informants identified in the document review. While the investigator set the sample size at five interviews (Creswell, 2012), data collection would continue if more than five key informants were available, considering that saturation was the key sample size determinant (Minichiello et al., 2008).

4.2.3.3 Data collection.

Data collection began with creating a list of key informants to interview. The document review process revealed key informants who had unique perspectives on the corporate fitness centre, such as the manager who was involved with establishing and promoting the corporate fitness centre. The key informant list was sent to the Facilitator, who subsequently emailed them an invitation to participate in the research. The email contained an information to participants form (refer to Appendix C) and a consent form (refer to Appendix D) as per the Victoria University ethics protocol (HRE15-059).

Key informants then emailed the facilitator about their interest in participating in the research, who in turn negotiated with the manager a convenient time to conduct each interview. The Facilitator arranged for all interviews to be conducted in a quiet meeting room at the

worksite, which was free from distraction of other employees. The investigator collected signed consent forms before the interviews commenced.

Interviews were digitally recorded with each interviewee's consent, and were transcribed verbatim. Data analysis began when the investigator finished each transcription and uploaded the data onto QSR Nvivo 11, at which time coding (refer to Analysis section 4.2.2.2) commenced. Once all the semi-structured interview analyses were completed, the investigator proceeded to the focus group study of the qualitative phase.

4.2.4 Focus groups.

The investigator conducted focus groups to obtain an internal perspective on what factors contribute to employee exercise participation at the selected corporate fitness centre. The internal perspective referred to employees' subjective lived experiences of constraints, negotiation, and motives to participate in exercise in the corporate fitness centre (Hubbard & Mannell, 2001). The literature review revealed a paucity of qualitative information on employee exercise participation, which encouraged the use of focus groups to fill this research gap.

A focus group approach is a useful method for exploratory studies in a range of contexts, such as education, health, policy, and sociology (e.g. Brinkmann, 2013; Bryman, 2012; Donley, 2012). Focus group participants discuss phenomenon and bounce their ideas from one participant to another (Minichiello et al., 2008). This unique feature enables participants to provide their own views and to create a diversity of perspectives that enhance the understanding of the focus group topic (Brinkmann, 2013). The rich understandings subsequently make focus groups suitable "for exploratory studies in little known domains" (Brinkmann, 2013, p. 26).

Focus groups have several valuable strengths that contribute to qualitative research outcomes (e.g. Donley, 2012; Minichiello et al., 2008; Patton, 2002). Cost-effectiveness is a strength, as data accumulates quickly, and is therefore beneficial for researchers under time pressure constraints (Minichiello et al., 2008; Patton, 2002). Group participants view phenomena differently, and these different views enable participants to discuss similarities and differences in their experiences, which improves understanding on the topic and the overall data quality (Minichiello et al., 2008; Patton, 2002). Focus groups are typically enjoyable experiences, which assist participants to create a unique group dynamic that facilitates data generation (Donley, 2012; Patton, 2002). These salient strengths encouraged the investigator to use focus groups as a key method to examine what factors contribute to employee exercise participation in corporate fitness centres.

Focus groups, however, are not without limitations (e.g. Bryman, 2012; Patton, 2002). The time associated to transcription is a limitation, considering that the quick generation of data results in additional time resources to transcribe the data (Bryman, 2012). Furthermore, a single participant could dominate the discussions, where participants with strong views begin discussion and might not enable other participants to enter the conversation to provide either similar or differing views. This dominance focuses data to a single, or limited number of participants (Patton, 2002). Moreover, scheduling is another focus group weakness, given that arranging a specific time and meeting place for individuals is problematic and that everyone is on different schedules and have variable commitments (Donley, 2012). The three weaknesses require safeguards to maximise data generation.

The investigator incorporated different strategies to safeguard against limitations. The investigator commenced data transcription at the completion of each focus group to ensure time efficiency. Additionally, the investigator advanced his skills and attended focus group workshops to learn how to manage dominant participants. Finally, in terms of time scheduling,

there was ample forewarning to participants via the Facilitator when scheduling the focus group (refer to section 4.2.4.3). These safeguards helped to minimise the inherent limitation of focus groups.

In conclusion, the focus group is a commonly used data collection method in a range of social science contexts (Donley, 2012). The focus group provides rich detail about the lived experiences of phenomenon (Patton, 2002), and specifically fills a knowledge gap in relation to what factors contribute to employee exercise participation in corporate fitness centres. While limitations reduce focus group effectiveness, safeguards were employed to mitigate against the negative influences.

4.2.4.1 Focus group schedule.

The focus group schedule provided the investigator with an orientation and uniformity in data collection between each group session (e.g. Kvale & Brinkmann, 2015; Minichiello et al., 2008) (refer to Appendix E). The schedule comprised of five main questions. Question one eased participants into discussion, and to initially develop a group dynamic (Donley, 2012; Kvale & Brinkmann, 2015) by inquiring about their thoughts on exercise, defined as “planned, structured, and repetitive” (Scott Lyons et al., 2016) physical activity to improve and maintain physical fitness.

Discussions segued from exercise into their perspectives as to what motivates their exercise participation in the corporate fitness centre. This was a positive inquiry to reinforce group dynamics in preparation for the negative question (Minichiello et al., 2008). This corresponded with the selective core code of motivation, which was informed by self-determination theory (Ryan & Deci, 2000). Probing questions were used to ascertain whether exercise participation in the corporate fitness centre was underpinned by extrinsic motivation or autonomy, with these questions aligning with external regulation, introjected regulation,

identified regulation, integrated regulation, and intrinsic motivation axial codes (Biddle et al., 2015).

The next question was the negative inquiry on constraint to participation. Probing questions were prepared to determine whether constraints developed at either intrapersonal, interpersonal, or structural levels (Crawford et al., 1991). This was an effective transition into the next question on negotiation, as constraints are known to initiate negotiation strategies in corporate fitness centre contexts (Hubbard & Mannell, 2001). The investigator then further probed for cognitive and behavioural strategies as per negotiation theory (Jackson et al., 1993).

The concluding question inquired about other potential factors that contribute to exercise participation in the corporate fitness centre. The purpose was to provide participants a final opportunity to consider other factors that were previously undiscussed (Minichiello et al., 2008).

4.2.4.2 Sample size.

There are a range of perspectives about recommended participant numbers per focus group (e.g. Bryman, 2012; Minichiello et al., 2008). Some researchers (e.g. Donley, 2012; Minichiello et al., 2008; Patton, 2002) recommend between six and 12 participants as ideal to generate rich data. Other researchers, however, suggest smaller focus groups, consisting of either three or four participants are beneficial for filtering voices during transcription, and when the researcher is an inexperienced moderator (Brinkmann, 2013). This guidance influenced the investigator's sample size decision for two reasons. First, the researcher decided to keep focus groups to four to six participants, due to the investigator being new to focus group moderation. Second, this group size was a good compromise between the investigator's experiences and sufficient data generation.

The recommended number of focus groups that are needed to generate valid and reliable data is ambiguous in the literature. Some researchers suggests conducting at least six focus groups to generate sufficient data (Minichiello et al., 2008). By contrast, other researchers indicate that focus groups should be continually conducted until thematic saturation. Thematic saturation is imminent when the moderator anticipates responses (Bryman, 2012). The researcher determined that obtaining enough participants to conduct at least six focus groups would be challenging, due to employee availability as described in section 4.2.4. Therefore, the researcher decided to conduct either up to six focus groups (Minichiello et al., 2008), or to continue until thematic saturation (Bryman, 2012) – which ever strategy was achieved first.

4.2.4.3 Data collection.

Data collection was a four-step process as per the Victoria University ethics protocol (HRE16-176). Step-one involved notifying, via email, the Facilitator that focus groups were ready to commence. The correspondence included emailing the Facilitator the focus group information pack (see Appendix F). The focus group information pack contained the following: an invitation and reminder email templates sent from the facilitator to employees, and an information to participants form and a consent form.

Step-two involved the Facilitator sending email correspondences to all organisational employees and contractors, regardless of either employee type or seniority level. The Facilitator used the email templates provided in step-one to invite employees into this research. The email also contained the information to participants and consent forms. Interested participants responded to the Facilitator, at which time, the Facilitator organised the timing and location at the worksite for each focus group.

Step-three involved gaining access to the organisation. The Facilitator organised site access for the investigator on three separate occasions, which involved notifying the security

staff of the investigator's arrival and arranging a temporary identification card to enable access throughout the worksite. Step-four involved the investigator receiving the signed consent forms either via email or in hard-copy, prior to focus group commencement. Focus groups were digitally recorded, and the investigator transcribed each focus group verbatim.

Step-five involved data analysis (refer to section 4.2.2.2). Data analysis commenced after the investigator transcribed the first focus group and uploaded the data to QSR Nvivo Version 11. The focus group data collection procedures are illustrated in Figure 15. After focus group data analysis, the quantitative phase commenced.

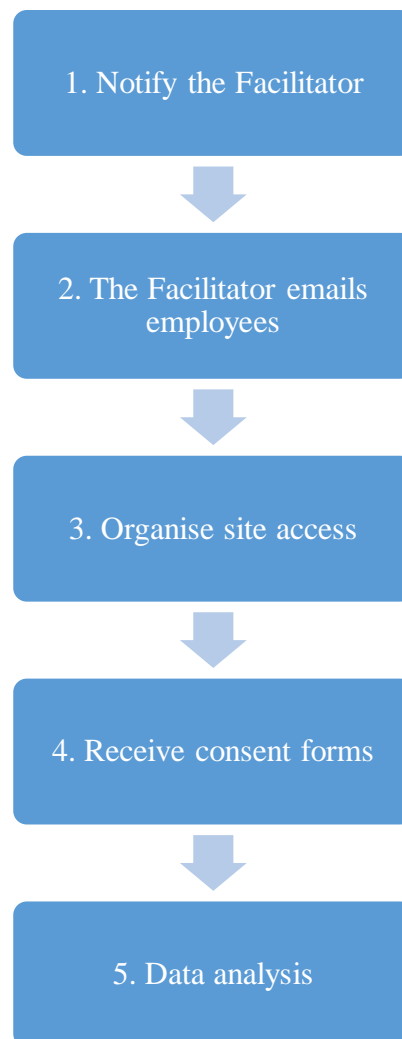


Figure 15. Focus group data collection protocol

4.3 Phase Two: Quantitative Phase

Quantitative research uses objective methods to precisely measure the relationship between variables (e.g. Bryman, 2012; Cooper & Schindler, 2014; Creswell, 2014). Quantitative research is a deductive research approach (Bryman, 2012) that surveys populations (Creswell, 2012), tests theories (Cooper & Schindler, 2014), and is used for experimental purposes to determine cause and effect relationships (Creswell, 2014). This research adopted a questionnaire design in the quantitative phase to examine constraints, negotiation, and motivation as predictors of employee exercise participation in corporate fitness centres.

The quantitative approach has key strengths that informed the investigator's decision to adopt it in this research. Measurement is a key strength, given that analysis of outcomes provide estimates of the relationship between variables (Bryman, 2012). Replication is another strength that refers to analyses producing the same outcome on different occasions (Bryman, 2012).

The quantitative approach, however, has some limitations. Limitations include sample size, social desirability, and response rates (Bryman, 2012; Bryman & Cramer, 2011; Donley, 2012). Large samples are challenging for researchers to obtain in quantitative approaches, as individuals who are invested in the research topic typically respond to these research opportunities, and thus potentially leads to response bias (Field, 2009). Social desirability is another limitation that occurs when questionnaire respondents provide socially accepted answers that do not completely reflect the respondent's authentic thoughts, characteristics, and beliefs (Donley, 2012). Response rate is an additional limitation. Social science researchers typically encounter low proportions of responses to data collection methods, such as questionnaires, that impact the generalisability of findings beyond the sample (Donley, 2012).

These are some weaknesses of quantitative research that need to be understood when interpreting the results of such studies.

The investigator incorporated safeguards to offset the limitations associated to the quantitative approach. Sample size was addressed using multiple logistic regression analyses (refer to section 4.4.3), given that this technique requires few cases than other approaches, like structural equation modelling (Demidenko, 2007). Regarding social desirability, research respondents used personal work computer devices to complete the online questionnaire. This strategy provided partial privacy from social influences (e.g. colleagues), and therefore minimised participants' propensity to provide socially desirable answers (Dillman, Smyth, & Christian, 2014). To address response rates, the investigator created communication protocols, including strategies to enhance questionnaire response rates. The protocol comprised sending multiple emails with variable research information between emails, and including attention-grabbing titles (Dillman et al., 2014). These strategies contributed to mitigating the inherent weaknesses of the quantitative questionnaire design.

In summary, the quantitative approach is an effective strategy to objectively measure the relationships between variables of interest. The approach has much many strengths such as replication. The approach, however, has several weaknesses, such as low response rates, that need to be considered at the onset of research and safeguarded against to ensure findings are accurate.

4.3.1 Questionnaire

This mixed methods approach comprised a questionnaire in the quantitative phase. The investigator distributed a national, online questionnaire to examine constraints, negotiation, and motivation as predictors of employee exercise participation in corporate fitness centres.

The various strengths of an online questionnaires encouraged the investigator to adopt this method for the study. Strengths include: gathering large response numbers in a short amount of time; being cost-effective in comparison to hard-copy questionnaires; and immediately available raw data for download, review, and analysis (Dillman et al., 2014). These strengths meant that an online questionnaire would be an effective method for quantitatively examining constraints, negotiation, and motivation in this study.

Online questionnaires, however, have several limitations. Characteristics of study populations can impair online data collection, as potential respondents might have restricted access to computers and up-to-date mobile technologies to complete online questionnaires (Dillman et al., 2014). Additionally, online questionnaires might display differently across different devices and internet browsing platforms, which create visual challenges, and therefore discourage respondents to complete the questionnaire (Dillman et al., 2014). Furthermore, numerous emails from internal and external personnel diminish response rates (Dillman et al., 2014), as employees receive several emails per day, and respond to core business priorities. Employees might therefore choose to delete online questionnaire correspondences, as the communications are not core business-related activities. These are three weaknesses of online questionnaires that need to be addressed.

Three strategies were used to address the limitations of online questionnaires. First, the organisations involved in the research were large organisations located within Australia, and thus the investigator assumed employees had access to up-to-date computer technology. Second, the investigator employed Qualtrics software to ensure data displayed consistency across devices. The software automatically converted questionnaire items to display uniformly across devices and browsing platforms. Finally, the investigator adopted a stringent communication protocol to safeguard against low response rates, with Facilitators at each organisation distributing two emails – an invitation and a reminder - that incorporated attention-

grabbing subject titles to encourage employee engagement with both emails, and altered the content in each correspondence to avoid repetition (refer to section 4.3.2.3). These strategies helped to mitigate the limitations of online questionnaires.

4.3.1.1 Variables in the study.

The variables included in the questionnaire corresponded to the core factors used in this research: constraints, negotiation, motivation, and participation. The independent variables were constraints, negotiation, and motivation, while the dependent variable was participation in exercise in the corporate fitness centre. Each variable was measured using previously developed, reliable scales (Hubbard & Mannell, 2001; Ryan & Connell, 1989). The variables and sections within the questionnaire are listed in Table 9.

Table 9.
Variables and Associated Sections in the Questionnaire

Variable name	Questionnaire name and authors	Section in questionnaire
Participation variable was embedded in Demographics		Section 1
Motivation	Exercise Self-Regulation Questionnaire (Ryan & Connell, 1989)	Section 2
Constraints	Leisure Constraints Scale (Hubbard & Mannell, 2001)	Section 3
Negotiation	Leisure Constraint Negotiation Scale (Hubbard & Mannell, 2001)	Section 4

4.3.1.2 Measures.

The questionnaire began with demographic information, with the dependent variable inserted into this questionnaire section, to settle and prepare respondents for the remaining questions in the three upcoming sections. Motivation was section two of the questionnaire, and inquired about the positive factors contributing to exercise participation in the corporate fitness

centre. Constraints was the focus of section three, with negotiation concluding the questionnaire in section four. Although the questionnaire was constructed in this order to elicit higher response rates, the constraints, negotiation, motivation sequence in the upcoming sections are presented to correspond with the organisation of constraints, negotiation, and motivation presented in the literature review.

Two concepts warrant explanation prior to describing the measures used in this research: reliability and validity. Reliability refers to a measure that provides consistent outcomes in different situations, and is measured by the Cronbach's alpha (Gravetter & Wallnau, 2013). Excellent ($\alpha = \geq 0.9$), good ($0.9 > \alpha = \geq 0.8$), acceptable ($0.8 > \alpha = \geq 0.7$), questionable ($0.7 > \alpha = \geq 0.6$), poor ($0.6 > \alpha = \geq 0.5$), and unacceptable ($0.5 > \alpha$) score categories comprise the Cronbach's alpha to determine the reliability of measurement instruments (Cohen, Manion, & Morrison, 2013). Validity, however, refers to an instrument measuring an underlying construct that it is supposed to measure (Gravetter & Wallnau, 2013). Face, concurrent, construct, and convergent validities comprise the overall validity concept (Bryman, 2012).

Face validity refers to questionnaire items that reflect the subject in question, and is usually tested by asking pilot testers whether the questionnaire item(s) align with the subject matter (Bryman, 2012). Concurrent validity refers to measurement results that are similar to results of previously measurements of the same construct (Bryman, 2012). A researcher testing the concurrent validity of an exercise scale might ask for high and low level exercisers to complete the questionnaire. If scores between the two groups are similar, the researcher ascertains that the scale does not have concurrent validity, as differences were expected between the two groups. Construct validity refers to the degree to which a scale measures what it is supposed to be measuring (Bryman, 2012). A useful example is an exercise intensity scale measuring one's exercise intensity, opposed to the scale measuring exercise sweat

production. Last, convergent validity refers to confirming the accuracy of a measurement tool using other methods (Bryman, 2012). Thus, the exercise intensity scale in the previous example could have convergent validity confirmed through using either observation or heart-rate monitors. Reliability and validity are referenced throughout this section.

Dependent variable.

Participation in the corporate fitness centre was measured using a single-item. For practical purposes, a short physical activity measure was desirable to ensure the questionnaire was not too long and burdensome for respondents. The measure has established reliability, with a test-retest reliability score of .86 (Milton, Bull, & Bauman, 2011). This reliability score demonstrates a strong capacity to be repeated, and was therefore considered a reliable measure of employee physical activity participation. The question measured physical activity conducted during the past week, and read as follows:

In the past week, on how many days have you done a total of 30 min or more of physical activity, which was enough to raise your breathing rate? This may include sport, exercise and brisk walking or cycling for recreation or to get to and from places, but should not include housework or physical activity that may be part of your job (Milton et al., 2011).

Monthly physical activity recall also was considered to measure the dependent variable in this research. Monthly recall questionnaires typically include ten to 20 items measuring physical activity time, intensity, frequency, and type across multiple domains (Herrmann, 2012). The investigator in this research determined adding ten to 20 more questions to an already lengthy questionnaire would be burdensome for the participants and likely result in dropout. The additional questions also would collect unnecessary physical activity information, such as time, intensity, and type. Consequently, dropout and collecting superfluous information reinforced the need to select a quick, reliable physical activity measure.

The next question measured participation in the corporate fitness centre, specifically, and read as follows: “From your answer in the previous question (Question 12), how many days of physical activity were completed in the *corporate fitness centre*?”. This specific question was as the dependent variable in this research

Constraints.

Constraints was measured using the Leisure Constraints Scale (Hubbard & Mannell, 2001) (refer to Appendix G). The scale includes thirty-two questions that addressed the three constraint levels: intrapersonal ($n = 14$), interpersonal ($n = 8$), and structural ($n = 10$) (Crawford et al., 1991). Respective examples of intrapersonal, interpersonal, and structural constraint items include the following: “I am too shy to start an activity”, “The people I know work too far away to start an activity with me”, and “I would do an activity if the facilities I need are not crowded”. A five-point Likert-scale ranging from *one*, representing strongly disagree, to *five*, representing strongly agree, measured the degree to which respondents either disagreed or agreed to the proposed constraints to exercise participation the corporate fitness centres. The Leisure Constraints Scale has established reliability in previous research with a .72 alpha coefficient, meaning it has acceptable reliability, however validity has not been established (Hubbard & Mannell, 2001).

Negotiation.

Negotiation was measured using the Leisure Constraint Negotiation Scale (Hubbard & Mannell, 2001) (refer to Appendix H). The scale includes thirty-four items that addressed time management ($n = 15$), interpersonal coordination ($n = 4$), skill acquisition ($n = 8$), and financial strategies ($n = 7$). Respective examples of time management, interpersonal coordination, skill acquisition, and financial strategy items include “I try to be organised”, “I arrange rides with friends”, “I try to improve my skills”, and “I have just learned to live within my means”. A Likert-scale ranging from *one*, representing never, to *five*, representing very often, measured

the frequency with which respondents used each strategy to negotiate constraints to exercise participation in corporate fitness centres. The Leisure Constraint Negotiation Scale has established reliability with an alpha coefficient score of .89, meaning it has good reliability however, validity has not been established (Hubbard & Mannell, 2001).

Motivation.

Motivation was measured using the Exercise Self-Regulation Questionnaire (SRQ-E) (Ryan & Connell, 1989) (refer to Appendix I). The SRQ-E incorporates items representing external regulation, introjected regulation, identified regulation, and intrinsic motivation dimensions as sub-scales. Three items comprised each sub-scale. Respective examples of external regulation, introjected regulation, identified regulation, and intrinsic motivation items include the following: “Because others like me better when I am in shape”, “Because I would feel bad about myself if I didn’t do it”, “Because working out is important and beneficial for my health and lifestyle”, and “Because I simply enjoy working out”. A seven-point Likert-scale ranging from *one*, representing not true at all, to *seven* representing very true, measured how true each item statement was for the respondent. The SRQ-E has established reliability, with sub-scale alphas ranging from .61 - .85 (Ryan & Connell, 1989), meaning motivation sub-scales range from questionable to good reliability, however, validity has not been established.

4.3.1.3 Pilot testing.

Pilot testing the online questionnaire had several purposes. These included: to ensure questionnaire instructions and question wording were clear and concise; to ascertain the logical order of the questions; to test the aesthetics and online commands, such as skip logics; and to measure completion time (Dillman et al., 2014). The pilot testing procedure comprised three-steps, which were expert panel review, adjustment, and distribution (Dillman et al., 2014).

Expert panel review was step-one, with the purpose to obtain feedback, as these experts possessed special knowledge in the field of constraints research. Previous research (e.g. Alexandris, Grouios, Tsorbatzoudis, & Bliatsou, 2001; Hung & Petrick, 2012) used panels consisting of three to seven experts. The investigator in this research recruited three academics recognised for their expertise in leisure constraints research and two Australian fitness industry professionals recognised for the expertise in the Australian health and fitness industry, to review the questionnaire. The researcher used face-to-face interaction to obtain questionnaire feedback (Dillman et al., 2014). Four expert panellists, however, who were unable to provide face-to-face feedback supplied the information via email.

A secondary panel was invited to review the questionnaire. The secondary panel comprised employees from a large Australian organisation who had access to a corporate fitness centre. The purpose of the secondary panel was to obtain an employees' perspective of the questionnaire. Six employees comprised the secondary panel. The investigator sought face-to-face feedback, with two secondary panellists who could not meet with the investigator, sending their feedback via email.

Adjustment was step-two in this pilot testing process. The purpose was to action questionnaire modifications from the suggestions gained from the expert panel. Suggestions included the questions pertaining to age and sex that required minor modifications. These question items were changed to open-ended questions. No further action was required to adjust other elements in the questionnaire.

Distribution was step-three of the pilot testing process, with the purpose of testing the distribution protocol. The investigator invited a large Australian organisation, with a corporate fitness centre, into the pilot study to test the distribution protocol. The Australian organisation accepted the invitation and sent the questionnaire to employees on the corporate fitness centre

mailing list. An invitation and reminder was sent to these employees as per the guidelines provided by the investigator (refer to Appendix J). Employees completed the questionnaire, with no further issues developing through the pilot distribution. The investigator and supervisors of this research undertook a final review of the questionnaire and distribution protocol, with no additional actions being required. Therefore, it was determined the online questionnaire was ready for national distribution.

4.3.2 Sample.

Sampling involved a three-step protocol to examine constraints, negotiation, and motivation as predictors of employee exercise participation in corporate fitness centres. The three steps were identifying organisations with a corporate fitness centre, contacting organisations with a corporate fitness centre, and inviting organisations to participate in the research. The protocol is illustrated in Figure 16.

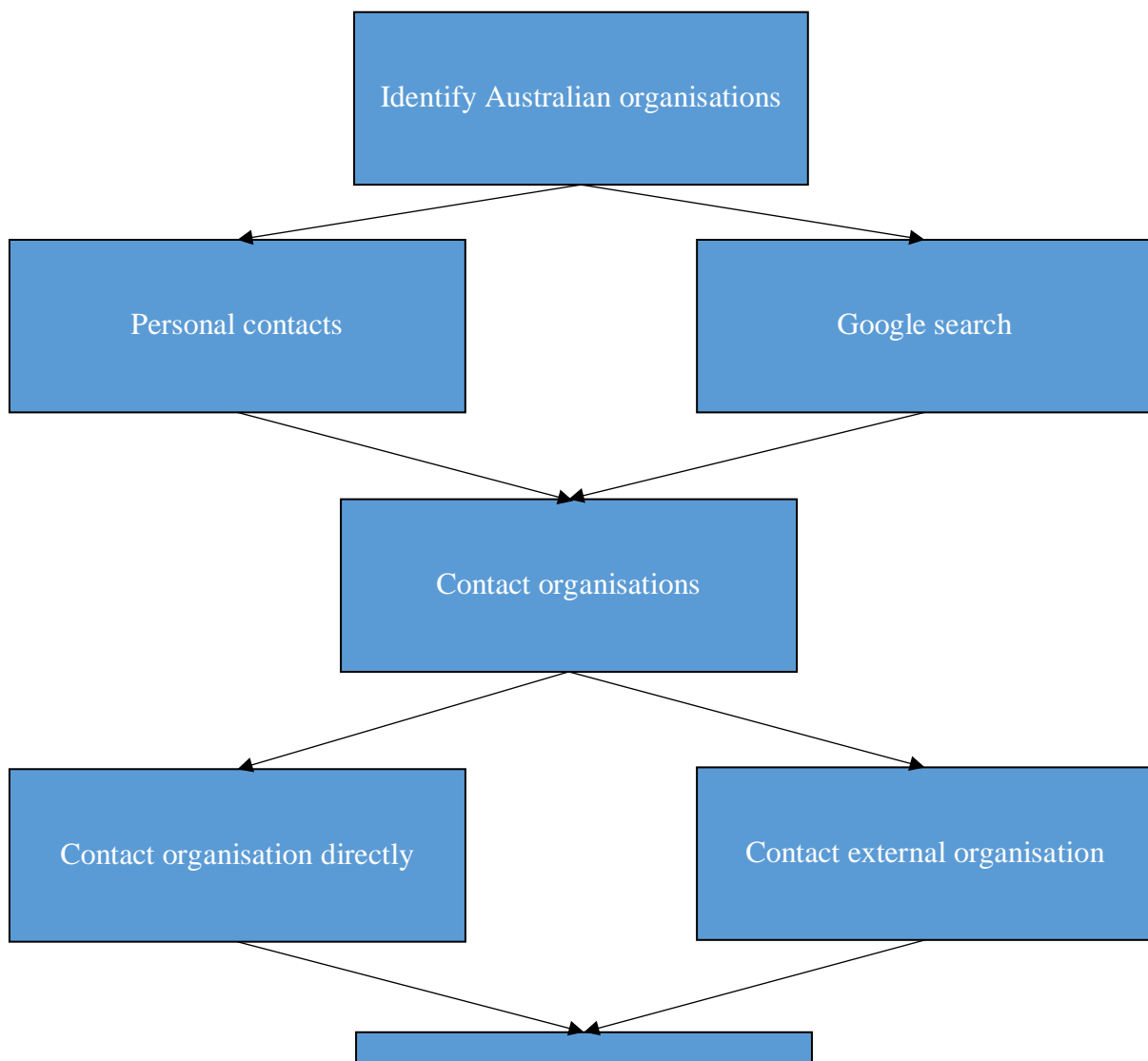


Figure 16. Sampling protocol

Identifying organisations in Australia with a corporate fitness centre comprised two methods: using the investigators' industry contacts and an exhaustive Google search. The investigator used personal contacts at private, public, and national fitness organisations to identify organisations in Australia with a corporate fitness centre. The investigator then created a corporate fitness centre contact list, and then added organisational names to the list when contacts supplied relevant information. Next, an exhaustive Google search was conducted to identify organisations in Australia with a corporate fitness centre, and used key terms such as *corporate, employee, fitness centre, and Australia*. Each relevant organisation was added to the corporate fitness centre list, noting the following: location, the organisation's contact information, an employee suitable to discuss the research, the date the investigator identified the organisation online, and the internet website from where the investigator retrieved the data. These two methods yielded contact details for 159 organisations in Australia with a corporate fitness centre. Step-one also revealed that corporate fitness centres were either managed internally, or by an external fitness provider. This knowledge influenced the conduct in step-two.

Contacting each organisation was step-two, and involved two separate methods. Method one involved directly contacting the organisation, when the investigator believed the corporate fitness centre was internally managed. The investigator contacted each organisation

via a phone call if a contact number was provided online. A gatekeeper (usually a reception employee) answered the phone call, and then transferred the investigator to either a human resource specialist or to the corporate fitness centre manager, at which time the research was verbally presented. Alternatively, an email was sent to organisations that did not supply a contact phone number online (refer to Appendix K). A gatekeeper usually forwarded the email to an employee with suitable knowledge to discuss the research inquiry. Organisations that were interested to participate in the research responded to the investigator, who then provided a follow-up email to confirm the research purpose, ethical guidelines relevant to the research, and the online questionnaire distribution procedures (refer to Appendix L).

Method two was very similar to method one. When a corporate fitness centre was identified as being managed by an external fitness organisation, the investigator contacted the external organisation directly. This involved the same protocol as described in the previous method with either phone call or email correspondences.

The follow-up email in step-two was followed with a formal, written acceptance letter from the participating organisations. This acceptance was step-three, as per the Victoria University ethics protocol (HRE17-021). An information pack (see Appendix J) was emailed to the Facilitator at each organisation, and contained invitation and reminder email templates and an information to participants involved in research form that the Facilitator attached to each email. Organisational policies prevented some facilitators from sending the emails to the entire employee population. Facilitators under these constraints sent the emails via the organisation's corporate fitness centre email distribution list.

