


2021

## Student Retention in Higher Education: Effect of the Campus Fitness Center on Women

Leslie Marie Gordon

University of North Florida, lmgordon1@comcast.net

Follow this and additional works at: <https://digitalcommons.unf.edu/etd>

 Part of the [Advertising and Promotion Management Commons](#), [Business Administration, Management, and Operations Commons](#), [Community College Leadership Commons](#), [Educational Leadership Commons](#), [Health and Physical Education Commons](#), [Higher Education Commons](#), [Marketing Commons](#), [Recreation Business Commons](#), [Sports Management Commons](#), and the [Strategic Management Policy Commons](#)

---

### Suggested Citation

Gordon, Leslie Marie, "Student Retention in Higher Education: Effect of the Campus Fitness Center on Women" (2021). *UNF Graduate Theses and Dissertations*. 1096.

<https://digitalcommons.unf.edu/etd/1096>

This Doctoral Dissertation is brought to you for free and open access by the Student Scholarship at UNF Digital Commons. It has been accepted for inclusion in UNF Graduate Theses and Dissertations by an authorized administrator of UNF Digital Commons. For more information, please contact [Digital Projects](#).

© 2021 All Rights Reserved

Student Retention in Higher Education: Effect of the Campus Fitness Center on Women

by

Leslie Gordon

A Dissertation submitted to the Department of Leadership,

School Counseling & Sport Management

in partial fulfillment of the requirements for the degree of

Doctor of Education

UNIVERSITY OF NORTH FLORIDA

COLLEGE OF EDUCATION AND HUMAN SERVICES

December 2021

Unpublished work © Leslie Gordon

This dissertation, titled Student Retention in Higher Education: Effect of the Campus Fitness Center on Women, is approved:

\_\_\_\_\_  
Dr. Linda Skrla, Committee Chair

\_\_\_\_\_  
Date

\_\_\_\_\_  
Dr. Jennifer Kane, Committee Member 1

\_\_\_\_\_  
Date

\_\_\_\_\_  
Dr. Kim Cheek, Committee Member 2

\_\_\_\_\_  
Date

\_\_\_\_\_  
Dr. Jay Coleman, Committee Member 3

\_\_\_\_\_  
Date

## DEDICATION

This dissertation is dedicated to my young women students. As a young woman once myself, I did not see myself as a leader; but others did and believed in me. I acknowledge the same for you. I see your arduous work, care, and insight as strong leadership qualities, and I believe in you as strong leaders. Believe in yourselves and go for it, ladies!

## ACKNOWLEDGEMENTS

Thank you to my husband Pat, who suggested I go back to school for my Doctorate because “you’ve always wanted to do that,” our son Matt who returned to school for his Master’s degree in business administration after seeing his mom return to school and our daughter Allie, a former NCAA athlete, who inspired me to be an advocate for young women and fitness.

Thank you to my sister Lou, who always asked how my work was going and said she was proud of me, and my sister Linda, who was the first to ask, “Can I read your dissertation?” and after she finished, said that her “head was spinning,” in a clever way I believe.

And thank you to my parents Mary and Jim Wildman for giving me this life. I know you would be proud and in the front row at graduation, clapping and smiling!

I am also grateful to Dr. Jennifer Kane for her sport/fitness knowledge, to Dr. Kim Cheek for helping me remove my “marketing hat” and see things differently, to Dr. Jay Coleman for sharing metrics and emphasizing the importance of retention, and to Dr. Linda Skrla who helped guide me to a deeper level of insight, where I sometimes felt uncomfortable but always knew it was worth it.

And much appreciation to Ellen Wheeler and Candy Veilleux-Mesa, my cohort BFFs, for Sunday morning talks, gifts, delicious food, fresh insight, and most of all your friendship.

## ABSTRACT

Of the 3.5 million first-time in college, full time students who began college in fall 2017, 74% returned for fall 2018, with 61.7% retained at their starting institution. Covid-19 has negatively impacted retention; in addition to normal attrition, one of every five students did not return to campus in fall 2020. Researchers have gauged both academic and social factors that positively influence retention and note the use of the campus fitness center (CFC) as one social factor; however, women are less likely to use the CFC, are one third as likely to exercise, and experience more numerous fitness obstacles and fewer fitness motivators compared to men. Women adjust less well to college than men, a situation which the CFC's contributions to a sense of belonging and social benefits can mitigate. While research identifies overall best practices for CFCs, knowledge about CFC best practices with respect to women, which align with women's needs for belonging and social benefits, is limited. Thus, the purpose of this qualitative exploratory multiple case study was to identify and analyze fitness areas on college campuses that deliver women-focused fitness that aligns with women's needs for belonging and social benefits. The information derived from this study was used to create an initial framework for women-focused fitness areas. From this work, institutions of higher education can learn how to design and implement such areas to motivate women to use the CFC and potentially improve their retention.

## TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	iv
ABSTRACT.....	v
TABLE OF CONTENTS.....	vi
CHAPTER 1: INTRODUCTION.....	1
Problem Statement.....	2
Purpose Statement.....	3
Research Questions.....	3
Overview of Theoretical Framework.....	3
Overview of Methodology.....	4
Significance of Research.....	5
Organization of the Study.....	6
Chapter Summary.....	7
CHAPTER 2: REVIEW OF LITERATURE.....	8
The Student Retention Problem.....	8
Why Student Retention is Important.....	9
Why Students Are Not Retained.....	10
Retention Terminology.....	11
History of Retention Theory in Higher Education.....	12
Prior to 1960: Development of Retention Focus.....	12
1960 –1980: Retention and Social Factors.....	13
1980-2000: Recreation as a Retention Social Factor.....	14
2000 - Present: Retention Program Design and Accountability.....	15
History of Physical Activity on Campuses.....	17
Programs.....	17
Facilities.....	17
Title IX.....	18
Effects of Covid-19 Pandemic.....	19
Importance of Physical Activity in Young Adults.....	20
Fitness Industry Best Practices for Women.....	22
CFCs’ Positive Effect on Retention.....	24

Features of CFCs that Affect Retention .....	25
CFCs and Gender Differences .....	26
CFC Benefits.....	29
CFC Best Practices .....	31
Usage Themes and Recommendations .....	31
Campus Fitness Culture .....	32
Initiating and Strengthening Programs .....	33
Women-Focused Practices.....	34
Alignment of Tinto’s Theory of Student Departure with CFC Best Practices .....	37
Chapter Summary .....	40
CHAPTER 3: METHODOLOGY .....	41
Study Design.....	41
Sample Selection.....	42
Data Collection .....	43
Interviews.....	43
Observations .....	44
Artifacts.....	46
Process Efficiency and Effectiveness .....	47
Data Analysis.....	48
Validity, Reliability, Credibility, and Trustworthiness.....	50
Chapter Summary .....	52
CHAPTER 4: FINDINGS AND RESULTS .....	53
Interviews.....	54
Case Studies.....	55
University A.....	55
University B.....	59
University C .....	70
University D.....	79
Women-Focused Fitness Accommodations Results by Category .....	84
Areas .....	84
Activities.....	84



Programs .....	85
Processes .....	85
Women-Focused Fitness Accommodations Results Thematically.....	87
Four Broad Themes of the Study .....	87
Women-Focused Areas: Importance of Design and Designation.....	87
Women-Focused Programs: Social Benefits and Importance of the Instructor.....	90
Women-Focused Activities: A Sense of Belonging from Social Benefits .....	93
Women-Focused Processes: A Sense of Belonging from Policy and Technology .....	94
Women-Focused Processes: A Sense of Belonging from Feedback and Outcomes .....	98
Chapter Summary .....	99
CHAPTER 5: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS .....	100
Summary of Methodology and Findings .....	100
A Framework for Women-Focused Fitness Accommodations.....	101
Tinto’s Theory of Student Departure: Alignment with the Women-Focused Fitness Accommodations Model.....	104
Recommendations.....	107
Recommendations for Practice .....	107
Recommendations for Policy .....	107
Recommendations for Future Research .....	108
Reflections .....	109
Study Conclusion.....	110
REFERENCES .....	112
APPENDIX A: EMAIL CORRESPONDENCE TO OBTAIN TELEPHONE INTERVIEWS ..	124
APPENDIX B: INTERVIEW QUESTIONS.....	125
APPENDIX C: AXIAL CODING PROCESS.....	126
APPENDIX D: WOWs INITIAL QUESTIONNAIRE FROM UNIVERSITY A.....	127

## CHAPTER 1: INTRODUCTION

Of the 3.5 million students (about twice the population of Nebraska) who began college in fall 2017, 74% returned for fall 2018 and of those only 61.7% returned to their starting institution (National Student Clearinghouse Research Center, 2019). These numbers are important because full-time, first-time-in-college (FTIC) students, defined as those who begin as first-year students in the fall term, are counted as retained by their starting institution if they return for the fall of their sophomore year. The Covid-19 pandemic caused many institutions of higher education (IHEs) to limit on-campus activities during AY 2020-2021. Most IHEs did return to normal activity in fall 2021, but in fall 2020, when only 191 of 2,958 colleges and universities were fully online (Adams et al., 2020), whether students would return to campus in fall 2021 was of great concern. In fact, in addition to normal attrition, one in every five students did not return to campus in fall 2020 while the pandemic was underway (Gardner, 2020).

Researchers have identified both academic and social factors that positively influence retention, and they note the use of the campus fitness center (CFC) as one social factor (Danbert et al., 2014). However, women in higher education (HE) are less likely than men to use the CFC (Stankowski et al., 2017); in fact, women are one third as likely to exercise and twice as likely to diet to lose weight (Gruber, 2088). They experience more fitness obstacles, such as chilly weather, and fewer fitness motivators (Arigo et al., 2020; Ball et al., 2018; Dobersek & Jeffery, 2018) compared to men. In addition, women's adjustment to college is overall not as successful as men's (Enochs & Roland, 2006). CFCs' delivery of a sense of belonging (Tinto, 1999) and social benefits (Dalgarn, 2001; Miller, 2011; Watson et al., 2006) could mitigate their adjustment problems. This dissertation, guided by Tinto's Theory of Student Departure (1999), reviews the

history of HE student retention and how it remains a problem; the positive effect of CFCs on retention; the differences in fitness influences, habits, and experiences of women compared to men; and CFC best practices aimed at increasing usage. Most importantly, this study develops an initial framework about fitness areas and college campuses that deliver women-focused fitness that promote a sense of belonging and social benefits. This research has the potential to help improve IHEs' fitness programs and practices to motivate more women to use the CFC and thus improve their retention.

### **Problem Statement**

Use of the CFC increases retention (Danbert et al., 2014), but women are less likely to use it (Stankowski et al., 2017), less likely to exercise (Gruber, 2008), and experience more numerous fitness obstacles and fewer fitness motivators (Arigo et al., 2020; Ball et al., 2018; Dobersek & Jeffery, 2018) compared to men. Women adjust less successfully to college (Enochs & Roland, 2006), which the sense of belonging (Tinto, 1999) and social benefits (Dalgarn, 2001; Miller, 2011; Watson et al., 2006) delivered by CFCs could mitigate. This benefit is especially the case because women are likely to use the CFC for its social aspects (Farren et al., 2017; Stankowski et al., 2017). Little existing research has focused on the intersection of student retention and CFC use by women students. Thus, it would be helpful to IHEs to know more about fitness areas and college campuses that deliver women-focused fitness effectively enough to motivate women to use the facility, and thus improve their adjustment to college and potentially their retention.

## **Purpose Statement**

This dissertation used a qualitative exploratory multiple case study design to produce research-based knowledge about women-focused fitness areas and college campuses that deliver women-focused fitness effectively. The information was used to create an initial framework of these women-focused fitness areas and how they align with women students' need for belonging and social benefits. The goal was for IHEs' leaders to learn how women-focused fitness areas look to be able to implement them to motivate women to use the CFC and increase their retention.

## **Research Questions**

This study was guided by these research questions:

- How do CFCs in HE determine the needs of their women students?
- How do CFCs accommodate the needs of women students?
- How do these accommodations relate to students' sense of belonging, for example through community and social factors like forming social relationships?
- How are CFC efforts to meet women's needs assessed and evaluated?

## **Overview of Theoretical Framework**

Tinto's (1999) Theory of Student Departure identified the importance of social integration, to retention and of the CFC, which not only provides social integration but also instills a sense of belonging. Tinto (2017) acknowledged the importance of social factors for retention and identified student rites of passage as members of a society or culture. Tinto posited that students drop out because they fail to separate from previous associations, don't effectively negotiate the transition from one society to the next, or fail to incorporate the new society's

values. While Tinto's critics have argued that his Theory of Student Departure is not an adequate model of attrition because it fails to generalize beyond the traditional student in terms of diversity, IHE structures, and socio-economic factors (Metz, 2002), his framework provides an effective guide for this study because his theory identifies the CFC's positive effect on retention, sense of belonging, and importance during a societal transition period, specifically the freshman year of college.

### **Overview of Methodology**

This multiple case study analyzed a purposeful sample (Merriam & Tisdell, 2016) of HE women-focused fitness areas, activities, programs, and processes, identified using criterion-based selection. First, I used women and fitness resources, such as academic women, fitness journals, and knowledgeable individuals in the field, to identify a potential sample of 23 IHE sites that I believed were women-focused fitness examples. I confirmed whether these 23 potential sites were, in fact, women-focused fitness areas and college campuses that delivered women-focused fitness by interviewing 11 CFC directors by telephone to determine their site's level of focus on and commitment to women's fitness.

Based on the telephone interview results, I selected four CFCs for case studies. From these cases, I collected data from the CFC program director and other key individuals using interviews, observations, and artifacts, either in person or through Zoom, and I analyzed the data by coding open codes into fewer more comprehensive categories (Merriam & Tisdell, 2016). I used the data from this multiple case study analysis to form an initial framework for women-focused fitness areas and college campuses that effectively deliver women-focused fitness which align with women students' need for belonging and social benefits. As a result of this work, IHEs

can now learn how these areas look and how to implement them to motivate more women to use the CFC and increase their retention.

### **Significance of Research**

Students in HE should care about retention, because in 2012, working-age high school graduates earned \$24,000 per year on average, compared to college graduates, who averaged \$56,000 per year. In addition, college graduates have significantly better health and longer life expectancy (Trostel, 2017, p. 9). Society should care about student retention because college graduates give disproportionately more to charities, engage more in volunteerism, and are more likely to work for the greater good than high school graduates. For IHEs, the withdrawal of learners leaves a financial void, in terms of tuition, housing, and miscellaneous fees such as books (Webb & Cotton, 2018). In addition, organizations like IHEs incur five times more expense in finding new clients (students) as opposed to retaining existing clients (Schiffman & Wisenblit, 2019). Finally, accrediting agencies monitor retention, and most states tie HE funding to retention outcomes (Seidman, 2012).