4.3.3 Data analysis procedures.

Data analysis involved examining constraints, negotiation, and motivation as predictors of employee exercise participation in corporate fitness centres. The investigator followed the

recommendations from of several authors (e.g. Field, 2009; Pallant, 2010; Tabachnick & Fidell, 2013) to complete the data analysis. Data analysis was completed using IBM SPSS Statistics 22 software package. The data analysis protocol is illustrated in Figure 17.

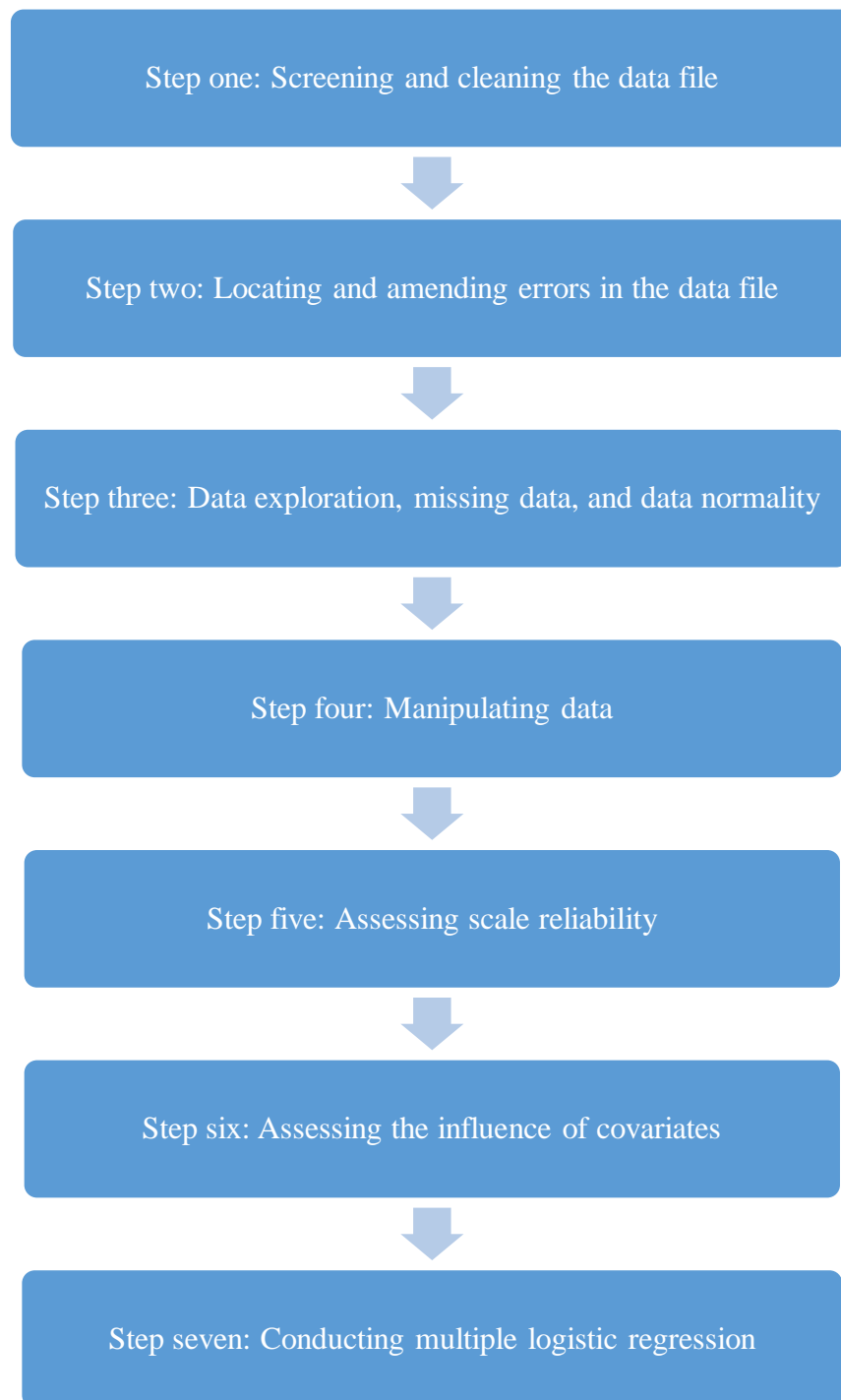


Figure 17. Quantitative data analysis protocol used in this research from Pallant (2010)

Step-one: Screening and cleaning the data file. The purpose of this step was to screen the data file for errors (Pallant, 2010). Scores on all the categorical, nominal, and scale variables

were inspected to ensure values were within the minimum to maximum range, and to calculate values, such as mean, median, and standard deviations (SD) on each variable.

Step-two: Locating and amending errors in the data file. The purpose of this step was to locate and amend the errors identified in step-one (Pallant, 2010). There were no errors in the data file, so the investigator proceeded to step-three.

Step-three: Data exploration, missing data, and data normality. The purpose of this step was to explore the questionnaire scores. The *Frequencies* command in SPSS produced scores for categorical variables, and the *Descriptive* command calculated scores on the continuous variables, such as mean, median, SD, skewness, and kurtosis (Pallant, 2010).

The exploration proceeded from descriptive scores, to missing data analysis. Missing data is common in questionnaire designs, and thus presents challenges to researchers (Pituch & Stevens, 2016; Schafer & Graham, 2002; Schlomer, Bauman, & Card, 2010), who must decide whether to delete or impute data to remedy missing scores (Pallant, 2010; Schafer & Graham, 2002). Deletion removes observations with either the casewise, pairwise, or listwise technique (Field, 2009; Pallant, 2010). Whereas imputation uses the collected values in a mathematical algorithm to replace the missing values (Enders, 2016; Pituch & Stevens, 2016).

The investigator used a hybrid approach using deletion and imputation to remedy the missing data. Entire cases were deleted from further analysis when there was either 50% or more missing data for either a specific case or when a case provided a non-response on the dependent variable (Hair, Black, Babin, & Anderson, 2014). The investigator then proceeded with Little's MCAR test to determine the randomness of missing data. The test revealed data was missing at random. Thus, full information likelihood estimation (FIML) was used to impute data for the remaining cases (El-Masri & Fox-Wasylyshyn, 2005; Pituch & Stevens, 2016; Schafer & Graham, 2002) (refer to section 6.2.3).

Exploration proceeded from missing data analysis to assessing data normality, with the purpose to assess the distribution of the dependent variable (Pallant, 2010). To assess normality, visual inspection of the histogram and Kolmogorov-Smirnov statistic were inspected (Pallant, 2010) (refer to section 6.2.4).

The exploration proceeded from data normality to assessing outliers. The purpose of this step was to assess the undesirable influence of extreme scores on the dependent variable (Pallant, 2010). The investigator visually inspected the histogram and boxplots, and examined 5% original and 5% trimmed mean scores (Pallant, 2010). The presence of no outliers results in progressing to the next step.

Step-four: Manipulating data. The purpose of manipulating data was to calculate scale scores (e.g. intrapersonal constraints scale). Calculating scale scores involved reverse coding of negatively worded questions using the *Transform* command, then calculating the item mean for each scale and sub-scale. Using the *Descriptive* command ensured the values were within the minimum and maximum scores. The dependent variable was also dichotomised during this step (Pallant, 2010).

Step-five: Assessing scale reliability. The purpose of this step was to assess how well each scale measured the underlying construct (Pallant, 2010). The Cronbach's alpha coefficient measures a scale's inter-item reliability, with an acceptable score ranging between 0.7 - 0.8 in the social sciences (DeVellis, 2003). These results are presented in section 6.5.

Step-six: Assessing the influence of covariates. The purpose of this step was to examine the undesirable influence the covariates had on the dependent variable (Tabachnick & Fidell, 2013). Calculating the influence of covariates is important, considering that the undesirable influences might need to be controlled for in the main data analysis technique. The investigator reported Chi-squared tests for goodness-of-fit to examine the relationships between covariates

and the dependent variable, as this test is acceptable for dependent variables with two categories (Pallant, 2010). Covariates that reach significance (i.e. $p < .05$) need to be controlled for in the logistic regression analyses. These results are reported in Appendix M.

Step-seven: Conducting multiple logistic regression. The purpose of this step was to answer the study's research questions by assessing how scores of two or more independent variables predict a categorical outcome. A total of three logistic regression models were run to address the three specific research questions:

- What constraint factor predicts the likelihood of exercise participation in corporate fitness centres?
- What negotiation strategy predicts the likelihood of exercise participation in corporate fitness centres?
- What motivation dimension predicts the likelihood of exercise participation in corporate fitness centres?

The *Binary logistic* command in SPSS commenced the main analysis procedure. The investigator inspected the values in the *Case Processing Summary*, *Dependent Variable Encoding*, and *Categorical Variables Codings* to identify whether these tables presented accurate information regarding sample size and coding of variables. The instructor proceeded to inspect the *Overall Percentage Score* table in *Block 0*, which assessed the percentage of cases that were categorised as non-participants in a regression model that excluded the independent variables.

Once the investigator noted the percentage in the codebook, *Block 1* results were assessed. The *Omnibus Test of Model Coefficients* score was observed to assess how well the model performs “over and above” (Pallant, 2010, p. 175) the results in Block 0. These scores were recorded in the codebook in addition to the Chi-squared and degrees of freedom values.

The *Hosmer and Lemeshow Test* was then inspected to ascertain whether there was statistical support or opposition for the model (Pallant, 2010). The test interprets support for the model differently to the Omnibus Test of Model Coefficients, considering that a non-significant score (i.e. above .05) is desirable and demonstrates support for the model (Pallant, 2010).

The *Model Summary* table was observed, and provided values for the *Cox and Snell R-Squared*, and *Nagelkerke R-Squared* scores. These scores indicate the amount of variation in the dependent variable explained by the independent variables in the model (Pallant, 2010).

When the Cox and Snell R-Squared and Nagelkerke R-Squared scores were ascertained, the investigator proceeded to inspect the *Classification* table. The table's values determine how well the model predicted the correct category for each case (Pallant, 2010). Block 1 results were compared with Block 0 results to assess whether there were improvements with the independent variables included in the model. The investigator manually calculated the sensitivity (i.e. percentage of cases with the outcome of interest), specificity (i.e. percentage of cases without the outcome of interest), positive predictive value (i.e. percentage of cases the model correctly classified having the outcome from the sample), and negative predictive values (i.e. percentage of cases the model correctly classified as not having the outcome from the sample) (Pallant, 2010).

The *Variables in the Equation* table presented scores on the contribution of each independent variable to the model. The investigator inspected the *Wald* value and then scanned to the *Significance* column. Probability values of less than .05 in the Significance column indicate a significant contribution to the predictability in the model. The *B* column presented values pertaining to case probability falling into a specific category. The positive or negative values designate the direction of the relationship. The $\text{Exp}(B)$ column presented the odds ratio,

which explained the probability of a case changing categories when the score on the predictor value increase by one unit (Pallant, 2010).

The last table in the SPSS Output was the *Casewise List*, and presented a list of cases that did not fit the model. The *ZResid* column displayed the cases with values above or below a score of two. Cases with values outside the -2.5 to 2.5 threshold required further examination as the cases were outliers. The investigator deleted the cases outside the threshold from that particular analysis and then repeated the analysis once (Pallant, 2010).

4.4 Chapter Summary

The purpose of this chapter was to describe and justify the methods used to conduct this research. The chapter explained the features of the mixed methods approach, and why employing the approach was effective to advance knowledge on employee exercise participation in corporate fitness centres. The chapter noted the strengths and weaknesses of the qualitative approach, and why the approach was relevant in this research. The use of the case study was justified; and included the strengths, weaknesses, and safeguards pertaining to the three qualitative methods used in phase-one: document review, semi-structured interviews, and focus groups. The chapter noted the features and limitations of the quantitative approach, and why it was effective for this research. The use of an online questionnaire was justified and deemed appropriate to answer the research questions, and described the strengths, limitations, and safeguards employed. The chapter also described the key sections of the questionnaire, and the sampling and analysis procedures. The next chapter presents the qualitative phase results.

CHAPTER FIVE: QUALITATIVE RESULTS

“Qualitative research is useful for exploring new research topics or understanding complex issues; for explaining people’s beliefs and behaviour; and for identifying the social and cultural norms of a culture or society” (Hennick, Hutter, & Bailey, 2011, p. 10).

This chapter presents the a priori core, axial, and open codes, and an emergent core theme with associated open codes drawn from the various data sources. The first section reports on document review, semi-structured interviews, and focus group results. The results are presented in this fashion to reflect the order of data collection explained in the methodology chapter.

The second section presents data triangulation. The a priori codes and emergent codes are compared among the three studies. The purpose is to demonstrate either support or contradiction amongst the various data sources in relation to what factors contribute to employee exercise participation in the selected corporate fitness centre. Semi-structured interviews from managers’ perspectives were the primary source of knowledge to gather data on the specific strategies used by management to contribute to employee exercise participation in the corporate fitness centre. Organisational document review results were a secondary source of knowledge that provided background information on what contributes to employee exercise participation, and sought to minimise the biases inherent in semi-structured interviews. The triangulation of these data helped improve the trustworthiness of findings. These data were then compared with employee focus group data, which sought to explore the constraints, negotiation strategies, and motivations relevant to exercise participation in the corporate fitness centre from their own perspective. This employee data was compared with document and

manager interview data to identify either convergence or divergence of views pertaining to employee exercise participation in the corporate fitness centre. At the start of each section, a Table (i.e. Tables 11, 17, and 20) lists the core, axial, and open a priori codes that featured in each particular study. These Tables act as summaries to guide the results in each respective section. A separate Table (i.e. Tables 14, 18, and 21) presents the codes associated to the inductive theme.

Data from the three studies are presented using different techniques. Documentary evidence is referenced using the document's name in parentheses. Semi-structured interview data is referenced with pseudonyms to preserve interviewee anonymity, and includes names such as Hudson, Kelly, and Melissa. Last, focus group participant data is referenced using the general statements, such as one participant *explained, described, or discussed*. This method of reporting results aligns with the approved VU ethical guidelines (HR17-021) (see Appendix N).

As per the coding protocol (refer to section 4.2.2.2), text from document review, and quotes from semi-structured interviews and focus groups were coded in "chunks" (Liamputtong, 2013, p. 242) of information that were the best representation of an open code. Direct text and quotes are used verbatim, with some quotes including minor adjustments to clarify the subject matter. These adjusted quotes are presented in brackets. Document review was the first study in this research, and is thus presented in the next section.

5.1 Study One: Document Review

The purpose of document review was to gather organisational historical background information on what factors contribute to employee exercise participation in the corporate fitness centre. A secondary purpose was to triangulate data with that obtained through semi-structured interviews to increase the trustworthiness of results, and to provide a complete

understanding of the practices and issues related to exercise participation in the corporate fitness centre.

Twenty-four documents were collected. Six were duplicates, which rendered eighteen documents for analysis. The investigator emailed the facilitator twice in 2016 to request additional documents that may have evolved since initial document collection. The facilitator did not supply further documentation. The documents were separated into the following categories: organisational-related, employee wellbeing programs, promotion, evaluation, and application. Document categorisation is presented in Table 10.

Table 10.
Categorisation of Organisational Documents

Organisational-related	Employee wellbeing	Promotion	Evaluation	Application
About the organisation.	Wellness charter.	April 2014 training update.	2012 employee wellness end of year report.	Wellness program recognition form A.
The organisational health promotion charter.	Manufacturing.	Employee wellness calendar.	2014 Employee wellness wrap-up.	Wellness program recognition form B.
		Health week flyer.	Employee wellness wrap up 2012.	
		Newsletter 2013.	PCM report September.	
		Skin checks November.	Survey summary.	
		2015 BUPA Around the Bay in a Day.		
		Zumba.		

Constraint and motivation core themes emerged through document review. These themes corresponded with the a priori codes from the literature review. The open codes identified through document review are listed in Table 11, with the number in parentheses representing the number of documents the open code emerged in.

Table 11.
A Priori Open Codes Identified in Document Review

Constraints	Motivation
<u>Structural</u>	<u>External regulation</u>
Programs at capacity (3)	Interpersonal encouragement (4)
Medical clearance (3)	Rehabilitation (3)
Shift work (6)	<u>Identified regulation</u>
	Health benefits (3)
	<u>Intrinsic motivation</u>
	Exercise enjoyment (3)

5.1.1 Constraints.

Structural constraints were the only constraint factor to feature in documents. The specific constraints were programs at capacity, medical clearance, and shift work. These constraints were identified in documents, given that they featured in at least three organisational documents, as per the coding protocol in section 4.2.2.2. Documents pertaining to these open codes are presented in Table 12, with programs at capacity presented first.

Table 12.
Documents Pertaining to Constraints

Employee wellbeing	Promotion	Evaluation	Application
Wellness charter.	April 2014 training update.	2012 Employee wellness end of year report.	Wellness program recognition form A.
	Newsletter 2013.	2014 employee wellness wrap up.	Wellness program recognition form B.

Zumba.

PCM report
September.
Survey summary.

Programs at capacity was considered a constraint that hindered the successful exercise participation of employees in the corporate fitness centre programs. It referred to the maximum number of participants that could fit in either a group training or Yoga program. Management capped the programs to 15 and 23 participants in the group training and Yoga programs, respectively, and would therefore constrain additional participants from engaging with the exercise opportunities. Program capping was summarised in an evaluation document, “[Yoga classes are] very well attended, often at full capacity of 23 people”.

Medical clearance was a strict policy considered to constrain employee exercise participation in the corporate fitness centre. Receiving a medical clearance ensured the medical management of employees and monitored who accessed the centre, by adding the employee’s name to an “approved list of users” (2012 employee wellness end of year report). This protocol likely constrained employees’ participation, as they were yet to receive medical clearance, and therefore deemed unpermitted to access the corporate fitness centre. The protocol was published in one of the evaluation documents, “Anyone who participates in any [corporate fitness centre] program must have a complete medical prior to attending” (Wellness program recognition form A).

Shift work referred to the unique job requirements recognised to constrain employee exercise participation in the corporate fitness centre. There was a diversity of work roles at the organisation, with shift workers specifically having variable working hours dictated by changing operational requirements. The variable operations and consistently changing working hours were identified to hinder this employee population from participating in exercise opportunities in the corporate fitness centre. As noted in one of the employee wellbeing

documents, “The challenge is always to ensure a diversity of events and [corporate fitness centre] programs to allow our shift population to be involved as much as possible, alongside our day workers” (Wellness charter).

5.1.2 Motivation.

Three motivation dimensions emerged in the data as strategies considered to contribute to employee exercise participation in the corporate fitness centre. External regulation, identified regulation, and intrinsic motivation, were the motivation dimensions, and correspond with the dimensions in self-determination theory (Ryan & Deci, 2000). Each code pertaining to the specific dimension was identified in three or more documents, according to the coding protocol (refer to section 4.2.2.2). Documents pertaining to the raw motivation data are presented in Table 13, with external regulation explained first in the upcoming next section.

Table 13.
Documents Pertaining to Motivation

Organisational-related	Employee wellbeing	Promotion	Evaluation	Application
The organisational health promotion charter.	Wellness charter.	Newsletter 2013.	2012 Employee wellness end of year report.	Wellness program recognition form B.
	Manufacturing.	Zumba.	PCM report September.	

5.1.2.1 External regulation.

External regulation is the most controlled form of behaviour that refers to an individual's compliance with either external rewards or demands (Ryan & Deci, 2000). The two external regulators identified in the document review as strategies considered to contribute to exercise participation in the corporate fitness centre were interpersonal encouragement and rehabilitation.

Interpersonal encouragement was the communication from managers to employees considered to contribute to employee exercise participation in the corporate fitness centre. The interpersonal encouragement derived from organisational managers, with their encouragement to use the corporate fitness centre featuring in four of 16 organisational documents, such as organisational-related, employee wellbeing, and promotion. Interpersonal encouragement from the manager was recognised by this investigator as a controlling type of motivation, given that the dialogue inadvertently coerced employees to comply with exercise opportunities. As summarised in organisational-related documents, “Our leadership team [is] actively encouraging and resourcing the participation of their teams in these [corporate fitness centre] programs” (The organisational health promotion charter).

Rehabilitation was another coercive strategy considered to contribute to employee exercise participation, specifically in the corporate fitness centre programs. The medical centre staff worked with injured employees on a confidential basis and prescribed them to participate in the exercise programs, in particular, the Yoga program. The strategy was considered an external regulator, as the medical centre staff appeared to act as an external motivator that inadvertently coerced the employees to comply with their instructions to participate in these programs. The text in an evaluation form summarised the strategy, “The medical centre continues to include Yoga attendance for appropriate persons as part of a rehabilitation and return-to-work programs” (Employee wellness end of year report).

5.1.2.2 Identified regulation.

Identified regulation refers to outcomes of personal importance (Ryan & Deci, 2000) that underpinned employee exercise participation in the corporate fitness centre. Health benefits was the only strategy identified in documents to be underpinned by identified regulation. It referred to management’s efforts to promote the wellbeing outcomes of exercise participation in the corporate fitness centre. The promotions highlighted the physical and

mental benefits of participating in the programs, and were subsequently coded as identified regulation, as these benefits are key outcomes of participating in exercise. Management emphasised health benefits in three documents, such as promotion and evaluation, with the following text included in their promotional materials, “Since practicing in Yoga, Madison feels she is much more centred and calm, not to mention the physical benefits she has experienced including being more flexible and fit” (Newsletter 2013).

5.1.2.3 Intrinsic motivation.

Intrinsic motivation, which refers to behaviour underpinned by the activity itself, includes motives such as enjoyment, challenge, and to learn activities (Ryan & Deci, 2000). Exercise enjoyment was the only intrinsic motive featuring in the document review, and therefore considered a strategy to contribute to employee exercise participation in the corporate fitness centre. Management communicated how the centre was fitted with different exercise equipment to enhance the exercise experience for employees, and then emphasised how this equipment develops exercise enjoyment. The following text was subsequently coded as intrinsic motivation, “The [corporate fitness centre] is fitted with straps, bolsters, and blocks, and all the equipment you need to enjoy a thorough Yoga experience” (Newsletter 2013).

5.1.3 Facilitators.

A small data set did not fit the core, axial, and open a priori codes, and instead reflected how management created external conditions that facilitated employee exercise participation in the corporate fitness centre. The data initially appeared to align with negotiation, however, negotiation is an intrapersonally-based construct, where individuals exert their own efforts to negotiate constraints (Hubbard & Mannell, 2001). Thus, the following codes were recognised as facilitators, considering that conditions contributed to employee exercise participation, and thus better aligns with facilitators to leisure (Raymore, 2002) (refer to section 7.4 for an in-

depth description of facilitators to leisure). Table 14 lists the specific avenues of facilitation, with documents pertaining to the raw data presented in Table 15.

Table 14.
Emergent Open Codes Identified Through Document Review

Facilitators	
Convenience (4)	Flexible programs (5)
Free programs (3)	

Table 15.
Documents Pertaining to Facilitators

Organisational-related	Employee wellbeing	Promotion	Evaluation	Application
The organisational health promotion charter.	Wellness charter.	Newsletter 2013.	2014 Employee wellness wrap up.	Wellness program recognition form A.
		Zumba.	PCM report September.	Wellness program recognition form B.

Convenience was the 24-hour access strategy considered to facilitate employee exercise participation in the corporate fitness centre. All employees who completed the medical clearance had access to the corporate fitness centre at any time during the day and night. Management implemented this external condition, and was therefore recognised to facilitate employees to participate in exercise at their convenience. The strategy was evident in an evaluation document, “This allows all of our employees and contract personnel with access available to [the corporate fitness centre] 24/7” (PCM report September).

Flexible programs referred to enabling all employees to access the same exercise opportunities, and therefore considered a strategy to facilitate employee exercise participation in the corporate fitness centre. Flexible programs were communicated in three documents, such as evaluation and promotions, to advise staff that instructors tailor the exercises to those employees participating in the programs. This external condition was recognised to facilitate

participation in exercise, as it provided all employees with an opportunity to access the exercise programs. The following text was evident in promotional materials, “No matter what level of fitness you are at, [the instructor] will ensure you are trained safely and properly” (Newsletter, 2013).

Offering free programs was a financial incentive to facilitate the recruitment and retention of employee exercise participation in the corporate fitness centre. Membership costs and ongoing participation in the five weekly exercise programs were completely subsidised by the organisation. The subsidy was identified in five documents, such as promotion, evaluation, and application, with the subsidy believed to act as an external condition to stimulate motivation and further enhance exercise participation in the corporate fitness centre. The strategy was summarised in an application form, “The organisation offered five free personal training and Yoga classes each week, onsite in [the corporate fitness centre]” (Wellness program recognition form A).

5.1.4 Summary.

Document review provided background organisational information on the strategies management used that contributed to employee exercise participation in the corporate fitness centre. Three structural constraints and three motivation dimensions emerged in the data, and therefore confirmed the a priori theories, while further data revealed an inductive core code that facilitated employee exercise participation to the corporate fitness centre. When document review was completed, semi-structured interviews commenced.

5.2 Study Two: Semi-Structured Interviews

The purpose of semi-structured interviews was to obtain an external perspective – defined as the views of managers – of the strategies considered to contribute to employee exercise participation in the corporate fitness centre. Semi-structured interviews specifically

gathered information on how managers sought to minimise the experience of constraints and motivate employees to participate in the corporate fitness centre.

There were eight interviewees, five of which were female. Interviewees were all full-time employees and comprised a range of management roles, such as medical, business, and operations. All interviewees were managers in their respective departments, and stipulated whether they participated in the corporate fitness centre or not, at the start of the interview. Interviews ranged from 35 to 55 minutes, with interviewee characteristics presented in Table 16.

Table 16.
Interviewee Characteristics

Interviewee alias	Gender	Management role	Participation type
Melissa	Female	Business	Participant
Jane	Female	Medical	Non-participant
Daphne	Female	Operations	Participant
Stephanie	Female	Business	Participant
Jose	Male	Business	Participant
Theodore	Male	General Manager	Non-participant
Kelly	Female	Business	Non-participant
Hudson	Male	Operations	Non-participant

Constraint and motivation a priori core themes emerged in the data, and were the same themes identified in document review. The open codes identified through semi-structured interviews are presented in Table 17, with the number in parentheses representing the number of interviewees that discussed the code.

Table 17.
A Priori Open Codes Identified Through Semi-Structured Interviews

Constraints	Motivation
<u>Interpersonal</u>	<u>External regulation</u>
Managers (6)	Event preparation (3)
<u>Structural</u>	Occupational health and safety (3)
Programs at capacity (3)	Interpersonal encouragement (8)
Promotion (7)	<u>Intrinsic motivation</u>
Schedule of programs (4)	Exercise variety (5)
	Try new exercises (3)
	Exercise enjoyment (7)

5.2.1 Constraints.

Four open codes emerged in the data as strategies considered to minimise the experience of constraints, and therefore contribute to employee exercise participation in the corporate fitness centre. Interpersonal and structural were the constraint factors that featured in the interviews, with the specific codes (strategies) presented in the upcoming sections.

5.2.1.1 Interpersonal.

Managers was the only strategy identified to minimise interpersonal constraints. The code referred to the attempts by corporate fitness centre management to limit the interference between line manager meetings and the commencement of exercise programs. Managers arranged team meetings between 11am and 1pm, which was problematic for employees, as programs were delivered between 12pm and 1pm. Corporate fitness centre management recognised the clash between meetings and exercise participation in programs, and therefore approached organisational management to try and remedy the circumstance. The attempt to

address the circumstance with upper management was subsequently considered a strategy to minimise the experience of the interpersonal constraint. As Melisa noted:

I think there's no respect for time, that period of time where you have a meeting and someone looks at you and goes 'Yeah there's a hole between 12 and one o'clock' which is a traditional lunch time for business people in a business setting and they'll schedule it... And that's something we've tried to reinforce with our leadership team as well.

5.2.1.2 Structural.

Three codes emerged in the data that were recognised as strategies to minimise structural constraints. The codes were programs at capacity, promotion, and schedule of programs.

Programs at capacity referred to how two aspects of the corporate fitness centre hindered employee exercise participation. Programs at capacity developed as there was minimal floor space in the corporate fitness centre, with additional equipment purchases further limiting the area to participate in exercise. Interviewees acknowledged that there is a certain number of employees that can fit within the programs at any one time. As Melissa described:

There's only so many you can get into the room. When Yoga is full, it's full. When PT is chocas, its chocas! So you're limited in what you can do...I've been in there when there was 15 [participants], and so that's maximum. You know it's really chocas. So, we've got more equipment, we use walls for Yoga, and of course you've got the poles in the middle that hold it up. So, you're bound by that as well.

Promotion referred to the efforts to communicate the availability of the corporate fitness centre. Strategies that emerged to inform employees about the exercise opportunities included, newsletters, an intranet page, and verbal communication with exercise champions. These champions were interpersonal points of contact to gather information about the programs; they also organised external fitness service providers to deliver the group training and Yoga programs. The different efforts to educate employees about the corporate fitness centre and the

exercise programs were therefore considered strategies to stimulate awareness and emphasise the opportunities to participate in exercise. As Melissa explained, “Kelly is our focal point for Yoga and for PT Daphne is the [person in charge] ... all [other promotion] is proactively found on the intranet page”.

The schedule of programs referred to the strategy to align exercise programs with the availabilities of certain employees. Interviewees believed the corporate fitness centre programs were unsuitable for the roster structure of shift worker employees, and thus offered the structured exercise programs at lunch times to cater to business employees. This inadvertently excluded and created other constraints to participation for shift employees. Regardless of the development of additional constraints, the decision minimised constraints for employees in the business department, and was thus considered a strategy to minimise structural constraints. As Theodore noted:

We offer the corporate fitness centre, in terms of structured programs, at certain times, typically lunchtimes during the week. People on shift structures, are [on] a 24-hour a day operation, 365 days per year and it does not fit their roster structure.

5.2.2 Motivation.

Two motivation dimensions featured in interviews as strategies reported to enhance motivation, and therefore contribute to employee exercise participation in the corporate fitness centre. External regulation and intrinsic motivation were the motivation dimensions that underpinned strategies to motivate employees.

5.2.2.1 External regulation.

Three open external regulation codes were identified in the data. These codes included event preparation, occupational health and safety, and interpersonal encouragement.

Event preparation referred to a gateway strategy to recruit employees into the corporate fitness centre. The organisation was the sponsor of a local charity event and registered all employees to participate in the physical activity component of this event. To physically prepare employees for the event, the organisation offered exercise programs to employees. This strategy was considered to externally regulate exercise participation in the corporate fitness centre's programs, as employees had to comply with the programs to participate in the event.

As Jane explained:

[The GM] involved us all in the [local charity event]. So, as a setup to get everyone to do the [event], he put in the [corporate fitness centre programs] to give people the training to be able to do the run in the first place.

Occupational health and safety reflected a mitigation strategy that externally regulated employee exercise participation in the corporate fitness centre. Management communicated the benefits of participating in exercise in the corporate fitness centre, and also proclaimed that participation improves worker safety and reduces physical risks to employees. These communication efforts were considered strategies underpinned by external regulation, as the communication was a means to inadvertently coerce exercise participation. Stephanie provided an example highlighting how the organisation addressed occupation health and safety:

An email was sent out on an incident that happened here, an injury to somebody, and they mentioned that it was an odd thing that happened, but because the person didn't have much core strength – had they of had a really good core strength – they could have just [corrected] themselves. [Organisational management] were reminding [reminding employees] that they needed to do exercise to keep themselves in shape.

Interpersonal encouragement reflected strategies that were considered to verbally motivate employee exercise participation in the corporate fitness centre. Interpersonal encouragement was derived from instructors, colleagues, and managers. These sources of interpersonal encouragement built relationships, and then invited employees into the exercise

opportunities. This was considered a strategy underpinned by external regulation, given that the invitation unintentionally pressured employees to comply with the external demand to participate in exercise. Jose provided a concise summary, “I encourage [employees] to come along to keep the number in the programs up”.

5.2.2.2 Intrinsic motivation.

Three open intrinsic motivation codes were identified in the data: exercise variety, try new exercises, and exercise enjoyment. These codes refer to strategies that underpinned motivation for the “inherent satisfaction of the activity” (Ryan & Deci, 2000, p. 71).

Exercise variety referred to the strategy of providing diverse exercise programs to suit the different preferences of employees, and was therefore considered a means that contributed to employee exercise participation in the corporate fitness centre. Instructors in the group training and Yoga programs constantly changed the exercise routine from session to session. The exercise variety was believed to keep employees guessing as to what the next session would incorporate and was perceived to keep them interested and sustain their participation in the program. This was a strategy underpinned by intrinsic motivation, considering that exercise variety was inherent to the exercise offerings. As Jose explained:

The trainers tend to come in and mix it up. So, we'll have one day of cardio for argument's sake, one day of boxing, and one day of strength work and it gets mixed up. So, it attracts [employees]. People like different things, so having the variety there is good to appeal to all the personalities.

Try new exercises reflected an intermittent strategy of providing exercise opportunities that contributed to employee exercise participation in the corporate fitness centre. Corporate fitness centre management offered specific programs once per month that were reported to encourage employee participation. This strategy was underpinned by intrinsic motivation,

considering that the capacity to try new exercises was inseparable from the exercise offerings.

As Stephanie explained:

So people seem to enjoy the restorative class. So it's, it's still physical, but not a physically demanding as a lot of other Yoga classes typically are ... it's a really good [program] for people that want to try it and to have it as an introduction as well. It's not as physically demanding ... so it's a really good one for trying to get people who want to give it go and then try the other normal [Yoga] classes ... so it's a special class which might interest people and, you know, try for the first time ... We do restorative once a month, first Tuesday of the month.

Exercise enjoyment referred to the strategy of providing enjoyable exercise experiences that were reported to contribute to employee participation in the corporate fitness centre. Managers reported how the exercise programs had to be positive experiences to encourage continual participation, with some managers even discussing their personal satisfaction in the programs. This was a strategy considered to be underpinned by intrinsic motivation, as exercise enjoyment was inseparable from the activity itself. As Jane explained:

People who've found a training program that suits them and they get a bit of a high from it, they enjoy it, they feel good after it, why wouldn't you keep doing it? That's all that there is to it: if you enjoy it, you'll do it.

5.2.3 Facilitators.

Similar to the document review, a data set did not fit the a priori codes from the literature review. These data reflected how management created external conditions that facilitated employee exercise participation in the corporate fitness centre (refer to section 5.1.3). The facilitators identified in document review are presented in Table 18.

Table 18.
Emergent Open Codes Identified Through Semi-Structured Interviews

Facilitators	
Convenience (7)	Program cut-back (3)
Free programs (3)	Flex-time (4)

Convenience referred to a strategy that facilitated participation in exercise on a 24-hour basis. Management provided 24-hour access to the corporate fitness centre to enable all employees with equal access to exercise opportunities. This was recognised as a facilitator, as management valued convenience, and thus created an external condition to contribute to exercise participation in the centre. As Jane noted, “If people want to use it outside of [program] hours, they can get a key, either from me or security, so they can go in at any time”.

Free programs referred to the financial strategy to facilitate the recruitment and retention of employee exercise participation in the corporate fitness centre. Managers explained that the organisation completely subsidised the exercise opportunities. There were neither upfront costs nor ongoing membership fees to participate in the exercise programs, or to use the exercise equipment. The free programs were considered a facilitator strategy, given that management developed an external condition that would enable employees to participate in the corporate fitness centre. As Melissa noted, “[The organisation] provides free personal training and free Yoga five days a week. It’s free out the door – another big reason to participate”.

Program cut-back referred to the strategy to reduce program duration, while retaining employee exercise participation, specifically in the exercise programs. Corporate fitness centre management were in a dilemma, as program participation was impinging on business operations. Management therefore decided that reducing exercise program duration was a good compromise to retain participation in programs, while embedding participation within the business structure. This decision-making was considered a facilitation strategy, considering that management develop an external condition that contributed to employee exercise

participation in the corporate fitness centre. As Jose explained, “I know [management] has cut-back its program times. So, there’s 45 minutes of exercise, and so you’re in, you should be able to get out of [the corporate fitness centre] within an hour”.

Flex-time reflected the flexible work scheduling that facilitated employee exercise participation in the corporate fitness centre. Some employees had flexible schedules that permitted participation in exercise throughout the day. There was an expectation, however, that lost time in lieu of participation in exercise would be made up after work. This was considered a facilitator to participation, given that there was an external condition to enable employees to access the corporate fitness centre, while they were on work time. As Melissa explained:

So if you were going to be an hour and a half – two hours away at training – there was an expectation that you will make it up at the end of the day. Most of the people that go do make up the time.

5.2.4 Summary.

Semi-structured interviews provided managers’ perspectives on the strategies that contributed to employees’ exercise participation in the corporate fitness centre. While management reported one strategy contributed to minimising interpersonal constraints, most of their efforts appeared to be directed at reducing structural constraints, as evidenced by programs at capacity, promotion, and schedule of program. Similarly, management reported three strategies that aligned with improving intrinsic motivation, while four strategies were aligned with external regulation strategies. Constraints and motivation corresponded with the a priori constructs, while other evidence featured the inductive theme of facilitators that was also recognised to contribute employee exercise participation in the corporate fitness centre. When semi-structured interviews were completed, focus groups commenced.

5.3 Focus Groups

The purpose of focus groups was to explore the lived experiences of employees' constraints, negotiations, and motivations relevant to exercise participation in the corporate fitness centre. The secondary purpose was to triangulate the results with the data obtained through document review and semi-structured interviews.

A total of three focus groups were conducted, as the investigator determined the data reached saturation. Information began to repeat after the second focus group, which indicates that saturation is imminent (Bryman, 2012), with the third focus group revealing no further insights regarding the lived experiences of constraints, negotiation, and motivation.

Unforeseen circumstances restricted the investigator from including the proposed four to six participants in each focus group session. Specifically, these circumstances pertained to unanticipated union action and scheduling constraints. As a result, the investigator proceeded with focus groups comprising three to four participants, as smaller focus groups still generate quality data (Brinkmann, 2013; Peek & Fothergill, 2009). Therefore, a total of 10 participants participated in focus groups across the research. Focus groups A and C consisted of three participants each, while focus group B comprised four participants.

There were seven female participants and three were male. The participants represented different work roles, such as operations, business, and laboratory. Most participants did not participate in exercise in the corporate fitness centre, and the conduct of focus groups sessions ranged from 35 to 55 minutes. Participant characteristics are presented in Table 19.

Table 19.
Characteristics of Focus Group Participants

Participant alias	Gender	Work type	Participant or non-participant
Focus group A			
Participant 1	Female	Operations	Participant
Participant 2	Male	Operations	Non-participant
Participant 3	Female	Business	Participant
Focus group B			
Participant 4	Male	Operations	Participant
Participant 5	Male	Business	Participant
Participant 6	Female	Business	Non-participant
Participant 7	Female	Laboratory	Non-participant
Focus group C			
Participant 8	Female	Business	Non-participant
Participant 9	Female	Business	Non-participant
Participant 10	Female	Laboratory	Non-participant

Constraint, negotiation, and motivation core a priori themes emerged from the focus groups. These themes corresponded with the a priori themes identified in the literature review. The open constraint, negotiation, and motivation codes identified through focus groups are presented in Table 20, with the number in parentheses representing the number of focus groups the code emerged in. Each code is explained in the upcoming sections.

Table 20.
A Priori Open Codes Identified in Focus Groups

Constraints	Negotiation	Motivation
<u>Intrapersonal</u>	<u>Cognitive</u>	<u>External regulation</u>
Suspicion (3)	Priority (3)	Rehabilitation (2)
<u>Interpersonal</u>	<u>Behavioural</u>	Interpersonal encouragement (3)
Colleagues (2)	Cooperation (3)	<u>Identified regulation</u>
Managers (2)	Time management (2)	Team building (2)
Instructors (3)		Social (3)
Family (2)		Health benefits (3)
<u>Structural</u>		<u>Intrinsic motivation</u>
Access (2)		Exercise challenge (2)
Promotion (2)		Exercise enjoyment (3)
Schedule of programs (3)		Exercise variety (3)
Time (3)		

5.3.1 Constraints.

A variety of constraints were identified that participants reported to hinder their exercise participation in the corporate fitness centre. Intrapersonal, interpersonal, and structural constraints emerged in the data, with each open code presented in the next sections.

5.3.1.1 Intrapersonal.

Suspicion was the only identified intrapersonal constraint, and referred to the negative perceptions managers or colleagues had regarding exercise participation. Participants reported internalising these negative perceptions, and this they believed hindered them from participating in the corporate fitness centre. Suspicion was considered an intrapersonal constraint, as participants reported suspicion as a psychological attribute. As one participant discussed:

So sometimes people notice that you're taking longer breaks. ... So, you really have to [be aware of it]. You guys have got to make [up the program time] afterwards, but there are certain people who seem to go to all of the classes and then come back and have lunch, so they technically have a two hour break every day. But also your colleagues perceive that you're getting extra [breaks] because you're getting a two hour lunch every day and they're working. So you've got to be mindful of that. I think that's a big blocker for everyone.

5.3.1.2 Interpersonal.

Four interpersonal constraints were identified that participants reported as hindrances to their exercise participation in the corporate fitness centre. The sources of interpersonal constraints were believed to develop from colleagues, managers, instructors, and family.

Colleagues referred to a just-in-time working basis that was reported to constrain participation in the exercise programs. Colleagues called focus group participants just before the lunch break and requested work to be completed as soon as possible. Focus groups participants submitted to the request, which therefore constrained their participation in programs. This was coded as an interpersonal constraint, as the interaction between employees and colleagues interfered in the preference-participation relationship (Crawford & Godbey, 1987). As one participant noted, "We do administration work and we're the go-to person for everything. So, if somebody comes to you at five to twelve and says, 'I need this in a hurry', that's the end of your lunch break".

Managers, which referred to the time they arranged meetings, were reported to constrain exercise participation in the corporate fitness centre. Managers called meetings that overlapped during program commencement. While some participants reported that the overlapping meetings were irregular occurrences and were sometimes required to bring large groups together, other participants reported their frustration that lunch time meetings were regular behaviours that coincided with programs, and were therefore considered as constraints to exercise participation. The managers code was located at the interpersonal-level, considering

that the social interactions between participants and managers created a constraint to participation. As one participant vented:

I think it is rude when people book my lunch time and I let them know. Let them know that it's not alright. But, you know, understand that sometimes you have to, just don't make a habit out of it ... But it happens all the time. It's not a rare occurrence. So, it wouldn't be that a week goes by without someone infringing on my lunch time at some point.

Instructors referred to how exercise professionals were reported to create deficient exercise experiences that contributed to constrained participation in the corporate fitness centre programs. Some participants reported that instructors did not meet their needs, and this gap between expectation and delivery contributed to a poor exercise experience. The experience was recognised as an interpersonal constraint, given that the deficient experience developed between individuals: the participant and the instructor. The following exchange occurred in focus group one:

Participant one: If you had a poor Yoga teacher, that'd be your first and your last class in Yoga.

Participant two: Yeah, after a while, I was not going to a particular class when I knew that a particular instructor was on. I would go when the good [instructor] is on.

Family reflected the domestic obligations that were reported to constrain employee exercise participation in the corporate fitness centre. Family obligations included the need to complete school drop-offs and pick-ups, and attend to home duties. These obligations appeared to take precedence in participants' lives, and thus contributed to constrained exercise participation in the corporate fitness centre. As the constraint developed between participants and other family members, it was therefore conceptualised as an interpersonal constraint. As one participant discussed:

I can't go to [the corporate fitness centre] after hours because I have kids, and I can't go before hours, which is what limits you to doing [exercise] outside of work as well. I've got to take my kids to school [and] I've got to pick the school kids up from the bus.

5.3.1.3 Structural.

Four structural constraints were identified that participants reported as constraints to their exercise participation in the corporate fitness centre. These constraints were access, promotion, schedule of programs, and time.

Access referred to the frustrating process that was reported to gain access to the corporate fitness centre. Participants discussed the problematic logistics to retrieve and return the corporate fitness centre key from security personnel at the main gate. This was considered a structural constraint, as participants had a preference to exercise, yet access appeared to constrain the preference-participation relationship. As one participant vented:

You'd have to go to the main gate [to get the key], which was a pain in the arse. I [use the corporate fitness centre] outside of [program] hours ... I go downstairs and grab the key and then lock it when I leave.

Promotion reflected the limited efforts to advertise the availability of the corporate fitness centre. Participants described how management's promotional efforts decreased over the last year, with this decrease in promotion reported to contribute to constrained exercise participation. Promotion was recognised as a structural constraint, as the limited promotional efforts did not make participants aware of the exercise opportunities. As one participant noted, "There is no clear champion of promoting [the corporate fitness centre] and getting people along ... For me, the active promotion is not there and that's a bit discouraging".

The schedule of programs referred to incompatible scheduling that was reported to constrain employee exercise participation in the corporate fitness centre. Participants described how exercise programs were delivered between 12pm and 1pm. Some participants, however,

had their scheduled lunch break from 1pm to 2pm, which created a perceived time constraint to participation. These participants had a preference to participate in exercise, yet were constrained by incompatible schedules. As one participant explained:

And their lunch break is different to everybody else's. So, contractors tend to have their lunch breaks a little later than staff. So you've got the whole [physical activity program] running from 12 to one, but we take lunch from one to two. So it is directed towards the office base.

Time reflected two types of constraints: inflexibility and work overload. Participants reported time-consuming tasks constrained their exercise participation in the corporate fitness centre programs. Some participants were required to gather resources that produce key organisational products, operate heavy machinery, and conduct field work. These tasks were all reported to contribute to time-related constraints, as it developed a perception of insufficient time to participate in exercise. Moreover, another group of participants referenced excessive workloads as a time constraint. These participants were inundated with work and therefore reported the need to address work duties as their time constraint to participation. One participant succinctly summarised the two types of time-related constraints, "A lot of us just work through lunch and keep going because you've got deadlines. So, you're like, 'I really don't have time [to participate in the corporate fitness centre programs]'".

5.3.2 Negotiation.

Two strategies were identified that participants reported as negotiation strategies to overcome constraints to exercise participation in the corporate fitness centre. The strategies were cognitive and behavioural negotiation strategies, which corresponded with the key a priori strategies from the literature review.

5.3.2.1 Cognitive.

Cognitive refers to negotiation strategies that alleviate the psychological dissonance associated to a constraint to participation (Jackson & Rucks, 1995). Priority was the only cognitive strategy reported to alleviate constraints to exercise participation. Some participants had the unrealistic preference to participate in all five weekly corporate fitness centre programs, considering that work duties was reported as a significant constraint to participation. The constraint was reported to trigger an active response that contributed to prioritising participation in specific programs. This was recognised as a cognitive negotiation strategy, as participants engaged in efforts that alleviated the constraint by assessing and then targeting their participation in specific exercise programs. As one participant discussed, “I just don’t have the time to do a class every day. So, I have to prioritise and have chosen to do the Yoga [program]”.

5.3.2.2 Behavioural.

Behavioural refers to the observable changes in behaviour that result in constraint negotiation (Jackson & Rucks, 1995). Cooperation and time management were the two identified behavioural strategies reported to negotiate constraints.

Cooperation referred to a social interaction strategy that was reported to negotiate constraints to exercise participation in the corporate fitness centre programs. When encountered with work related constraints, some focus group participants initiated dialogue with colleagues and line managers to negotiate these constraints. The efforts to initiate dialogue was reported to act as a solution and help negotiate constraints, and was thus considered a behavioural negotiation strategy. As one participant explained:

It’s about the relationship you have with your line manager. Mine’s pretty easy. I just say, “Look, I need to lose some weight. My fitness is crap. Can I [use the corporate fitness centre]?” And she’ll say, “OK, how are you going to make up the time that you are away?” And I’ll just say, “I’ll just work from home for an hour” – Problem solved!

Time management reflected how restructuring the work day contributed to successful constraint negotiation. When confronted with workload constraints, some participants reported to respond actively, and thus decided to restructure their workday to fulfil their exercise needs. This was therefore recognised as a behavioural negotiation strategy, as participants would have engaged in observable behaviour change efforts to accommodate exercise into their day. As one participant described, “What I do best as I can, is structure my workload on the days that I go [to the corporate fitness centre]. That frees me up to attend”.

5.3.3 Motivation.

A variety of reasons were identified that participants reported as motives to exercise in the corporate fitness centre. Motivation was underpinned by external regulation, identified regulation, and intrinsic motivation dimensions, with the specific open codes discussed in the following sections.

5.3.3.1 External regulation.

Two external regulators were identified and reported to contribute to exercise participation in the corporate fitness centre. These external regulators included rehabilitation and interpersonal encouragement.

Rehabilitation referred to restoring physical and mental health that contributed as a controlled motive to exercise in the corporate fitness centre. Participants were aware that the medical centre staff prescribed participation in the exercise programs as a means to recover from ailments, such as broken bones and muscular strains, and to reduce anxiety and depression. The prescription was considered an external regulator, as the medical staff inadvertently coerced participants to comply with their external demand, and thus participate in the corporate fitness centre. One participant recalled an observation when the medical staff prescribed participation in exercise programs to colleagues:

Apparently the [medical staff] see employees each day, and it's not things that happen to them at work, it's like they've got high blood pressure or they're anxious or tense or whatever. And I know [the medical staff] does refer people to try Yoga.

Interpersonal encouragement reflected motivation that was considered to derive from colleagues, managers, and quality instructors. Quality instructors were reported to provide positive exercise experiences and verbal encouragement that contributed to participation in exercise programs. Similarly, colleagues and managers reportedly used interpersonal interactions, such as verbal and email, to recruit employees into the programs. The behaviours of instructors, colleagues, and managers were recognised as external regulators, as the interactions were external factors that unintentionally controlled employee participation in exercise. One participant summarised the interpersonal encouragement, "Everybody who goes [to the exercise programs] plus a certain percentage of us who do keep going, keep dropping the hint to other people that we work with to come along, [experience] one hour, and feel the difference".

5.3.3.2 Identified regulation.

Three identified regulators featured in the data and were reported to contribute to employee exercise participation in the corporate fitness centre. These regulators were teambuilding, social, and health benefits.

Teambuilding referred to valuable group development outcomes that were reported to be results of participating in exercise programs in the corporate fitness centre. Participants valued that the group activities could develop a sense of camaraderie. It brought colleagues to a neutral location and engaged them to interact with one another in a common activity and to achieve a solitary goal. As teambuilding was considered the outcome of exercise participation, it was therefore recognised as a motive underpinned by identified regulation that may have contributed to exercise participation in programs. As one participant explained:

What I really like is you see people you don't really see part of your normal work, because [the corporate fitness centre] cuts across all different [departments]. There is a sense of mateship almost – if someone sees that you're struggling, they'll say "Come on, you can do this".

Social reflected the inseparable interpersonal interactions that accompanied group exercise, and was reported to contribute to employee exercise participation in the corporate fitness centre. Instructors either created pairs or small groups that facilitated interactions between exercise program participants. While the act of pairing participants was an external regulator initiated by the instructor, employees valued the social interactions that organically developed throughout the session. For this reason, social was recognised as a motive underpinned by identified regulation. As one participant described:

I think it is the class dynamic. If you've got a group that are all there to have some fun and get fit, then you will go along with the ride ... So, I think it depends on the dynamic of the group and if everyone is there with the same goal and to have fun, then everyone [continually participates].

Health benefits referred to the physical and mental health benefits associated with exercising in the corporate fitness centre. Participants reported enhanced physical and mental health status because of participating in the exercise programs. These perceived improvements to health were therefore viewed favourably by participants, and may have contributed to their continual participation in the exercise programs. The reported value of health benefits was recognised as an outcome of exercise participation, and thus considered an identified regulator of behaviour. One participant proclaimed support for the program:

But in here, nothing gets to you. The door shuts, and what is inside there is for us. It's your space. We all absorb it differently, we all benefit from it. Key factor – that's why this program should be kept forever!

5.3.3.3 *Intrinsic motivation.*

Three intrinsic motives evolved from focus group analysis that were reported to contribute to employee exercise participation in the corporate fitness centre. The codes were exercise challenge, exercise enjoyment, and exercise variety.

Exercise challenge referred to the act of participating in programs to experience physically demanding exercises. The movements in the programs were reported to test respondents' physical capabilities, which in turn influenced them to report on the improvements to their fitness levels. These benefits reportedly made them feel good about themselves, with the challenge of the activity being the main aspect that underpinned their participation, and was thus recognised as an intrinsic motivation. As one participant noted, "The CrossFit type classes that [the instructors] run – they can be quite [challenging]. The [exercises] can push the boundaries a bit".

Exercise enjoyment reflected participants' enjoyable exercise experiences in the corporate fitness centre. Participants reported that positive experiences contributed to their maintained participation in the exercise programs. Exercising with colleagues and having a quality instructor reportedly enhanced the retention of participants in these exercise programs. This was recognised as intrinsic motive, as the feeling of enjoyment was inseparable from the exercise. One participant recalled her colleague's enjoyment in the program, "We've got a pregnant lady that's never done Yoga before and she's [continued participating]. She's absolutely loving it, she just feels so much better".

Exercise variety referred to the diverse exercise programs that were reported to contribute to employee participation in the corporate fitness centre. Participants recognised that variability in exercises and program formats were positive aspects that reportedly encouraged their participation in exercise opportunities. This was acknowledged as an intrinsic motive,

considering that exercise variability is inseparable from the exercises itself. The following exchange occurred in focus group A:

Participant A: I personally like the variety, the different formats.

Participant B: Yeah there's pretty good variety.

Participant C: Not having done the PT classes for ages, but you go there and never knew from day-to-day what you'd be doing. It could be a completely different thing each time.

5.3.4 Facilitators.

Similar to the document review and semi-structured interviews, a small data set did not fit the a priori codes, and instead reflected how employees experienced facilitators to exercise participation in the corporate fitness centre. The specific facilitators are listed in Table 21.

Table 21.
Emergent Open Codes Identified in Focus Groups

Facilitators	
Flexible programs (3)	Convenience (2)
Program cut-back (3)	

Flexible programs referred to providing alternative exercises to accommodate the variable fitness levels of participants within the same corporate fitness centre program. Instructors with sufficient experience would modify the exercises for participants with either lower fitness levels, were injured, or pregnant. These actions created an external condition that was reported to accommodate these employees into the exercise program, without compromising the exercise experiences of the other participants. As one participant described:

[The instructor] will tell you the things you can't do and give you alternatives. And even if [the instructor] is planning a harder class, when she sees [the pregnant employee], [the instructor] just [modifies the exercises for her] and we don't care, we don't care what we get given to do. She just modifies it to suit who's coming in and what their limitations are.

Convenience reflected easy access to exercise opportunities that may have contributed to employee participation in the corporate fitness centre. Exercises options were limited in the organisation's general vicinity, as commercial gyms and not-for-profit recreational facilities were at least a 15-minute drive from the worksite. The organisation's provision of a corporate fitness centre created an external condition that enabled easy access to an exercise-based facility. As one participant explained, "I guess being here on-site, you're limited with what you can do. So, [the corporate fitness centre] does give everybody a really good opportunity to participate in [exercise] if they wanted to".

Program cut-back referred to a management strategy that may have facilitated employee retention in the corporate fitness centre programs. Participants explained management's decision to cut-back exercise program duration as a means to fit program participation within business operations. This decision reportedly created an external condition, where work commitments were balanced with exercise needs. One participant noted, "The CrossFit training [was reduced] to 45 minutes, so senior management has tried to accommodate the programs [into the business schedule]".

5.3.5 Summary.

Focus groups provided employees' lived experiences as to what reportedly contributed to their exercise participation in the corporate fitness centre. Overall, the results revealed four core themes: constraints, negotiation, motivation, and facilitators. Constraint factors that emerged in the data were intrapersonal, interpersonal, and structural. While there were constraints to participation, some participants reported their use of cognitive and behavioural strategies that contributed to constraint negotiation. Motivation emerged in the form of external regulation, identified regulation, and intrinsic motivation dimensions. These data indicate how behaviour was regulated with a variety of controlling and autonomous motives. Last, facilitators was the fourth theme and inductively emerged in the data, with specific reference

to activity modification, flexible programs, and convenience. These facilitators were external conditions that reportedly contributed to employee exercise participation in the corporate fitness centre.

5.4 Triangulation of Phase-One Results

The purpose of this section is to present the phase-one, triangulation results. The section commences with step-one, data sorting, to develop separate triangulation matrices related to each core theme identified in phase-one results: constraints, negotiation, motivation, and facilitators. This is followed with convergence coding, which is step-two, where the individual open codes identified through phase-one are compared to determine whether the data agree, partially agree, diverge, or remain silent (refer to section 4.2.1.4 for an explanation for these terms). A convergence assessment is step-three, and was conducted to identify the percentages of agreement, partial agreement, divergence, and silence among all open codes. This is then followed with a completeness comparison in step-four to compare the scope of each data source in relation to the research topic. Next was the researcher comparison to ascertain agreement on the united set of findings, with feedback concluding this section, by explaining how the investigator gathered comments and addressed supervisors' comments.

5.4.1 Step-one: Data sorting.

The primary purpose of data sorting was to arrange the information from each data source in relation to the research questions (Farmer et al., 2006). Data sorting occurred in the previous three sections of this chapter, as the information gathered from documents, semi-structured interviews, and focus groups were analysed and arranged in accordance with constraint factors, negotiation strategies, motivation dimensions, and facilitators. The secondary purpose was to amalgamate the open codes into four triangulation matrices to visually demonstrate where open codes featured in the three data sources. These triangulation

matrices are exhibited in section 5.4.2 to enable flow between the respective matrices and convergence coding.

5.4.2 Step-two: Convergence coding.

The purpose of convergence coding was to compare the meaning of each open code, between the three data sources (Farmer et al., 2006). This enabled the investigator to identify and determine whether open codes across the three data sources agreed, partially agreed, diverged, or remained silent. Convergence coding is structured with constraints coded first, negotiation second, motivation third, and facilitators last. The constraints, negotiation, and motivation sequence align with the order presented in the literature review. Facilitators is coded last, as the theme inductively emerged in the data. This sequence aligns with the reporting of phase-one results.

Additionally, convergence coding pertaining to the four themes is ordered in the following sequence: agreement, partial agreement, divergence, and silence. The investigator determined this order of reporting as agreement, partial agreement, and divergence possess greater trustworthiness in the findings. This due to open codes featuring in two or more studies (Bryman, 2012). Codes that remained silent are provided with a potential explanation why they featured in a single method. These results were considered less credible, as one data source does not provide a trustworthy account of the findings (Bryman, 2012). Triangulation of open constraint codes is presented in the next section.

5.4.2.1 Constraints.

Triangulation revealed constraints either provided partial agreement, divergence, or remained silent throughout phase-one. While open codes, such as programs at capacity and promotion either partially agreed or diverged in the data, the information provided a more nuanced understanding of each open code in relation to what contributes to employee exercise

participation in the corporate fitness centre. Most of the constraint codes, however, remained silent. Table 22 exhibits a triangulation matrix pertaining to constraints. Columns represent the data source, with rows representing constraint codes. In each cell, the constraint is summarised, and alludes to whether the code partially agrees, diverges, or remains silent.

Table 22.
Triangulation Matrix of Constraints in Phase-One Data

Codes	Document Review	Interviews	Focus Groups
<u>Intrapersonal</u>			
Suspicion			Internalise negative perceptions.
<u>Interpersonal</u>			
Colleagues		Meetings overlap with programs.	Request for work.
Managers			Meetings overlap with programs.
Instructors			Deficient experiences.
Family			Domestic obligations.
<u>Structural</u>			
Programs at capacity	Program participant cap.	Floor space and equipment purchases.	
Medical clearance	Policy to restrict and monitor access.		
Shift work	Variable operations and shift patterns.		
Promotion		Newsletters, intranet, and verbal.	Limited efforts.
Schedule of programs		Programs align with certain employees.	Incompatible schedules.
Access			Frustrating process.
Time			Inflexibility and work overload.

Partial agreement.

Three open constraint codes partially agreed in the phase-one data: managers, programs at capacity, and schedule of programs. These codes featured in two qualitative studies, and thus provided complementary information that improved the understanding of each respective open code.

The managers open code was triangulated between interviews and focus groups, and revealed partial agreement in the data. While both data sources reflected that organisational managers either arranged meetings at or around the commencement of programs, there were slight differences in the views between interviewees and participants. Managers (interviewees) discussed how they tried to minimise overlapping meetings, whereas participants (employees) described meetings were a continual constraint to participation. This difference in meaning led to the code being conceptualised as providing partial agreement.