While researchers have gauged both academic and social factors that positively influence retention and note the use of the campus fitness center (CFC) as one social factor (Danbert et al., 2014), women are less likely to use it (Stankowski et al., 2017), are three times less likely to exercise (Gruber, 2008), and experience more numerous fitness obstacles and fewer fitness motivators (Arigo et al., 2020; Ball et al., 2018; Dobersek & Jeffery, 2018), compared to men. Women also adjust to college less successfully than men, a situation which the CFC's sense of belonging (Tinto, 1999) and social benefits (Dalgarn, 2001; Miller, 2011; Watson et al., 2006) could mitigate. This research study developed an initial framework for women-focused fitness

areas and college campuses that effectively deliver women-focused fitness that aligns with women students' need for belonging and social benefits. Now, leaders of IHEs can learn how these areas look and how to implement them, to motivate more women to use the CFC and improve their retention.

### **Organization of the Study**

Guided by Tinto's Theory of Student Departure (1999), chapter two discusses the importance of student retention; reasons why students are not retained; the history of retention in HE and its supporting academic theories; the history of PA on campuses, including programs, facilities, and Title IX; the importance of PA in young adults; fitness industry best practices for women; CFC features that effect retention; gender differences toward CFC use; and CFC benefits and best practices. Chapter three discusses this dissertation's qualitative exploratory multiple case study design; sample selection; data collection, including interviews, observations, and artifacts; and data analysis. Chapter four reviews and analyzes the results and findings from four HE CFC's women's accommodations, including areas, activities, programs, and processes, and how these accommodations relate to social benefits, like social integration, and sense of belonging, for example through community. Most importantly, since research is limited on the topic, Chapter 5 presents an initial framework of women's-focused fitness accommodations, which align with women's need for belonging and social benefits, the framework's alignment with Tinto's Theory of Student Departure, and recommendations for practice and future research. Leaders of IHEs can now learn how these women's-focused fitness accommodations look and how to implement them, to motivate more women to use the CFC and increase their retention.

## Chapter Summary

With student retention in HE averaging 74% (National Student Clearinghouse Research Center, 2019), and further decreased by 20% due to Covid-19 (Gardner, 2020), understanding the CFC's positive effect on retention (Danbert et al., 2014) is important, especially for women, who are less likely to use it (Stankowski et al., 2017) and three times less likely to exercise (Gruber, 2008). Use of the CFC can improve women's adjustment process from high school to college, which is less successful than men's (Enochs & Roland, 2006). While research guides best practices for CFCs, studies are limited regarding best practices for women specifically. Therefore, using Tinto's Theory of Student Departure as a guide, this qualitative exploratory case study identified and analyzed four CFCs in North America in regard to their women's-focused fitness accommodations which provide social benefits. This investigation was for IHE's leaders to learn how women-focused fitness areas look to be able to implement them to motivate women to use the CFC and improve their retention. The research questions to be addressed were:

- How do CFCs in HE determine the needs of their women students?
- How do CFCs accommodate the needs of women students?
- How do these accommodations relate to students' sense of belonging, for example through community and social factors like forming social relationships?
- How are CFC efforts to meet women's needs assessed and evaluated?

In preparation for this investigation, Chapter 2 reviews in detail the extant literature concerning the relationships among retention, fitness, and gender.



## CHAPTER 2: REVIEW OF LITERATURE

Only 61.7% of HE students who began college in fall 2017 were retained at their starting institution in fall 2018 (National Student Clearinghouse Research Center, 2019). Retention rates were also depressed by a global pandemic, during which an additional 20% of students did not return to campus in fall 2020 (Gardner, 2020). Although use of the CFC positively affects persistence (Danbert et al., 2014), women are less likely to use it (Stankowski et al., 2017). In fact, women are one third as likely to exercise (Gruber, 2008), and they experience more numerous fitness obstacles and fewer fitness motivators (Arigo et al., 2020; Ball et al., 2018; Dobersek & Jeffery, 2018) compared to men. In addition, women are less successful than men in adjusting to college during the transition from high school (Enochs & Roland, 2006). Use of the CFC can help women adjust because it delivers to students' sense of belonging (Tinto, 1999) and social benefits (Dalgarn, 2001; Miller, 2011; Stankowski et al., 2017; Watson et al., 2006). This literature review explains the importance and extent of the HE student retention problem, how IHEs and academic theorists have attempted to create and guide solutions, and how one campus institution, the CFC, increases retention but that women are less likely to use it, experiencing numerous fitness obstacles and fewer fitness motivators compared to men. Finally, this review examines how IHEs have attempted to increase student CFC usage, in general, for example through state-of-the-art facilities, but have yet to implement consistent and effective solutions to increase women's usage, which could go a long way to increase their retention outcomes.

### **The Student Retention Problem**

An undergraduate retention and graduation report (IES/NCES, 2020) identifies the following undergraduate retention rates for FTIC, full-time students: (a) retention rates for all

IHEs combined averages 81%; (b) for open enrollment institutions, 62%; (c) for selective institutions, 97%; (d) at public four-year colleges, 81%; and (d) at private for-profit institutions, 60% (p. 1). Student return to campus has been an even greater concern for HE leaders during a pandemic where, in addition to normal attrition, 20% of students did not return to campus in fall 2020 due to Covid-19 concerns (Gardner, 2020). Although IHEs provided more online courses instead of returning students to socially distanced campuses, some students decided to take the academic year off or parents advised their young adults to remain home, due not only to health but also budget concerns regarding their own job losses and furloughs (Lorin, 2020).

### **Why Student Retention is Important**

A variety of stakeholders note the importance of HE student retention. Students should care about success, retention, and graduation because in 2012, working age high school graduates earned \$24,000 per year on average compared to college graduates who averaged \$56,000 per year, and college graduates have significantly better health and longer life expectancy. Society cares about student success and retention because college graduates give disproportionately more to charities, engage more in volunteerism, and are more likely to work for the greater good than high school graduates (Trostel, 2017, p. 3). For IHEs, the withdrawal of learners leaves a financial void in terms of tuition, housing, and miscellaneous fees such as books (Webb & Cotton, 2018). Organizations such as IHEs incur up to five times more expense finding new clients (students) as opposed to retaining existing clients (Schiffman & Wisenblit, 2019). Finally, accrediting agencies monitor retention, and most states tie HE funding to retention outcomes (Seidman, 2012).

## **Why Students Are Not Retained**

In addition to understanding why students should stay in college, it is important to evaluate why students exit, as engagement and follow-up with non-returning first-year students, on their own, can motivate students to return (Turner & Thompson, 2014). In a 2014 study of 30 participants, 10 freshmen, 10 sophomores and 10 non-returning freshmen, using telephone interviews, the following factors were identified as most influential to first-year transitions: (a) 67% reported engaging activities; (b) 65% development of effective study skills; (c) 57% reported inadequate interactive instructor-student relationships; and (d) 53% of students reported inadequate academic services support. The lack of engaging activities, which could be social in nature, proved most important to student withdrawal (Turner & Thompson, 2014, p. 100).

Martin (2017) analyzed 144 non-returning students' stories, 66% women and 34% men, and found those students exhibited low levels of campus involvement or engagement and struggled socially with their college living experience. Women especially represented a notable percentage of non-returners, and Martin determined that social relationships are especially important to retaining women during their first year. Specifically, how well or how poorly students navigate their adaptation to college influences re-enrollment and retention rates. During the first-year transition, students are required to adapt in a variety of ways, including academically, socially, culturally, and emotionally, as they reposition themselves from the well-known surroundings of home and high school to the distinctly different environment of a college campus (Martin, 2017). Non-returning women reported pleasure, during the first year, in engaging in experiences such as exercising, being healthy, and having stress free days. At the same time, 67% of students' negative stories related to the college lived experience, and this high

percentage of negative stories suggests these students struggled, among other ways, socially, financially, and physically (Martin, 2017, p. 193). These social woes relate to Bean's (2005) "social factors" retention theme, in that the non-returners may not have located the "social support and close friendships [that] form the core components of social integration" (p. 228).

### **Retention Terminology**

Before examining HE's history of retention, retention theory, and physical activity (PA), it is important to clarify retention terminology. Specifically, retention measurement uses the following often interchangeable terms: retention rate, persistence rate, graduation rate, completion rate, attrition rate, drop-out rate, stop-out rate, withdrawal rate, and non-persistence rate (Haydarov et al., 2013). The National Center for Education Statistics defines retention as "a measure of the rate at which students persist in their educational program at an institution, expressed as a percentage" (Powers & Schloss, 2017, p. 18). For four-year institutions, this is the percentage of FTIC, full-time bachelors' degree-seeking undergraduates from the previous fall who re-enroll in the current fall with a 2.0 institutional GPA or higher. For all other institutions, retention is measured as the percentage of first-time degree/certificate-seeking students from the previous fall who either re-enroll or successfully complete their program by the current fall. For purposes of this study, retention will be discussed in terms of FTIC, full-time students who begin their first year in the fall and return to their sophomore year the following fall with an institutional GPA of 2.0 or greater.

## **History of Retention Theory in Higher Education**

To understand retention overall, along with factors influencing retention, it is important to note historically how the HE retention issue developed and evolved along with supporting retention theory.

### ***Prior to 1960: Development of Retention Focus***

During the early development of IHE's, student enrollment primarily focused on growth rather than persistence because there were few students attending college. However, in 1938 IHEs became more aware of the importance of persistence due in part to the release of the first retention study. Titled "College Student Mortality," conducted by John McNeely, and published on behalf of the U. S. Department of the Interior and Office of Education, the study examined data from 60 IHEs across the United States concerning extent of attrition; average time to degree completion; points in the academic career at which attrition proved most prevalent; impact of institutional size on attrition; and impact of participation in extra-curricular activities on attrition. McNeely noted that first-year students were more likely to exit, and that in the junior and senior years, men were more likely to leave than women (Bentley, 2015).

By the late 1950's, student retention had become a priority, because while two world wars and an economic depression had not hindered enrollment and IHEs were experiencing a post-World War II student influx, administrators began to note attrition rates of 25% or more of the entering first-year class (Thelin, 2011, p. 329). In response, IHEs developed retention programs, focused on academics, and including academic advising and need-based teaching, to increase the odds that students persisted and graduated. At the same time, state governments adjusted HE funds and separated subsidies based on enrollment and degree conferral, in part to

force IHEs to realize the importance of and enforce accountability for both outcomes (Thelin, 2011).

### ***1960 –1980: Retention and Social Factors***

In 1962, retention theorists began noting social influences, in addition to academic influences, on student persistence. John Summerskill (1962), for example, reported that the reasons students withdrew from college were complex and attributable to psychological, familial, social, and economic issues, and he recommended further research on motivational factors toward graduation. Summerskill posited that students' behavior, attitudes, and satisfaction were influenced by internal and external or social pressures, and these various influences required a multi-causal approach, grounded in the social sciences, psychology, and sociology, to address persistence. Spady (1970) reinforced the importance of social factors and initiated an interdisciplinary longitudinal study to understand why students dropped out of college. Influenced by Emile Durkheim's (1951) suicide theory, Spady determined that the conditions contributing to college dropout were similar to those contributing to the completion of suicide, and that integration, or the lack thereof, explained why students dropped out of college. Spady posited that both suicide and dropping out of college share the causal factor of students not perceiving their values as congruent with that of their college peers or lacking support from their social group.

To focus on social aspects of retention, IHEs began developing support services beyond teaching and learning. Student clubs and organizations, some fitness-related, were created to reinforce social bonding. Along these lines, and in consideration of the time spent in social programs, IHEs redefined student success measurements, and in place of a typical undergraduate

experience of four years of full-time study, recognized “stopping out” and “dropping out.” IHEs also extended “Bachelor’s degree completions” from what had been four-year to a six-year completion period (Thelin, 2011).

### ***1980-2000: Recreation as a Retention Social Factor***

Alexander Astin (1984) reconceived responsibility for retention influences, pivoting from the students’ responsibility to the responsibility of IHEs, and determined that colleges should create an environment that support student involvement. Astin emphasized two main predictive factors affecting a student’s decision to continue, personal attributes and the HE environment. He became one of the first to identify the importance of specific fitness activities, like intramurals, positing that students who participated in sport programs were more likely to persist.

In later findings, Astin (1999) proposed that increases in a student’s level of involvement helped improve the odds of retention and noted the following five postulates: (a) involvement requires investment and exertion of both physical and psychological energy; (b) involvement has varying degrees and intensities; (c) involvement measures are quantitative and include time spent and number of times participating; (d) both the nature and amount of involvement relate to a student’s withdrawal decision; and (e) institutional requirements and programming influence involvement. This fifth postulate reinforced IHEs’ responsibility to initiate programs such as campus fitness activities that increase student involvement and retention.

Vincent Tinto also supported IHEs’ responsibility to create programs that promoted retention and emphasized involvement in recreational sports and the campus fitness facility. While I will discuss Tinto’s (1999) Theory of Student Departure more fully in a later section of this chapter, here I note Tinto’s support of Astin (1999) in noting that a university’s behaviors

and structures lead to knowingly or unknowingly including or excluding students from its communities. Specific behaviors and structures which could either include or exclude students include faculty relationships, low interaction with other students, use of the campus fitness facility, and a sense of belonging and establishment of emotional bonds with other students through clubs, organizations, and recreational sports (Webb & Cotton, 2018; Danbert et al., 2014).

### ***2000 - Present: Retention Program Design and Accountability***

Although Astin and Tinto identified factors that contribute to the likelihood of departure, this knowledge alone did not change the odds of students remaining in school. To provide understanding about how to retain students, Alan Seidman's Retention Formula (2012) guided institutional leaders in designing and implementing programs and services to support student persistence. The formula states that retention is the achievement of the following: early identification of students' needs; early, intensive, and continuous intervention; and intervention programs designed to help support progress toward retention. Physical activity programs were one example that provided support for student health needs, could be introduced early, during the important first year, and were proven to increase retention.

More recently, to further promote retention, Powers and Schloss (2017) advocated administrative resources like student recreation programs, along with measurement of outcomes, and recommended that IHEs focus on assisting students to obtain a degree rather than replacing students who have transferred or dropped out. To that end, Florida's public IHEs, for example, are monitored by 10 performance based funding metrics: (a) percent of bachelor graduates enrolled in graduate programs or employed; (b) median wages of bachelor graduates employed



full time; (c) average cost of a bachelor's degree; (d) four-year graduation rate; (e) academic progress or second year retention rate; (f) percent of bachelor degrees awarded within programs of strategic emphasis; (g) percent of graduate degrees awarded within programs of strategic emphasis; (h) university access rate, measured through the percentage of students using Pell grants; (i) percent of bachelor degrees awarded without excess hours; and (j) percent of full-time undergraduates enrolled in online courses. Most if not all these directives relate to retention, including graduation rate, second year retention, degrees awarded, and online enrollment (State University System of Florida, n.d.).