The programs at capacity open code was triangulated between document review and semi-structured interviews, and produced a partial agreement result. The meaning of the code was similar in both data sets, with documents and interviewees (managers) alluding to exercise programs being a capacity issue. Descriptions between the two data sources, however, differed and were thus coded as partial agreement. Documents noted programs were capped, whereas interviewees mentioned equipment purchases reduced floor space, and thus contributed to the capacity issue. This difference in interpretation was therefore coded as partial agreement.

The schedule of programs code was triangulated between interviews and focus groups. Triangulation revealed partial support in the findings, with both data sources alluding to alignment of programs. In interviews, schedule of programs referred to aligning programs with certain employees, whereas the meaning in focus groups reflected incompatible alignment between the schedule of programs and lunch breaks. These differing views provided a more complete understanding of the problematic nature of program scheduling, as one strategy to alleviate constraints appeared to inadvertently create constraints to participation in programs for other employees.

Divergence.

Promotion was the only open constraint code that produced a divergent outcome through the triangulation protocol. According to interviewees (managers), promotion reflected the management strategies to make employees aware of the exercise opportunities, such as newsletters, intranet pages, and verbal communication strategies. By contrast, focus group participants (employees) referred to the limited efforts by management to promote exercise to staff that therefore contributed to constrained employee exercise participation in the corporate fitness centre. The contrast in perspectives led to promotion being coded as divergent.

Silence.

Eight open constraint codes remained silent through phase-one, and featured under the intrapersonal, interpersonal, and structural constraint types. The specific open constraint codes were as follows: suspicion, colleagues, instructor, family, medical clearance, shift work, access, and time. Six of these codes (suspicion, colleagues, instructors, family, access, and time) featured in focus groups, while remaining silent in interviews and document review. A likely explanation of this outcome is that managers overlooked constraints from the employees' perspective. This probably led to managers failing to discuss these codes during interviews and potentially why strategies to minimise these constraints were not published in organisational documents.

5.4.2.2 Negotiation.

Two strategies were reported to negotiate constraints to participation in exercise in the corporate fitness centre: cognitive and behavioural. The priority open code was the only cognitive negotiation strategy, whereas cooperation and time management were recognised as behavioural negotiation strategies. These three codes were identified in focus groups, with staff

responding actively to constraints on their exercise participation. Table 23 illustrates the triangulation matrix pertaining to these data.

Table 23.
Triangulation Matrix of Negotiation Open Codes in Phase-One Data

Codes	Document Review	Interviews	Focus Groups
<u>Cognitive</u>			
Priority			Program prioritisation
<u>Behavioural</u>			
Cooperation			Dialogue with colleagues
Time management			Work day restructure

Silence.

The three negotiation codes featured in focus groups only, and thus remained silent in interviews with managers and through documents review. A potential reason for this outcome is due to the purpose of each data collection method. The focus group schedule candidly inquired about employees' negotiation strategies. In contrast, inquiries about negotiation were omitted from the interview schedule, as negotiation was considered an intrapersonally-based concept, as evidenced by the constraints-effects-mitigation model (Hubbard & Mannell, 2001) (refer to Figure 10). Thus, it is unsurprising that negotiation did not emerged in interviews. Additionally, the silence evident in document review might reinforce the notion that negotiation is an individual construct, as it did not feature in organisational documents that possessed the purpose to contextualise the general management of the corporate fitness centre.

5.4.2.3 Motivation.

Triangulation revealed motivation either provided agreement, partial agreement, or remained silent throughout phase-one. While open codes, such as rehabilitation and health benefits provided agreement among different data sources, other open codes had either similar meanings or remained silent, all of which contributed to a more nuanced understanding as to what motivated employee exercise participation in the corporate fitness centre. Table 24

exhibits a motivation triangulation matrix, with columns representing the data source and rows representing axial and open motivation codes. In each cell, the specific motivation is summarised, and indicates whether the code agrees, partially agrees, or remains silent.

Table 24.
Triangulation Matrix of Motivation Open Codes in Phase-One Data

Codes	Documents Review	Interviews	Focus Groups
External regulation			
Interpersonal encouragement	Derived from managers.	Derived from instructors, colleagues, and managers.	Derived from instructors and managers.
Event preparation		Gateway strategy.	
Occupational health and safety		Improve worker safety.	
Rehabilitation	Prescribed program participation.		Prescribed program participation.
Identified regulation			
Health benefits	Physical and mental.		Physical and mental.
Teambuilding			Group development.
Social			Interpersonal interaction.
Intrinsic motivation			
Exercise enjoyment	Equipment develops enjoyment.	Need to provide enjoyable activities.	Enjoyable fitness experiences.
Exercise variety		Diverse exercise programs.	
Exercise challenge			Physical demanding exercises.
Try new exercises		Providing new activities on an intermittent basis.	

Agreement.

Two open motivation codes provided agreement in phase-one data: health benefits and rehabilitation. These open codes featured in two data sources, and thus provided corresponding meanings, regardless of the data source.

The rehabilitation code was the only external regulator that provided agreement through triangulating document review and focus group data. The code reflected the medical staff's prescription of exercise to restore employees' overall health. This was evident through document review, with the interpretation corresponding in employee focus groups. They recognised that their colleagues were prescribed exercise participation as a prerequisite to return to work duties. The corresponding data from different data sources was thus coded as agreement.

The health benefits code was the only identified regulator that provided agreement through triangulating document review and focus groups. The meaning of the code through document review referenced the physical and mental health benefits of exercise participation in documents, such as promotion and evaluation. This meaning corresponded in focus groups with employees, as part of their motive to participate in the corporate fitness centre was underpinned by physical and mental health benefits. These corresponding views from diverse perspectives was therefore coded as agreement.

Partial agreement.

Two open motivation codes provided partial agreement through phase-one: interpersonal encouragement and exercise enjoyment. These codes featured in all three data sources, albeit with slightly different meanings that were thus coded as partial agreement through the triangulation protocol.

The interpersonal encouragement code was the only external regulator that provided partial agreement through triangulating document review, interviews, and focus groups. While the code's fundamental meaning in each data source referred to specific personnel who provided encouragement, there were slight difference between personnel. Managers were reported sources of encouragement in documents; instructors, colleagues, and managers were encouragers identified in interviews; and instructors and managers were identified in focus groups. Triangulation provided a clearer illustration of interpersonal encouragement within the organisation, with managers appearing as the main source of encouragement, as managers featured in all data sources. Overall, the slight differences between data sources pertaining to specific personnel who encouraged participation in the corporate fitness centre was thus coded as partial agreement.

The exercise enjoyment code was the only intrinsic motive that provided partial agreement through triangulating document review, interviews, and focus groups. The code's underlying meaning was comparable between data sources, as all sources referenced enjoyment as an element considered to encourage exercise participation in the corporate fitness centre. Interviewees (managers) explained the need to provide enjoyable exercise experiences. This view was similar to what emerged through document review, however, a slight difference was management purchased equipment to provide enjoyable exercise experiences. The need for enjoyable exercise experiences was specifically reported in focus group with employees. Despite the similar interpretation of exercise enjoyment, the marginal differences in meaning was thus coded as partial agreement.

Silence.

Eleven open motivation codes featured through phase-one, yet seven remained silent. These open codes – event preparation, occupational health and safety, team building, social,

exercise challenge, exercise variety, and try new exercises – were spread among external regulation, identified regulation, and intrinsic motivation dimensions.

Similarly to the silence evident in constraints, management likely overlooked what strategies motivated employee exercise participation in the corporate fitness centre. Interviewees (managers) specifically reported event preparation, occupational health and safety, exercise variety, and try new exercises as strategies to encourage participation, yet these strategies neither featured in document review nor from the perspective of focus group participants (employees). Likewise, focus group participants specifically discussed teambuilding, social, and exercise challenge as motives to participate in the corporate fitness centre that were overlooked by interviewees (managers), and were excluded from documents. The silence of open motivation codes indicates a gap as to what management *does* and what they *should* do in regards to improving motivation levels.

5.4.2.4 Facilitators.

Five open facilitator codes were identified through phase-one. The codes were convenience, flexible programs, free programs, program cut-back, and flex-time. Flex-time was the only code that remained silent, whereas, the remaining four codes either agreed or provided partial agreement. Table 25 exhibits the facilitator triangulation matrix. The rows represent the specific facilitator code, while the columns represent the data source. Each cell includes a summary of the facilitator, and indicates whether the code either agrees, partially agrees, or remains silent.

Table 25.
Triangulation Matrix of Facilitator Open Codes in Phase-One Data

Codes	Document Review	Interviews	Focus Groups
Convenience	24-hour access.	24-hour access.	Access to physical activity.
Flexible programs	Access for different fitness levels.		Alternative exercises.
Free programs	Incentive.	Subsidy.	
Program cut-back		Reduce program duration.	Reduce program duration.
Flex-time		Expectation to make up time.	

Agreement.

The program cut-back code was the only facilitator to provide agreement through triangulating interviews and focus group data. Program cut-back referred to reducing program duration to fit within business operations, with this meaning being consistent between interview and focus group data sources. The code, however, was silent in document review, with timing of data collection a likely explanation for this outcome. Documents were collected in 2015 and interviews and focus groups were conducted during 2016. The program cut-back condition could have been implemented after document collection, and therefore excluded from analysis.

Partial agreement.

Three facilitator codes provided partial agreement through phase-one: convenience, flexible programs, and free programs. Convenience featured in all three studies, whereas flexible programs and free programs emerged in two of the studies. Regardless of the number of studies these codes featured in, they had similarities in their meanings.

The convenience code was triangulated between document review, interviews, and focus groups with a partial agreement outcome. Both document review and interviews with managers reported the same meaning, referring to convenience as 24-hour access to the corporate fitness centre. The meaning in focus groups, however, was slightly different. While

participants fundamentally referred to 24-hour access, they also added that convenience referred to easy access to exercise opportunities. These comparable, yet subtle differences in interpretation, led to convenience being conceptualised as providing partial agreement.

The flexible programs code was triangulated between document review and focus groups. Triangulation revealed partial agreement, with both data sources referring to the exercise programs as catering to employees with different physical capacities. There was, however, one key difference. Documents alluded to programs providing access to all fitness levels. By contrast, focus group participants reported that the instructors were the individuals who provided alternative exercises to employees, which made the programs more flexible and accommodating for those with lower physical capacities. Thus, flexible programs was coded as providing partial agreement.

The free programs code was triangulated between document review and interviews and provided a partial agreement outcome. The fundamental meaning of free programs was comparable, as it referenced creating an external condition for employees to participate in the programs. The key difference between the data sources was documents recognised free programs as an incentive to participate in the programs, whereas interviewees described free programs as a subsidy to facilitate continual exercise participation. These data show complementary information on how management strategically facilitated exercise participation in the corporate fitness centre. Despite the similar meanings between data sources, the slight differences were recognised as providing partial support.

Silence.

The flex-time code reflected the expectation to make up for lost time in lieu of exercise participation in the corporate fitness centre. Flex-time featured in interviews, yet, remained silent in document review and focus groups with employees. Flex-time was an expectation,

opposed to a documented policy, which could explain why the code was silent in document review. Additionally, the sample of focus groups participants is a potential explanation why flex-time did not feature in the data source. Most of the focus group employees considered themselves as non-participants of the corporate fitness centre, and thus most likely would not have encountered the flex-time facilitator. It is therefore unsurprising that flex-time remained silent in focus groups.

In sum, convergence coding enabled the investigator to compare the meaning of each code between three data sources. Limited agreement was identified through the triangulation protocol, with partial agreement featuring through triangulating constraints, motivation, and facilitators. Promotion was the only code that diverged, while several codes in relation to constraints, motivation, negotiation, and facilitators remained silent. The next step in the triangulation protocol was to complete a convergence assessment.

5.4.3 Step-three: Convergence assessment.

The purpose of the convergence assessment was to review all the triangulated open codes to provide an assessment on the level of convergence (Farmer et al., 2006). In consideration of convergence coding in section 5.4.2, either agreement or partial agreement occurred among 35% of open codes. The open constraint codes were managers, programs at capacity, and schedule of programs. Open motivation codes were health benefits, rehabilitation, interpersonal encouragement, and exercise enjoyment; and open facilitator codes were program cut-back, convenience, flexible programs, and free programs.

By contrast, divergence featured in one open code, the open constraint code of promotion. Silence was the most prominent convergence outcome through the coding process, as 62% of all open codes featured in only one data source. The limited convergence between the open codes through phase-one is likely due to two factors. First, the purpose of each method

differed, and could thus explain the differences in findings. Second - and more likely - is the limited convergence could be attributed by management being unaware as to what contributes to exercise participation from the employee perspective, and therefore neglecting to implement strategies that complement employee exercise participation in the corporate fitness centre. This is discussed in more detail in the next section.

5.4.4 Step-four: Completeness comparison.

The purpose of the completeness assessment is to compare the nature and scope of each data set, as the comparison unites the findings to provide a comprehensive understanding of the coverage and differences (Farmer et al., 2006) as to what factors contributed to employee exercise participation in the corporate fitness centre. The convergence coding and convergence assessment steps demonstrated that the open constraint, negotiation, and motivation codes confirm the a priori core themes used at the onset of this research, with open facilitator codes inductively emerging as an additional factor that contributed to employee exercise participation in the corporate fitness centre. While the 35% agreement and partial agreement among open codes showed data corresponded in different information sources, most of the open codes remained silent. This discrepancy tells two stories as to what contributed to employee exercise participation at the selected corporate fitness centre.

First, motives and facilitators were the main contributors to employee exercise participation in the corporate fitness centre. Open motivation and facilitator codes triangulated between multiple data sources during the convergence coding step, and thus improved the trustworthiness of these open codes and core themes as contributors to employee exercise participation. Interpersonal encouragement, exercise enjoyment, and convenience triangulated in all three studies; and six total open motivation and facilitator codes triangulated through document review and focus groups. While these open codes demonstrate what motivates and facilitates employee exercise participation in the corporate fitness centre, open constraint codes

featured minimally through triangulation. Programs at capacity triangulated in document review and interviews with managers, while the managers code triangulated in interviews and focus groups. Together, these data indicate motivation and facilitators were trustworthy contributors to exercise participation, with programs at capacity and managers as indicators of the factors that constrain employee exercise participation in the corporate fitness centre.

Second, manager and employee perspectives were mostly disjointed regarding what contributes to employee exercise participation in the corporate fitness centre. The strategies interviewees (managers) discussed as contributing to participation often did not align with employees' perspectives. The convergence coding showed interviewees reported five strategies – four motivation and one facilitator – that contributed to participation, yet these five strategies did not feature in focus groups. Similarly, focus group participants (employees) discussed what contributes from their lived experience, which were not recognised in interviews. They discussed 12 open codes – seven constraints, three negotiation strategies, and two motives – that did not align with interviewees. Thus, the differences in perspectives as to what contributes to employee exercise participation in the corporate fitness centre showed managers were unaware of specific constraints, negotiation strategies, and motives; and implemented what appears to be ineffective motivation and facilitator strategies. The findings show management will need more insights from the employee perspective to ensure management is actively encouraging exercise participation and addressing the correct constraints, both of which would be based on employees' input.

In sum, the three data sets endorse the core constraint, negotiation, and motivation themes; and the emergent core facilitators theme. These data also show those codes that converged to provide complementary information were mostly concentrated on motives and facilitators to participation, with limited recognition of constraints to employee exercise participation in the corporate fitness centre. Moreover, the divergent perspectives between

management and employees demonstrates management may be unaware of the factors that encourages and discourages employee exercise participation in the corporate fitness centre. Individually, each data set partly answers each research question, yet collectively, the information provides an improved level of examination and a more thorough understanding regarding what factors contribute to employee exercise participation in the selected corporate fitness centre.

5.4.5 Step-five: Researcher comparison.

The purpose of this step was to examine the completeness comparison among the research team to ascertain congruence on the united set of findings. Completing the researcher comparison revealed disagreement on one code. Disagreement occurred on the free programs open code, as one supervisor believed it should have been coded as agreement opposed to partial agreement. Nevertheless, the general agreement level among the investigator and the research supervisors occurred on 97% of codes. A minimum coder agreement of 70% is recommend to ascertain coding confidence in qualitative research (Miles & Huberman, 1994). Thus, the investigator proceeded to the final step.

5.4.6 Step-six: Feedback.

The purpose of this step was to share the triangulated results with the research team (Farmer et al., 2006). Triangulation results were shared with the investigator's supervisors to comment on issues and adjust discussions based on disagreements in the triangulation results. The investigator distributed drafts and re-drafts of the triangulation matrices; and discussion pertaining to convergence coding, convergence assessment, and completeness comparison. Adjustments were made to these sections to clarify whether codes agreed, partially agreed, diverged, or remained silent, until the point at which the triangulation matrices (refer to Tables 22, 23, 24, and 25) and associated discussions were accepted among the investigator and supervisors. Completing the triangulation protocol led to phase-two of this research.

5.5 Chapter Summary

The purpose of this chapter was to present the phase-one results individually, and then engage in the triangulation protocol to compare the findings between the individual studies. This process helped to ascertain whether the information in the separate data sources agreed, partially agreed, diverged, or were silent. Whether data would either agree or diverge, the amalgamation of findings exhibited a more nuanced understanding as to what factors contributed to employee exercise participation in the selected corporate fitness centre.

The first three sections comprised results of the individual studies: document review, semi-structured interviews, and focus groups. The findings provided support for constraints, negotiation, and motivation, which were the a priori themes identified at the onset of this research. While these core themes were identified in the data sources, the facilitators theme inductively featured through this research and extended the understanding as to the other factors that contribute to employee exercise participation in corporate fitness centres.

The final section presented the findings of the triangulation process, and commenced with a brief explanation related to data sorting. The next triangulating step involved convergence coding, where the investigator compared the meanings of each open constraint, negotiation, motivation, and facilitator code to ascertain whether there were either similarities or differences in code meanings between the three data sources. This coding step helped the investigator to determine whether codes either agreed, partially agreed, diverged, or were silent. This step was followed with a convergence assessment comparison, where approximately one-third of codes were either labelled as providing agreement or partial agreement, while most of the codes remained silent. This finding led to a completeness comparison, where the all the open codes were analysed to determine the nature and scope of the three data sources in relation to answering what contributes to employee exercise participation in the corporate fitness centre. Researcher comparison was the next step and

involved the investigator and each research supervisor to independently inspect the completeness comparison to ascertain congruence in the triangulation protocol. A 97% convergence level was the outcome of this process. Feedback was the last triangulation step, and involved describing how the investigator ascertained and addressed comments to develop the triangulation findings of phase-one data.

CHAPTER SIX: QUANTITATIVE RESULTS

“Statistic procedures provide researchers with objective and systematic methods for describing and interpreting their research results” (Gravetter & Wallnau, 2013, p. xv).

The purpose of this chapter is to present the quantitative, phase-two results. The chapter begins with data screening and cleaning, to locate obvious errors in the data file. Data exploration, missing data, and data normality is the focus of the next section. The section includes descriptive statistics of the sample, the missing data analysis and remedy results, and the outcomes of data normality assessment. Manipulating data comprises the next section, and presents the means and SDs in relation to constraint, negotiation, and motivation scales; and sub-scales. The section also presents the outcomes of dichotomising the dependent variable. Scale reliable scores are presented, and then followed with covariate results. The chapter concludes with results in relation to the three logistic regression models conducted to answer the three research questions.

6.1 Screening and Cleaning the Data File

The current section presents the results of the data screening process. The investigator visually inspected the raw data file to determine if the file contained any obvious errors. No obvious errors were identified, however, the investigator noted questionnaire items resulted in non-response the further respondents went through the questionnaire (refer to section 6.2). This therefore led to using Descriptive and Frequencies commands to objectively ascertain whether scores were within the normal ranges. This process did not reveal any errors, and thus, there was no requirement to locate and amend errors in the data file, which was step-two in the quantitative data analysis protocol described in section 4.3.3.

6.2 Data Exploration, Missing Data and Data Normality

Screening and cleaning the data file was followed with data exploration, missing data, and data normality. Data exploration involved analysing sample characteristics. These specific results are presented last in this section to enable flow of information. Thus, this section begins with missing data analysis results, and is followed with data normality.

6.2.1 Type of missing data.

Missing data analysis was a three-step protocol. The first step was to determine the missing data type to enable selection of a suitable missing data remedy. Missing data is either ignorable, which refers to either missing values as part of the questionnaire design (e.g. the use of skip logic) or non-ignorable, which refers to a respondent's failure to complete items in the questionnaire (e.g. stop halfway due to respondent fatigue or skip sensitive questions) (Pituch & Stevens, 2016; Schafer & Graham, 2002).

Questionnaire items that had associated skip logics were treated as ignorable missing data, and thus coded with -1 in the data file. The non-ignorable missing data represented the missing scores the investigator noted through data file screening in section 6.1. The remedy for missing scores is explained in section 6.2.3.

6.2.2 Determine the extent of the missing data.

The next step involved deleting cases that had unacceptable levels of missing data. Questionnaire respondents that either provided a non-response on the dependent variable (i.e. level of corporate fitness centre participation) or had 50% or more missing data were immediately deleted from the main data file (Hair et al., 2014). This resulted in 59 cases of the 305 collected, being immediately deleted from the data file, leaving a final sample size of 246. All 246 cases had less than 10% missing data.

6.2.3 Diagnose the randomness of the missing data process.

The investigator then conducted a missing data diagnosis on the 246 cases to determine the pattern of missing data. The diagnosis revealed whether the missing data were either missing not at random (MNAR), missing at random (MAR), or missing completely at random (MCAR) (see Pituch and Stevens (2016) for an in-depth description of each missing data process).

A visual inspection of the data file did not reveal clear patterns of missing data. Therefore, Little's MCAR test was conducted and revealed a non-significant result (Sig. = .977), meaning the data was missing at random and the investigator could proceed with the FIML approach (data imputation) to remedy the missing data. After imputing the data, these imputed values were rounded either up or down where appropriate to create whole numbers (Hair et al., 2014).

6.2.4 Data normality.

Missing data analysis was followed with a data normality assessment. Data normality was assessed on the dependent variable (the number of days exercise was completed in the corporate fitness centre) (Pallant, 2010). Visual inspection of the histogram revealed data non-normality and is presented in Figure 18.

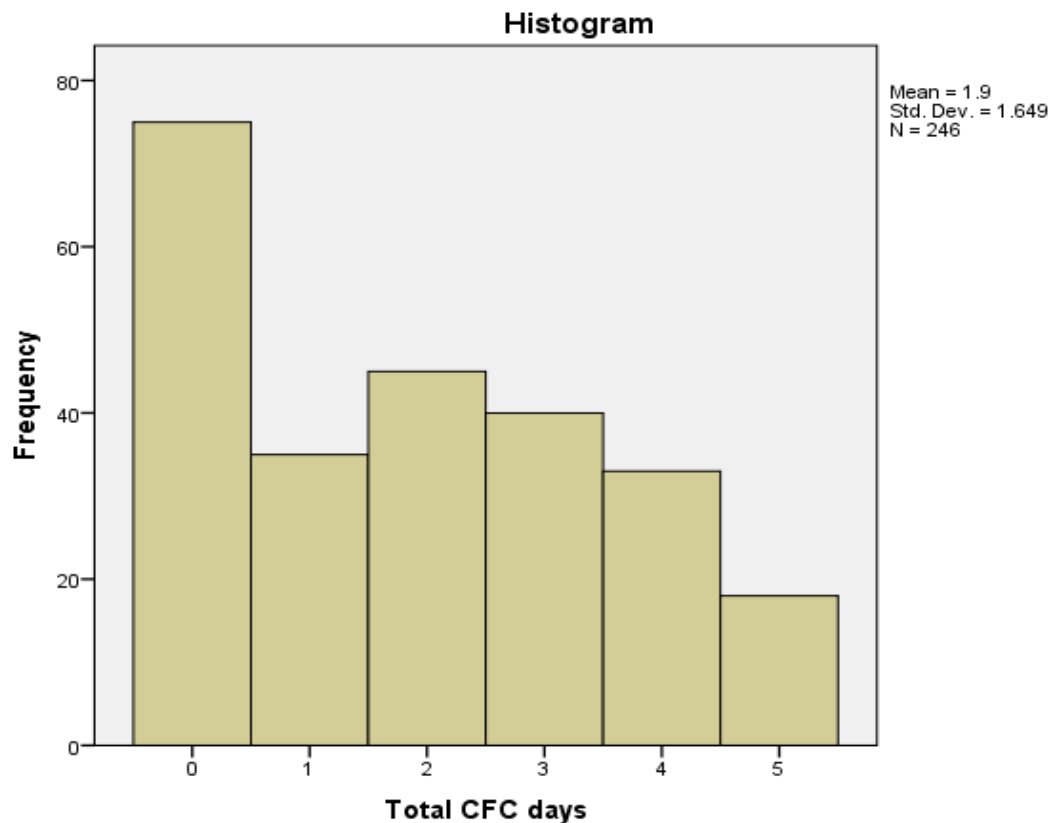


Figure 18. Histogram of the dependent variable's normality test

The original mean score was 1.90 and the 5% trimmed mean score was 1.83, which indicated the top and bottom 5% of scores did not have a large influence on the dependent variable's average score. Skewness was .329, which indicated a clustering of scores at the low end of the scale, whereas, kurtosis was -1.14, which indicated the distribution was relatively flat. The Kolmogorov-Smirnov statistic indicated significant data non-normality (Sig. = .000).

A large percentage of 0 values on the dependent variable, coupled with the statistically significant result regarding non-normality of the dependent variable indicated that the variable could be dichotomised for analysis. This meant that logistic regression was an appropriate statistical analysis. Results of dichotomising the dependent variable are presented in section 6.3.4.

6.2.5 Sample descriptive statistics.

Descriptive analyses were employed to provide a summary of the sample. The sample included respondents from six Australian organisations located in five different Australian States and Territories (Australian Capital Territory, New South Wales, Queensland, South Australia, and Victoria). Informal discussions with Facilitators at the Australian organisations revealed each organisation was categorised as a large Australian organisation (Australian Public Service Commission, 2017). Table 26 reports the sample characteristics of the 246 respondents, including range, mean, and SDs on the following continuous variables: age, average working hours per week, total physical activity per days, and total corporate fitness centre days.

Table 26.
Sample Characteristics

Variable	Minimum	Maximum	Mean	SD
Age	21	74	39.08	10.05
Average working hours per week	8	60	40.20	5.53
Total PA days	0	7	3.71	1.81
Total CFC days	0	5	1.90	1.65

Data exploration also involved analysing categorical questionnaire items. Examples of categorical variables included sex, education level, and working status. These data are displayed in Table 27.

Table 27.
Categorical Variables

Variable	Frequency	Percentage
<u>Sex</u>		
Male	147	59.8
Female	99	40.2
<u>Marital status</u>		
Never married	38	15.4
Divorced	8	3.3
Married/de facto	158	64.2
Separated	7	2.8
Single/not married	35	14.2
<u>Education</u>		2
No qualification	5	10.2
Certificate	25	24.8
Advanced Diploma/Diploma	61	38.2
Bachelor degree	94	9.8
Graduate diploma/Graduate certificate	24	15
Postgraduate degree	37	
<u>Employment status</u>		
Casual	2	.8
Part-time	6	2.4
Full-time	238	96.7
<u>Income</u>		
Less than \$10,000	2	.8
\$40,000 to \$49,999	13	5.3
\$50,000 to \$59,999	21	8.5
\$60,000 to \$69,999	18	7.3
\$70,000 to \$79,999	22	8.9
\$80,000 to \$89,999	22	8.9
\$90,000 or greater	148	60.2
<u>Participation level</u>		
I am currently not participating in these activities and I do not want to	23	9.3
I am currently not participating in these programs, but I would like to	42	17.1
I am currently participating in these activities and I am satisfied with the amount	91	37.0
I am currently participating in these activities, but I want to participate more	90	36.6
<u>Desired participation level</u>		
I would be most satisfied participating 1 or 2 times per week	61	27.4
I would be most satisfied participating about 3 times per week	85	38.1
I would be most satisfied participating more than 3 times per week	77	34.5

6.3 Manipulating Data

This section presents results in relation to data manipulation. Results pertaining to scales and sub-scales are presented independently, and then followed with the results of dichotomising the dependent variable. Scale reliability scores are presented last in this section.

6.3.1 Constraint variables.

Mean scores on each item ranged from 1.52 (I have a disability) to 4.38 (uncomfortable participating with opposite sex) (refer to Appendix O for detailed individual scores). Table 28 reports the mean and sub-scale scores for the Leisure Constraints Scale. There was marginal difference in mean scores between the three constraint factors, with the interpersonal constraint sub-scale scoring the highest average.

Table 28.
Constraint Scale Means and Standard Deviations

Scale	Mean	SD
<u>Constraints</u>	<u>2.61</u>	<u>.35</u>
Intrapersonal	2.54	.44
Interpersonal	2.68	.47
Structural	2.62	.49

6.3.2 Negotiation variables.

Mean scores on each item ranged from 1.24 (use a baby sitter) to 4.06 (be organised) (refer to Appendix P for detailed individual scores). Table 29 shows the mean and sub-scale scores on the Leisure Constraint Negotiation Scale, with financial resources and strategies as the least frequently used strategy, whereas, skill acquisition was the most frequently used negotiation strategy.

Table 29.
Constraint Negotiation Scale Means and Standard Deviations

Scale	Mean	SD
<u>Negotiation</u>	<u>2.96</u>	<u>.42</u>
Time Management	3.07	.39
Skill Acquisition	3.20	.56
Interpersonal Coordination	2.69	.75
Financial Resources and Strategies	2.59	.55

6.3.3 Motivation variables.

Mean scores on each item ranged from 2.02 (feel pressured to work out) to 5.71 (important and beneficial) (refer to Appendix Q for detailed individual item scores). Table 30 reports the mean and sub-scale scores for the SRQ-E. Identified regulation was the highest rated sub-scale and external regulation was the lowest ranked subscale.

Table 30.
Motivation Scale Means and Standard Deviations

Scale	Mean	SD
<u>Motivation</u>	<u>4.03</u>	<u>.65</u>
External Regulation	4.00	1.53
Introjected Regulation	4.11	.98
Identified Regulation	5.99	.81
Intrinsic Motivation	4.82	1.25

6.3.4 Dependent variable.

The dependent variable was dichotomised into two groups, due to the large percentage of 0 responses and the statistically significant result regarding data non-normality. The

dependent variable was thus dichotomised into participants ($n = 171$) and non-participants ($n = 75$) categories (Field, 2009). Categorisation is displayed in Table 31.

Table 31.
Results of Dichotomising the Dependent Variable

Category	Frequency	Percentage
Non-Participation	75	30.5
Participation	171	69.5
Total	246	100

6.4 Assessing Scale Reliability

Although some sub-scales (e.g. introjected regulation) contained less than ten items, the investigator reported the Cronbach's alpha scores to provide comparisons between past research and the current findings. Most sub-scale scores in the current research did not reach acceptable levels of $\alpha = .7$ (e.g. identified regulation, structural constraints, and time management) (DeVellis, 2003). The measurement of each overall scale, however, revealed acceptable reliability levels, which are presented in Table 32. The researcher retained all scales for analysis, considering that previous research (Hubbard & Mannell, 2001; Ryan & Connell, 1989) demonstrated reliability of these scales, and scale modification was not an aim and outside of the scope of this research.

Table 32.
Scale Reliability Scores

Scale	Alpha Coefficient (α)
<u>Constraints</u>	.78
Intrapersonal	.71
Interpersonal	.46
Structural	.60
<u>Motivation</u>	.74
External Regulation	.82
Introjected Regulation	.39
Identified Regulation	.66
Intrinsic Motivation	.79
<u>Negotiation</u>	.83
Time Management	.68
Skill Acquisition	.66
Interpersonal Coordination	.65
Financial Resources and Strategies	.56

6.5 Assessing the Influence of Covariates

The investigator conducted a series of analyses prior to the multiple logistic regression analyses to determine if covariates would contribute undesirable influences on the dependent variable in each logistic regression model (Pallant, 2010). The investigator used the Chi-square goodness-of-fit statistic to examine the associations between covariates including gender, education, employment, marital status, household structure, country of birth, and salary, with the dependent variable. The test was selected, as it is suitable for categorical variables (Pallant, 2010). Results revealed none of the covariates significantly contributed to the variance related to the dependent variable (all $p = > 0.05$) (refer Appendix M for detailed results). Therefore, no variables needed to be controlled for in the subsequent logistic regression analyses due to covariate effects.

6.6 Conducting Multiple Logistic Regression

The purpose of the current section is to present the results of the multiple logistic regression models. Each section is presented with the research questions as a heading. Each regression model had corporate fitness centre participation as the dependent variable, dichotomised as either participant or non-participant. The following three sections comprise the results of the three logistic regression models completed in this research.

6.6.1 What constraints hinder employees from exercising in corporate fitness centres?

The logistic regression model contained three independent variables: intrapersonal, interpersonal, and structural constraints. The model containing all predictors was statistically significant, $\chi^2 (3, n = 246) = 8.21, p < .05$, indicating that the model was able to distinguish between participants and non-participants in the corporate fitness centre. The model explained between 3.3% (Cox and Snell R squared) and 4.7% (Nagelkerke R squared) of the variance in corporate fitness centre participation and correctly identified 70.2% of cases. As shown in Table 33, structural constraints made a statistically significant contribution to the model, with an odds ratio of .39, indicating that for every one-unit increase on the structural constraints scale, a corporate fitness centre participant is 2.6 times more likely not to participate.

Table 33.
Logistics Regression of Constraints Predicting Likelihood of Reporting Corporate Fitness Centre Participation

Scale	B	S.E	Wald	df	<i>p</i>	Odds Ratio	95% CI Odds Ratio	
							Lower	Upper
Intrapersonal	.11	.40	.07	1	.79	.90	.41	1.96
Interpersonal	.09	.32	.08	1	.78	1.10	.59	2.03
Structural	.95	.42	5.02	1	.03	.39	.17	.89

6.6.2 How do employees negotiate constraints to exercise in corporate fitness centres?

The logistic regression model contained four independent variables: time management, skill acquisition, interpersonal coordination, and financial resources and strategies. The full model containing all predictors was statistically significant, $\chi^2 (4, n = 246) = 15.50, p < .05$, indicating that the model was able to distinguish between participants and non-participants in the corporate fitness centre. The model explained between 6.1% (Cox & Snell R square) and 8.6% (Nagelkerke R square) of the variance in corporate fitness centre participation and correctly classified 69.9% of cases. As shown in Table 34, skill acquisition made a unique, statistically significant contribution to the model, with an odds ratio of 2.13. This indicated that for every one-unit increase on the skill acquisition scale, a respondent is 2.13 times more likely to report participation in exercise in corporate fitness centres.

Table 34.
Logistics Regression of Negotiation Predicting Likelihood of Reporting Corporate Fitness Centre Participation

Scale	B	S.E	Wald	df	p	Odds Ratio	95% CI Odds Ratio	
							Lower	Upper
Time Management	.62	.39	2.50	1	.11	1.86	.86	3.98
Skill Acquisition	.76	.33	5.34	1	.02	2.13	1.12	4.06
Interpersonal Coordination	.03	.28	.01	1	.91	1.03	.60	1.76
Financial Strategies and Resources	.11	.33	.11	1	.74	.90	.47	1.70

6.6.3 What motivates employees to exercise in corporate fitness centres?

The logistic regression model contained four independent variables: external regulation, introjected regulation, identified regulation, and intrinsic motivation. The full model containing all predictors was statistically significant $\chi^2 (4, n = 217) = 29.34, p < .05$, indicating that the model was able to distinguish between participants and non-participants of

the corporate fitness centre. The model explained between 12.6% (Cox and Snell R square) and 20.2% (Nagelkerke R squared) of the variance in corporate fitness centre participation, and correctly classified 84.8% of cases. As shown in Table 35, identified regulation made a unique, statistically significant contribution to the model, with an odds ratio of 2.34. This indicated that for every one-unit increase on the identified regulation scale, respondents were 2.34 times more likely to report participation in exercise in corporate fitness centres.

Table 35.
Logistics Regression of Motivation Predicting Likelihood of Reporting Corporate Fitness Centre Participation

Scale	B	S.E	Wald	df	p	Odds Ratio	95% CI Odds Ratio	
							Lower	Upper
External Regulation	.28	.16	3.15	1	.08	1.32	.97	1.79
Introjected Regulation	-.01	.23	.00	1	.96	.99	.62	1.50
Identified Regulation	.85	.26	10.55	1	.00	2.34	1.40	3.90
Intrinsic Motivation	.22	.16	1.86	1	.17	.17	.91	1.70

6.7 Chapter Summary

The purpose of the current chapter was to present the quantitative results of this research. Six Australian organisations located in different Australian States and Territories who had a corporate fitness centre distributed an online questionnaire to employees. In total, 246 useable questionnaires were analysed to ascertain what constraint factor, negotiation strategy, and motivation dimension independently predicted employee exercise participation in corporate fitness centres.

The chapter began with screening and cleaning the data file. No errors were identified, thus, the investigator proceeded to data exploration, missing data, and data normality. Descriptive analyses summarised the respondent sample, revealed the extent of the missing data, and that the dependent variable was non-normal that required data manipulation. Data manipulation involved reverse coding of negatively worded items, and then developing scale

and sub-scales, which were subsequently analysed with mean and SD scores. Results of dichotomising the dependent variable revealed most respondents as corporate fitness centre participants. Scale reliability were the next analyses, and revealed most sub-scales did not reach acceptable levels, yet the overall scales attained acceptable levels. Assessing covariates demonstrated these variables did not have a statistically significant influence on the dependent variable. The chapter concluded with the results of multiple logistic regression analyses, which showed structural constraints, skill acquisition, and identified regulation independently predicted employee exercise participation in the respective regression models.

CHAPTER SEVEN: DISCUSSION

“Always write the discussion for the reader; remember that the focus should be to help the reader understand the study and that the highlight should be on the study data” (Hess, 2004, p. 1238).

This chapter includes discussions pertaining to qualitative and quantitative findings, and an explanation of findings with reference to the relevant literature on constraints, negotiation, motivation, and facilitators. The findings are also discussed in relation to employee wellbeing programs and general SHRM practices, to advance knowledge beyond the current management of corporate fitness centres. The chapter aims to synthesise the findings to answer the three questions underpinning this research:

1. What constraints hinder employees from exercising in corporate fitness centres?
2. How do employees negotiate constraints to exercise in corporate fitness centres?
3. What motivates employees to exercise in corporate fitness centres?

The first three sections address the research questions in the respective order: constraints, negotiation, and motivation. Explanations in each of these sections are arranged as per the a priori axial codes discussed in the methodology (chapter four). Constraints that hinder employee exercise participation are discussed in the following order: intrapersonal, interpersonal, and structural. Similarly, cognitive and behaviour negotiation strategies are discussed, while the motives that contribute to exercise participation are discussed in the following sequence: external regulation, identified regulation, and intrinsic motivation. Facilitators to exercise participation is the fourth section, with an integration of findings in section five, where the qualitative and quantitative findings are presented in a new model of

employee exercise participation in corporate fitness centres (refer to Figure 19). Contextualising findings, such as the limited corroboration between manager and employee views of exercise participation, concludes the chapter. The purpose is to explain other noteworthy findings of this research.

This research indicates employee exercise participation in corporate fitness centres is a complex behaviour that is influenced by multiple factors. Management needs to consider not only what individual-level factors contribute to exercise participation, but also how the organisational environment either encourages or discourages preference to participate in these exercise opportunities. Four key factors identified through this research contribute to employee exercise participation in corporate fitness centres. First, constraints are factors that hinder employee exercise in corporate fitness centres. Second, negotiation strategies are individually-based efforts employees use to overcome their constraints to exercise participation. Third, motivation refers to factors that underpin employees' preference to participate. Finally, facilitators reflect external conditions that either further motivate or enable employee exercise participation. This research showed that constraints, negotiation, motivation, and facilitators interact to contribute to employee exercise participation in corporate fitness centres.

7.1 What Constraints Hinder Employees from Exercising in Corporate Fitness Centres?

Intrapersonal, interpersonal, and structural constraints were identified as hindrances to employee exercise participation in corporate fitness centres, with the quantitative results suggesting that structural constraints independently predict participation after accounting for the influence of other constraints. Qualitative data triangulation revealed interpersonal and structural constraints hindered participation in the corporate fitness centre, which is similar to findings identified in previous research on corporate fitness centres (Edmunds, Stephenson, & Clow, 2013) and workplace wellbeing programs (C. Tudor-Locke et al., 2014). The intrapersonal constraint code of suspicion, while identified in focus groups and remaining silent

in document review and interviews, corroborated with a quantitative questionnaire item in the Leisure Constraints Scale (Hubbard & Mannell, 2001) (refer to section 7.1.1). The constraints that hinder employees from participating in corporate fitness centres are discussed in the following sections.

7.1.1 Intrapersonal.

Suspicion was an intrapersonal constraint to employee exercise participation in corporate fitness centres identified through this study. Suspicion is a new contribution to knowledge as it neither featured in the literature review nor in document review and interviews with managers. Employees in focus groups, however, described suspicion as internalising the negative perceptions their managers and colleagues had regarding exercise participation in the corporate fitness centre, which made them feel unpermitted to exercise. Corroboration was identified in the quantitative findings as approximately one-fifth of employees indicated they do not feel permitted to use a corporate fitness centre, although it should be noted that intrapersonal constraints did not independently predict participation in the constraints logistic regression model.

The internalisation and subsequent development of the intrapersonal constraint identified in this research is consistent with constraints theory. Specifically, the perception of either insurmountable structural or interpersonal constraints create an intrapersonal constraint to activities in question (Jackson et al., 1993). The findings in this research indicate employees' negative interactions with managers and colleagues regarding their exercise participation in the corporate fitness centre initiated the feedback loop (Jackson et al., 1993), and could have been interpreted as an insurmountable obstacle that therefore suppressed the preference to participate at the intrapersonal-level. These findings correspond with the interpersonal support strategy identified as part of the recruitment and retention of employees in wellbeing programs (Carnethon et al., 2009). Thus, there is a need for interpersonal support strategies to facilitate

positive relationship between employees, colleagues, and managers that support and encourage employee exercise participation in corporate fitness centres.

7.1.2 Interpersonal.

Two interpersonal constraints were identified as hindrances to employee exercise participation in corporate fitness centres: family and managers. These interpersonal constraints triangulated in the qualitative phase, and is consistent with previous research that identified family (Banwell et al., 2017) and managers (J. Mayer et al., 2013) as constraint sources to participate in employee wellbeing programs.

Family referred to domestic obligations that constrained employee exercise participation in corporate fitness centres. Employees in focus groups discussed obligations, such as child drop-offs and pick-ups from school, constrained their exercise participation in the corporate fitness centre. In the quantitative study, a constraint item asked whether employees had colleagues who had too many family obligations. Just under one-fifth of employees reported having colleagues with too many family obligations to participate with them in the corporate fitness centre. These corresponding findings reveal family as a constraint to exercise participation, and is also consistent with previous research (Banwell et al., 2017; Wong et al., 2014). The findings in both studies show that employees prioritised family time over opportunities to participate in workplace physical activity programs. These findings correspond with results in this research, as employees opted to attend to family obligations, despite the opportunity to participate in exercise in the corporate fitness centre either before or after work.

Managers were a source of constraint to employee exercise participation in corporate fitness centres. Triangulation revealed partial agreement in the data as managers in interviews described their strategies to minimise the overlap of team meetings and program commencement. Employees in focus groups, however, discussed the overlap as a persistent

problem. This supports outcomes found in other studies, where managers' attitudes of participation were constraints to engagement in workplace physical activity programs (J. Mayer et al., 2013; C. Tudor-Locke et al., 2014). While these studies indicate managers' attitudes as a constraint to physical activity participation, this research adds to the knowledge base. Overlapping meetings was the specific constraint to exercise participation in corporate fitness centres, and thus could be another reason why managers potentially constrain participation in workplace wellbeing programs, more generally. These findings further reinforce the need for interpersonal support structures that support exercise participation in corporate fitness centres, which are similar to the recommendations to recruit and retain employees in wellbeing programs (Hill & Korolkova, 2014).

7.1.3 Structural.

Structural was the key constraint factor hindering employee exercise participation in corporate fitness centres. Structural constraints were consistently mentioned in the qualitative phase, and independently predicted participation in the constraints logistic regression model. This finding aligns with other studies pertaining to corporate fitness centres (Hubbard & Mannell, 2001; Schwetschenau et al., 2008). While structural constraints were a significant constraint in general, four specific constraints corroborated between the qualitative and quantitative phases in this research: programs at capacity, schedule of programs, promotion, and time.

Programs at capacity was a constraint to successfully recruit additional employees into the corporate fitness centre exercise programs. Findings from document review indicated corporate fitness centre managers capped participants per program. This was partially supported by the views of managers in semi-structured interviews, who noted that the corporate fitness centre's design and equipment purchases limited the physical floor space for exercise. Moreover, the quantitative results revealed just under half of the sample agreed that corporate

fitness centres were overcrowded. The findings in this research support the findings of previous studies (Brown et al., 2014; Mathes et al., 1992), which found employees encountered congestion in corporate fitness centres. The findings in this research suggest the corporate fitness centre's structural design, and the type and number of pieces of equipment reduce the physical space for employees to participate in exercise. This could explain why management placed a cap on the number of participants in exercise programs, thus contributing to constrained participation. The programs at capacity problem is a similar issue experienced in commercial gymnasiums, with additional program provision and offering cheaper rates to attend at off-peak times, as potential strategies to dilute exercise participation numbers (Comereski, 2013).

Schedule of programs referred to the incompatibility between both work and corporate fitness centre program schedules. Managers in interviews identified a specific time to deliver exercise programs. Employees in focus groups, however, described the program delivery time was incompatible with their mandatory breaks, and thus hindered their opportunities to exercise in the programs. Schedule of activities was further corroborated in the quantitative findings, as over one-quarter of employees agreed that they experienced scheduling challenges in relation to participating with colleagues in the corporate fitness centre. This scheduling constraint is consistent with previous findings pertaining to participation in workplace physical activity programs, as managers delivered programs during what employees perceived as the busiest period of the day (Person et al., 2010). Although there was no evidence indicating programs were delivered at the busiest time in this research, this investigator speculates that program scheduling interfered in the preference-participation relationship (Crawford et al., 1991). Employees had the desire to participate in exercise, however, the constraint of program schedule was neither an interpersonal nor an intrapersonal constraint. This therefore indicates

program scheduling was a structural constraint that theoretically interferes with the preference-participation relationship specific to corporate fitness centres.

Promotion was identified as another structural constraint to employee exercise participation in corporate fitness centres. While managers in semi-structured interviews described the key promotional strategies as newsletters, an intranet page, and word-of-mouth, employees in the focus groups believed management made minimal efforts to promote the corporate fitness centre. Employees perceived the limited promotion as discouraging, and thus contributed to constrained exercise participation. Further corroboration was found in the quantitative data, as almost two-thirds of employees agreed that they would participate in corporate fitness centres if they knew the opportunity was available to them. Although limited information suggests corporate fitness centres are passive fringe benefits that do not require active promotion (Noe et al., 2011), the findings in this research and the support of other studies (Brown et al., 2014; Hannon et al., 2012) indicate that limited promotional efforts create a problem where employees are unaware of the existence of exercise opportunities - whether they are interested or not. The findings in this study indicate employee exercise participation was constrained at the structural-level, with increased promotional efforts potentially assisting in raising awareness and encouraging exercise participation in corporate fitness centres. This supports the need for similar communication efforts as recommended to recruit and retain employees in wellbeing programs (Zula, 2014). Targeted information, coupled with effective communication strategies, likely makes employees aware of the availability of corporate fitness centres, and thus limits employees from experiencing a consistent constraint at the structural-level.

Time constraints derived from inflexibility and work overload, and thus constrained employee exercise participation in corporate fitness centres. Employees in focus groups explained that inflexibility were the job-inherent tasks, such as gathering resources and

operating machinery, which developed a perceived lack of time to participate in corporate fitness centres. Similarly, these employees believed their excessive amounts of work created a lack of time to exercise. Further corroboration was found in the quantitative findings, as over half the employees agreed that time was a constraint to their exercise participation in corporate fitness centres.

The findings of this research are consistent with those found in previous studies related to workplace physical activity and employee wellbeing programs. Specifically, employees experienced inflexibility due to customer demands (J. Mayer et al., 2013) and employees worked through their lunch breaks when they encountered work overload (Kilpatrick et al., 2017; C. Tudor-Locke et al., 2014). In Australia, average working hours have decreased over the last three decades, however, full-time and part-time employees have increased their total work time. (Australian Bureau of Statistics, 2010). This potentially indicates to constant demand for higher productivity and could reinforce experiencing inflexibility and work overload constraints as identified in this research. The findings of this research indicate that inflexibility and work overload are specific time constraints to exercise in corporate fitness centres, and suggests that human resource specialists might need to incorporate flex-time strategies into total reward systems (Dressler, 2013). Flex-time potentially alleviates time constraints and supports exercise participation in corporate fitness centres. This is reinforced in section 7.4.

7.2 How do Employees Negotiate Constraints to Exercise in Corporate Fitness Centres?

Cognitive and behavioural negotiation strategies were identified as efforts to overcome constraints to exercise participation in corporate fitness centres, with skill acquisition independently predicting participation in the negotiation logistic regression model. Using negotiation strategies is consistent with previous workplace research, which identified that employees engage in efforts to participate in corporate fitness centres (Hubbard & Mannell,

2001) and workplace wellbeing programs (Banwell et al., 2017), and also to engage in leisure-time physical activity (Laura Wood & Karen Danylchuk, 2015). This research identified employees specifically used priority as their cognitive strategy; and engaged in cooperation, time management, and skill acquisition behavioural strategies to alleviate the negative influences of constraints on their participation in corporate fitness centres.

7.2.1 Cognitive.

Priority reflected a cognitive strategy used to negotiate time constraints related to exercise program participation. This strategy was discussed in focus groups with employees and revealed work overload triggered some employees to prioritise their participation in one exercise program over the other. Some employees prioritised participation in the longer Yoga class over the shorter group training programs. The findings from the quantitative phase support those from the focus groups and show just over half of employees regularly or very often engaged in prioritisation strategies to negotiate constraints to exercise participation in corporate fitness centres. These findings highlight the potential efficacy of prioritising exercise into one's schedule, which is important to acknowledge in light of other research, which found that employees considered exercise participation secondary to their work (Banwell et al., 2017) and domestic duties (Lenneis & Pfister, 2017).

7.2.2 Behavioural.

Cooperation was a behavioural strategy that involved developing beneficial interpersonal interactions that assisted employees in negotiating constraints to exercise participation in corporate fitness centres. Employees in focus groups discussed forming relationships with colleagues and managers to help alleviate constraints to exercise participation. This strategy to alleviate constraints was also identified in the quantitative study, with over one-third of employees either regularly or very often cooperating with family members to make time to participate in the corporate fitness centre. Similarly, approximately

one-fifth of employees either regularly or very often cooperated with spouses to take care of children to participate in the corporate fitness centre. This research indicates the potential for employees to advantageously use their social resources to participate in corporate fitness centres, which is important to recognise, as previous research demonstrates individuals use their social resources to participate in leisure-time physical activity (Kennelly et al., 2013). This potentially signals the need for education sessions to elicit interpersonal support from managers and colleagues. These recommendations have also been identified in the literature as part of the recruitment and retention strategies in relation to employee wellbeing programs (Carnethon et al., 2009).

Time management was identified as a behavioural strategy that reflected how employees restructured their day to negotiate constraints, and thus exercise in the corporate fitness centre. Time management was discussed in focus groups with employees, where they reorganised their work day to react actively to constraints on their participation. This is supported by the quantitative results, which showed approximately four-fifths of employees engaged in strategies to accommodate exercise into their work day. This research aligns with previous studies. Employees were more time efficient by skipping warm-ups to reduce exercise duration (T. Bredahl et al., 2015), and either woke up earlier or stayed up later at night to incorporate exercise into their day (Fletcher et al., 2008). Although the workday restructuring did not feature in these previous studies, the combined findings of previous studies and this research suggest employees are willing to engage in time management strategies to more effectively address their exercise need. Consequently, management could educate employees about time management skills to facilitate constraint negotiation strategy use. This further supports the need for management to consider incorporating flex-time strategies in total reward systems (Dressler, 2013) to further enable employees to use corporate fitness centres.

7.3 What Motivates Employees to Exercise in Corporate Fitness Centres?

External regulation, identified regulation, and intrinsic motivation were the motivation dimensions that contributed to employee exercise participation in corporate fitness centres, with identified regulation independently predicting participation in the motivation logistic regression model. Qualitative data triangulation revealed specific motives (open codes) within these motivation dimensions, such as interpersonal encouragement and exercise enjoyment, which contributed to employee exercise participation. In general, these motives correspond with the motives known to encourage participation in sport, exercise, and leisure-time physical activity (Weinberg & Gould, 2015). Further corroboration was identified in the quantitative findings, and thus provides additional credibility regarding motivation as an important contributor to employee exercise participation in corporate fitness centres. Motives specific to external regulation, identified regulation, and intrinsic motivations are explained in the next sections.

7.3.1 External regulation.

Two external regulators were identified as motives to exercise in corporate fitness centres: rehabilitation and interpersonal encouragement. These motives were triangulated in the qualitative phase of this research and complement previous research that identified rehabilitation (Rossing & Jones, 2015) and interpersonal encouragement (Edmunds & Clow, 2015) as external demands encouraging individuals to comply with exercise opportunities.

Rehabilitation was a controlling form of motivation – defined as behaviour to comply with external demand (Ryan & Deci, 2000) – that referred to recruiting employees into corporate fitness centre programs for the purpose of restoring physical health. Rehabilitation featured in the document review and in focus groups with employees, where both data sources provided agreement in relation to medical staff prescribing exercise program participation to restore employee physical health. This finding supports previous research that found

rehabilitation was one of many reasons to either use a corporate fitness centre (Rossing & Jones, 2015) or a commercial gymnasium (MacIntosh & Barbi, 2015). The involvement of health care practitioners also aligns with literature in relation to practitioner exercise referral schemes, which have increased considerably since the 1990s (Pavey et al., 2012; Tobi, Estacio, Yu, Renton, & Foster, 2012). Therefore, the consistent data indicates rehabilitation could be a worthwhile strategy to recruit employees into corporate fitness centres. Self-determination theory, however, posits that controlling motivation dimensions only lead to short-term behaviour change (Biddle et al., 2015). Thus, there is a need for employees to internalise motives that transfer corporate fitness centre behaviours from a state of control to a state of autonomy. Emphasising positive affect in promotional materials potentially assists this transition into sustained exercise participation (refer to section 7.3.3).

Interpersonal encouragement for employees to participate in corporate fitness centre, is attributed to managers, colleagues, and instructors. These interpersonal encouragement sources were identified through the qualitative triangulation protocol and provided partial support among the data sources. Document review revealed managers as interpersonal encouragement sources; managers, colleagues, and the instructor encouraged participation from interviewees' perspectives; and managers and instructors were sources of encouragement in the employee focus groups. These complementary findings align with the outcomes identified in previous research, where physical activity champions – that is, employees considered as leaders of physical activity in the workplace (Edmunds & Clow, 2015) – encouraged their colleagues to engage in physical activity opportunities. This is also consistent with the concept of vicarious experience from social cognitive theory, which posits that individuals learn behaviours from similar people, with these experiences increasing self-efficacy for future behaviour engagement (Bandura, 1989). As extrinsic motivation dimensions, such as external and introjected regulation, have previously been shown to only be loosely linked with continued

participation in physical activity (Teixeira et al., 2012), it may be an ineffective strategy to retain employee exercise participation in corporate fitness centres. Recruitment to corporate fitness centres, however, might have some motivational promise, considering that these controlling forms of motivation are known to initiate physical activity behaviours (Biddle et al., 2015). Thus, management could incorporate interpersonal encouragement into reward management practices to reinforce social support to participate in corporate fitness centres.

7.3.2 Identified regulation.

Identified regulation was the key motivation dimension that contributed to employee exercise participation in corporate fitness centres. This finding aligns with other research that identified employees valued health outcomes associated to participation, and thus used this value as a motive to participate in corporate fitness centres (Mathes et al., 1992). Identified regulation as a significant predictor of participation in corporate fitness centres, is a promising finding. Identified regulation is one of the more autonomous forms of motivation positively associated to participation in general physical activity (Teixeira et al., 2012), and means exercise in corporate fitness centres can also be underpinned by the more autonomous motivation dimensions.

Health benefits was the specific identified regulation motive found to contribute to exercise participation in corporate fitness centres. Health benefits reflected how physical and mental health outcomes associated with exercise underpinned participation in corporate fitness centres. Health benefits featured in the document review and focus groups with employees, with both data sources providing agreement through the triangulation protocol. Documents included information regarding physical and mental health benefits associated to exercise participation in the corporate fitness centre, while employees in focus groups discussed how they valued physical and mental health improvements, which underpinned their behaviours. Further corroboration was identified in the quantitative phase, with questionnaire findings

demonstrating that almost 85% of respondents provided a response in relation to valuing exercise. These findings support previous research that identified health benefits underpin participation in corporate fitness centres (Mathes et al., 1992) and workplace physical activity programs (Renton et al., 2011). This research reinforces that employees can value corporate fitness centres, by acknowledging how the exercise opportunities address their physical and mental health needs. Management could incorporate physical and mental health as non-financial components (Dressler, 2013) that emphasise wellbeing as part of employee total reward systems.

7.3.3 Intrinsic motivation.

Two intrinsic motivations contributed to employee exercise participation in corporate fitness centres: exercise enjoyment and try new exercises. These two motives triangulated across the research, and correspond with the literature relating to intrinsic motivation and participation in sport, exercise, and leisure-time physical activity (Gallucci, 2013).

Exercise enjoyment contributed to employee exercise participation in corporate fitness centres for the integral satisfaction of experiencing enjoyable exercise experiences, and provided partial support through the qualitative triangulation protocol. Document review identified an association between exercise equipment and exercise enjoyment. Additionally, managers reported the need to provide enjoyable exercise programs, while employees in focus groups discussed how enjoyable exercise experiences contributed to their participation in the corporate fitness centre. The quantitative findings further corroborate these qualitative findings, given that approximately three quarters of employees reported enjoyment for exercise as a reason to use the corporate fitness centre. The intrinsically motivating role exercise enjoyment plays in participating in exercise in corporate fitness centres in this study, is supported by self-determination theory (Ryan & Deci, 2000), and previous research that found enjoyment led to continual participation in group exercise settings (Burn & Niven, 2018). The

increasing focus on positive affect also emphasises the critical role of exercise enjoyment in exercise participation, as researchers recognise that individuals do not necessarily participate in beneficial health behaviours, despite their recognition of the positive outcomes (Ekkekakis, 2017). Thus, there is a recent shift in thinking to promote positive affect in promotional materials, opposed to outcomes of exercise (Ekkekakis, 2017). Consequently, exercise instructors could use effective communication strategies during program delivery to reinforce positive affect, and how this assists with developing positive mind-sets (Anshel, 2006).

Try new exercises reflected a management strategy to provide innovative exercise opportunities that contributed to employee participation in corporate fitness centres. Managers in interviews discussed how providing new exercises on an intermittent basis contributed to employee exercise participation. Although try new exercises remained silent in document review and focus groups, corroboration was identified in the quantitative phase. Approximately half of employees reported the need to try and master new exercises. The findings in the current research align with intrinsic motivation, as the inherent interest to learn new exercises movements is inseparable from the exercise itself (Ryan & Deci, 2000). The findings in this research correspond with previous studies that found employee discovery of exercises and skills was a motive underpinning corporate fitness centre participation (Huddleston et al., 2012; Mathes et al., 1992), and thus reinforces the need for exercise instructors to provide variable exercise programs to sustain employee exercise participation in corporate fitness centres. Try new exercises could be communicated into promotional materials, which aligns with the recruitment and retention communication strategy of employees in wellbeing programs (Berry et al., 2010).

7.4 What Facilitates Employees to Exercise in Corporate Fitness Centres?

The qualitative phase of this research identified an unexpected inductive theme – facilitators - that was not part of the a priori coding system informed by constraints, negotiation,

and self-determination theories. The codes of convenience, program cut-back, flexible programs, and free programs, all identified as participation facilitators, featured in more than one of the qualitative phase studies.