However, even with legislative mandates to support student retention, limited research exists regarding how to retain diverse groups such as women within organizational contexts such as IHEs. While the six-year graduation rate for women compared to men is 62% versus 57% overall, and women are more likely to graduate at public IHEs 61% to 55%, fewer women graduate at private, for-profit institutions, 25% vs. 28% (IES/NCES, 2020) and experience a lower level of adjustment to college overall (Enochs & Roland, 2006). Moreover, women's fitness in HE is a timely topic, with debate surrounding gender categories where gender is viewed as more than binary (White, 2021), and inequities exist between men's and women's fitness facilities (Jones, 2021). Overall, mixed reviews of women's retention, adjustment to college, and fitness accommodations reinforce the importance of studying women's fitness in HE through organizational contexts such as CFCs, which positively influence retention and sense of belonging but are less likely to be used by women.

## **History of Physical Activity on Campuses**

### ***Programs***

PA on campus has emerged as a key factor in student persistence. The earliest PA began as a required component of educational programs at Amherst College, “to provide activities that would help Amherst students maintain their health and relieve the strain associated with their academic courses” (Cardinal et al., 2012, p. 503). By 1968, 90% of four-year IHEs in the United States had some sort of PA requirement for graduation; however, by 2010 that percentage had decreased to 40% (Petruzzello & Box, 2020, p. 279). According to the Huffington Post (2013), “There is a remarkable disconnect in that we fund research as a nation showing that physical activity is absolutely critical to academic and life success, but we aren’t applying that knowledge to our own students” (p. 1).

One reason for the decrease in required PA programs were the prestige and subsequent time commitment needed to garner external research funds. Specifically, HE’s focus on research activity created a negative cycle; pressure to secure funding led to lack of attention to PA programs, and the lack of attention made PA departments a target for contraction when university budgets were constrained (Petruzzello & Box, 2020). Park (2017) noted that not only are there fewer PA programs, but the programs that do exist give little, if any, attention to putting the results of quality PA research into practice.

### ***Facilities***

One way in which universities have circumvented a need for PA requirements is through building recreation centers in the hope that students will use them for their PA needs. However, data compiled from the American College Health Association, using the National College Health

assessment for the academic year 2020-2021, showed that only 42.1% of students (51.3% of men and 39.3% of women) reported meeting the PA guidelines for active adults, including strength training and aerobic activity (American College Health Association, 2021). Since the data collection was noted as “self-reported,” these statistics could be understated because the response mechanism placed the onus on students.

Therefore, to motivate students to increase PA at the CFC, IHEs have enhanced CFC facilities both through physical features and social opportunities. Atwood (2017) explained that CFCs were initially based on physical education (PE) facilities, meant primarily to offer space to teach students how to be PE teachers; however, today’s facilities contain multipurpose sports courts, aquatic platforms with waterfalls and sunbathing shelves, and climbing walls. An amenity known as leisure water serves as a social platform by providing shallow water areas for ease of student interaction. Weight rooms are also more social in nature and include features such as roll tires, pull sleds, and modular rings conducive to side-by-side and partner recreation.

### ***Title IX***

However, while CFC amenities continue to be enhanced, gender equity regarding fitness accommodations under Title IX has not changed. Title IX of the Education Amendments of 1972 was first enacted as a federal law to bar sex discrimination in all facets of education, including sports programs, and prohibits any federally funded education program or activity from engaging in sex discrimination (National Coalition for Women and Girls in Education, 2002). However, to comply with Title IX’s application to athletics an IHE need only fulfill one of the following requirements: (a) proportionality, meaning the number of men and women athletes should be equivalent to their enrollment percentages; (b) a history and continued practice of adding

women's sports; or (c) ability to show that the athletic interests and abilities of women are being fully and effectively accommodated. IHEs have tried to meet the first and/or second standard by adding sports for women, eliminating non-revenue-producing sports for men, and/or adding sports for women overall, thereby disregarding the third standard, the effective accommodation of women's needs (Murray, 2002).

More specifically, Stephen Erber, Director of Athletics at Muhlenberg College, noted, "The current interpretation of Title IX, which allows institutions to come into compliance by achieving a certain gender ratio, or quota, is exactly what enables those same institutions to avoid redistributing existing resources in order to enhance women's athletics programs" (Murray, 2002, p. 89). As a result, resources provided for women's sports, including services, facilities, and supplies, can remain inadequate, motivating leaders like Marcia Greenberger, co-president of the National Women's Law Center, to ask (regarding Title IX), "What else needs to be done for women?" (Murray, 2002, p. 92).

### ***Effects of Covid-19 Pandemic***

It is important to note the effects of the Covid-19 pandemic on HE fitness facilities. According to James Baur, Associate Director of Recreation at the University of North Florida, the CFC currently operates at full capacity, is no longer closed throughout the day for sanitizing purposes, and all equipment has been relocated back to its original, pre-pandemic positions. Also, social distancing and masks are no longer required or enforced. However, two features at the facility remain different than pre-Covid: hand sanitizer stations are now provided throughout the facility and hours of operation remain limited, due to hiring shortages and lower student interest in employment.

In addition, Baur explained that although initially CFCs nationally had similar Covid-19 protocols, programs are now reopening, and restrictions are loosening at varied rates. In fact, NIRSA: Leaders in Collegiate Recreation's fall 2020 survey of the state of campus recreation related to the COVID-19 pandemic at 240 CFCs (Watts, 2021) found that 90% opened in fall 2020; 75% remained open throughout that fall; 40% were designated as "core" or "essential" to the university; less than 2% reported COVID-19 cases linked to recreation; and 98% reported that students and other patrons followed the rules put in place for health. When asked when operations and programs would return to a "new normal," 17% of CFC leaders were optimistic it would occur by spring 2021, 61% by fall 2021, and 80% by spring 2022.

### **Importance of Physical Activity in Young Adults**

Former U. S. President John F. Kennedy addressed young adult fitness and its lack thereof, writing in 1960:

"But the harsh fact of the matter is that there is also an increasingly large number of young Americans who are neglecting their bodies—whose physical fitness is not what it should be—who are getting soft. And such softness on the part of individual citizens can help to strip and destroy the vitality of a nation. For the physical (and mental) vigor of our citizens is one of America's most precious resources. If we waste and neglect this resource, if we allow it to dwindle and grow soft then we will destroy much of our ability to meet the great and vital challenges which confront our people. We will be unable to realize our full potential as a nation." (Kennedy, 1960, p. 16)

President Kennedy's insight remains true today, as there is evidence linking lack of PA in young adults to increased risk for coronary artery disease, obesity, diabetes, and osteoporosis

(Higgins & Oldenburg, 2003). In fact, autopsy findings from 2,876 men and women between ages 15 and 34 documented atherosclerotic lesions in the youngest age group, 15 to 19 years, and found high prevalence of heart disease risk factors in a college student population (Leslie et al., 2001, p. 117).

Cumulative research on the interrelationship between PA and health outcomes highlights two points: primary prevention must begin at an early age, and regular physical activity is one of the key health behaviors that must be promoted (Bray & Born, 2004). Surveys conducted to assess the prevalence of PA participation in young adults consistently show that rates of PA participation decline sharply during the teenage and young adult years. Specifically, 66% of students engage in adequate amounts of PA during their last two months in high school but only 44% do so during their first two months of college (Petruzzello & Box, 2020, p. 280). Therefore, the transition period from high school into college plays a significant role in decreasing PA for young adults.

In terms of gender, women's PA drops earlier and faster than men's, affecting health and self-efficacy. In fact, men's decline in vigorous activity is less marked than that of women of the same age, with men's participation decreasing from 70% to 42% from age 12 to 21, compared to women's drop from 70% to 30% (Matteucci et al., 2012, p. 164). Young adults who participate in more days and minutes of vigorous and moderate PA report fewer barriers to exercise, are more likely to set health-related goals, have a higher level of self-efficacy, and are more intrinsically motivated (Teixeira et al., 2012). Therefore, given the importance of retention and its relationship to CFC use, HE's shift of responsibility from a PA requirement to students' use

of the CFC, and women's low CFC participation, further examination is warranted regarding CFC best practices to increase usage, especially for women.

### **Fitness Industry Best Practices for Women**

In addition to on-campus best practices for women, off-campus programs in the fitness industry have also been identified as increasing PA and can be performed in a social setting such as classes. Chukhlantseva (2019), for example, examined the effect of an indoor cycling program on the body composition and physical fitness of young women and found indoor cycling training at fitness clubs provided an optimal amount and structure of PA, increasing body strength, muscular endurance, and balance. The study concluded that indoor cycling in a fitness club is an effective form of exercise for young women because it has targeted training effects on their body's functional systems, adaptive abilities, and overall physical fitness.

Hooker et al. (2018) examined a fitness program with a monetary reimbursement and its effect on women's usage at a fitness center and found an initial positive effect on usage. The study, involving university women, reported that members of the program initially visited the fitness center on average more times per month due to the reimbursement, but were significantly more likely to have terminated memberships after one year compared to members who did not receive the incentive. Therefore, women's participation in a monetary incentive program to attend a fitness center may be associated with greater utilization at the beginning of the membership but may not reduce the risk of membership termination in the future.

Finally, in terms of gym concepts and processes, Craig and Liberti (2007) found both technology and employees to be valuable to women customers' participation in a franchise of women-only gyms. Specifically, registering with an app on a smart phone or using a personal

fitness tracker, which monitors steps walked and calories burned, along with a feminized culture of primarily women employees, proved important to participation. In line with social motivation, the study also emphasized that technology should be used to reinforce sociability, rather than judgment and competition, to foster positive interactions and identities among women.

On the other hand, Widawska-Stanisiz (2020) recognized that while the application of technologies to diversify sports and fitness for women could help in promoting healthy habits, negative feelings and behaviors can also result from fitness applications. Usage of smart phone apps, for example, could cause feelings of exercise obsession, guilt for not completing a particular set of exercises, failure due to not seeing results, and interference with everyday duties. Therefore, it is important for developers of such tools to individualize and customize their application to fit the user's level of fitness, gender, and needs.

Vincent Tinto (1999, 2017) recognized one avenue for PA, use of the CFC, as providing social integration as well as a sense of belonging, and further identified the importance of rites of passage. As explained in his Theory of Student Departure, students leave college because they fail to separate from previous socialized associations, negotiate the transition period between prior socialized associations and new college associations, or incorporate the new socialization group's values. The first stage requires students to disassociate themselves from membership in their previous society, or high school; the second identifies a transition period dependent on similarities of past and new societies; and the third reflects full integration into the academic and social societies of the college. While Tinto also acknowledged external factors' influence on retention, like whether students enroll at a community college versus a four-year college, he argued that external factors were secondary to experiences within the college.



Critics of Tinto's Theory of Student Departure argue that it is an inadequate model of student attrition because it fails to generalize beyond the traditional student. In other words, the theory appears most valid for white, middle class, residential college students and fails to consider diverse student sub-groups according to race, gender, and age; diverse IHE structures such as the community college environment; and student and family socio-economic factors and how upper, middle, and lower socio-economic backgrounds influence retention (Metz, 2002). Alan Seidman (2012) also posited that Tinto's theory only identifies what influences retention but does not address how to increase persistence. However, what influences retention is a precursor to identify how to increase persistence. Therefore, while the Tinto model is not perfect, for this study it provides an effective overview and guide because the theory identifies the CFC's positive effect on retention, establishment of a sense of belonging, and influence on the transition period between prior associations and new college associations, in this case, the first year.

### **CFCs' Positive Effect on Retention**

Under normal circumstances, CFCs help students develop a sense of belonging and have been shown to positively influence retention through their features, programs, and the built environment (Fine et al., 2016; Forrester et al., 2018; Kampf et al., 2018; Reynolds, 2007). Satisfaction is related to the understanding of benefits of value-added services (such as an exercise facility) to a university community, and it positively influences behavior intentions towards participation (Cole & Illum, 2006). Thus, satisfaction with the CFC tends to increase students' participation.

Forrester et al. (2018, p. 70) examined the CFC's effect on retention through recreational sports programs. They found that student participants are between 16% and 26% more likely to

remain in school than non-participants, and that the more frequently students use the facility, the greater the positive correlation to retention. The CFC's social aspects, for example through sports programs, are more important to retention than they are in the choice of a university (Forrester et al., 2018). Finally, according to a database of intramural participants that was cross-referenced with an institutional database of FTIC students at a small (less than 3000 students) private college, students who participated in intramural programs experienced increased retention rates of 5.9 percentage points (McElveen & Rossow, 2014, p. 50).

### ***Features of CFCs that Affect Retention***

Staffing, cleanliness, and parking are significant indicators of student satisfaction with on-campus recreational activities (Fine et al., 2016). Fine et al. also found that gender plays a role in the level of satisfaction with CFCs. Specifically, people agree that as parking, perception of staff quality, and cleanliness increase, satisfaction increases. However, women reported a lower level of satisfaction with the CFC overall. Therefore, while women's satisfaction increases based on individual features, overall, they are less satisfied with the CFC than men.

New or renovated CFC facilities had a positive impact on retention ranging from 3.3% to 11%. For first-year users who were deciding on returning, new or renovated CFCs maintained some level of importance for 89.4% to 92.5% of students, and after a renovation, students reported using the CFC more frequently (Kampf et al., 2018, p. 30). Therefore, the CFC ranks as one of the most influential buildings toward retention, and new or renovated facilities also have a positive effect, particularly with first-year students.

Gender affects effectiveness of specific programs: 85% of women would like to participate in recreational sports at least once a week. Women were more likely than men to

participate in active recreational sports in the 1-3, 4-6, and 7-9 times per week categories (Lindsey & Sessoms, 2006, p. 34). Therefore, since usage of the CFC increases retention, since 85% of women would like to participate in recreational sports at least once a week, and since women are likely to participate multiple times per week, women could be motivated to increase their use of the CFC, and thus their retention, through recreational sports programs.

In addition to programs, Reynolds (2007) investigated IHEs' PA-related built environment according to gender and retention and found a positive association. Specifically, women were more interested in facilities related to their major, classrooms, the library, and the student union, while men were more interested in technology, science and engineering, and recreation and intramural facilities. However, when both men and women were asked about overall satisfaction with certain facilities since they arrived on campus, the top six ranked most influential facilities were facility in my major, the library, technology facilities, dining halls, exercise facilities, and recreation facilities.

### ***CFCs and Gender Differences***

First-year students are important in the study of retention because persistence is commonly measured from the first to the second year; however, students' first year habits regarding health and fitness are generally poor. During the transition from high school to college, students tend to increase alcohol consumption and fast-food intake, decrease PA, and experience weight gain. While women gain less weight than men (on average, four pounds versus eight pounds) (Beaudry, 2019, p. 19), women are twice as likely to diet to lose weight, one-third as less likely to exercise (Gruber, 2008), and less likely to use the CFC (Stankowski et al., 2017).

Women experience three times as many fitness obstacles as men and are discouraged by: chilly weather, lack of energy, lack of willpower, time constraints, upward comparisons (to women they perceive as more fit, smarter, or more attractive), body image, mirrors, and feeling objectified (Arigo et al., 2020; Ball et al., 2018; Dobersek & Jeffery, 2018; Stankowski et al., 2017). Women are encouraged to engage in fitness activities by intramurals, team sports, and fitness classes (Beaudry et al., 2019; Farren et al., 2017), especially indoor cycling (Chukhlantseva, 2019). Men are positively influenced toward fitness by other men, in the form of workout partners (Beaudry et al., 2019), upward comparisons (Arigo et al., 2020), and health advertisements (Dobersek & Jeffery, 2018). In fact, women upward compare themselves an average of 16 times and up to 30 times daily, and this practice decreases their PA and self-efficacy, whereas for men these comparisons increase their PA and self-efficacy (Arigo et al., 2020, p. 8). Women are influenced by self-determination (Ball et al., 2018) and monetary reimbursements (Hooker et al., 2018), but not necessarily other women.