These four facilitators correspond with facilitators theory, known as the external conditions that either promote preferences (i.e. motivation) or further enhance participation in activities in question (Raymore, 2002). Three facilitator types exist, which correspond with the three constraint factors: intrapersonal, interpersonal, and structural facilitators (Raymore, 2002). The open facilitator codes identified in this research (convenience, program cut-back, flexible programs, and free programs) were all structural facilitators that conceptually interacted with interpersonal and intrapersonal facilitators, which aligns with facilitators theory (Raymore, 2002), and thus contributed to employee exercise in the corporate fitness centre (this is discussed in the following paragraphs).

Facilitators also correspond with the socio-ecological theory, where layers of influence contribute to promote preferences for activities in question (Kono, 2018). The structural facilitators could be conceptualised as institutional factors, otherwise known as either the social or institutional characteristics that influence behaviour (McLeroy et al., 1988). Even though facilitators is a unique contribution to knowledge, as it assesses the positive conditions that contribute to behaviour, facilitators has received minimal research attention to date (Kono, 2018; Stodolska, Sharaievskaya, Tainsky, & Ryan, 2014). To provide attention to the four facilitators associated with exercise participation in corporate fitness centres, they are explained in the following paragraphs.

Convenience was identified in the qualitative phase as a structural facilitator that contributed to employee exercise participation in corporate fitness centres. Qualitative data triangulation revealed partial agreement between data sources. Document review and

interviews with managers showed how convenience was addressed by enabling employees to use the corporate fitness centre on a 24-hour basis, while employees in focus groups explained how the corporate fitness centre provided useful access to exercise opportunities. Although these qualitative findings show convenience was a facilitator to exercise participation, convenience featured in the Leisure Constraints Scale, and thus provided corroboration with these qualitative data. Specifically, just over three-quarters of employees agreed that corporate fitness centres must be convenient for them to use. Facilitators theory sheds light on convenience's contribution to exercise participation in corporate fitness centres. Convenience was an organisational value enacted at the structural facilitator level, which aligns with facilitators theory (Raymore, 2002). This created a condition that was positively viewed by employees at the intrapersonal facilitator level who potentially possessed psychological attributes, such as personality or self-efficacy that facilitated their participation, and thus enabled them to participate in the corporate fitness centre. These data therefore indicate the need to incorporate higher-order organisational values that encourage employees to use corporate fitness centres. This aligns with the organisational culture recommendation in relation to recruiting and retaining employees in wellbeing programs, whereby values pertaining to employee wellbeing become part of organisational operations (Berry et al., 2010; Goetzel et al., 2014) (refer to section 2.2.3).

Program cut-back was identified as a structural facilitator enacted by embedding exercise program participation into the organisation's business structure that could facilitate better participation in corporate fitness centres. Both management's actions denoted in interviews and the views of focus group participants acknowledged the competing interests of work and exercise program participation. Facilitators theory suggests that social belief systems that operate at the structural-level enable participation to activities in question (Raymore, 2002). In this research setting, the organisation's operations were their primary priority. As

work priorities and exercise opportunities competed for time resources, management adjusted the exercise programs to better blend them with the higher-order priority of work time. The pragmatic programming actions are similar to competing priorities theory (Lamont & Kennelly, 2010; Lamont, Kennelly, & Moyle, 2014), where management prioritised work time at the expense of exercise program time. Although program time was reduced, employees in focus groups appeared to accept the outcome. This reflects an intrapersonal facilitator, as acceptance is an intrapersonal characteristic that could further promote exercise participation (Raymore, 2002). These findings reinforce the need for management to develop high-order values that transfer into organisational norms (Berry et al., 2010) (refer to section 2.3.3). These norms would thus become embedded into the organisation, and have a trickle-effect to the intrapersonal facilitators-level, where employees develop psychological characteristics that further enable exercise participation in corporate fitness centres.

Flexible programs were identified as a structural facilitator, acted at the structural and interpersonal levels, and contributed to employee exercise participation in the corporate fitness centre. This finding is consistent with facilitators theory (Raymore, 2002). Management communicated in documents, such as promotion and evaluation, that exercise programs were tailored to employees' varied individual needs, which communicates an organisational value. This value was acted at the interpersonal facilitator level, where instructors subsequently delivered flexible programs to employees that had different exercise capacities. These employees potentially possessed psychological attributes that further facilitated their participation after experiencing the flexible program delivery. This finding suggests that high-order values from management create external conditions, where flexible programs can provide greater exercise opportunities for employees, particularly for those who otherwise would not be able to participate with employees with higher fitness levels in the same program.

Free programs were identified as facilitators at structural and interpersonal facilitator levels that contributed to employee exercise participation in corporate fitness centres. Management communicated in evaluation documents that free programs were an incentive to participate, whereas managers in interviews viewed the free programs as a subsidy for employees. Regardless, these complementary views of free programs align with structural facilitators, given the organisation created an external condition where employees could develop a preference to participate (Raymore, 2002). Although management enacted this facilitator to assist employee exercise participation in the corporate fitness centre, the effectiveness of financial inducements remains inconclusive. Past research found financial incentives encouraged employee participation in workplace physical activity programs (Persson et al., 2017), with other research suggesting financial inducements have minimal contribution to general exercise participation (Biddle et al., 2015). A recent systematic review, however, identified financial rewards based on either external conditions or engagement level had a beneficial influence on physical activity, while unconditional incentives appeared to have minimal effect on behaviour (Barte & Wendel-Vos, 2017). Thus, management could reward continued exercise participation in corporate fitness centres, rather than providing unconditional financial rewards, such as free programs or low-cost memberships, as identified in this research. This information recommends human resource specialists to financially reward employees who achieve a specific exercise participation level, and thus contributes a new practice within total reward systems (Dressler, 2013).

In sum, it is evident that several constraints, negotiation strategies, motivations, and facilitators contributed to employee exercise participation in corporate fitness centres. The three constraint factors hinder participation, with structural being the most important constraint. While constraints hinder participation, employees also respond actively to the challenges on their participation by using cognitive and behavioural negotiation strategies. External

regulation, identified regulation, and intrinsic motivation underpinned employees' reasons to use a corporate fitness centre, with identified regulation being the most important motivation dimension. Last, facilitators to participation were conditions that management enacted to either assist employees to develop their motivation levels or further enable employees to use the corporate fitness centre. These findings provide a contribution to knowledge (refer to section 8.2) and implications for management (refer to section 8.3), and a visual model (refer to Figure 19) to improve the understanding on what factors contribute to employee exercise participation in corporate fitness centres.

7.5 Integration of Findings

The purpose of this section is to amalgamate the qualitative and quantitative findings in this research to present a visual model demonstrating how factors identified in the previous sections of this chapter contribute to employee exercise participation in corporate fitness centres. The constraints-effects-mitigation model (Hubbard & Mannell, 2001) (refer to Figure 10) forms the basis of the new model: the constraints-negotiation-motivation-facilitators model of employee exercise participation in corporate fitness centres (Figure 19). This new model expands upon the constraints-effects-mitigation model by incorporating the key constraint factors, negotiation strategies, motivation dimensions, and facilitators identified in this mixed methods research. The dotted red lines represent the nature of the constraints-negotiation process (Hubbard & Mannell, 2001); the solid black lines represent the relationship between constraints, negotiation, and motivation identified in this research; and the dotted black lines represent facilitators' relationship identified in this research. The dotted black lines represent how facilitators either encourage motivation or further enhance participation (Raymore, 2002).

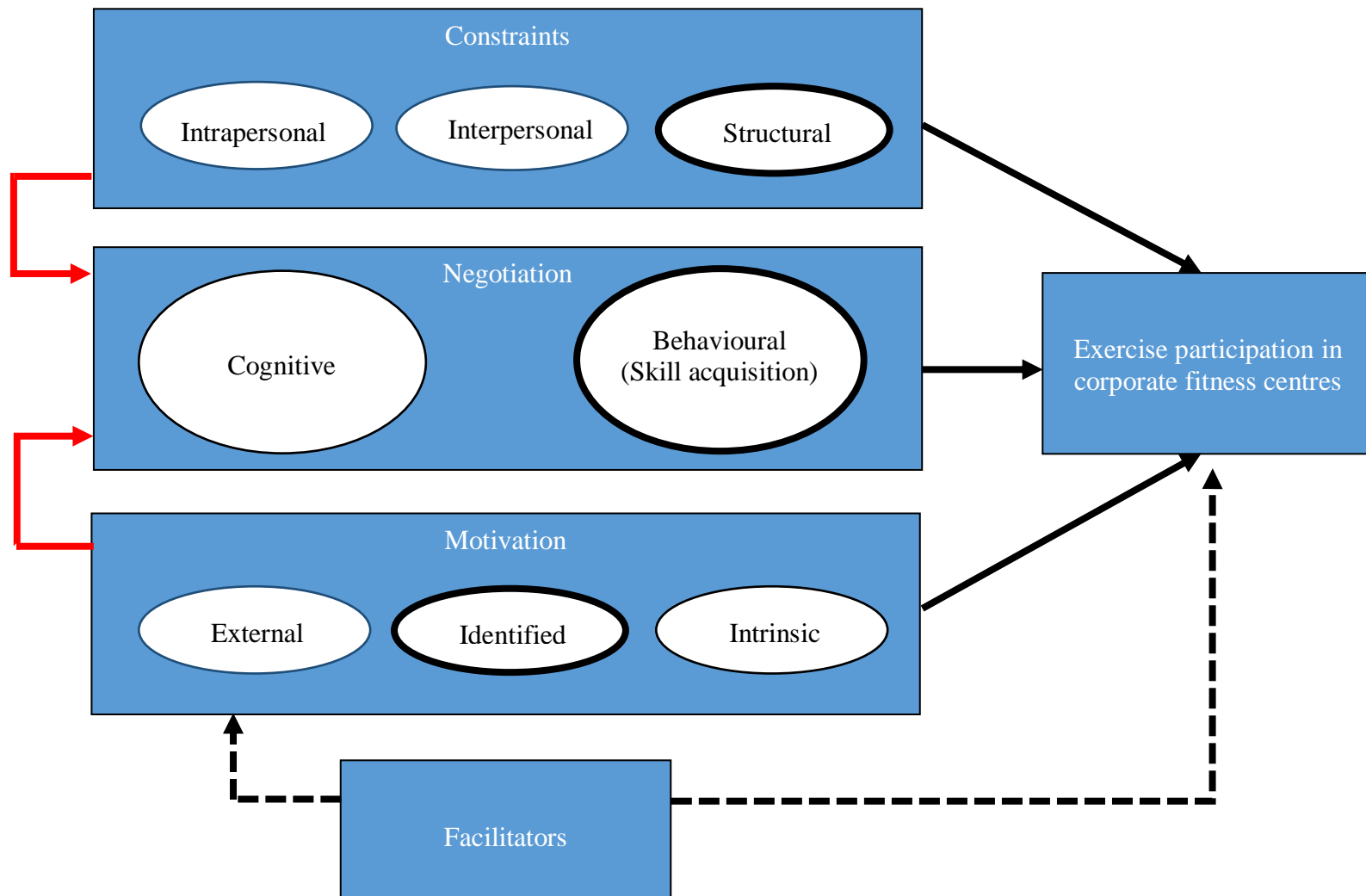


Figure 19. Constraints-negotiation-motivation-facilitators model of employee exercise participation in corporate fitness centres

The investigator recognises that developing a model based on a single organisation is difficult to justify. Previous research focusing on LTPA (Stodolska et al., 2014), however, developed a participation model, based on a single case. The constraints-negotiation-motivation-facilitators model of employee exercise participation was therefore deemed an appropriate contribution to knowledge emanating from this research.

7.6 Limitations Influencing the Discussion

The purpose of this section is to discuss other noteworthy findings that, although not directly related to the three research questions, provide further insights as to how constraints, negotiation, motivation, and facilitators contributed to participation (the key limitations, such as those related to research design, are discussed in detail in section 8.4). Explaining upcoming findings might help to contextualise the results that featured in sections 7.1 to 7.4. Seven noteworthy findings are explained: two findings relate to minimal convergence between qualitative and quantitative findings, two other findings are associated to the qualitative phase, and an additional three findings pertain to the quantitative phase.

The limited corroboration of qualitative codes and quantitative questionnaire items is a noteworthy finding. This was evidenced by 13 open codes, regardless of core theme, corroborating with the questionnaire items. A potential explanation for this finding is that the Leisure Constraints Scale (Hubbard & Mannell, 2001), Leisure Constraint Negotiation Scale (Hubbard & Mannell, 2001), and SRQ-E (Ryan & Connell, 1989) were informed by leisure and education fields, respectively. Thus, the questionnaire items may not entirely represent the constraints, negotiation, and motivations specific to corporate fitness centre contexts, and therefore could have limited the correspondence between qualitative codes and questionnaire items in this research. This research suggests the constraint, negotiation and motivation triangulated open codes identified in the qualitative phase could be incorporated into future iterations of corporate fitness centre questionnaires that aim to examine constraints,

negotiation, and motivation. These open codes comprise managers, rehabilitation, and interpersonal encouragement.

Introjected regulation is also worth discussing. Introjected regulation - defined as behaviour to either avoid guilt or to improve self-worth (Ryan & Deci, 2000) - did not emerge through the qualitative phase. The introjected sub-scale had a low internal reliability score, which may have undermined its measurement. This finding could be attributed to the sub-scale being informed from the education domain, and therefore the items might not be specific to the corporate fitness centre context (Tavakol & Dennick, 2011). Further examination of the introjected regulation items suggests that the scale could have measured more than one latent variable (Tavakol & Dennick, 2011), such as social recognition or guilt. Thus, the results should be interpreted with some caution.

Two noteworthy findings emerged in the qualitative phase which pertain to limited triangulation of codes. First, there was minimal triangulation of open qualitative codes. Only five codes triangulated between document review and focus groups, six codes triangulated in interviews with managers and in focus groups with employees. Another six codes triangulated between document review and focus groups. Last, only three codes triangulated in all three studies. A potential explanation for this minimal convergence is that the investigator in this research did not adequately explore open codes through document review, semi-structured interviews, and focus groups. A secondary, and a more probable explanation, is that views on employee exercise participation in the corporate fitness centre diverged between employees and management, which is the second noteworthy finding in the qualitative phase.

Only six open codes triangulated between managers and employees. The codes were managers, promotion, interpersonal encouragement, exercise enjoyment, convenience, and program cut-back. These triangulated codes indicate that the external and internal view of

exercise participation in the corporate fitness centre, mostly corresponded on motivation and facilitator core themes, with minimal recognition of constraints to exercise participation. This is not necessarily a surprising finding for two reasons. First, managers discussed few constraints, which indicates minimising constraints was not necessarily a salient management activity. Second, the limited documentation associated to the corporate fitness centre would not have provided managers many insights. For example, there were no specific documents dedicated to the corporate fitness centre, with the vast majority of corporate fitness centre information intermittently inserted into document categories, such as evaluation and the general employee wellbeing program.

Interestingly, however, managers discussed five strategies they believe contributed to employee participation, yet these five codes did not feature in focus groups with employees. Similarly, employees discussed 12 open codes that did not emerge in interviews with managers. The lack of triangulation associated to these open codes indicated management potentially implemented ineffective strategies, and were unaware as to what contributed to employee participation from the employees' perspective. This is an unsurprising finding, as the minimal triangulation between focus groups and document review could explain - and further reinforce - why management were unaware of what contributes to employee exercise participation in the corporate fitness centre. This dissemination enables managers to develop and implement evidence-based strategies to improve employee exercise participation levels in corporate fitness centres. Strategies, such as communication (Zula, 2014) and interpersonal support (Carnethon et al., 2009) could improve participation, and are also strategies used to recruit and retain employees in employee wellbeing programs.

The measurement of the interpersonal constraint sub-scale was the first noteworthy finding related to the quantitative phase. Acceptable Cronbach alpha levels range between $\alpha = .7$ to $\alpha = .8$ (Cohen et al., 2013). The interpersonal constraint sub-scale, however, reached an

unacceptable Cronbach alpha level ($\alpha = .46$). Scales with low item numbers are known to produce lower Cronbach alpha levels (Tavakol & Dennick, 2011), yet eight items comprised the interpersonal constraint sub-scale, and thus likely rules out item numbers as an explanation for the unacceptable alpha level in this research. A probable explanation is poor inter-relatedness between scale items (Tavakol & Dennick, 2011). Previous research using the same interpersonal constraint sub-scale produced either poor ($\alpha = .55$) (Hubbard & Mannell, 2001) or questionable ($\alpha = .69$) (L. Wood & K. Danylchuk, 2015) Cronbach alpha levels. This indicates the items that comprised the interpersonal constraint sub-scale might have had poor correlations, and consequently measured a heterogeneous concept (Tavakol & Dennick, 2011) with minimal association to interpersonal constraints. The consistently lower Cronbach alpha level in past studies and in this research suggests the scale requires reconsideration (Tavakol & Dennick, 2011).

Skill acquisition was the second noteworthy finding pertaining to the quantitative phase in this research. Skill acquisition was the negotiation strategy that independently predicted employee exercise participation in corporate fitness centres in the negotiation logistic regression model. Skill acquisition, however, did not feature as a negotiation strategy in the qualitative phase in this research. The differences in qualitative and quantitative samples could explain why skill acquisition did not feature through the qualitative phase and why the strategy significantly predicted participation in the quantitative phase. First, employees in focus groups predominantly consisted of non-participants of the corporate fitness centre. Thus, they were unlikely to report skill acquisition as a strategy to negotiate constraints. Second, the quantitative sample mostly comprised corporate fitness centre participants. Skill acquisition is known to contribute to participation in corporate fitness centres (Hubbard & Mannell, 2001) and in leisure-time physical activity (Laura Wood & Karen Danylchuk, 2015), and could explain why the strategy was significant in this quantitative phase.

External regulation almost reached significance in the motivation regression model is another finding worth discussing. Although not significant, employees nearly doubled their odds of participating in exercise in the corporate fitness centre for every one-unit increase on the external regulation scale (refer to Table 31). This finding shows that employees' compliance to external demands could be important motives underpinning behaviour specific to corporate fitness centres. Corroboration of rehabilitation and interpersonal encouragement motivation codes in the qualitative phase of this research could reinforce the quantitative findings. An alternative explanation, however, is that the quantitative sample could have been novice exercise participants of corporate fitness centres, as data suggests extrinsic motivation dimensions such as external and introjected regulation are beneficial behaviour activators, but may not sustain behaviour over time (Biddle et al., 2015).

7.7. Chapter Summary

The purpose of this chapter was to converge the qualitative and quantitative data gained from this research as per the convergent mixed methods protocol discussed in chapter four. A secondary purpose was to incorporate the literature from chapters two and three to compare, contrast, and discuss the findings identified in this research, and in doing so, answer the three questions that underpinned this research.

The chapter commenced by addressing the first research question, which pertained to constraints that hinder employee exercise participation in corporate fitness centres. Constraints to employee exercise participation were heterogeneous, and emerged at intrapersonal, interpersonal, and structural levels, with structural constraints independently predicting participation. The next section addressed the second research question pertaining to how employees negotiate constraints. Cognitive and behavioural negotiation strategies were the efforts employees used to overcome their challenges to participation, with skill acquisition significantly predicting participation in corporate fitness centres. The following section then

addressed what motives underpin employee exercise participation. Both controlling and autonomous forms of motivation underpinned participation, with identified regulation independently predicting participation in corporate fitness centres. Using SDT as a framework to examine motivation was particularly useful. Self-determination theory enabled the investigator to examine the spectrum of extrinsic to intrinsic motives underpinning employee participation. This was particularly valuable to advance knowledge, considering previous research concentrated their efforts on extrinsic motives, such as motivational climates (Huddleston et al., 2012) and social support (Hunter et al., 2017). Facilitators to participation was then discussed as an inductive core theme that contributed to preference development and further enabled employee exercise participation. A model visually illustrating the findings from this research was the focus of the next section, and the chapter then concluded with additional noteworthy findings that provide new knowledge based on the focus of this research. The next chapter brings this research to a conclusion.

CHAPTER EIGHT: CONCLUSION

“[The conclusion] should particularly reaffirm the thesis statement and seek to offer answers to the research questions raised in the research and justification for the approach used by the study as well as pathways forward” (Assan, 2009, p. 1).

The purpose of this chapter is to draw this thesis to a conclusion, by providing final interpretations of salient findings, explaining the contribution to knowledge and management implications, and suggesting directions for future research. The chapter begins with an overview of key findings that originated from the three research questions about employee exercise participation in corporate fitness centres. Implications for theory (even though the research was not designed to test nor to develop theory) that emerged through this research are discussed, which comprises section two. Implications for management is the focus of section three, and includes specific recommendations for each of the main factors of constraints, negotiation, and motivation; and the emergent theme of facilitators that featured through this research. Research limitations are explained and combined with future research prospects to address these limitations and the findings in this research. The last section provides a final conclusion regarding employee exercise participation in corporate fitness centres.

8.1 Overview of Key Findings

The purpose of this section is to summarise the key findings pertaining to employee exercise participation in corporate fitness centres. Detailed answers to the three research questions were provided in chapter seven. Thus, those findings in the previous chapter are summarised in Table 36 to visually streamline the connection between the research questions

posed in chapter one, the key findings discussed in chapter seven, and research implications in this chapter. The research implications form the basis of this section.

Table 36.
Research Questions, Findings, and Recommendations

Research question	Research findings	Recommendations
What constraints hinder employees from exercising in corporate fitness centres?	<u>Qualitative:</u> Intrapersonal, interpersonal, and structural constraints hinder participation. <u>Quantitative:</u> Structural constraints significantly predict participation (negative).	All constraint factors hinder employee exercise participation, with structural constraints being the most important.
How do employees negotiate constraints to exercise in corporate fitness centres?	<u>Qualitative:</u> Cognitive and behavioural strategies negotiate constraints. <u>Quantitative:</u> Skill acquisition significantly predicted participation.	Employees use cognitive and behavioural strategies to negotiate constraints to participation, with behavioural strategies appearing to be more important.
What motivates employees to exercise in corporate fitness centres?	<u>Qualitative:</u> External regulation, identified regulation, and intrinsic motivation dimensions motivate participation. <u>Quantitative:</u> Identified regulation significantly predicted participation.	External regulation, identified regulation, and intrinsic motivation dimensions underpin participation, with identified regulation being the most important.

The three constraint types – intrapersonal, interpersonal, and structural - hindered employee exercise participation in corporate fitness centres. Qualitative data triangulation revealed interpersonal and structural constraints specifically hindered exercise participation, while synthesis of qualitative and quantitative data strands demonstrated the three constraint factors prevented participation in corporate fitness centres. Quantitative analysis further revealed structural as the key constraint factor. These findings demonstrate that while intrapersonal and interpersonal constraints hinder employee exercise participation, structural

constraints are the most important constraints to address. These findings demonstrate that management need to recognise and alleviate constraints – especially structural - to potentially improve employee participation levels in corporate fitness centres. This is explored further in section 8.3.1.

Employees used cognitive and behavioural strategies to negotiate their constraints to participation in corporate fitness centres. Qualitative data triangulation found three open negotiation codes that synthesised with questionnaire items. While skill acquisition independently predicted participation in the quantitative phase, it did not feature in the qualitative findings. Skill acquisition is a behavioural strategy, and thus provides confidence that employees engage in observable behavioural strategies to address their exercise needs. These findings confirm the importance of negotiation to participate in corporate fitness centres, and for management to consider how they can further facilitate constraint negotiation. These management implications are explained in section 8.3.2.

External regulation, identified regulation, and intrinsic motivation were the three motivation dimensions that contributed to employee exercise participation in corporate fitness centres. These three dimensions triangulated through the qualitative phase, and also converged with the quantitative findings, with identified regulation significantly predicting employee exercise participation. These findings demonstrate that motives ranging from a state of control to a state of autonomy underpin employee exercise participation in corporate fitness centres. This is an important finding for management, as it helps them acknowledge the different reasons that encourage exercise participation, which is discussed in section 8.3.3.

Facilitators were an emergent finding in this research. Facilitators was excluded from Table 34, considering that it was not part of the a priori core themes identified at the start of this research. Facilitators triangulated in the qualitative phase, and featured as external

conditions that further enabled employees to exercise in corporate fitness centres. This is a noteworthy finding, given that it reinforces management's role in relation to how they provide supportive environments that are conducive for exercise participation in corporate fitness centres. Management implications to facilitate participation are provided in section 8.3.4.

In sum, constraints, negotiation, motivation, and facilitators contributed to employee exercise participation in corporate fitness centres. The data triangulation protocol in the qualitative phase helped to identify the exact constraints, negotiation strategies, motivations, and facilitators relevant to employee exercise participation. The complementary quantitative phase identified the most important constraint factor, negotiation strategy, and motive. Converging the qualitative and quantitative data strands provided further confidence regarding what factors contribute to employee exercise participation, and what are statistically the most important factors. It also indicates what management should consider when offering corporate fitness centres to employees as part of reward management practices.

8.2 Contribution to Knowledge

This research adds to the limited knowledge base pertaining to employee exercise participation in corporate fitness centres. The available research on this topic provided the investigator with directions to identify and bridge knowledge gaps (refer to chapters two and three).

The focus on constraints in this research provided new knowledge contributions regarding employee exercise participation in corporate fitness centres. Previous research (e.g. Schwetschenau et al., 2008) adopted a barriers perspective to describe what prevents participation in corporate fitness centres, with a constraints perspective limited to one quantitative study that measured the constraint-negotiation process (Hubbard & Mannell, 2001). The limited constraints focus in past studies led the investigator to adopt qualitative

methods to explore and describe the lived experiences of employee's constraints to exercise participation in corporate fitness centres. This new information is particularly salient in the Australian context, as the review did not identify Australian-based, qualitative information. Additionally, this research is the first to identify structural constraints as the main constraint factor that hinders employee exercise participation in Australian corporate fitness centres. Together, these findings pertaining to constraints provide new knowledge, specifically in the Australian context, and adds to the limited knowledge base globally on constraints to participation in corporate fitness centres (Hubbard & Mannell, 2001).

This research provides new knowledge regarding how employees negotiate constraints to participate in corporate fitness centres. The review identified one study that used negotiation to assess employee participation (Hubbard & Mannell, 2001), with minimal negotiation focus in other employee wellbeing program studies (Olsen & Chaney, 2009; Person et al., 2010; Rossing & Jones, 2015). The limited knowledge on negotiation provided the investigator in this research with a means to explore how employees adopt negotiation strategies to alleviate constraints to participation. While Hubbard & Mannell's (2001) study identified time management as the main negotiation strategy, this research found both cognitive and behavioural strategies contribute to employee exercise participation. This finding is the first in the Australian context and adds to the scant knowledge base on negotiation strategies to participate in corporate fitness centre contexts.

The examination of motivation in this research contributed new knowledge regarding employee exercise participation in corporate fitness centres. The limited focus of motivation in previous studies (Huddleston et al., 2012; Hunter et al., 2017) enabled this investigator to explore and describe the lived experiences on what motivation dimensions underpin employee exercise participation. Qualitative findings revealed participation was underpinned by external regulation, identified regulation, and intrinsic motivation dimensions, with quantitative

findings demonstrating identified regulation was the most important motivation dimension. Additionally, using self-determination theory contributed new understandings on employee exercise participation, as there was minimal use of motivation-based theories in previous studies (Huddleston et al., 2012). Using self-determination theory in this research showed participation in corporate fitness centres was underpinned by controlling and autonomous motivation dimensions, which is a new contribution knowledge in this physical activity context, as previous research efforts either excluded motivational perspectives (Hunter et al., 2017) or used alternative motivational theories (Huddleston et al., 2012). Together, these findings add to the literature pertaining to motives associated with sport, exercise, and leisure-time physical activity (Weinberg & Gould, 2015), and to the limited knowledge base on motives to participate in Australian corporate fitness centres (Hunter et al., 2017).

Facilitators in this research was an inductive factor that contributed to employee exercise participation in corporate fitness centres. Facilitators did not feature as a salient theme in the review, and is a factor with minimal research attention in leisure studies (e.g. Kono, 2018; Stodolska et al., 2014). The findings in this research, however, show how external conditions instigated by management further enable employees to participate in exercise. This is a new finding, given that previous corporate fitness centre research concentrated on the *a priori* core themes: constraints (Hubbard & Mannell, 2001; Schwetschenau et al., 2008), negotiation, (Hubbard & Mannell, 2001), and motivation (Huddleston et al., 2012). This finding highlights a strength of incorporating qualitative research through the emergence of new lines of inquiry, and therefore enables researchers to further explore and consider incorporating facilitators into future research designs, which are discussed in section 8.4. These findings also align with the general physical activity literature, which incorporates socio-ecological models to guide research efforts, as the model acknowledge how higher-order levels of influence, such as policies, influence behaviour (McLeroy et al., 1988).

The constraints-negotiation-motivation-facilitators model (Figure 19), developed based on the findings of this research, presents a new way to understand what factors contribute to employee exercise participation in corporate fitness centres. This research confirmed that constraints, negotiation, and motivation are key factors that contribute to exercise participation, with this research adding an additional contributor – facilitators – based on its inductive emergence and influence on corporate fitness centre behaviours. The model also suggests the pathways through which factors influence participation, which could be further tested in future research, such as either the facilitators-motivation path or facilitators-participation path.

The constraints-negotiation-motivation-facilitators model could be transferrable to other employee wellbeing programs. Xavier (2014) proclaimed the need for future researchers to concentrate their efforts on employee wellbeing programs, as these employee benefits will have more prominence in employee fringe benefit schemes in the future. This model could provide human resource specialists and employee wellbeing service providers with a framework to comprehend employee participation in these programs, as participation is also an issue. Previous research estimates that 33% of employees participate in these wellbeing programs (Robroek, van Lenthe, van Empelen, & Burdorf, 2009), which is below the desirable percentage of 50% (Goetzel & Ozminkowski, 2008). Subsequently, the model from this research could be applied to study participation in other employee wellbeing programs.

8.2.1 Implications for other employee wellbeing programs.

This research was conducted in the context of employee wellbeing programs, more generally, with a specific focus on corporate fitness centres for two reasons. First, there is limited information explaining why employee exercise participation is low (e.g. Huddleston et al., 2012; Schwetschenau et al., 2008) and second, this research was timely, as corporate fitness centres are expected to increase in worldwide supply, given that organisations are considering more novel strategies to recruit, motivate, and retain talented employees (Pridham, 2013). The

limited information about employee exercise participation specific to corporate fitness centres provided the investigator with direction to explore relevant information from similar bodies of literature.