Finally, women exercise for extrinsic body image while men participate for intrinsic health reasons (Matteucci et al., 2012). Jacobi and Cash (1994) found that, when participating in fitness, women desire an ideal body shape that is slimmer than their current body form while men desire to have a more muscular body frame. Dobersek and Jeffery (2018) agreed and found that women engage in fitness behavior to look their best and appear thinner while men engage to increase muscle mass. Research demonstrates that exercising for extrinsic factors, like appearance, is linked to a plethora of negative consequences, such as poor body image and self-esteem, disordered eating, body dissatisfaction, and increased depressive symptoms (DiBartolo et al., 2007; Gonçalves & Gomes, 2012).

Women experience different outcomes than men after completing a life fitness course. Matteucci et al. (2012) reported that after course completion men were more motivated than women to engage in higher levels of activity for moderate, hard, and very hard activities. These behavior changes were linked to increased self-esteem, better body image, lower rates of developing an eating disorder, and an increase in overall mental well-being (Nebel, 1995; Sale et al., 2000).

Results of these gender-specific fitness studies suggest that women experience more fitness obstacles and fewer motivators than men. Women's exercising for an ideal body shape could lead to negative consequences like poor body image, while participation in a life fitness course does not necessarily mitigate these negative outcomes for women.

According to social comparison theory, individuals are motivated to gauge and evaluate how they are doing in certain domains by comparing themselves to others in order to reduce their uncertainties, and downward comparisons generally reduce uncertainties more than upward comparisons (Festinger, 1954). Women engage in upward body comparisons when they are exposed to, among other things, thin-ideal media advertisements and images of women's bodies (Tiggemann & Zaccardo, 2015). Women also experience PA decreases following negative interactions with friends, but positive interactions showed limited effects (Arigo, 2020). In summary, women's PA and self-efficacy can decrease daily, prompted by ideal-image advertisements, ideal-image women, or from negative interactions with their friends.

At the same time, Farren et al. (2017) found that social support is beneficial for women students in the CFC, particularly for increasing muscle-strengthening activities, and reported that women would use the free weights more if they knew how to use them properly. Previous

research has suggested that CFCs “soften” the appearance of their weightlifting to be more inviting to women, such as by including weight machines as well as free weights. In addition, it was found that women would participate more if the CFC were not as intimidating, a perception which could be mitigated through social support (Young et al., 2003). Women find the CFC intimidating because participation makes them feel “self-conscious,” especially when “activities are dominated by a specific gender,” i.e., men (Young et al., 2003, p. 57).

Stankowski et al. (2017) also recognized the importance of social factors for women students in promoting fitness and confirmed that women are motivated to participate in PA by appearance or social motives. Women receive more social encouragement from their friends to exercise than men (Gruber, 2008). In summary, while negative comparisons and interactions decrease PA and self-efficacy for women, positive relationships and friendships could increase both.

### **CFC Benefits**

Given that women experience many more fitness obstacles but fewer positive influences than men, but use the CFC more for social benefits, HE leaders should realize the CFC’s social benefit of sense of belonging through community and how the concept can increase women’s use. To that end, the Carnegie Foundation for the Advancement of Teaching (1990) defined a successful HE community as one that includes: (a) the role of teaching and learning; (b) the commitment of students and faculty to understand and demonstrate the educational mission of the institution; (c) freedom and clarity of expression; (d) high standards of civility; (e) appreciation of and respect for diversity; (f) a community creed that identifies the standards of conduct and outlines the responsibilities that one accepts upon becoming a member. Finally, the importance of supporting, caring for, and caring about one another was also important, as were

celebrations, traditions, and an understanding/appreciation of shared history (Dalgarn, 2001; Henchy, 2011). A shared frame of reference increases a sense of belonging, which is a critical component of retention (Hall, 2006). Miller (2011) reported that CFCs are a major factor in improving a student's sense of belonging, persistence, and overall satisfaction with the university. CFCs also create a community atmosphere, with 64.4% of students reporting the CFC helped them to feel more at home and 41.4% reporting that it facilitated making friends. Finally, those who used the facility often were more likely to experience these positive feelings than those who did not use the facility as often (Watson et al., 2006, p. 14).

CFCs can also extend a sense of belonging and caring to the broader surrounding community by their capacity to educate not only the campus population but also society. Through experiences such as summer camps for children, educational conferences, book drives, and alumni reunions, the CFC can be viewed as a central gathering place for celebrations and education for both on and off campus participants, as well as delivering programs aimed at meeting the needs, interests, and expectations of a diverse community (Dalgarn, 2001).

In addition to a sense of belonging, the CFC provides social benefits through education and development of the whole person and serves as more than just a place to exercise. Through health and wellness programs, for example, the facility serves as a venue for users to develop self-esteem by engaging in healthy habits, embrace social relationships by supporting other students' health goals, and improve their interpersonal skills by collaborating with partners and on teams (Dalgarn, 2001). Through intramural sports, the CFC also provides personal social benefits such as improved self-confidence; cultural social benefits, or increased understanding and tolerance of different cultures; social group bonding and decreased social alienation;

university integration, or improved sense of belonging at the university; and reliable alliance benefits like increased trust in peers. The results of Artinger (2006) study concluded that when using the CFC, students gained the most in the areas of personal social benefits and social group bonding (Artinger et al., 2006).

### **CFC Best Practices**

Given that women are motivated to participate in PA by social motives, that the CFC provides sense of belonging and social benefits, but that the research is limited about women's CFC best practices, HE leaders should review CFC best practices, as they provide a foundation for effective policies and programs and some address women's social needs.

### ***Usage Themes and Recommendations***

Stankowski et al. (2017) identified common CFC usage themes along with corresponding recommendations and found that:

- The most common constraint is time, therefore managers should educate regarding least crowded usage times.
- Students are more likely to visit if they have a friend to go with, so programmers should design a workout buddy system.
- Students (especially women) would use the facility more if they understood how to use the equipment; therefore, managers should provide easily accessible instruction through staff, online videos, and skills courses.
- Intramurals, sports clubs, and aerobics are the most popular programs and serve individual interests, so offer them to students, faculty, and staff.



- Wellness programs provide resources needed to pursue healthy lifestyles and should include fitness assessments, follow-up, and a resource library.
- Wellness staff should extend programs into the campus community, such as in the residence halls and during staff in-service meetings.
- Wellness staff should collaborate with other on-campus support groups, like student health, the women's center, and residential life.

### *Campus Fitness Culture*

In addition to the CFC, Petruzello et al. (2020) shared that PA and movement should become part of the campus culture through the built environment, active transportation, and outdoor activity. Sparling (2003) agreed and recognized that the university campus should provide an environment that is favorable to establishing regular patterns of PA and exercise, including not only the use of facilities but also through pedestrian-friendly campuses. Specifically, campuses should provide a physical environment known to be positively associated with participation in PA, including accessible facilities with convenient location and transportation; outdoor opportunities for activity, like obstacle courses; safety in both interior and exterior environments; and aesthetic attributes, like attractive interior décor and exterior landscape. In other words, “Rather than simply encouraging people to make better choices in the face of considerable social, practical, and material barriers, it is often more effective to address upstream factors—to change the environment in ways that make healthy behaviors easier and unhealthy behaviors harder to do” (Hook & Marcus, 2020, p. 644).

Building on a fitness culture, IHEs should implement a culture cycle (Hook & Marcus, 2020) or provide health and wellness through a variety of opportunities and programs that

consider past, present, and future goals. For example, while state-of-the-art facilities can increase PA, changing the physical environment can be time-consuming, costly, and challenging as many campus buildings are older and difficult to modify. Therefore, reinstating PA programs from past practices as part of a general education requirement could reinforce health and wellness culture today, but they should be revised to not only provide health and fitness knowledge but to also include the tools necessary to strengthen PA habits for a lifetime, like a consistent fitness routine.

### ***Initiating and Strengthening Programs***

Sweeney (2011) agreed that recycled programs can be effective in increasing PA and recommended strengthening these programs with Healthy Campus guidelines, which comprehensively address student health issues such as sexual behavior, PA, and obesity and provide a well-documented basis for student discussions; economic homework, or a report that demonstrates cost-saving and revenue generating initiatives associated with better student fitness; advocacy support through an advisory committee for programs, including outside business and recreation leaders along with campus community members; and a position statement announcing to the college community the institution's PA philosophy. The guidelines should be aligned with the Physical Activity Guidelines for Americans, which recommend that adults participate in 150 minutes per week of moderate or 75 minutes of vigorous aerobic PA (Sweeney, 2011, p. 20).

At Vanderbilt University, for example, the CFC aids in increasing retention by using programs which not only increase PA but also improve students' quality of life. One such program which improves the lives of student-parents is a summer day camp for children six to 12

years of age that includes swimming, crafts, and theme days, and is designed for both instruction and supervision. Each fall, members of the undergraduate student population complete a Quality of Life Survey. From 1997 to 2001, 75% percent of the student respondents reported visiting the CFC and using its programs, and 45% of students reported the CFC aided in both their recruitment and their retention (Dalgarn, 2001, p. 71).

### ***Women-Focused Practices***

Effective CFC management and programs work toward increasing student PA and retention, and although women-focused fitness research is limited, aspects have been identified as important for their participation. According to Erik Kocher, an architect at Hastings + Chavetta, "More women are going to college and we're designing facilities on campuses which are 55% to 60% female" (Attwood, 2017, p.3). For women especially, facilities should be conveniently located and appealing in design, as women are attracted to shiny fixtures, bright lighting, and state-of-the art acoustics. Similarly, Kocher emphasized the importance of healthy design outside the facility including well-maintained, wide-open spaces. "It's not just the wow factor inside, it's the lifestyle, the idea of embracing wellness," agreed James Braam of HOK Design. "At the end of the day, it's about the students and what they need and what can improve their quality of life" (Atwood, 2017, p. 3).

In addition to design, mitigating women's obstacles such as feelings of intimidation or discomfort in the weight room have been shown to increase both participation and sense of belonging (Cole, 2020). One factor which improves women's comfort when they are using the weight area with men is the presence of women employees who provide guidance and knowledge. Sarah Cole, the recreational coordinator at the University of California, shared that

CFCs demonstrate inclusive design by hiring women and designing women-preferred activities. “At our CFC, half of our personal trainers and 85% of our group fitness instructors are women and all of our fitness programming is created and developed by women” (Cole, 2020, p. 2). Cole also emphasized program trends which support women’s social needs, for example, high impact interval training, a variety of brief but vigorous exercises in a mostly-women attended class, and partner activities like obstacle courses which encourage camaraderie. Use of personal trainers is also effective in promoting exercise for women (Fischer & Bryant, 2008; Widawska-Stanisiz, 2020).

Williams, Sienko, et al. (2018) studied women’s preferred programs according to race and noted fun and engaging fitness and social activities such as dancing for African American, Black, Hispanic and Latina women, and swimming for White women. When asked what would help them to become more physically active, White, Hispanic and Latina women noted better time management, and African American and Black women reported exercising with a partner, a practice which aligns with social factors.

Finally, Williams, Greene, et al. (2018) identified effective PA programs and practices for women at universities using a group class or club structure, which included offering a credit course or PA elective; organizing walking groups during free periods, as well as a day of exercise and healthy eating; offering group incentives for time spent in the gym, like scholarships and discounted health insurance; offering more group activities, like Zumba classes, free outdoor clubs, and boot camps; and offering club sports, like dancing, bicycling, and hiking. Flexible programs are also convenient for employed students, who have limited time and opportunity for fitness.

In addition to design and programs, Haney (2018) found benefits of wearable fitness technology (WFT) for women college students. For example, personal fitness tracking devices such as arm bands and wrist watches encouraged calorie tracking, nutritional awareness, PA, accommodation of health risks, and recognition of the amount of PA required for positive health outcomes. WFT can also promote social interaction in the form of team support toward fitness and health outcomes.

Finally, conceptual physical education (CPE) has proven to be an effective motivator for women in terms of increasing PA through a classroom social structure. Project GRAD, for example, integrates concepts and methods from exercise science and behavioral theory into a college-credit course and includes lectures about the risk of physical inactivity, recommended PA patterns, principles of injury prevention, and behavioral self-management. In addition, the lab portion teaches physical activities and helps students self-manage their own PA programs. For men, PA outcomes were not affected, but for women, effects were significant including increased total caloric expenditure, improved strength and flexibility, and increased total energy expenditure during leisure time (Leslie et al., 2001; Stapleton et al., 2017). Another CPE program, the ARTEC project, also promotes PA through group courses and includes weight training, aerobics, fitness assessments, and swimming. The project found that men were motivated to be active for weight gain, while women were motivated by weight loss, appearance, and locations closer to home. From these findings, program offerings were matched with student preferences for activities, types of assistance needed, and social support. After eight weeks, the program resulted in a significant increase in the proportion of women students reporting higher levels of PA (Leslie et al., 2001; Stapleton et al., 2017).

### **Alignment of Tinto's Theory of Student Departure with CFC Best Practices**

Returning to Tinto's Theory of Student Departure, Table 1 summarizes the theory's postulates, how they correlate with CFC best practices, and how this correlation demonstrates results towards increasing students' sense of belonging and social benefits. Specifically, the first column of the table defines the theory's aspects of a sense of belonging; social engagement; the first rite of passage phase, separation from the prior association; the second phase, transition into the new association; and the final phase, incorporating the new association's values. The remaining columns categorize relevant CFC best practices according to community atmosphere, health and wellness programs, intramural programs, best practices, and usage and recommendations.

In examining each theory postulate and how it corresponds to community atmosphere at the CFC, Table 1 summarizes students' experience of a sense of belonging or "feeling more at home" at college when using the CFC. The social engagement benefit is a result of how often students use the facility: the more often students use the CFC, the more likely they are to experience engagement. The stages of Tinto's "rites of passage" are also analyzed, including the feelings students develop at each stage and how the CFC's community atmosphere positively affects their feelings. For example, the first phase, Separation, calls for words of encouragement and these can be accomplished through CFC celebrations and teaching and learning events. Students in the second phase, Transition, need to combat feelings of isolation and these can be mitigated by making friends at the CFC. Finally, for the third stage, Incorporation, to occur, the student need for connectedness can be satisfied by the CFC's offering support and caring for and about others (Nora, 2001).