Literature from diverse fields, such as workplace physical activity and employee wellbeing programs, and leisure-time physical activity, informed the review in chapters two and three. This literature showed the benefit of incorporating related information to inform this research on employee exercise participation in corporate fitness centres, as constraints, negotiation, and motivation in the review were confirmed in this research. This has implications for assessing employee participation in other workplace physical activity and employee wellbeing programs.

While research continues to progress on employee participation in wellbeing programs, future research efforts might need to expand beyond familiar research perspectives and methods to further advance knowledge on these employee fringe benefits. Research continually focuses on barriers to participation in employee wellbeing programs (e.g. Nöhammer et al., 2014; Person et al., 2010; Toker et al., 2014). The findings specific to this research, however, demonstrates that these negative factors (barriers) comprise one part of employee program participation. Thus, evolving beyond single perspectives of participation and incorporating related literature fields, such as sport and leisure-time physical activity, could be considered in future research.

The constraints-negotiation-motivation-facilitators model (refer to Figure 19) from this research could provide a starting point for future research prospects, and further advance reward management practices that include corporate fitness centres in employee benefit schemes. This is particularly important, as minimal research seems to be evident on the financial effectiveness of corporate fitness centres, and thus needs further exploration (Gupta

& Shaw, 2014). Concentrating research efforts on the effectiveness of other reward management and employee benefits is timely, as these human resource management practices will be more prominent in the future as the world becomes more globalised and competing for talented employees intensifies (Nankervis et al., 2017).

8.3 Recommendations for Management

The contribution to knowledge discussed in section 8.2 provides recommendations for managing and improving employee exercise participation in corporate fitness centres. To potentially improve participation, the findings in this research must be communicated to key corporate fitness centre stakeholders, such as human resource specialists and corporate fitness centre providers. Table 37 provides a summary of management recommendations that are explained in detail in the next sections.

Table 37.
Recommendations for Management

<u>Reducing constraints</u>	
Intrapersonal	Instil organisational values that alter social norms.
Interpersonal	Awareness of program timing and avoid meetings during program delivery.
	Encourage family members into corporate fitness centres.
	Corporate fitness centre design.
Structural	Program scheduling.
	Effectively promote the corporate fitness centre.
<u>Increasing negotiation efforts</u>	
Cognitive	Act actively.
Behavioural	Act actively.
<u>Improving motivation</u>	
External regulation	Incorporate exercise programs into return-to-work programs.
	Educate instructors, employees, and managers about interpersonal support.
Identified regulation	Emphasise identified regulators into promotional materials.
Intrinsic motivation	Emphasise positive affect in promotional materials.
	Provide variable programs.
<u>Facilitating participation</u>	
Structural	Document values that promote and reinforce participation.

8.3.1 Reducing constraints.

Reducing constraints is one potential strategy to improve employee exercise participation in corporate fitness centres. Based on the findings of this research, management could concentrate most of their efforts to minimise structural constraints, as structural constraint interfere in the preference-participation relationship (Crawford et al., 1991). Specific to this research, careful corporate fitness centre design could minimise the programs at capacity constraint, considering that careful planning potentially maximises floor space for exercise and exercise equipment placement. Similarly, program scheduling that maximises program

participation by aligning program delivery with mandatory breaks, may reduce most time constraints, and therefore enable an increased number of employees to access and continually participate in exercise programs. Management could identify the mandatory breaks among different employees, and then deliver exercise programs during these times.

Moreover, corporate fitness centre management could focus their efforts to more effectively promote their corporate fitness centres. Employee awareness of the availability of the corporate fitness centre is a key principle, considering that employees encounter a consistent structural constraint, if they are unaware of the exercise opportunities (Crawford et al., 1991). Thus, communication is a fundamental recommendation to improve awareness levels that could be at the forefront of management activities. This aligns with communication relevant to encourage employee participation in employee wellbeing programs (Hill & Korolkova, 2014). A specific strategy to promote corporate fitness centres emanating from this research is to combine interpersonal support efforts from instructors, employees, and particularly from managers. Another potential promotion strategy is to either incorporate employee education sessions sporadically throughout the year or to educate new employees about the exercise opportunities during inductions sessions. This would therefore require human resource specialists to consider and incorporate education sessions into one of the potential SHRM practices, such as training or reward management (Taylor et al., 2008) (refer to Figure 1).

Management could also implement strategies to minimise interpersonal and intrapersonal constraints, as these constraint factors featured through this research. Addressing these constraint types is important, given that employees who encounter either significant intrapersonal or interpersonal constraints will not progress along the constraint hierarchy, and thus experience structural constraints (Crawford et al., 1991). Consequently, line managers are recommended to recognise exercise program schedules and avoid meetings during these

delivery times. This potentially alleviates interpersonal constraints that emanate from managers. Corporate fitness centre management could arrange intermittent education sessions throughout the year to inform and remind line managers about their role in minimising participation constraints. This practice means human resource specialists may need to incorporate education sessions into the SHRM practice of training (M. Armstrong & Taylor, 2014) (refer to Figure 1).

Family was the other interpersonal constraint, and reflected familial obligations that hindered employee exercise participation in corporate fitness centres. Similarly to managers as a constraint to participation, family members hindered employees from participating in corporate fitness centres in this research. Management could incorporate family members into corporate fitness centre programs to alleviate this constraint. This means human resource specialists may need to consider inserting a family-friendly component into total reward schemes, which is a practice recommended in other research (Rose, 2014). Another recommendation is to educate employees about eliciting social support from family members, which is an interpersonal support strategy identified to recruit and retain employees in wellbeing programs (Carnethon et al., 2009).

Managers could also incorporate strategies to minimise intrapersonal constraints. Intrapersonal constraints are potentially the strongest constraint factor, as they control the will to act (Crawford et al., 1991). Suspicion (which originates from an interpersonal-level via the feedback loop) in this research reflected internalising managers' and colleagues' negative perceptions of participation in the corporate fitness centre that made employees feel unpermitted to engage in the exercise opportunities. Management could address this constraint by implementing organisational values that alter social norms, such as access and interpersonal support. This action corresponds with the employee wellbeing literature, as organisational

culture was described as an “extension” (Berry et al., 2010, p. 5) of the organisation to promote health enhancing behaviours.

8.3.2 Increasing negotiation efforts.

Facilitating use of negotiation strategies is another implication for corporate fitness centre management to improve employee exercise participation levels. This research found employees used cognitive and behavioural strategies to actively respond to constraints to participation. Thus, management could either act passively or actively regarding negotiation. Acting passively means management allows employees to engage in their own strategies to negotiate constraints, as findings in this research show employees used priority, cooperation, and time management strategies to overcome their challenges without management interference. Previous research (Hubbard & Mannell, 2001; Loucks-Atkinson & Mannell, 2007), however, showed negotiation mediated the motivation-participation relationship, and thus encourages management to respond actively to facilitate negotiation strategies. Consequently, this research recommends management could concentrate efforts to improve motivation levels, given that highly-motivated employees are more likely to engage in more negotiation efforts to satisfy their physical activity needs (Hubbard & Mannell, 2001). The following motivation recommendations could encourage employees to exert more negotiation efforts.

8.3.3 Improving motivation.

Improving employee motivation is another strategy that could enhance exercise participation in corporate fitness centres. This research demonstrated external regulation, identified regulation, and intrinsic motivation underpinned exercise participation, with identified regulation being the most prominent. Thus, management could focus their efforts to improve motives underpinned by identified regulation. Health benefits, such as physical and mental, underpinned identified regulation in this research. Management could further explore

the specific physical and mental health benefits that employees consider valuable outcomes associated to participation, and then emphasise these benefits in promotional materials, such as email and social media systems. It could be important for management to gather employee input to therefore inform promotional materials that resonate and are personally important to employees.

Addressing external regulation could also promote employee exercise participation in corporate fitness centres. External regulation was particularly important in this research, as a one-unit increase on the external motivation sub-scale results in an employee being approximately twice as likely to use a corporate fitness centre. Rehabilitation in this research is one potential avenue to inadvertently pressure employees to participate in exercise programs to restore physical and mental health. Thus, management could liaise with medical staff to effectively incorporate exercise participation in corporate fitness centres into return-to-work policies, which is an activity that potentially fits within employee-employer relations and general SHRM practices (Dressler, 2013). Management could also work with medical professional to ensure employees do not perceive the encouragement as pressure to participate. Thus, medical professionals could use autonomy supportive language, which could be important for employee to feel more intrinsically motivated (Anshel, 2006).

Interpersonal encouragement was another external regulator in this research that reflected employees' compliance with external demand from managers, colleagues, and instructors. This could reinforce the need for educational sessions to communicate the important role of beneficial relationships that support exercise participation in corporate fitness centres and employee wellbeing programs, more generally (Mattke et al., 2013). While the findings in this research indicated external demand is one motivation dimension underpinning participation, external regulation is loosely linked with sustained participation in physical

activity (Teixeira et al., 2012). Thus, emphasising the more autonomous motivation dimensions could be prudent for continual exercise participation in corporate fitness centres.

Encouraging intrinsic motivation is a strategy that could improve continual employee exercise participation in corporate fitness centres. This research specifically identified exercise enjoyment and try new activities as motives underpinned by intrinsic motivation. Management could incorporate targeted messaging in relation to how employees experience enjoyment when they exercise in the corporate fitness centre. Connecting positive affect with exercise participation reinforces intrinsic motivation, which is the motivation dimension associated with sustained physical activity behaviours (Teixeira et al., 2012). It is also an action beyond typical promotional strategies that emphasise health benefits, such as physical and mental, in promotional materials. Thus, management could emphasise how employees develop positive affect through exercise participation in their communication systems.

Management could provide variable exercise programs to encourage employees to try new activities and improve intrinsic motivation. Try new activities could be addressed by implementing different exercise programs throughout the week, and then modifying exercise program schedules throughout the year to consistently alter exercise program delivery. This aligns with the commercial gymnasium literature, whereby gymnasium management provides clients with different, yet complementary, exercise program options (Comereski, 2013). Additionally, corporate fitness centre management could offer employees with novice, intermediate, and advanced exercise programs. The purpose is to provide an environment supportive of employees psychological needs: autonomy, competence, and relatedness (Ryan & Deci, 2000). Instructors could provide autonomy supportive communication techniques in exercise programs, which potentially assist employees' agency to engage in what they believe is self-endorsed behaviour (Burn & Niven, 2018). Competence could be addressed in these programs by having an instructor match the exercise movements with the exercise abilities of

employees that slowly progress their ability from easy to difficult programs. Last, relatedness could be addressed by either implementing exercise champions or promoting the benefits of exercise partners in these programs. The exercise champions could either develop camaraderie or feelings of cohesiveness in programs to further support relatedness needs, which is consistent with previous research involving workplace physical activity champions (Edmunds & Clow, 2015). Alternatively, management could communicate how colleagues' relational support during exercise supports continued exercise participation, which is recommended to recruit and retain employees in wellbeing programs (Carnethon et al., 2009).

8.3.4 Facilitating participation.

Facilitators is another consideration for management to potentially improve employee exercise participation in corporate fitness centres. This research revealed that the organisation in the qualitative phase implemented four external conditions that contributed to employee exercise participation: convenience, program cut-back, flexible programs, and free programs. These initiatives reflected structural facilitators known as either institutional or social belief systems of an organisation (Raymore, 2002) that encouraged preference formation or further promoted exercise participation in the corporate fitness centre. Therefore, management could create and enact values that further support participation. Management could enact the policy of interpersonal support that assists line managers to recognise exercise schedules, and thus avoid meetings during these exercise program, as discussed in section 8.3.1. Similarly, management could value convenience for all employees to access exercise programs, and thus incorporate strategies such as 24-hour access to the corporate fitness centre. These values could become embedded into organisational values, as recommended in the strategies to recruit and retain employees in wellbeing programs (Berry et al., 2010) (refer to section 2.3.3).

8.3.5 Strategic guide for management.

The findings in this research could have further impact for management if they are provided with a resource to guide in managing employee exercise participation in corporate fitness centres. Resources that guide practitioners in managing employee participation were not identified in previous studies, and is a unique feature of this research. The investigator created the following strategic guide of key considerations and steps for management to assist in improving employee exercise participation in corporate fitness centres. The steps in the strategic guide are conceptualised in Figure 20.

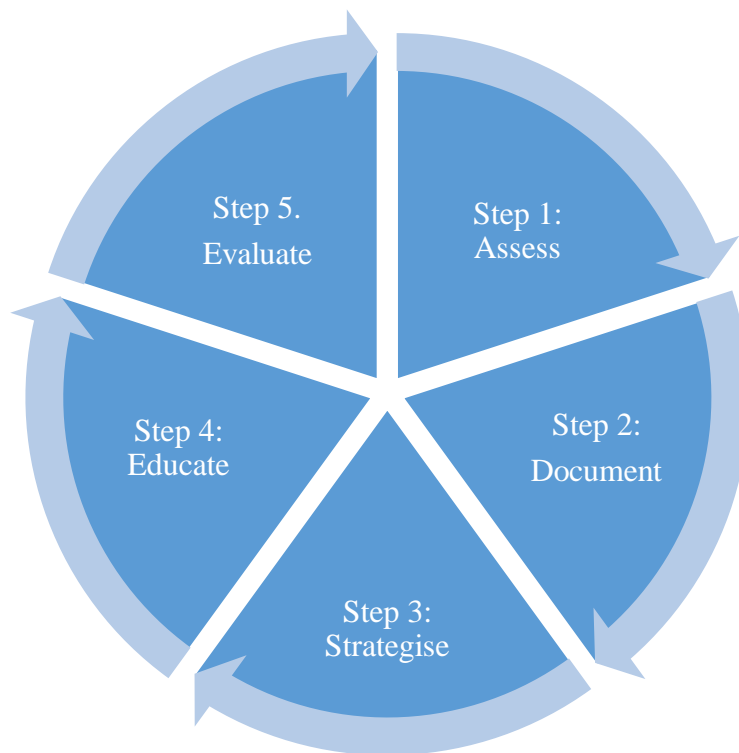


Figure 20. Conceptual model of the strategic guide for corporate fitness centre management

8.3.5.1 Step-one: Assess.

The purpose of this step is for management to recognise the key constraints and motives that contribute to employee exercise participation in the corporate fitness centre. Management establishing a corporate fitness centre should recognise that intrapersonal, interpersonal, and structural constraints will most likely hinder employee exercise participation. Management,

however, could immediately acknowledge how they physically design the corporate fitness centre, schedule programs, and promote the exercise opportunities to limit structural constraints. They could also consider how they will immediately promote health benefits of exercise in their promotional strategies to address motivation. This step could also involve conducting pre-questionnaires with employees to understand and further recognise what hinders and encourages their participation, specific to their organisation.

8.3.5.2 Step-two: Document.

The purpose of this step is for management to document the information they gathered from the pre-questionnaires in step-one. Management could create a handbook that includes specific constraints and motives to participation, and how each factor develops in the lived experience of employees. The handbook thus becomes a reference point for corporate fitness centre management, and for line managers to explore and learn about employee participation in corporate fitness centres. This step also involves management developing values that act as social belief systems that either promote employee motivation or further enhance participation, such as the values of convenience and free programs identified in this research. This particular action aligns with the supportive policies strategy identified to recruit and retain employees in wellbeing programs (Goetzel et al., 2014) (refer to section 2.3.3) that subsequently become enacted in step-three.

8.3.5.3 Step-three: Strategise.

The purpose of this step is for management to synthesise the documented information, and thus involves considering the constraints, motivations, and facilitators that contribute to employee exercise participation. Management could focus their energies to minimise the key structural constraints identified in step-one (design, schedule, and promotion). Alternatively management could strategies how to manage salient constraints identified through their own research. Similarly, management may decide to concentrate their efforts to promote physical

and mental health benefits provided in step-one. However, management might consider alternative strategies to improve motivation identified through their research.

Moreover, management should streamline the identified facilitators with participation. Specifically, the value of convenience could be streamlined with swipe-card access to the corporate fitness centre on a 24-hour basis. This action corresponds with the accessible physical environments strategy in relation to recruiting and retaining employees in wellbeing programs, given that accessible environments further minimise constraints to participation (Berry et al., 2010).

8.3.5.4 Step-four: Educate.

The purpose of this step is to educate department and line management about what contributes to employee exercise participation in corporate fitness centres. Either publishing the handbook from step-two as an online resource, creating ‘Facilitating employee participation in our fitness centre’ as a standing agenda item for meetings whereby topics are addressed, or conducting formal information sessions are potential methods to address education. The education step enables management to holistically recognise employee exercise participation in corporate fitness centres, considering that the handbook and discussing exercise participation with employees provides management with the internal perspective of participation. Providing managers with the internal perspective is important according to this research, as line managers are generally unfamiliar with the factors that contribute to employee exercise participation in corporate fitness centres. These education methods potentially assist line managers to recognise exercise participation from the employee perspective, and to therefore implement effective strategies that complement participation.

8.3.5.5 Step-five: Evaluate.

The purpose of this step is for management to evaluate employee participation in the corporate fitness centre, with this evaluation potentially conducted on a yearly basis. This post-evaluation process could involve questionnaires to identify changes from the pre-assessment data collected in step-one. These actions are similar to the evaluation strategy identified in relation to recruiting and retaining employees in wellbeing programs, considering that evaluation involves assessing and addressing program weaknesses (Mattke et al., 2013; Zula, 2014). This step is also similar to step-one. Step-one and step-five therefore blend together and continue the cycle to consistently address and potentially enhance employee exercise participation in corporate fitness centres.

8.4 Key Limitations and Future Research.

The delimitations discussed in chapter one had a specific influence on the conduct of this research and the data that was collected. Delimitations, such as using a single case in the qualitative phase and employing logistic regression analyses in the quantitative phase, enabled the investigator to proceed with the research and obtain pragmatic conclusions within the budget and timeframe of this Ph.D. While these delimitations provided a framework to proceed with the research, limitations emerged that are worthy of discussion.

The qualitative phase used a single Australian organisation and a limited number of employees to explore what contributed to employee exercise participation in corporate fitness centres. The information provided descriptive data about how employees experienced constraints, used negotiation strategies, and developed motives that contributed to their exercise participation. The descriptive data, however, is limited to the research participants and is context bound (Punch, 2005). Therefore, future research could employ a multiple case study design to identify constraints, negotiation strategies, motives, and facilitators based on findings

specific to this research, across multiple sites and with diverse research participants to enhance transferability of these findings to other corporate fitness centres (Yin, 2014).

The quantitative phase recruited a convenience sample of employees who responded to the questionnaire. The responses provided the first Australian-based data on the key constraint, negotiation strategy, and motivation dimension that contributed to employee exercise participation in corporate fitness centres. The purpose of the quantitative phase was to predict participation and then converge the statistics with the qualitative data. Generalisability was not an aim of this research, and therefore generalisability of these quantitative results are unlikely, given the sample does not represent a specific population (Bryman, 2012). Future research could employ either random or probability sampling protocols to inform inferences from the sample to a population (Bryman, 2012).

Most questionnaire respondents were corporate fitness centre participants, and thus contributed another sampling limitation. The questionnaire responses represented employees who were potentially physically active, and therefore may not entirely reflect the perspectives of employees considered to be non-participants of corporate fitness centres. Other physical activity research has encountered similar limitations, as self-selection bias is typical in studies that rely on voluntary participation, which is challenging to avoid (Thomas, Nelson, & Silverman, 2011). More meaningful information to develop strategies to enhance employee exercise participation could derive from employees considered as non-participants, given that they conceptually experience constraints at an intensity greater than their motivation to participate (Crawford et al., 1991). Therefore, future researchers might consider focusing their efforts on employees who do not use corporate fitness centres, which is similar to past research that concentrated on non-attendees in sporting contexts (K. Mayer et al., 2017).

Three items informed each motivation dimension in the quantitative phase. Most of the motivation dimensions (i.e. external regulation, identified regulation, and intrinsic motivation) demonstrated acceptable consistency levels (Tabachnick & Fidell, 2013). Relying on three items for each motivation dimension, however, could have limited the convergence between the quantitative and qualitative data. Future researchers could use the qualitative findings in this research to add new items to future iterations of corporate fitness centre questionnaires. This potentially increases the convergence between qualitative and quantitative data in future research prospects.

The reliability of measures was a research limitation. Some sub-scales, such as introjected regulation, had low reliability, which suggests that scores and scale items were either heterogeneous or may have been measuring more than one latent variable (Tavakol & Dennick, 2011). The limitation reinforces the need to develop reliable measurement tools to effectively assess what contributes to employee exercise participation in corporate fitness centres.

Another limitation was that this research is an Australian-based study. The research sheds lights on the factors that contribute to corporate fitness centre participation, and potential strategies to recruit and retain employees. The Australian corporate fitness centre market, however, is significantly smaller compared to the United States and Canada (Pridham, 2013), with some cultural differences (G. Wood, 2000), meaning interpretation of findings should be expressed with caution, as strategies might not be transferable from Australia to North America. Future research could employ cross-cultural research designs to improve the sophistication of the knowledge base on exercise participation in corporate fitness centres, and likely enhances the effectiveness of strategies to improve employee participation (Heppner, 2006).

The definition of corporate fitness centre is another research limitation. An official definition of corporate fitness centre could not be found in the literature review, and therefore encouraged the investigator to adapt a definition from the fitness centre management literature (Tharrett & Peterson, 2008). Standardising the definition among researchers and practitioners could be the focus of future research.

8.5 Final Conclusion.

The start of this research began with the problem of employee exercise participation in corporate fitness centres. There was limited global and Australian-based evidence to explain why employee exercise participation was so low. The problem and knowledge gap identified a strong rationale for this research.

This research contributes to the body of knowledge pertaining to employee exercise participation in corporate fitness centres in several ways. It adds methodological, conceptual, and practical information. The mixed methods approach enabled the investigator to explore what factors contribute to employee exercise participation in corporate fitness centres. The design facilitated collecting different data strands and synthesising these data to more comprehensively examine employee exercise participation. This research showed a mixed methods approach can be effectively adopted to study what factors contribute to corporate fitness centre participation, and thus inform management strategies that could enhance employee exercise participation levels.

This research described and further confirmed the applicability of constraints, negotiation, and motivation pertaining to employee exercise participation in corporate fitness centres. Constraints theory was successfully applied to the study of employee exercise participation in corporate fitness centres, for the first time in Australia. The findings showed intrapersonal, interpersonal, and structural constraint factors hindered participation. Thus, this

study confirmed the negative influence these constraint factors have on participation, with structural constraints being the most prominent. This has implications for management, and recommends to focus efforts of minimising structural constraints.

Similarly, negotiation theory was applied in this research for the first time in the Australian corporate fitness centre context, with findings confirming that employees actively respond to constraints to exercise participation. Negotiation theory demonstrated employees use cognitive strategies such as priority to alleviate the psychological dissonance constraints has on participation. A second negotiation strategy involves observable behaviours, such as cooperation and time management, to mitigate their own challenges to satisfy their exercise need. This is new knowledge specific to employee exercise participation in Australian corporate fitness centres, and recommends management improves motivation, as highly motivated employees likely engage in more efforts to negotiate constraints (Hubbard & Mannell, 2001).

Self-determination theory was also successfully applied for the first time in the corporate fitness centre context. The target population was employees, rather than general population engaging in leisure-time physical activity or athletes in sporting contexts. This research demonstrated that a range of motivation dimensions underpinned employee exercise participation in corporate fitness centres. The most prominent motivation dimension was identified regulation, and suggests that employees place importance on the outcomes of exercise in corporate fitness centres. Management could emphasise these outcomes in promotional materials.

The practical management strategies suggested in this chapter is a specific contribution to knowledge. The strategic guide provides managers with a user-friendly guide of steps and considerations in managing employee exercise participation in corporate fitness centres. The

strategic guide is the first resource specific to corporate fitness centre management, and includes five steps: assess, document, strategise, educate, and evaluate. This guide provides management with a starting point to synthesise information pertaining to employee exercise participation, understand their target audience, and devise strategies to recruit and retain participation in their corporate fitness centre.

This research contributed valuable knowledge regarding management strategies to potentially enhance employee exercise participation in corporate fitness centres, particularly during a period when global provision is increasing (Pridham, 2013). The expansion of understanding what factors contribute to employee exercise participation could continue to be a focus for future research, considering that the global knowledge base remains shallow - especially in Australia (Hunter et al., 2017).

A mixed methods approach was applied to study exercise participation among employees in an under-research physical activity context. This included qualitative and quantitative phases that facilitated the synthesis of employee exercise participation in corporate fitness centres, to be explored from different points of view and with multiple data strands. The mixed methods approach produced new findings that contributed methodological, conceptual, and practical knowledge, particularly pertaining to employee exercise participation and management strategies to enhance the participation level in corporate fitness centres. It is hoped these findings lead to more research opportunities that further extend the understanding of participation; more effectively inform strategies that improve employee exercise participation; and contribute generally to employee benefit, reward management, and SHRM practices.

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APPENDIX A: Victoria University ethics approval for document review and semi-structured interviews

The screenshot displays the Victoria University QUEST RME 5.18.0 web application. The browser address bar shows the URL <https://quest.vu.edu.au/RMENet/QME/QME001A.aspx>. The page header includes the Victoria University logo and the QUEST logo with the tagline "FOR EXCELLENCE IN RESEARCH AND INNOVATION". The user is logged in as "s3787005 MR James Brandner" with a "Logout" button.

The main navigation bar includes links for "Home", "Ethics", "HDR", and "Help". The current page title is "HRE15-059 : 'Exploring Barriers and Enablers to Workplace Fitness Facility Engagement: A Single Site Case Study'". Below the title, the application status is "Finalised - Approved" and the process stage is "Review complete: Application Approved". The form version is "v.13-07 Human Resea".

The left sidebar contains a table of contents with sections: Introduction, SECTION 1 - PROJECT OVERVIEW, SECTION 2 - PROJECT INVESTIGATORS, SECTION 3 - NATURE OF THE PROJECT, SECTION 4 - PROJECT DESCRIPTION, SECTION 5 - PARTICIPANTS, SECTION 6 - RECRUITMENT OF PARTICIPANTS, SECTION 7 - RISKS ASSOCIATED WITH THE RESEARCH, and SECTION 8 - DATA PROTECTION AND ACCESS.

The main content area is titled "Important Information" and includes the following text:

IMPORTANT INFORMATION FOR ALL APPLICANTS:

- Applicants are advised to follow the guidelines provided on the [Human Research Ethics website](#) prior to submitting this application.
- Ensure all questions are appropriately answered in plain language with correct spelling and grammar.
- All applications must be sighted and approved by all members of the research team and any relevant parties. Applications will not be reviewed without appropriate authorisation.
- To avoid unnecessary delays, please ensure application is submitted in full by the submission deadline for the relevant HREC.

You are reminded that your project may not commence without formal written approval from the appropriate Human Research Ethics Committee.

Contact:

Ethics Secretary
For help and further information regarding ethical conduct, refer to the Human Research Ethics website: <http://research.vu.edu.au/hrec.php> or contact the Secretary for the Human Research Ethics Committee, Office for Research.
Phone: 9919 4781 or 9919 4461
Email: researchethics@vu.edu.au

Quest Service Desk
For technical help, refer to the Quest website: <http://research.vu.edu.au/quest.php> or contact a member of the Quest team.
Phone: 9919 4278
Email: quest.servicedesk@vu.edu.au

External Resources

The bottom of the screen shows the Windows taskbar with various application icons and the system clock displaying 11:09 AM on 3/05/2018.

APPENDIX B: Semi-structured interview schedule**Topics**

Please describe your role here at The Firm.

What is your specific involvement with the corporate fitness centre?

Please explain the reason why the corporate fitness centre was established.

- What was involved to set it up?
- What is involved to management it on a day-to-day basis?
- Where does the corporate fitness centre fit within HR strategy?

What are the factors that hinder employees from using the corporate fitness centre?

- What kind of feelings hinder participation? (*Intrapersonal a priori code*)
- How do relationships hinder participation? (*Interpersonal a priori code*)
- What else hinders participation? (*Structural a priori code*)
- How does management reduce these factors?

What does The Firm do to encourage participation in the corporate fitness centre?

- How do you try to control participation? (*External regulation a priori code*)
- How do you try to guilt employees to participate in the centre? (*Introjected regulation a priori code*)
- How do you emphasise the benefits of participating in the corporate fitness centre? (*Identified regulation a priori code*)
- How do you get employees to link their personal identity with participation in the centre? (*Integrated regulation a priori code*)
- How do you encourage employees to value the physical activity participation in the corporate fitness centre? (*Intrinsic motivation a priori code*)
- What else do you to encourage participation in the centre?

What are your impressions of the corporate fitness centre?

**APPENDIX C: Semi-structured interviews information to participants involved in
research form**

INFORMATION TO PARTICIPANTS INVOLVED IN RESEARCH



You are invited to participate

You are invited to participate in a research project entitled "Exploring Constraints to, and Motivations for, Corporate Fitness Centre Participation".

This project is being conducted by a student researcher, James Brandner, as part of a PhD study at Victoria University under the principal supervision of Dr. John Tower from the College of Sport and Exercise Science.

Project explanation

The aim of this project is to understand the drivers and barriers for employees to participate in corporate fitness centre (CFC) activities. The results of the project will assist CFC managers to develop strategies that improve participation levels.

What will I be asked to do?

You will be invited to participate in an interview with a student researcher. The aim of the interview is to discuss why corporate fitness centres are in the workplace; and how management facilitates employee participation.

What will I gain from participating?

Your participation in this study is important because you will provide new insights. Currently, there is limited information that discusses why corporate fitness centres are in workplaces. Your insights on this matter will provide valuable information.

Limited information also exists regarding the management of corporate fitness centres. That is, there is incomplete information on the ways management can enhance employee participation levels. Your participation in this study will contribute information that will assist managers to enhance their policies, programs and potentially capabilities, involved in corporate fitness centre management.

How will the information I give be used?

The information that you provide will be:

1. Transcribed and key themes will be combined with the results from other interview transcripts
2. These themes will form the questions for a national survey to quantify findings
3. The findings of key themes will be presented at conferences, to CFC managers and presented in a thesis dissertation and in journal articles

What are the potential risks of participating in this project?

The risks associated with your participation in this study are low. The interview transcripts will be viewed by the student researcher and his supervisors only. Your confidentiality will be maintained through the use of a pseudonym. Interviews will be conducted at a time and place suitable to you e.g., meeting room at your workplace.

How will this project be conducted?