**Table 1**

*Alignment of Tinto's Theory of Student Departure with CFC Best Practices and Student Outcomes*

<b>Tinto's Theory Elements</b>	<b>Application to Freshman Year Experience</b>	<b>CFC Community Atmosphere</b>	<b>CFC Health &amp; Wellness Programs</b>	<b>CFC Intramural Programs</b>	<b>CFC General Best Practices</b>	<b>CFC Usage &amp; Recommendations</b>
<b>Sense of Belonging</b>	Students feel they matter and belong to the new community	Students feel more "at home" (Watson et al., 2006)	Students connect with similar health goals (Dalgarn, 2001)	University benefits; sense of belonging (Miller, 2011; Artinger et al., 2006)	Outdoor fitness; hiking & bicycling (Petruzello et al., 2020; Sparling, 2003; Hook & Marcus, 2020)	Buddy system (Stankowski et al., 2017)
<b>Engagement</b>	More positive interactions are better than fewer.	More often used, more likely to benefit (Watson et al., 2006)	CPE such as GRAD & ARTEC courses (Hook & Marcus, 2020; Williams, Greene et al., 2018)	Social benefits; bonding (Artinger et al., 2006; Williams, Sienko et al., 2018)	Convenient location & 24-hour access (Atwood, 2017)	Healthy Campus PA guidelines (Sweeney, 2011)
<b>Rite of Passage #1: Separate from Prior Association</b>	Encouraging words, positive gestures in social endeavors	Gathering place for celebration, teaching & learning (Dalgarn, 2001)	Self-esteem through healthy habits (Dalgarn, 2001)	Alliance benefit; peer trust (Artinger et al., 2006)	Varied instruction about equipment use (Stankowski et al., 2017)	Purpose statement (Sweeney, 2011)

<b>Rite of Passage #2: Transition into New Association</b>	Isolated if not part of a community; withstand stressors	Making friends (Watson et al., 2006)	Build social relationships by supporting others' health (Dalgarn, 2001)	Personal benefit; self confidence (Artinger et al., 2006)	Group class variety (Williams, Sienko et al., 2018)	Fitness library (Stankowski et al., 2017)
<b>Rite of Passage #3: Incorporate into New Association</b>	Sense of connectedness; repetitive contact is important	Caring for and about others (Dalgarn, 2001; Henchy, 2011)	Interpersonal skills through team collaborations (Dalgarn, 2001)	Cultural benefit; acceptance (Artinger et al., 2006)	Technology for goals; emphasize sociability (Haney, 2018)	Programs into campus community (Stankowski et al., 2017)



## Chapter Summary

Given that fewer than 74% of fall 2017 freshmen returned for fall 2018, (National Student Clearinghouse Research Center, 2019), understanding the CFC's positive effect on retention (Danbert et al., 2014) is important, especially with respect to women, who do not use the CFC as frequently as men (Stankowski et al., 2017). In fact, women are twice as likely as men to not exercise and instead diet to lose weight (Gruber, 2008), and identify more fitness obstacles and fewer motivators (Arigo et al., 2020; Ball et al., 2018; Dobersek & Jeffery, 2018) than men. Women also do not adjust as well to college (Enochs & Roland, 2006), which the CFC's sense of belonging (Tinto, 1999) and social benefits (Dalgarn, 2001; Farren et al., 2017; Miller, 2011; Stankowski et al., 2017; Watson et al., 2006) can improve. This literature review identified and discussed student retention history, physical activity in young adults and on college campuses, and effects of CFCs on fitness and retention. It went on to discuss best practices in general and some, but limited, CFC best practices specific to women, aligned with Tinto's Theory of Student Departure. Chapter 3 describes the methodology that was used to collect and analyze information about four case-study CFCs that have successfully designed and implemented programs for women.

## CHAPTER 3: METHODOLOGY

Women do not navigate the transition from high school to college as well as men (Enochs & Roland, 2006), but participation in CFCs can ease that transition by providing a sense of belonging (Tinto, 1999) and social benefits (Dalgarn, 2001; Miller, 2011; Watson et al., 2006). While research identifies CFC best practices, some of which provide a sense of belonging, research is limited regarding CFC best practices which provide social benefits regarding women. To fill this gap, this qualitative exploratory multiple case study provided information that was used to create an initial framework for college campuses that deliver women-focused fitness. In this chapter, I review study design, sample selection, data collection, analysis and how trustworthiness was ensured.

### **Study Design**

This qualitative, exploratory study highlights the nature and essence of women-focused fitness areas, college campuses that deliver women-focused fitness, and how those areas align with sense of belonging and social benefits. I explored four case studies that are examples of women-focused fitness areas and college campuses that deliver women-focused fitness. The study's guiding questions were:

- How do CFCs in HE determine the needs of their women students?
- How do CFCs accommodate the needs of women students?
- How do these accommodations relate to students' sense of belonging, for example through community and social factors like forming social relationships?
- How are CFC efforts to meet women's needs assessed and evaluated?

Because this study was a multiple case study, I collected and analyzed data from four CFC cases. I first present findings as individual case studies or “portraits” of each CFC’s women-focused fitness areas, activities, programs, and processes. Second, I form a generalization about what constitutes an effective women-focused fitness model. In other words, I used two stages of analysis, within-case, where each case was first related as a comprehensive case in and of itself, and cross-case, which built a general explanation that fit all the individual cases (Merriam & Tisdell, 2016).

### **Sample Selection**

To determine the three to five cases for study, I first identified a potential sample of 23 CFCs I believed offered women-focused fitness. I found this potential sample by way of my contacts with academic women, campus fitness journals, knowledgeable individuals in the field, and online resources, for example a discussion thread identified through the National Intramural Recreational Sports Administration (NIRSA) website. I emailed 23 CFC directors (Appendix A) introduced myself, described my study, explained that I suspected they offered women-focused fitness, and that if so, I would like to interview them over the telephone to determine their site’s focus on and commitment to women’s fitness. Eleven individuals responded positively to my invitation. My preliminary telephone questions for these 11 CFC directors included:

- Does your facility measure its effect on retention overall and for both men and women exclusively?
- Does your facility recognize value in gender accommodations to increase its usage?
- Does your facility offer women-focused accommodations and, if so, what are they?

- What have been the outcomes, such as feedback, of the women-focused accommodations on women's use and retention?
- What future goals does your facility have regarding this topic?
- Who do you know in HE that offers/delivers women-focused fitness areas, activities, programs, and processes?

### **Data Collection**

Based on the results from the 11 preliminary telephone interviews, I selected a group of four HE CFCs to study in-depth because their CFC leaders answered most of or all the telephone interview questions in the affirmative and provided detailed women's-focused fitness information to substantiate their answers. In all I collected data from five interviews, five observations, and five artifacts.

### ***Interviews***

I conducted interviews of the leaders of the four CFCs via Zoom. Benefits of an online interview were that I was not constrained by geography in considering participants and therefore could interview leaders from across the United States and Canada. While online interviews can pose challenges, such as limited knowledge of platforms, problems with internet connections, and increased risk of compromised confidentiality (Merriam & Tisdell, 2016), I did not experience these challenges to any significant extent.

I interviewed two leaders from University C because the second interviewee was recommended by the first interviewee as a current CFC leader who also had used the facility as a student prior to becoming an employee. I determined that the second interviewee could provide valuable input because the leaders could share insight about the CFC both prior to and following

the introduction of accommodations for women and could offer feedback as to their effectiveness in fulfilling women's needs. The second interviewee's job responsibilities included recruiting and training instructors and she had also served as an instructor. As a result, while the data collected from the second interviewee added value to my study, I acknowledge that the framework is more influenced by University C's women's accommodations.

For interview questions (Appendix B), I used a combination of structured and unstructured questions to gain both standardized information and fresh insights with a variety of question types: background, feeling, knowledge, and opinions and values. In addition to recording the five Zoom interviews, I also took written notes because both recordings and notes provide value in coding the categories and social benefits of the women-focused fitness accommodations, in comparing similarities and differences in feedback, and in recognizing non-verbal cues like eye movement and body posture.

### ***Observations***

To substantiate the interview findings, I also observed five women-focused fitness areas, derived from three of the campuses: (a) women's only pods, constructed from refurbished squash courts, containing fitness equipment women tend to use and viewed from videos and photographs; (b) an in-person predominantly-women yoga class; (c) an in-person temporary weight machine area, constructed during the pandemic, to which women migrated; (d) a women's Zumba class, viewed from videos and photos; and (e) a women's Zombie Zumba event, also viewed from videos and photos. The photos and videos were gathered or created by the CFC leaders and emailed to me; however, they did not appear to be marketing materials because they did not appear in a polished or professional format. The observations provided

context and specific incidents and behaviors and were useful as reference points. Observations were also important in this qualitative study because interviewees may not have felt free to talk about or may have not wanted to discuss all topics, including those of dissension and strife, which could be potentially be observed in the environment (Merriam & Tisdell, 2016).

Upon entering the in-person observation environment, I asked the CFC director to introduce me. I tried to be passive, unobtrusive, and friendly and honest. I explained that I was conducting field research for my dissertation study. I positioned myself as a “complete observer,” only observing, and I refrained from verbal and physical interaction with the observed members (Merriam & Tisdell, 2016). I kept my observation short in order to avoid becoming overwhelmed.

During the in-person observation, I observed the fitness facility overall but mainly the female-focused fitness area according to: physical setting, including objects, resources, and space allocation; participants, in terms of who was there, who wasn't there, how many people were involved, and how people organized themselves; activities, interactions, and the sequence of activities, including norms, rules, and typical or unusual activity; conversations regarding who spoke to whom and who listened, what was said, silences, and non-verbal behavior; subtle factors like informal activities, symbolic meanings, dress, physical cues, and what did not happen; timing in terms of time of day, time of semester, and day of the week; and my own behavior, such as how I affected the scene, what I said and did, and what thoughts I was having (Merriam & Tisdell, 2016).

I also recognized the potential for researcher anxiety, so I didn't worry about the flow of activities or doing the right things at the right time and how to make sense out of what I was

studying. As a fitness participant myself, I tried to avoid over-identifying with the study group. I realized my presence could affect the climate of the setting or change it from informal to formal; therefore, I remained as unobtrusive as possible. Finally, I took descriptive notes, including direct quotations and observer comments (Merriam & Tisdell, 2016), and used a self-created checklist to help me focus on the participants, setting, and activities outlined.

### *Artifacts*

In addition to interviews and observations, I also gathered data through artifacts which included women's pre- and post- feedback from Women on Weights (WOWs), post-feedback from group fitness classes, post-feedback from a Ladies Night event, and CFC usage and retention data. I determined if an artifact brought value to my study by asking, does it contain information or insight relevant to the research questions? Can the artifact be acquired in a reasonably practical yet systematic manner? If these two questions were answered in the affirmative, then the artifacts were reviewed and provided insight for the study's findings (Merriam & Tisdell, 2016).

Once an artifact was located, its authenticity and, if possible, the conditions under which it was produced were assessed. For example, women's feedback from the WOWs course appeared more authentic because it was provided by the interviewee in its original, primary form, whereas the Ladies Night feedback was provided in a secondary or spreadsheet format. The WOWs feedback included both pre- and post- input, while the Ladies Night was post-feedback only, gathered after the conclusion of the activity so that CFC leaders could determine what was enjoyed the most and least, and whether the women would return to the event. I was aware of each artifact's history, in terms of when it was obtained; how it came into my hands, for example

who delivered it to me and their title; whether it was original or tampered with, which was mitigated when information was delivered in its original format; the artifact's purpose or reason it was initiated; and the author and their bias (Merriam & Tisdell, 2016).

### *Process Efficiency and Effectiveness*

To ensure that my data collection process was effective and efficient, I:

- Forced myself to confine the study to only HE women-focused fitness center areas, activities, programs, and processes.
- Forced myself to limit the type of study, or in this case how the women-focused fitness practices affected students' sense of belonging, such as through community and social aspects (e.g., social interaction).
- Developed analytic questions such as: How were women using the area? How did their use relate to social factors like social interaction? How else did social factors and sense of belonging present themselves and/or play out in the area?
- Planned data collection sessions according to previous findings: for example, from one interview I noted the importance of the instructor in providing women a sense of belonging in their programs, and therefore I asked the next interviewee if they noticed the same or different impact in their women's programs.
- Wrote memos to myself about what I was learning in the setting and how it related to larger theory, for example, how the women's behavior related to Tinto's (1999) Theory of Student Departure and its identification of sense of belonging.
- Tried out ideas and themes on participants to advance analysis. For example, I explained a theme from a past interview which related to women's misuse of



equipment and learned whether the present interviewee responded the same or differently about the topic.

- Used my literature review to enhance analysis: for example, I asked myself if I observed “sense of community” elements within the area such as women caring for one another.
- Played with analogies and avoided nearsightedness by asking myself, “What did that remind me of?”
- Recognized saturation, or the point at which data analysis produced no new information or insights; showed the same things I’d seen earlier; provided small bits of information which were minor in comparison to the effort I spent collecting; had produced categories, themes, or findings robust enough to cover what emerged from the data collection (Bogdan et al., 2011).

### **Data Analysis**

Data collection, management, and analysis were simultaneous processes that interacted with each other and with me, and the process-researcher relationship became more intensive as the study progressed and once all data were collected. Therefore, for organization purposes I used coding or shorthand designations like colors, numbers, phrases, or words to categorize data and align it with aspects of the study:

- Purpose: Used a study designed to increase information about women-focused fitness areas and college campuses that delivered women-focused fitness effectively, specifically to inform the decisions and actions of IHE leaders.
- Research questions from the perspective of CFC leaders:

- How did HE CFCs determine the needs of women students?
- How did CFCs accommodate the needs of women students?
- How did these accommodations relate to students' sense of belonging, such as through community, and social factors like forming social relationships?
- How were CFC efforts to meet women's needs assessed and evaluated?

I began the coding process by considering “trees”, an open form of coding which captured data with a word or phrase that was responsive to the research questions (Appendix C) (Merriam & Tisdell, 2016). For example, in terms of women-focused accommodations, I identified four main categories of accommodations, areas, activities, programs and processes. Next, I returned to the “forest” and identified main themes, insights, and answers to the research questions, for example: What are the women-focused accommodations? Do the accommodations fulfill women's needs and if so, what are those needs? Do the accommodations deliver social benefits and if so, what are they? How are the accommodations assessed and evaluated?

I developed data categories from my research questions and used the constant comparative method, moving between concrete and abstract ideas. I also used inductive reasoning, in which I gathered data to build a women-focused fitness framework. Using axial coding, I combined codes from many specific categories into fewer, more comprehensive categories, where the fewer the categories the greater the level of abstract ideas and ease with which I could communicate my findings. For example, while I noted effective women-focused areas, activities, programs, and processes, I also noted the reoccurring theme of “importance of the instructor” for social benefits; therefore, effective instructor recruitment and training was included as one facet of the framework. These comprehensive categories were formed from ideas

which were frequent, introduced by the audience, unique, or from inquiry not otherwise recognized (Merriam & Tisdell, 2016).

Periodically between coding stages, I considered my biases or what I might be projecting onto the data based on my beliefs and life experience, such as being a lover of fitness, a mom to a former NCAA athlete, and a HE professor who compared women and men's behavior in class. For example, the perception I held that men in my class more aggressively pursued and embraced leadership roles frustrated me; however, instead of allowing this perception to create a negative attitude toward HE women, I used it as motivation for this study to increase the leadership potential of women.

### **Validity, Reliability, Credibility, and Trustworthiness**

Ensuring validity and reliability in qualitative research involved conducting the investigation in an ethical manner. Therefore, at the end of my study I asked myself: Would I feel sufficiently secure about my findings to construct social policy or legislation based on them? (Merriam & Tisdell, 2016). In doing so, I provided the reader with a study description that was detailed enough to show that my conclusion "made sense."

Internal validity deals with the question of how research findings match reality or, in the case of this qualitative research, people's construction of reality or how they understand the world. While according to Merriam & Tisdell (2016), I was not going to be able to capture an objective "truth" or "reality" from qualitative research, I used the following strategies to increase internal validity and credibility of my findings:

- triangulation, or multiple methods of data collection including interviews, observations, and artifacts;

- adequate engagement in data collection so the data and emerging findings felt saturated, or I began to see or hear the same things over again and no new information surfaced;
- looked for data that disconfirmed or challenged my emerging findings; for example, when I noticed women did not enter a group fitness class together, I looked for an opposite set of behaviors in my second observation and noted that women did enter the women-focused area together;
- used member checks, that is solicited feedback about my preliminary findings by asking some of the Zoom interviewees if what I had noted from my initial telephone screening was accurate;
- explained my biases, dispositions, and assumptions regarding the research so the reader understood how I arrived at my interpretation of the data: specifically, my love of fitness, my role as parent to a former NCAA women's athlete, and my experience as a HE instructor.
- used peer debriefings conducted by two colleagues familiar with my research, who are also both members of my cohort and Doctoral students themselves, Ellen Wheeler and Candice Veilleux-Mesa (Merriam & Tisdell, 2016).

External validity refers to the extent to which research findings can be replicated or applied to other situations, while reliability refers to the consistency within the employed analytical procedures (Merriam & Tisdell, 2016). Validity and reliability can be problematic in the social sciences because many interpretations exist of what is happening with no benchmark to establish reliability in the traditional sense (Merriam & Tisdell, 2016). The more important

question I asked then is whether my results were consistent with the data collected; therefore, I incorporated triangulation, peer examination, and investigator's position to ensure reliability, along with an audit trail which explained how I arrived at the results. I further enhanced the external validity or replicability of this study by using a small, nonrandom, purposeful sample to understand my subject in depth, not to find out what is generally true of the many. Finally, I employed rich, thick description, a highly descriptive, detailed presentation of the setting and the findings of the study.

### **Chapter Summary**

Over 38% of students on average do not return to their initial college for their second year (National Student Clearinghouse Research Center, 2019) and while use of the CFC can improve retention, women are less likely to use it. This goal of this study, therefore, was to develop a framework of women-focused accommodations based on what HE exemplars are actually doing to motivate women to use the CFC and improve their retention. I created this framework by conducting a qualitative exploratory multiple case study of HE women-focused fitness areas, activities, programs, and processes by gathering data through interviews, observations, and artifacts. I used Tinto's (1999) Theory of Student Departure to focus on how the fitness areas provided students with a sense of belonging such as through community and social factors like forming social relationships. In Chapter 4 I describe the findings and results of the study.

## CHAPTER 4: FINDINGS AND RESULTS

Given that only 61.7% of students are retained at their starting institution after their first year (National Student Clearinghouse Research Center, 2019), and recognizing that use of the CFC positively influences retention (Danbert et al., 2014) but women are less likely to use it (Stankowski et al., 2017), HE leaders need to understand how to motivate women to use the CFC to increase their institution's retention rates. Research has tended to focus on CFC best practices to increase retention generally, not necessarily on women-focused best practices that also align with social benefits. This dissertation used a qualitative exploratory multiple case study design to produce research-based knowledge about women-focused fitness areas and college campuses that deliver women-focused fitness effectively. This chapter reports on the results of four case studies of CFCs that effectively deliver women-focused fitness. The information was used to create an initial framework of these women-focused fitness areas and how they align with women students' need for belonging and social benefits. The goal was for IHE leaders to learn how women-focused fitness areas look so as to be able to implement them to motivate women to use the CFC and improve their retention.

As described in Chapter 3, I solicited 23 CFC directors for this study on women-focused fitness, and from among those contacts I conducted 11 preliminary telephone screening interviews. From those interviews, four CFC directors confirmed all six of the interview questions as being true and provided detailed explanations to support their answers. Therefore, these four CFCs were used as cases for my study. The four CFC finalists confirmed that their institutions provided women-focused fitness accommodations in the four categories of areas,

activities, programs, and processes. I present my findings first chronologically, institution by institution; then by accommodation category; and finally, thematically in a cross-case analysis.

## **Interviews**

I interviewed five CFC leaders from the four CFCs, all of whom appeared to be between 25 and 40 years of age. Interviewee #2 was dressed in a suit jacket while the others wore either exercise attire, long sleeve t-shirts, or their institution's logo-designed sweatshirt. Most of the interviewees also wore smart/fitness watches. The participants appeared relaxed; Interviewee #5 pulled her foot up onto her chair and Interviewee #4 wrapped a blanket around her early in the interview commenting, "it's so cold in here." All the participants appeared forthcoming, paused to consider their answers, and spoke slowly and thoughtfully. The exception was Interviewee #5 who responded to questions quickly, most likely because they requested the interview questions in advance. Each participant used non-verbal arm/hand movements to emphasize points, like when Interviewee #4 raised her arms to demonstrate women's weight-lifting movements and when Interviewee #3 used her fingers to count the number of women's needs satisfied from their accommodations. Interviewee #1 leaned toward and looked directly into the camera, when they shared the importance of providing women equal opportunities in the CFC, while Interviewee #2 was particularly supportive, asking questions about my research process and using phrases like, "I'm excited that you asked that," and "that's a super-fair question." I noted that Interviewee #2's enthusiasm was probably related to the fact that my daughter had attended their university and participated on their women's crew team. Because all the interviews were conducted online through Zoom, I also noted the participant's virtual backgrounds, which were either their CFC offices, their homes or on one occasion a view of the CFC's pool at sunset. Finally, the women

smiled occasionally, for instance when Interviewee #4 shared the story of their CFC bullying issue and when Interviewee #5 shared they, “wear many hats,” in terms of their roles/responsibilities.

## **Case Studies**

### ***University A***

**Women-Focused Programs.** University A, a large public university in Canada, offers a women-focused fitness program and women-focused areas. Spearheaded by a woman Fitness Center Manager (FCM), Interviewee #1, who had previously developed a women’s weight training program at a university in Sweden, the six-week program called “Women on Weights” (WOWs) teaches women weight training techniques in an exclusive women’s-only space. Teaching proper use of equipment is important because the FCM noted that women sometimes misuse CFC machines; for example, they use the hamstring machine as a glute exercise. Men, on the other hand, tend to need instruction regarding proper CFC behavior such as limiting vocal noise. The WOWs program also includes a buddy system in which women choose a partner with whom to practice weight-lifting techniques for homework when they are out of class. The partners communicate using WhatsApp, a mobile phone application where they can confirm workout times, which increases students’ accountability and program retention.

The women participants are surveyed both prior to and upon completion of the WOWs program. A copy of the WOWs Initial Questionnaire was provided by the FCM (Appendix D). Of the six respondents, who all described themselves at the “beginner” level, all six reported the primary reasons they had not engaged in any or much resistance exercise were “lack of knowledge/technique,” while five reported “lack of time,” four noted “intimidation by



men/women in the gym,” and three checked the box next to “afraid of hurting myself.” One student noted in a space for “other” reasons, “I used to be really fit in high school so it’s embarrassing to me to go back to the gym.” The reasons for joining the course, according to the survey results, were to improve fitness/weight management, increase knowledge/expertise about fitness training, and improve confidence while participating in fitness training and fitness activities. Finally, women expected to gain or learn the following from their instructor: proper technique, increased confidence, motivation/encouragement to succeed, knowledge to continue the program after its completion, help in achieving personal goals, guidance regarding safety precautions, patience, and positive energy.

The WOWs final questionnaire (not shown) is administered when women complete the program. All seven respondents scored both the overall program and the program instructor a minimum of four out of five possible points or nine out of ten possible points, based on two different survey formats, one group of surveys used a scale from one to five and another group of surveys used a scale from one to 10. Also, all participants achieved their “top 3 goals/reasons for joining the program” and realized their “top 3 expectations of the instructor.” The students’ “favorite parts” of the course included: “being pushed outside of my comfort zone,” “learning how to properly use lifting equipment” and “seeing progress from one week to the next,” “my new friends!” and camaraderie, “feeling very confident!” the “helpful, approachable, and supportive” instructor, and the small classes. “Least favorite” aspects included “none,” “lack of discussion about lifting styles,” and desire for more personalized feedback and more gym equipment. Suggested improvements emphasized longer or more sessions and adding a WOWs level II course. Within the seven final questionnaires, the researcher counted four smiley face

emojis and 16 exclamation points written at the end of positive comments. Subsequently, based on the “overwhelming positive feedback” noted by the FCM, a more advanced Level II WOWs course was created.

**Women-Focused Areas.** In addition to the WOWs program, University A also provides women only exercise spaces. Known as pods, and initially created to house the WOWs programs, these refurbished squash courts provide women with an exclusive area to learn weight-lifting techniques with the intention to eventually “take the training wheels off,” according to the FCM, and transition to using the full facility. Given that the women’s pods are located on a lower level than the main fitness center, the FCM also recognizes not only the importance of refreshed and welcoming aesthetics not only of the pods but also of the areas and hallways leading to the pods. The two existing pods are popular with women; therefore, a third pod is being constructed. University A decided to construct women’s-only spaces rather than offer women’s-only fitness times at the CFC because the FCM was concerned about what days and times would satisfy women participants, how men might respond to their usage limitation, and who should be included or excluded in regard to gender-fluid categories.

The layout and design of the pods, which I examined from two photographs and two videos provided by the FCM, includes a 30 by 20-foot space which appeared newly remodeled, well-organized, clean, and with state-of-the-art equipment. Room colors included muted gray floors and walls as well as bright blue, red, yellow, and green free weights, and exercise balls. The equipment in one room included a modern stationary bike, numerous dumbbells in various sizes, a variety of weight machines, a large mirror covering most of the rear wall, mats for stretching, and a large flat screen television on the entrance wall. Upon entering the pod,

immediately to the right, were cleaning cloths, spray bottles containing a cleaning solution, and Covid-19 face coverings. The second pod, with a similar design, level of cleanliness and organization, included a stationary bike, a large weight-lifting rack alongside the rear-wall mirror, a fan for air circulation, stacked wooden boxes to perform box-jumps, and bright pink, red, and yellow fitness balls.

**Need Fulfillment and Outcomes.** The FCM reported that the women-only pods are the “most enjoyable” part of the women’s accommodations and that the spaces provide feelings of “safety and not feeling judged or stared at.” The women also appreciate the variety of equipment supplied in the pods, which includes TRX bands, circuit weight-training equipment, televisions to display workout programs, and light dumbbells and weight plates, so they can build strength but not “what would be needed to play football” according to the FCM. The “most engaging” and “most adding to confidence” is the WOWs program, which introduces a variety of moves, teaches myth-busters about what it means to be a woman training, and is led by a woman instructor who is encouraging, caring, and “makes them feel safe.” The WOWs program also delivers the “most bonding” aspect, the buddy system which requires women to connect with a partner outside the course, to get to know each other and to complete their homework together. For “something you would change,” the women suggest a longer WOWs course timeframe for eight instead of six weeks; however, women note they “don’t know if they’d want to pay more than the \$139” price for a longer program.

**Future Planning.** In the future, University A will be adding a third pod and is considering converting a “junk room” into a multiple-use, women-focused fitness space. As part of a corporate sponsorship with a fitness performance brand, the converted space would house

on-demand virtual programming, one-on-one personal training services, and the WOWs program. Although, according to the FCM, “one or two men have said kind of in jest, ‘Is there going to be anything for men?’” in general the women-focused fitness programming and areas are widely well received because “other CFC programming is predominantly male, like the Olympic Weightlifting course,” and “the gym is already a men’s space.” The FCM continued,

We want to change the underlying idea that athletics and rec is only for varsity athletes.

This is a space where we want you to feel welcome. We want you to have athletics and recreation be a part of your university experience because we know how important health and wellness is not just to your, you know your overall physical well-being but your mental well-being.

To that end, University A’s CFC messaging is recreation-focused and inclusive. Marketing strategies to support this messaging include a revised user-friendly website; CFC updates in the campus newsletter; an affordable price point for fitness classes, \$20/semester for two classes/week; fitness outreach to geographically distanced campus areas; and use of corporate-fitness sponsorships to improve and extend the programming.

### ***University B***

**Women-Focused Programs.** University B, a large public university in the southeast region of the United States, offers women-focused programming, areas, and processes. For programming, University B provides a WOWs program, first offered in 2012 by the Assistant Director of Wellness (ADW), Interviewee #2, a woman, and her male colleague; a women’s-only swim-time in the CFC pool; “Emtowerment,” a women’s rock-climbing course; bilingual yoga for women; and “Werq” and “Buti,” unique group fitness classes tailored to women. For added

privacy during group classes, University B is converting the current area's window blinds to a frosted non-see-through glass.

**Women-Focused Areas.** While University B does not create work out spaces designated exclusively for women, the campus offers three different CFCs, two of which seem to attract women. One main larger facility is located on one side of campus, while a second smaller “boutique” CFC is available on the opposite side of campus, and a third CFC is located on a satellite campus 15 miles from the main campus. According to the ADW, women tend to use the on-campus boutique location particularly for cardio machines, and the satellite location seems to attract women because its interior design features soft muted colors and it offers a holistic approach to fitness and health. On a side note, the satellite CFC shares its services with a local community college to provide health and wellness to diverse student groups and “meet them where they are.”

**Women-Focused Processes.** University B discusses ways to improve CFC diversity and inclusion at every fitness meeting; depicts women exercising in CFC marketing materials; uses gender-fluid terminology in CFC surveys and waivers; provides a CFC “orientation of floor” for freshmen women; and surveys WOWs participants before and after the course as did University A. In a recent course completion survey, all 26 of the WOWs participants reported increased self-confidence after taking the course. University B also measures CFC usage and its effect on both student GPA and likeliness to graduate for both men and women.

**Need Fulfillment and Outcomes.** The overarching goals of University B's CFC are to educate students and build their self-confidence, provide a welcoming and inclusive environment, and ensure respect and privacy for students. The university's CFC mission

statement contains the words “diversity” and “inclusive” and in fact was the first HE CFC in the United States to include a diversity statement in their CFC vision. University B also has CFC goals for employees, including creating a diverse and inclusive environment, developing students, educating them regarding risk management, and focusing on skills transfer from college to career.