This project will use one corporate fitness centre to address the issue of corporate fitness centre participation. The study will consist of four phases.

Phase 1 involves an analysis of organisational documents. The aim of this study is to provide background information for phase two.

Phase 2 involves interviews with key informants. Key informants include Senior Managers and employees involved with the promotion and decision-making of the corporate fitness centre. The aim of this study is to discuss the reasons for and the management of corporate fitness centres. The findings of this study will develop phase three of the research.

Phase 3 involves focus groups with a small sample of the employee population. The aim of this study is to understand how employees experience constraints and motivation for corporate fitness centre participation. The findings of this study will develop phase four of the research.

Phase 4 involves a questionnaire that will be distributed nationally. The aim of this study is to quantify the findings in phase three and to provide a quantitative explanation to the data.

Who is conducting the study?

Student Researcher

James Brandner

0452 277 669

James.Brandner@live.vu.edu.au

Chief Investigator

Dr. John Tower

9919 4741

John.Tower@vu.edu.au

Conflict of Interest Statement

The student researcher declares that there is a conflict of interest related to this research. The student researcher is currently employed by the fitness organisation that manages the personal training service. The student researcher has no contact with the corporate fitness centre or any of its users. It is reinforced that information gathered is for research purposes only and that confidentiality of participants is of utmost importance.

Any queries about your participation in this project may be directed to the Chief Investigator listed above.

If you have any queries or complaints about the way you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001, email researchethics@vu.edu.au or phone (03) 9919 4781 or 4461.

APPENDIX D: Semi-Structured Interview Consent Form

CONSENT FORM FOR PARTICIPANTS INVOLVED IN RESEARCH

**INFORMATION TO PARTICIPANTS:**

We would like to invite you to be part of a study entitled "Exploring Constraints to, and Motivations for, Corporate Fitness Centre (CFC) Participation".

The aim of this project is to develop management strategies for CFCs. The findings of this research will be used by CFC managers at national and international locations to enhance CFC participation levels.

There are minimal risks associated in the collection of data. There is a chance that the insights you provide can be traced back to you in the write-up and publication of results. To ensure that the information you provide remains anonymous, a pseudonym will be used.

CERTIFICATION BY SUBJECT

I, *[insert your name here]* _____ of *[insert the suburb/town in which you live]* _____ certify that I am at least 18* years old and that I am voluntarily giving my consent to participate in the study:*[insert the name of the study]* being conducted at Victoria University by Dr John Tower.

I certify that the objectives of the study, together with any risks and safeguards associated with the procedures listed hereunder to be carried out in the research, have been fully explained to me by James Brandner and that I freely consent to participation involving the below mentioned procedures:

- Interview about the management of CFCs

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this study at any time and that this withdrawal will not jeopardise me in any way.

I have been informed that the information I provide will be kept confidential.

Signed:

Date:

Any queries about your participation in this project may be directed to the researchers:

Student Researcher

Mr. James Brandner

0452 277 669

James.Brandner@live.vu.edu.au

Chief Investigator

Dr. John Tower

9919 4741

John.Tower@vu.edu.au

If you have any queries or complaints about the way you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001, email Researchethics@vu.edu.au or phone (03) 9919 4781 or 4461.

[*please note: Where the participant/s are aged under 18, separate parental consent is required; where the participant/s are unable to answer for themselves due to mental illness or disability, parental or guardian consent may be required.]

APPENDIX E: Focus group schedule

Topics



What are your thoughts on exercise?

Exercise definition: “Planned, structured, and repetitive” physical activity to improve physical fitness (Lyons et al., 2016).

Describe what encourages you to use the corporate fitness centre.

- What do you think control your participation in the centre? (*External regulation a priori code*)
- Tell me about times how guilty feelings encouraged you use the centre (*Introjected regulation a priori code*)
- What key benefits do you get from participating in the centre? (*Identified regulation a priori code*)
- What are your thoughts on your identity encouraging you to participate in the centre? (*Integrated regulation a priori code*)
- How to the physical activities specifically encourage you to use the centre? (*Intrinsic motivation a priori code*)

What prevents you from using the corporate fitness centre?

- Describe the feelings that prevent you from participating in the centre. (*Intrapersonal a priori code*)
- How do you relationships stop you from participating in the centre? (*Interpersonal a priori code*)
- How does the workplace environment prevent your participation in the centre? (*Structural a priori code*)

Explain how you overcome challenges to participate in corporate fitness centre.

- What is your thought process to overcome barriers to participation? (*Cognitive a priori code*)
- What behaviours do you have to do to overcome barriers to participation in the centre? (*Behavioural a priori code*)

What additional points would you like to discuss to assist my understanding of what influences your participation in the corporate fitness centre?

APPENDIX F: Focus group information pack**Invitation email**

Dear employee,

I would like to invite you to participate in a focus group discussion about your use of the corporate fitness centre at The Firm. This focus group is part of my Victoria University PhD research about the management of corporate fitness centres. Your participation will help to develop strategies that enhance participation levels, which will contribute to improvements in employee physical, emotional and psychological health.

I plan to conduct at least two focus groups with four to eight employees in each. The discussion will explore what encourages and what prevents your participation in corporate fitness centre activities; and how you deal with the challenges that might prevent your participation.

Sessions will be conducted on-site in a quiet meeting room. I would like to highlight that your identity will be anonymous in documents that arise from each session. To respect the opinions of others, I would like to emphasise that all discussions will be kept confidential among the employees of each session.

Please contact me if you need any additional information.

I look forward to your response within the next week.

Regards,

James Brandner

PhD Candidate

College of Sport and Exercise Science

Institute of Sport, Exercise and Active Living

Victoria University

Email: James.Brandner@live.vu.edu.au

Mob: 0452 277 669

Information to participants involved in research form

INFORMATION TO PARTICIPANTS INVOLVED IN RESEARCH

**You are invited to participate**

You are invited to participate in a research project entitled "Exploring Constraints to, and Motivations for, Corporate Fitness Centre Participation".

This project is being conducted by a student researcher, James Brandner, as part of a PhD study at Victoria University under the principal supervision of Dr. John Tower from the College of Sport and Exercise Science.

Project explanation

The aim of the project is to understand and describe what stops and what encourages employees to participate in corporate fitness centre (CFC) activities. The result of this project will assist CFC managers to develop strategies to improve participation levels.

What will I be asked to do?

You will be invited to participate in a focus group with at least 3 other employees, which will be managed by the student researcher. The aim of the focus group is to discuss your experiences of CFC participation.

You will be asked to participate in a focus group on-site and the focus group is expected to last no longer than 60 minutes. The researcher will receive your consent in writing prior to the commencement of the focus group.

What will I gain from participating?

Your participation in this study is important, because you will provide new insights. Currently, there is limited information about CFC participation. Your insights on this matter will provide valuable information that will help to develop management strategies for CFCs. The management strategies will be used to improve participation levels at national and international locations.

How will the information I give be used?

The information that you provide will be:

1. Transcribed and key themes will be combined with the results from other focus groups,
2. Themes from focus groups will form the questions for a national survey to quantify findings,
3. The findings of key themes will be presented at conferences, to CFC managers, and will be in written up as part of a thesis/dissertation and in journal articles.

What are the potential risks of participating in this project?

The risks associated with your participation in this study are low. First, your experiences will not be confidential, because focus groups involve discussions between employees. To mitigate this risk, the word 'male' or 'female' will be assigned to your responses should they be presented in the public domain. Second, you might experience some mental distress, because the focus group questions deal with your personal experiences. To mitigate this risk, the researcher will provide you with the main focus group questions so that you have time to consider your answers, should you choose to participate. In an extreme case, the contact details of a counsellor will be provided to you should you experience significant mental distress. Additionally, you will have the choice to withdraw your participation at any time without penalty.

Counsellor

Dr. Grant O'Sullivan

9919 4267

Grant.OSullivan@vu.edu.au

Victoria University

How will this project be conducted?

This project will use one CFC to explore the issue of participation. The research will consist of 4 studies. Studies 1 and 2 have been completed. This invitation is for Study 3 only.

Study 1 involved a review of organisational documents. The aim of the study was to gain background information of the CFC.

Study 2 involved interviews with key informants. Key informants included managers and employees involved with the promotion and decision-making of the CFC. The aim of the study was to discuss the management of the CFC.

Study 3 will involve focus groups with a small sample of employees. The aim of the study is to discuss the different experiences of CFC participation.

Study 4 will involve the national distribution of a questionnaire. The aim of the study is to measure the findings from study 3.

Who is conducting the study?

Student Researcher

James Brandner

0452 277 669

James.Brandner@live.vu.edu.au

Chief Investigator

Dr. John Tower

9919 4741

John.Tower@vu.edu.au

Conflict of Interest Statement

The student researcher declares that there is a conflict of interest related to this research. The student researcher is currently employed by the fitness organisation that manages the fitness service. The student researcher has no contact with the CFC or any of its users beyond this research. It is reinforced that information gathered is for research purposes only and that confidentiality of participants is of utmost importance.

Any queries about your participation in this project may be directed to the Chief Investigator listed above.

If you have any queries or complaints about the way you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001, email researchethics@vu.edu.au or phone (03) 9919 4781 or 4461.

Consent form



CONSENT FORM FOR PARTICIPANTS INVOLVED IN RESEARCH

INFORMATION TO PARTICIPANTS:

We would like to invite you to be part of a study entitled "Exploring Constraints to, and Motivations for, Corporate Fitness Centre (CFC) Participation".

The aim of this project is to develop management strategies for CFCs. The findings of this research will be used by CFC managers at national and international locations to enhance CFC participation levels.

There are two risks associated to your participation in this research. First, focus groups are not confidential, because it is the very nature of a focus group to discuss a topic of relevance. To mitigate this risk and to safeguard your identity, the word 'male' or 'female' will be assigned to your insights to minimise the traceability when the results are presented in the public domain. Second, the questions in the focus group might develop mental distress, because the questions are about your personal experiences. To mitigate this risk, the main focus group questions will be presented to you before the focus group. This will ensure that you have time to consider your responses, should you decide to participate. Should any psychological distress develop, the contact details of a counsellor will be provided to you. Additionally, you will have the choice to withdraw your participation at any time without penalty.

CERTIFICATION BY SUBJECT

I, *[insert your name here]* _____ of *[insert the suburb/town in which you live]* _____ certify that I am at least 18 years old and that I am voluntarily giving my consent to participate in the study: *[insert the name of the study]* _____

_____ being conducted at Victoria University by Dr. John Tower.

I certify that the objective of the study, together with any safeguards associated with the procedures listed hereunder to be carried out in the research, have been fully explained to be my James Brandner and that I freely consent to participation involving the below mentioned procedures:

- Focus group about the experiences of constraints, negotiation, and motivation pertaining to CFC participation.

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this study at any time and that this withdrawal will not jeopardise me in any way.

Signed:

Date:

Any queries about your participation in this project may be directed to the researchers:

Student Researcher

Mr. James Brandner

0452 277 669

James.Brandner@live.vu.edu.au

Chief Investigator

Dr. John Tower

9919 4741

John.Tower@vu.edu.au

If you have any queries or complaints about the way you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001, email Researchethics@vu.edu.au or phone (03) 9919 4781 or 4461.

APPENDIX G: Leisure Constraints Scale

The following are reasons that people often give for their level of involvement or lack of involvement in fitness and recreation programs at work. Please read each of these reasons and on the 5-point scales provided, circle the number which best represents the extent to which each statements is true for you.

	Strongly Disagree			Strongly Agree	
I am too shy to start an activity (INTRA)	1	2	3	4	5
I have friends and/or acquaintances with whom to participate (INTER)	1	2	3	4	5
The people I know work too far away to start an activity with me (INTER)	1	2	3	4	5
I feel comfortable participating in activities with members of the opposite sex (INTRA)	1	2	3	4	5
I don't feel permitted to do activities during the work day (INTRA)	1	2	3	4	5
I would do an activity if the facilities I need are not crowded (STRUCT)	1	2	3	4	5
I don't feel comfortable participating in activities with my subordinates (INTRA)	1	2	3	4	5
The people I know usually don't have time to start an activity with me (INTER)	1	2	3	4	5
I don't feel comfortable changing clothes in front of co-workers (INTRA)	1	2	3	4	5
I wouldn't do an activity if I have other commitments (STRUCT)	1	2	3	4	5
I would start an activity that my family thinks is alright (INTRA)	1	2	3	4	5
I don't have the right clothes or equipment required to participate (STRUCT)	1	2	3	4	5
The people I know usually have enough money to begin an activity with me (INTER)	1	2	3	4	5
I wouldn't do an activity that makes me feel uncomfortable (INTRA)	1	2	3	4	5
I wouldn't do an activity if the facilities I need aren't convenient (STRUCT)	1	2	3	4	5
I would do an activity that my friends thought was alright (INTRA)	1	2	3	4	5
The people I know usually have too many family obligations to start an activity with me (INTER)	1	2	3	4	5
I would do the activity if I know what is available (STRUCT)	1	2	3	4	5

I would do an activity that doesn't make me feel self-conscious (INTRA)	1	2	3	4	5
(STRUCT)	1	2	3	4	5
The people I know usually don't have enough skills to start an activity with me (INTER)	1	2	3	4	5
I would do an activity if I have money for clothes, equipment, and fees (STRUCT)	1	2	3	4	5
I feel comfortable participating in activities with people older or younger than me (INTRA)	1	2	3	4	5
The people with whom I would participate are on a different work schedule from me (INTER)	1	2	3	4	5
I am not in good enough shape to participate (INTRA)	1	2	3	4	5
I wouldn't do an activity that is not in keeping with my religious beliefs (INTRA)	1	2	3	4	5
I wouldn't do an activity if I don't have time (STRUCT)	1	2	3	4	5
I would do an activity that doesn't require a lot of skill (INTRA)	1	2	3	4	5
I am too busy with physical activities outside of work (STRUCT)	1	2	3	4	5
I feel uncomfortable participating in activities with my superiors (INTRA)	1	2	3	4	5
I have a disability that prevents me from participating (STRUCT)	1	2	3	4	5
I don't have the energy to participate (INTRA)	1	2	3	4	5

APPENDIX H: Leisure Constraint Negotiation Scale

The following are some of the things people have told us they do to get around the obstacles that they face in starting, continuing, or increasing their involvement in fitness and recreation programs at work. Please read each of these statements and on the scales provided circle the number that best represents how frequently you have done or are doing the following things to try to start, continue, or increase your participation in fitness and recreation programs at work.

	Never			Very often	
When at work, I work hard so that I can have more fitness and recreation time (TM1)	1	2	3	4	5
I try to learn new activities (SA1)	1	2	3	4	5
I try to find people to do fitness and recreation activities with (IC1)	1	2	3	4	5
I try to be organized (TM2)	1	2	3	4	5
I borrow equipment and/or clothes (FS1)	1	2	3	4	5
I use a babysitter sometimes to make free time (TM3)	1	2	3	4	5
I try to budget my money (FS2)	1	2	3	4	5
I arrange rides with friends (IC2)	1	2	3	4	5
I try to plan ahead for things (TM4)	1	2	3	4	5
I try to improve my skills (SA2)	1	2	3	4	5
I ask my family to share in the daily chores (TM5)	1	2	3	4	5
I set aside time for fitness and recreation activity (TM6)	1	2	3	4	5
I save up money to do fitness and recreation activities (FS3)	1	2	3	4	5
I have just learned to live within my means (FS4)	1	2	3	4	5
I do more fitness and recreation activities close to home (FS5)	1	2	3	4	5
I have learned to participate despite an injury or physical/health condition (SA3)	1	2	3	4	5
I prioritize what I want to do, and make fitness and recreation a priority (TM7)	1	2	3	4	5
I take lessons (SA4)	1	2	3	4	5
I take turns with my spouse taking care of the kids (TM8)	1	2	3	4	5
I just try to work my fitness and recreation in around my other commitments (TM9)	1	2	3	4	5
I am trying to get a better job (FS6)	1	2	3	4	5
I just swallow my pride and try my best (SA5)	1	2	3	4	5
I get up earlier or stay up later to make fitness and recreation time (TM10)	1	2	3	4	5
I ask for help with the required skills (SA6)	1	2	3	4	5
I try to teach my kids to be more responsible and help with things (TM11)	1	2	3	4	5
I participate in activities with people in my age group (IC3)	1	2	3	4	5
Sometimes, if I need some recreation time, I just drop what I am doing and take it (TM12)	1	2	3	4	5
I sometimes substitute another more convenient activity for a preferred one (TM13)	1	2	3	4	5

I obtain treatment for injury or health condition (SA7)	1	2	3	4	5
I improvise with the equipment and/or clothes I have (FS7)	1	2	3	4	5
I cut short the activity session time (TM14)	1	2	3	4	5
I try to meet people with similar interests (IC4)	1	2	3	4	5
I participate in activities with people of the same gender (IC5)	1	2	3	4	5
I try to participate in off-peak times when facilities are less busy (TM15)	1	2	3	4	5
I practice the required skills on my own (SA8)	1	2	3	4	5

APPENDIX I: Self-Regulation Exercise Questionnaire

There are a variety of reasons why people work out. Please indicate how true each of these reason is why you work out: The scale is:

Not true at all

Very true

1 2 3 4 5 6 7

Why do you work out at the Corporate fitness centre?

1. Because I simply enjoy working out.
 2. Because working out is important and beneficial for my health and lifestyle.
 3. Because I would feel bad about myself if I didn't do it.
 4. Because it is fun and interesting.
 5. Because others like me better when I am in shape.
 6. Because I'd be afraid of falling too far out of shape.
 7. Because it helps my image.
 8. Because it is personally important to me to work out.
 9. Because I feel pressured to work out.
 10. Because I have a strong value for being active and healthy.
 11. For the pleasure of discovering and mastering new training techniques.
 12. Because I want others to see me as physically fit.
-

APPENDIX J: Questionnaire information pack**Invitation email**

Hi employee,

You are invited to participate in a questionnaire to enhance the management of corporate fitness centres (CFC) for the benefit of employee health and productivity. The CFC at your workplace indicates that your health and productivity are valued by managers.

Your input will assist human resource and corporate fitness managers to develop strategies that enhance employee's participation levels, which will/should lead to improved levels of employee health and productivity.

The questionnaire will take approximately 15 minutes to complete. Your responses will be:

1. Anonymous and combined with responses of other employees throughout Australia.
2. Analysed and identify key reasons that encourage and hinder participation.
3. Interpreted to develop management strategies.

Risks to you and your organisation are low. Your identity and responses will not be traceable to your organisation. You can withdraw your participation at any time during the questionnaire without implications.

Please use the link to be directed to the questionnaire: XXXXX

Please consult the *Information to Participants Involved in Research* form for additional information. I am available through phone or email at any time if you have questions.

Thank you for participating in the questionnaire.

Regards,

James Brandner

James Brandner

PhD Candidate, Institute of Sport, Exercise and Active Living, Victoria University

M: 0452 277 669

Email: James.Brandner@live.vu.edu.au

Reminder email

Hi employee,

The questionnaire about enhancing the management of corporate fitness centres (CFC) is still open. Thank you to those that have completed this questionnaire.

Employees that have not completed the questionnaire are encouraged to use the link to access it: XXXXX

Your responses are highly valued to help enhance the management of CFC, which will improve employee health and well-being; and therefore, the organisational capacities of Australian businesses.

The questionnaire takes 15 minutes to complete. Your responses are anonymous and cannot be traced back to you or your organisation. You can withdraw your participation at any time.

Please contact me if you have questions.

Thank you for participating.

Regards,

James Brandner

James Brandner

PhD Candidate, Institute of Sport, Exercise and Active Living, Victoria University

M: 0452 277 669

Email: James.Brandner@live.vu.edu.au

APPENDIX K: Email template for organisations without a contact number

Hi (*insert organisation name here*),

I am a final year PhD student, studying how employee well-being influences organisational capacities. The current research develops strategies for enhancing participation in onsite gyms, thus, addressing the well-being matter.

I understand (*insert organisation name here*) provides onsite gyms to employees, which is why I am sending his inquiry.

I conducted a case study, identifying the encouraging and hindering factors to onsite gym participation. The results developed an online voluntary questionnaire for employees (approved by the Victoria University Human Research Ethics Committee).

Currently, I am contacting Australian organisations, sharing and inviting them into the research, to gain enough meaningful data which impacts onsite gym management, employee well-being, and organisational capacities.

I understand (*insert organisation name here*) has a busy schedule, but I am interested in developing a dialogue to explore how (*insert organisation name here*) might be able to assist and to benefit from the research.

I am available at any time to answer questions, and to provide additional information and resources about the research.

Thank you in advance and I look forward to hearing back from you.

Regards,

James Brandner

PhD Candidate

ISEAL HDR Representative

College of Sport and Exercise Science
Institute of Sport, Exercise and Active Living (ISEAL)
Victoria University
www.vu.edu.au

Phone: +61 3 9919 5354

Mobile: +61 452 277 669

Twitter: @JamesBrandner1

APPENDIX L: Follow-up email template

Hi (*name of contact*),

Thank you so much for the chat. As discussed, here is the information related to the research.

The research is about how employee well-being influences organisational capacities. The current project develops strategies to increase employee participation rates in onsite gyms, thus addressing the well-being matter.

I conducted a case study of an Australian onsite gyms in Melbourne, identifying the encouraging and hindering factors to participation. The results informed the development of an online voluntary questionnaire, which is ready for national distribution (and is approved by the Victoria University Human Research Ethics Committee).

Currently, I am contacting organisations to share the research; and to collect enough meaningful data, making a difference to onsite gym management, employee well-being, and organisational capacities.

I tried to keep the effort levels as minimal as possible for the participating organisations. Here are the procedures:

1. Provide consent to participate in the research (this can be done through email by stating, "I, on the behalf of (*name of organisation*), consent to participate in the research").
2. Distribute two pre-written emails to employees: the first is an *invitation* and the second (sent 7 days later) is a *reminder* to complete the questionnaire. Attached to each email is the information to participants involved in research form.

When the study is complete, a *Fact File* will be provided with a summary of the results.

Ethics is a matter to address. (*Name of organisation*) will not be identified in the outputs (e.g. presentations, reports) of the research. Also, employee responses will not be traceable to them or to _____.

I understand this is a lot of information. So, I welcome questions about the research so I can be as transparent as possible.

(*Name of contact*), thank you again for your time this afternoon and I look forward to hearing back from you.

Regards,

James Brandner

James Brandner
PhD Candidate
ISEAL HDR Representative

College of Sport and Exercise Science
Institute of Sport, Exercise and Active Living
Victoria University
www.vu.edu.au

Phone: +61 3 9919 5354
Mobile: 0452 277 669
Twitter: @JamesBrandner1

APPENDIX M: Results of covariates analyses

- A Chi-Square test for independence (with Yates Continuity Correction) indicated a non-significant association between **gender** and CFC participation, $\chi^2 (1, n = 246) = 1.75, p = .17, \phi = .09$.
- A Chi-Squared test for independence indicated a non-significant association between **education** and CFC participation, $\chi^2 (1, n = 246) = 3.64, p = .60, \text{Cramer's } V = .12$.
- A Chi-Squared test for independence indicated a non-significant association between **employment** and CFC participation, $\chi^2 (1, n = 246) = 4.82, p = .09, \text{Cramer's } V = .14$.
- A Chi-squared test for independence indicated a non-significant association between marital and CFC participation, $\chi^2 (1, n = 246) = 1.54, p = .82, \text{Cramer's } V = .08$.
- A Chi-squared test for independence indicated a non-significant association between **household structure** and CFC participation, $\chi^2 (1, n = 246) = 5.78, p = .22, \text{Cramer's } V = .15$.
- A Chi-squared test for independence indicated a non-significant association between **country of birth** and CFC participation, $\chi^2 (1, n = 246) = 2.12, p = .83, \text{Cramer's } V = .15$.
- A Chi-Squared test for independence indicated a non-significant association between **salary** and CFC participation, $\chi^2 (1, n = 246) = 5.90, p = .44, \text{Cramer's } V = .14$.

APPENDIX N: Focus Group Ethical Approval

The screenshot displays the Victoria University Quest RME 5.18.0 web application. The browser address bar shows the URL <https://quest.vu.edu.au/RMNet/QME/QME001A.aspx>. The page header includes the Victoria University logo and the Quest logo with the tagline "FOR EXCELLENCE IN RESEARCH AND INNOVATION". The user is logged in as "s3787005 MR James Brandner".

The main navigation bar includes links for Home, Ethics, HDR, and Help. The "Ethics" link is highlighted. Below the navigation bar, the application title "HRE17-021 : Exploring constraints and motivations for corporate fitness centre participation" is displayed, along with the status "Application Status: Finalised - Approved" and the process stage "Process Stage: Review complete: Application Approved". The form is identified as "v.16-02 Human Resea".

The left sidebar contains a table of contents with the following sections:

- Introduction
 - Important Information
 - Quest Guide
 - [Office Use Only - Administration]
 - [Office Use Only - Risk Assessment]
- SECTION 1 - PROJECT OVERVIEW
- SECTION 2 - PROJECT INVESTIGATORS
- SECTION 3 - NATURE OF THE PROJECT
- SECTION 4 - PROJECT DESCRIPTION
- SECTION 5 - PARTICIPANT
- SECTION 6 - RECRUITMENT OF PARTICIPANTS
- SECTION 7 - RISKS ASSOCIATED WITH THE RESEARCH
- SECTION 8 - DATA PROTECTION AND ACCESS
- SECTION 9 -

The main content area is titled "Important Information" and includes the following text:

IMPORTANT INFORMATION FOR ALL APPLICANTS:

- Applicants are advised to follow the guidelines provided on the [Human Research Ethics website](#) prior to submitting this application.
- Ensure all questions are appropriately answered in plain language with correct spelling and grammar.
- All applications must be sighted and approved by all members of the research team and any relevant parties. Applications will not be reviewed without appropriate authorisation.
- To avoid unnecessary delays, please ensure application is submitted in full by the submission deadline for the relevant HREC.

You are reminded that your project may not commence without formal written approval from the appropriate Human Research Ethics Committee.

Contact:

Ethics Secretary
For help and further information regarding ethical conduct, refer to the Human Research Ethics website: <http://research.vu.edu.au/hrec.php> or contact the Secretary for the Human Research Ethics Committee, Office for Research.
Phone: 9919 4781 or 9919 4461
Email: researchethics@vu.edu.au

Quest Service Desk
For technical help, refer to the Quest website: <http://research.vu.edu.au/quest.php> or contact a member of the Quest team.
Phone: 9919 4278
Email: quest.servicedesk@vu.edu.au

External Resources

- NHMC: National Statement on Ethical Conduct in Human Research
- NHMC: Human Research Ethics Handbook

The bottom of the screen shows the Windows taskbar with the time 5:26 PM on 8/07/2018.

APPENDIX O: Constraint item scores

Item	Mean	SD
Too shy to participate	1.96	.99
No friends/ acquaintances to participate with	2.70	1.07
People too far to participate with	2.31	.96
Uncomfortable participating with opposite sex	4.38	.83
Don't feel permitted during the work day	2.38	1.22
Facilities crowded	3.16	1.18
Uncomfortable participating with subordinates	1.81	.87
People don't have time to participate with me	2.57	.99
Uncomfortable changing clothes with co-workers	2.04	1.03
Other commitments	3.51	1.07
Family thinks activity is alright	2.75	1.04
Don't have clothes or equipment to participate	1.73	.78
People have enough money to participate with me	3.01	1.07
Activity makes me feel uncomfortable	3.39	1.13
Inconvenient facilities	3.80	.96
Friends think activity is alright	2.95	.98
People have too many family obligations	2.69	.94
Do activity if I know what's available	3.59	.80
Do an activity that doesn't make me feel self-conscious	3.09	1.00
Prefer atmosphere for PA in the workplace	2.96	.85
People don't have enough skills	2.42	.87
Participate if enough money for clothes, equipment, and fees	3.17	1.14
Comfortable participating with older or younger people	2.01	.91
People are on different schedules to me	2.99	.92
Not in good enough shape	2.09	.94
Religious beliefs	2.10	1.05
Not enough time	3.69	.98
Activity doesn't require a lot of skill	3.26	1.03
Busy with PA outside of work	2.52	1.00
Uncomfortable participating with supervisors	1.96	.94
Have a disability	1.52	.78
No energy	1.97	.94

APPENDIX P: Negotiation item scores

Item	Mean	SD
Work hard to have more fitness and recreation time	3.26	1.08
Learn new activities	3.51	.76
Find new people to participate with	2.56	1.05
Be organised	4.06	.70
Borrow equipment and/or clothes	1.62	.84
Use a babysitter	1.24	.60
Budget my money	3.29	1.20
Arrange rides with friends	1.86	1.09
Plan ahead for things	3.92	.82
Improve my skills	3.96	.73
Ask family to share daily chores	2.96	1.16
Set aside time for exercise	3.91	.91
Save up money	2.83	1.19
Learned to live within my means	3.44	.98
Do more exercise closer to home	3.33	1.12
Learned to participate despite an injury/health condition	2.81	1.25
Prioritise exercise	3.53	1.05
Take lessons	2.67	1.22
Take turns with spouse caring for kids	2.10	1.43
Exercise around my other commitments	3.84	.93
Trying to get a better job	2.49	1.24
Swallow my pride and do my best	3.32	1.00
Get up earlier/stay up later to make exercise time	3.28	1.22
Ask for help with skills	3.22	.95
Teach kids to me more responsible and help with things	2.39	1.05
Participate in activities with people my age	3.10	1.04
Drop what I am doing and take exercise time	2.57	1.01
Substitute a more convenient activity for a preferred one	3.05	.84
Get treatment for injury or health condition	2.89	1.16
Improvise with the equipment and/or clothes I have	3.10	1.00
Shorten activity duration	2.45	.76
Meet people with similar interests	2.29	.93
Participate with people of the same gender	3.01	.91
Participate when the facilities are less busy	3.24	1.10
Practice the required skills on my own	3.26	1.02

APPENDIX Q: Motivation item scores

Item	Mean	SD
Enjoy working out	4.65	2.40
Important and beneficial	5.71	2.35
Feel bad	4.27	2.29
Fun and interesting	4.28	2.23
Others like me better	2.96	2.20
Falling out of shape	4.51	2.36
Image	3.70	2.37
Personally important	5.09	2.34
Feel pressured to work out	2.02	1.65
Value being active and healthy	5.05	2.36
Discover and master new skills	3.69	2.19
Wants others to see me as physically fit	3.69	2.27