According to the ADW, in addition to addressing physical needs, University B’s women-focused fitness also fulfills social needs, through the process of “like-minded individuals who are learning the same things”; needs for emotional connection, through bonding activities like the all-women’s swim time; spiritual needs, by accommodating Muslim women’s cultural need to exercise separately from men; financial concerns, because use of the CFC, including all programming and amenities, is included in tuition costs; privacy needs, by providing frosted windows around the group fitness rooms especially for women who are “unfamiliar with a gym and don’t want to be watched and judged;” and safety needs, by providing freshmen women an orientation to the facility. With three unique facilities and outdoor fitness adventure spaces, students comment, according to the ADW, that “there is nothing that we don’t have here,” including boxing, rock climbing, and both leisure and lap-swimming pools.

In addition to need fulfillment, women’s feedback regarding WOWs is “overwhelmingly positive,” according to the ADW, and women return after program completion to either continue using the CFC on their own or to work with a personal trainer. Specifically, one of the “most enjoyable” parts of women’s fitness is the feel of “community where women are seen, acknowledged, and welcome.” Women also enjoy instructor “quality and one-on-one attention.” According to the ADW, if a student makes a misstep in class, a common instructor response is,

“that’s alright, we’re freestyling today,” and is more “cheer-led and championing” rather than critical. Similarly, the “most engaging” aspect of the women’s accommodations is the instructors’ “quality, passion and excitement,” while the “most adding to confidence” relates to instructors’ validation and student accomplishment aspects. The “most bonding” aspect is the forming of relationships, both instructor-student and student-student.

**Future Planning.** For “something to change” in the future of women’s fitness, the ADW would like to see University B implement more advanced programming like a Level II WOWs course, an advanced yoga class, and a student-requested women’s Olympic Weightlifting course so women could “work toward a common goal;” additional spaces in the women’s locker room for privacy; more women joining programs like WOWs, especially given that women enter the facility in groups and exercise together; and more education and training for women regarding equipment use, since equipment is misused at times. In fact, one of ADW’s fondest memories is of coaching a woman to use the chest press successfully, noting how “her face lit up.” The ADW summarized:

We live in a male-centric world and so everything has been adjusted or catered to men for a really long time and so now that we're including women into the equation, I believe that in order to have equity we need to be uplifting women and providing equal opportunities for them to get to where men have always been.

**Observation of a Women-focused Program and Area.** I observed University B’s CFC and a noon Yoga class, which tended to be popular with women, on a Tuesday in late June, between Summer A and B sessions. Upon arrival at 11:30 AM, I was given a tour by the ADW and noted that the facility was occupied by 90% men and 10% women. The men congregated

predominantly in two separate weightlifting areas and appeared to exercise in groups of two or three, while the women exercised mainly in the cardio section on separate machines, either a treadmill or a stair-stepper. Another woman was seen climbing the rock wall, while a man guided her movements with connected support straps. The women wore loose-fitting shorts and t-shirts.

The CFC also contained a large, outdoor lap-swimming pool; three basketball and volleyball courts located on the lower level; a fourth court on the lower level which temporarily housed weight machines so equipment could be spaced six to eight feet apart per Covid-19 guidelines; group fitness classrooms located on the lower level; two gender-neutral restrooms with showers; a large television screen in the main weight-lifting area and four smaller televisions in the cardio section; a Smoothie King eatery with tables and chairs near its counter; a jogging track located on the main floor directly above and surrounding the four lower-level courts; and administrative and health/wellness support offices along the perimeter of the building.

A few minutes before noon, the ADW led me to the yoga classroom; they had previously alerted the instructor that an observation would be taking place, for a dissertation study. My first preference was to observe a WOWs class however, the course was not offered during the summer. The yoga class contained four women and three men, all of whom appeared to be between the ages of 18 and 25. From observation of skin tone, hair color, and other physical characteristics, the three men appeared to be of middle eastern descent. One woman appeared to be Asian, two appeared to be African American, and one appeared to be Caucasian. The instructor also appeared to be Caucasian.



The Caucasian woman and the three men arrived first and positioned themselves directly in front of the teacher. One man placed his cell phone next to his mat; the woman stood up from a seated position, walked to the cubby shelves to retrieve her cell phone, and placed it alongside her mat next to a decorative pink thermos. Two of the three men and the woman brought their own mats, while the third man took a mat from the supply cabinet. An African American woman arrived and positioned herself in the second row, laid out two mats to designate two spaces, and alerted the instructor, “You don’t have to wait for her,” which turned out to be the second African American woman who arrived 17 minutes after the class start time. The fourth woman arrived three minutes after that and appeared to be Asian. The women wore t-shirts and loose-fitting shorts or tighter-fitting leggings and exercise tops; the men were dressed in loose shorts and t-shirts. All the participants removed their shoes and socks, which the men placed next to them and the women placed in the cubby shelves.

A few minutes before noon, the instructor dimmed the lighting and turned-on relaxing music. I was seated on a weight machine chair in the corner of the room, next to the front door. I counted eight windows between the front and the rear entrance door; the windows were large, approximately four feet tall and two feet wide. A wrap-around full-length mirror was located across the other three walls, and the temperature of the room felt cool. The instructor asked the participants, “Do you normally come to this class?” as she was acting as a substitute instructor and taught at other times of the week. The students responded although the comments were not audible. The instructor then shared, “Leslie is doing a study on fitness so she will be here observing the class;” I waved at the group, and she began her instruction.

During the class, which included deep-breathing and yoga-position exercises, I avoided direct eye contact with the participants when they turned their bodies and looked my way; I remained quiet and unobtrusive. I also remained focused instead of closing my eyes and relaxing, as I tend to do when participating in a yoga class. The instructor shared phrases such as “great job, everyone” and “awesome,” in a calm, relaxed tone of voice. The CFC’s loud pop music could be heard outside over the softer yoga music, and eight men walked by the windows during the class, in groups or as singles, some talking loudly. The class lasted one hour and at its conclusion, the woman and one of the men in the front row immediately checked their phones. One of the African American women and another man thanked the teacher, said “bye” to me, and left the room. The third man spoke to the teacher before exiting, saying, “I’m also trying to teach,” which I assumed meant he was preparing or planning to instruct group fitness classes. The Asian woman then approached the teacher, shared that she was “excited for the new studio,” and downloaded a new app onto her phone, which the instructor explained contained the class schedule for the new location. Finally, the Caucasian woman approached the instructor, talked with her, and was the last to exit the classroom.

As the instructor and I exited the classroom, the instructor inquired, “Did you get what you needed?” I explained that I believed I did, and that the observation was interesting. The instructor asked me specifically what my study related to in fitness, and I shared my topic of women-focused fitness, its link to student retention, and research regarding women’s limited use of the CFC compared to men. In response, the instructor commented that the temporary weight machine area across the hall frequently housed women, and she hoped “they don’t change it back” because “most of the facility is male-centric.” I inquired if the gender ratio in today’s class

was comparable to other yoga classes she had taught, and she responded, “No, I taught a yoga class this past Sunday at 7:00 PM which had all women, 12 of them.” I noted that the time of day, week, and semester, 12:00 noon on a Tuesday between Summer A and Summer B terms, most likely influenced the lower number of seven participants. Finally, I asked if she noticed women’s behavior when they are in class with men, versus in a class with all women, and she responded, “I don’t really notice because I tend to focus on their form.”

I thanked the instructor and sat down on a bench located outside the room’s front door to observe the temporary weight machine area across the hall, in anticipation of viewing women in the space. The area was the size of a basketball court and contained approximately 20 weight machines. I observed two women exercising on two different machines. Both women were quiet, wore ear buds, moved slowly from one machine to the next, and paused on machines to look down at their cell phones. On three occasions one of the women walked to a container of cleaning wipes at the front of the space, then returned to her machine to clean it with the wipe. A man entered the area, walked through it to the next court and began stretching, while another man entered and began using a machine in the back corner. Two women then entered, talking, and split up to exercise on separate machines. Another man/woman couple entered the space, spent a few minutes using the equipment, taking turns, and then exited the space. When the weight area was quiet, I overheard shouting, cheering, and tennis shoes squeaking in a basketball court, two courts away. Two teams of men, each the size of a typical basketball team, were playing basketball, running fast up and down the court, bouncing and passing the ball, and yelling “aaawww,” “yes,” “there you go,” and clapping their hands loudly. Their play stopped 30 minutes later; upon finishing, the men began high-fiving and hugging each other.

**Artifacts: WOWs Survey Feedback and Student Usage and Retention Data.** In

addition to a facility tour and providing permission for an observation, the ADW supplied three categories of data, from AY 2018-2019: student CFC general usage and use related to retention; a WOWs program summary, dated October 16<sup>th</sup> to November 3<sup>rd</sup>; and women's pre- and post-survey results from a WOWs course. In terms of CFC usage, out of University B's 7,055 FTIC students who began in fall 2018, 5,836 (83%) used the CFC at least once that year. The overall retention rate of the FTIC students, measured by their return for fall sophomore year, was 91.5%; however, retention of students who used the CFC measured 92.1%. In fact, of the 5,836 students who used the CFC, both men and women combined, students who visited the CFC between 31 and 45 times that freshmen year had a retention rate of 95.2%. University B's undergraduate student body enrollment is 55% women and 45% men, while its CFC users are 46% women and 54% men; non-users of the CFC consist of 60% women and 40% men. University B's data outcomes correlate with previous research that reports that use of the CFC increases student retention rates; the more students visit the CFC, the more the facility positively influences retention; and women are less likely to use the CFC compared to men.

In the WOWs program summary, the program is described as three weeks in length, and having the purpose of taking participants' resistance training knowledge to the next level. It was taught by the Strength and Conditioning Graduate Assistant and three CFC women trainers and was conducted Mondays and Wednesdays from 7:00 AM to 8:00 AM. It included instruction on machine and free weight safety, proper form and exercises, program design, and common myths and misconceptions.

Pre and post surveys were conducted to assess women's understanding of muscle groups and equipment and level of confidence in utilizing the CFC fitness floor. Results of the survey showed a 186% increase in muscle groups/equipment understanding; 92% of participants reported a higher level of confidence in using the CFC, and 39% reported a higher level of confidence overall. More specifically, the 26 respondents to the pre-survey answered five questions: What do you hope to learn from the program? How would you rate your confidence with lifting weights on a scale of one to five? What made you interested in the WOWs program? What barriers do you face when going to the gym/lifting weights? Any additional comments/feedback? For learning goals, the women emphasized three areas: increasing their comfort, increasing their confidence, and improving their weight-lifting technique. For rating their confidence, eight women reported a "one," rating, eight a "two," eight a "three" rating, two a "four," and zero reported a level five. In terms of "what made you interested?" five themes surfaced: working with other women/making friends, which comprised the most comments; no men participating; always wanted to learn; avoid getting hurt; and increasing confidence. For "barriers faced" at the gym/weightlifting, five themes surfaced: judgment, intimidation, lack of confidence, lack of knowledge, and getting hurt. Words/phrases related to the barrier of "intimidation" included, "boys are annoying," "too many people," "never active as a kid and never built proper motor functions," and "anxiety." Finally, additional comments included the following: "I would love to be grouped with ladies," "finding ladies who are also wanting friends," and "finding a workout partner."

In the post-survey, all 14 women who returned the survey reported increased confidence, specifically due to learning more information about the gym, learning how to use the weights,

and learning correct form. Confidence levels on a scale of one to five increased for all participants, who and they reported zero “ones,” zero “twos,” three “threes,” seven “fours,” and four “fives.” Regarding “what did you enjoy/learn,” comments related to proper use, women and inclusivity, making friends, empowerment, and “getting the chance.” An additional category of comments concerned instructors were “nice,” “answered every question,” and “were so knowledgeable.” Regarding “items to change for the future,” women preferred learning in smaller groups; longer program length because “it felt really short;” offering the program more frequently; and “starting earlier to get more time on the weight floor.” Finally, “additional feedback” reported, “loved it, now I can be more confident on weightlifting,” “it was fun,” and “I’d definitely do it again,” as well as “I felt like I didn’t get the assurance in my form when doing some of the activities,” and “overall I came in unsure and left still unsure about weight training.”

Finally, a “summary of program” noted that:

- WOWs was a very successful program.
- “Weekly Wednesday Workout” promotional videos were shared leading up to the classes.
- Several participants signed up for fitness assessments and requested personal training during the program.
- Classrooms were available for the lecture portion of the program.
- Weekly fitness challenges with prizes were implemented to increase participant retention.
- Covering all the program material in one hour was challenging on some days.

- Goals for muscle/equipment identification and confidence using the CFC were met, and participants expressed gratitude to the trainers.

Suggestions for next year's WOWs program included:

- Add more trainers.
- Provide programs continuously throughout the semester and, deliver one-hour lectures once a month on popular topics.
- Provide the program outline to trainers at the start of the program so they have adequate time to prepare.

### *University C*

**Women-Focused Programs (University C Interview I).** University C is a large public university in the western United States. The university designed GFIT (Group Fitness Instructor Training), which recruits students, predominantly women who use the CFC, to audition for employee positions as group fitness instructors. The program then trains and certifies the women to teach group fitness classes such as Kick Boxing, Step, TRX, Rowing, Cycling, and Tighten and Tone, a women's weight-lifting class. The first University C interviewee, who was Interviewee #3 and a former student of University C, completed GFIT in 2012 and was promoted to Fit Well Coordinator (FWC) of the CFC in 2016. She now serves as a mentor to other women students interested in and engaging in the GFIT program.

**Women-Focused Processes (University C Interview I).** The FWC manages the recruitment, training, evaluation, and class scheduling of group instructors at the CFC. The FWC emphasized that group fitness instructors, who are predominantly women because they "gravitate toward the position," are trained to provide their women clients with empathy in understanding

diverse needs; attention, by watching students' movement instead of themselves in the mirror and correcting or modifying incorrect movements; connection or a "check-in" with each client during class; and referrals to additional fitness resources like personal trainers. According to the FWC:

The main aspect is that you know they're (the instructors) really paying attention to people, but they are encouraged to grow, and they want to grow. Like you know, if they feel like you know I already know everything they have that ego type of style. It's just it's not gonna work for anyone and the students feel it.

The popular women-dominant classes, which draw between 100 to 150 students, are Zumba, which teaches "love for yourself," Tighten and Tone, which uses "not just light" but heavier weights, greater than three to five pounds, Pre-Natal Pilates, and Partner Yoga.

**Women-Focused Areas (University C Interview I).** In addition to programs and processes, University C also provides a women-focused fitness area. Created as part of a second CFC, which was added in 2012, women are provided "secluded pockets" in the gym, with a "plethora of equipment," and limited access for others in the gym to see and watch the area's activity. The area also provides mats for stretching and wall space where women lean their phones and tablets to view online programming like POP Pilates. "When I started exercising on campus and used the first CFC," shared the FWC, "it had a small man-dominant weight room that smelled really bad." She continued, the facility had a "male persona that said this is a man's area, with men's posters everywhere and men being macho and stuff." My second University C interviewee, who was Interviewee #4, helped spearhead the development of the second, newer CFC which more effectively caters to women's needs.



**Women-Focused Activities (University C, Interview I).** University C also provides women-focused events including Zumba De Mayo, Zombie Zumba, and events at the swimming pool. For these events, the university provides a chef who prepares healthy cuisine in a kitchen located near the pool. In addition, during finals week, students can study in the kitchen while the chef provides healthy snacks such as protein bowls which are low in carbohydrates, low on the glycemic index, or high energy. In fact, the FWC identifies the Zumba events with the chef's treats as "most engaging," Zumba group fitness classes and the Partner Yoga class as "most enjoyable" and "most bonding," and the Partner Yoga class and the Tighten and Tone class as "most adding to confidence."

**Need Fulfillment and Outcomes (University C, Interview I).** According to the FWC, Zumba classes fulfill women's need for self-worth, sense of self, and "feeling good in their skin," especially when instructors are attentive and provide feedback. Tighten and Tone, on the other hand, addresses a women's need for instruction about lifting techniques so they "can go out in the gym and use it." The FWC continued that University C's women-focused fitness combines "education, awareness and a fun, open environment" where women experience the power of being heard, receiving attention to "how they feel on the outside," "feeling good doing movements in their bodies," and expressing their emotions. Women attending the CFC can arrive feeling stressed and group fitness classes provide a "space for them to let that all go." Even after class, instructors are trained to talk with women and provide additional pointers regarding form, how they can apply their in-class activity to other sports, and other resources. The Massage Therapy class, for example, helps women identify not only where they are sore but inspires them to share why they are hurting.

“Women come to my office and say I wish this instructor would teach more,” “smiling and sweaty,” shares the FWC and these informal practices are one way she evaluates instructor effectiveness. In addition, when observing classes, the FWC notes women “dancing along with each other, talking, connecting, and looking at each other, having fun.” In addition to connecting with each other, the FWC sees women connect with their instructors during and after class. Finally, University C surveys women after they complete a group fitness class to learn if they plan to attend again or refer the class to a friend. In fact, one survey asked the women to rate their stress level before class, which was noted as a “five” to “seven” on a scale of “one” to “ten” but declined to a “one” to “three” upon class completion.

**Observation.** Because the facility was located 3,000 miles away from the researcher, the FWC supplied 32 photographs and 23 short videos of Zumba classes and events. Most of the photos depicted approximately 100 women participating in a large gymnasium both during the day and at night. One video of the daytime class showed women dancing demonstrably, with high leg kicks, and foot stomping. Most participants were smiling, either at the instructor or at each other, and some were yelling “woo,” or “yes,” and “yeah.” The song playing, which sounded like an African American man’s voice, sang the words, “for her, for her, out of respect for her.” In a Zombie Zumba video, for a class held at night, the overhead lights were turned off, loud music was playing from an in-person DJ, and disco-type lighting was flashing. The women were dressed in colorful shorts or leggings with t-shirts or tank tops. Some women’s outfits appeared fluorescent or glow-in-the-dark while other women were wearing or using glowing accessories such as plastic light-up necklaces, bracelets, and swords. Loud cheering, by both the instructor and the participants, could be heard over the high-volume music.

The teaching style of the women instructors included strong, accentuated dance movements, and they yelled encouraging comments such as, “you got it” and “great job.” In a group photo, five of the six instructors depicted were women dressed in bright colored knee socks and jogger pants. Some instructors had their faces painted and their poses appeared silly with their hands positioned under their chins or their arms raised showing their muscles. They all displayed bright smiles, and their arms are draped around each other’s backs or shoulders. Finally, two photos depicted an instructor teaching a Zumba class, through Zoom, on a laptop computer; students were positioned around the instructor in squares, and the instructor is wearing bright fitted clothing and a large smile.

**Future Planning (University C, Interview I).** University C’s CFC plans include adding a reformer to the Pilates class, a piece of equipment which assists participants in achieving goals like posture control, and an Aerial Yoga class, both of which women have requested, as well as a nutrition coach. “We give as much as possible to answer women’s requests,” says the FWC; however, a suggestion for a Pole Fitness class will not be fulfilled due to a high risk of injury. Women are enjoying a recently added Paddle Boarding class, which according to the FWC is “cool.” However, “leadership on mixed-gender teams are still men-dominant,” reported the FWC, as well as in ropes competition, and these behaviors frustrate her because she believes strongly that “fitness should be inclusive.” When the researcher asked the FWC if women-focused fitness takes something away from men-focused fitness, the FWC responded resoundingly, “No, there are all different types of fitness and fitness is inclusive no matter what your gender or ethnicity is.” Sometimes the classes’ names are modified, from Weightlifting for

Women to Tighten and Tone, for example, but that's all right with the FWC because providing various programs, processes, areas, and activities for women in fitness is an important focus.

**Women-Focused Processes (University C, Interview II).** The second person I interviewed at University C was the Assistant Director of Fit Well (ADF), which is a fitness program at the university that emphasizes a healthy lifestyle and lifelong wellness. The ADF (Interviewee #4), who was hired in 2009, is the FWC's boss and was responsible for creating the women's fitness accommodations in the new facility in 2012. According to the ADF, the old facility was male dominated with a power lifting focus. In fact, inside the entrance to the facility, a large sign posted on the wall read "Who Can Lift the Most Weights?" and ranked the men participants according to their level of strength. Because the facility was male-centric, women gravitated to the cardio gallery, which was located away from the weight room, or to group fitness classes; most classes contained 60 to 130 women. Seeing that women were interested in fitness and filling classes to capacity, the ADF created a welcoming atmosphere for women in the main facility and ensured that the CFC was inclusive of everyone.

To create a more women-welcoming space, the ADF enacted CFC policy regarding proper fitness etiquette, which forbade shouting, slamming of weights and monopolization of the facility and its equipment. In doing so, the ADF received pushback, "which my boss can attest to," such as threats, harassment, and bullying. According to the ADF, "there was this clan of males that would kind of like walk around with this attitude and like kind of bully people in the gym." Specifically, the behavior included intimidating, rushing, and scaring women off the fitness equipment by saying, "are you almost done with that?"; throwing down free weights loudly, a practice which is not only intimidating but also unsafe; talking loudly over employees

and acting disrespectful; threatening to slash the ADF's tires and cursing at them; and fighting among each other. "It took a while to clean up that culture and atmosphere," shared the ADF. In fact, a bullying situation occurred recently when a male participant attempted to intimidate a woman employee by "talking over her and telling her what to do." The CFC maintains a zero-tolerance bullying policy, and students who demonstrate such behavior are documented and referred to the department of student conduct.

In addition to enforcing an etiquette policy, the ADF employs her own policy of walking around and noticing and helping women who appear to be new in the CFC. "Maintaining a friendly and approachable stance is important," she explains, so "when I notice women are mis-using equipment I say, 'Hey, my name is such-and-such. I work here at the Rec and I notice you're doing this exercise, but I want to show you a different way to do it. And usually, they're like, oh thank you so much like I really appreciate you.'" The ADF also recruits and hires women personal trainers and instructors and supports the writing and publication of women-focused fitness articles like "Women in the Weight Room," which was penned by the Marketing Coordinator and published in Campus Recreation Magazine.

**Women-Focused Areas (University C, Interview II).** The ADF also designed and equipped three small "pocket" areas in the gym according to "what women like to use"; muscle groups women typically exercise, like glutes; and with machines which are user-friendly with easy-to-adjust seats, for example. One of the "pocket" areas is designated as a "new member" section, where women can learn to use full-body circuit weight equipment with a pin-select feature, at weights of no more than 40 pounds. By using lighter weights first, women learn proper weight-lifting technique in an "easier" format, according to the ADF, with the intention of

“eventually getting them to use plate-loaded” weights. Other women-focused equipment in these areas includes “assisted” pull-up and dip machines because these movements are challenging for women; glute and inner/outer thigh machines, placed behind a wall or pillar, so women using them are not “out and exposed;” and narrow-grip barbells or PVC pipes that women with smaller hands can lift while they learn technique. Finally, one of the “pocket” areas is located near the group fitness classrooms to help “lure women into strength training.”

**Need Fulfillment and Outcomes (University C, Interview II).** While participant feedback regarding the facility includes a spotless environment and a variety of well-maintained equipment, the “most enjoyable” aspect of the women-focused fitness is the women’s feelings of success and building confidence to continue using the facility. For the “most engaging” part, the ADF identified women’s relationships with staff and instructors along with the CFC’s “community atmosphere” she creates. “When I walk around, I get to know women personally and recognize their accomplishments by saying, ‘I see you’re getting stronger, great job,’ and ‘I’ve noticed you’ve lost a lot of weight.’” She trains her staff to do the same. “Something women would like to change” is the dress code which designates no crop tops or sports bras for women, and no muscle tanks and ribs exposed for men. According to the ADF, “the dress code is misunderstood” and was enacted to prevent health issues, for example skin infections, which can be contracted through equipment use, not to limit showing the body or self-expression. Finally, the “most unusual” aspect of women’s fitness, according to the ADW, is that men gravitate to the “pocket” areas, because the main weight-lifting area downstairs can be “crowded and congested.”

**Future Planning (University C, Interview II).** For the future, the ADF is planning and designing an outdoor fitness space which would be available to the larger campus community. “Right now, staff and faculty have to pay to use the CFC, so this could be a special membership with a minimal cost to employees.” Ideally, the area will include green space as well as designated areas for group classes, boot camps, and functional and agility workouts. The ADF will also continue to survey CFC participants, but with a focus less on usage and more on outcomes, asking how use of the CFC impacts friendships and relationships, confidence, stress management, and the students’ focus on school, all important aspects for women. The ADF concludes, “It’s important to provide women-focused services so they are not intimidated or uncomfortable working out and to get them into the gym,” admitting that as a student she was intimidated by the CFC, afraid she’d be laughed at, and didn’t know what to do with machines and equipment.

**Artifact.** The ADF shared the university’s spring 2021 group fitness survey. Although the CFC was closed due to Covid-19 during spring term and the survey focused on online group fitness classes, the data is important because the respondents contained 92% women both students and staff. Feedback was requested regarding 40 different classes within seven categories of group fitness: cardio, dance, cycling, cardio/strength fusion, strength, mind/body, and massage. The most attended classes, within these categories and ordered accordingly, were Kickboxing (cardio), Zumba (dance), no classes attended (cycling), HIIT Fusion (cardio/strength fusion), Abs/Gluts (strength), Yoga (mind body), and a massage class titled, “Take a Break.” Four of the questions related to physical outcomes such as well-being and stress levels before and after classes, and three questions related to social outcomes, such as confidence, connection,

and role-modeling. With respect to both physical and social outcomes, and of the 93 students and staff surveyed, 98% strongly agreed or agreed that the classes contributed to positive well-being, 98% strongly agreed or agreed the classes contributed to positive mental health, and 72% strongly agreed the classes decreased the participants' stress levels to relatively low or low. For the social outcomes, 88% strongly agreed or agreed that the classes boosted confidence, 90% strongly agreed or agreed they felt more connected to the campus community after the classes, and 97% agreed that the classes helped them model healthy behaviors to other students. From 74 examples of "personal feedback," social benefits, like instructors' energy, engagement, or sense of community created, were mentioned 27 times, the most mentioned topic. Other topics highlighted were scheduling, adding classes, and appreciation of the online opportunity to participate. Feedback phrases that related to social benefits from the classes included "enjoy being able to feel close to the campus community"; "feel comfortable and happy"; "feel upbeat and supported"; "enjoy energy and friendliness"; "experience community in classes"; "love engaging and caring instructors"; "experience virtual bonding"; "saved my sanity;" and "improved mood and lowered stress levels".

### ***University D***

The final CFC in the study was at a branch of a large state university in the southeastern United States.

**Women-Focused Programs.** The Women in Weights class occurs once a semester and introduces women to lifting weights; Strong Her is a six- to eight-week course in a small group format, which not only teaches proper weight-lifting technique but also educates women about the benefits of the practice. Women in Weights is free to students, while Strong Her costs \$100.



**Women-Focused Areas.** According to the Assistant Coordinator of Fitness (ACF), Interviewee #5, the institution is completing two women's fitness rooms which were scheduled to open in fall 2021. The rooms contain Echelon fitness mirrors that display an instructor conducting an exercise routine along with televisions, mats, medicine balls, resistance bands, and dumbbells up to 30 pounds in weight. According to the Director of Wellness, whom I interviewed in the initial telephone screening, "We're supplying these rooms so women-focused fitness is available every day."

**Women-Focused Activities.** University D provides women-focused activities in the form of Ladies' Nights. During these events, a part of the gym is sectioned off for women to try lifting weights, for example, and use of the swimming pool and rock-climbing wall are designated for women exclusively. Women can also try out and participate in group fitness classes like cycling and cardio dance. Similar activities are provided during Welcome Week, an orientation where freshmen women can "demo" these offerings as well as learn more about Women in Weights and Strong Her.

**Women-Focused Processes.** Women-focused processes include hiring women instructors for weight-training and group fitness classes and asking for women's feedback after attending "Ladies Night" events.

**Need Fulfillment and Outcomes.** According to the ACF, these accommodations satisfy women's needs for both comfort and confidence in the gym. For example, a Women in Weights demonstration during a "Ladies Night" event teaches three lifts, the bench lift, the deadlift, and the squat; the instruction helps women feel more comfortable and confident with weight training. In the post-event surveys, women's comments included: appreciation for weight-training

instruction such as, “Otherwise, I would not have tried it because it’s intimidating;” feel sense of community; feel empowered; and prefer event be held earlier or later in the day rather than the 4:00 to 6:00 PM timeframe.

The “most enjoyable” aspect of the women’s accommodations, according to the ACF, is the group fitness classes because they provide a sense of community without pressure to perform “technically” correctly, which women might feel in a Women in Weights class. Conversely, the “most adding to confidence” is Women in Weights because the class provides a foundation of weight-training techniques taught by women instructors; after the class, women say, “I can actually do this.” The “most bonding” aspect of the women’s fitness accommodations is Strong Her, because the course includes a small group of women who learn together for six to eight weeks. Finally, “something to change” highlights what the ACF believes are women’s two biggest obstacles to fitness, time to work out and the cost. Therefore, CFC leaders are considering revising Women in Weights from one 60-minute class to two 30-minute classes and adjusting the price of Strong Her.

**Future Planning.** According to the ADF, while University D will revamp its CFC design spaces so they continue to be “worth their while, strategic and effective,” CFC leaders will also strengthen the women’s accommodations by completing the private rooms and providing more group fitness classes, Strong Her courses, and Ladies Night events. Recalling a time when she was asked to substitute teach a Strong Her class “at the last minute,” and which “she hadn’t planned on or prepared for,” the ADF explained the “women helped me guide them about what they wanted to focus on, expressing their needs.” Consequently, the ADF noted the “growth and

confidence” of the women as they progressed through the course, which she “would not have seen if it were the first day of class.”

Finally, in terms of the notion that women-focused fitness takes something away from men-focused fitness, the ADF completely disagreed. She continued, “When fitness started it was designed for white men,” and men that were “yoked,” who “looked like Arnold Schwarzenegger.” The ADF continued that men had “a certain level of privilege with that of just simply being a man and having a facility that is more tailored to men.” Therefore, the ADF believes women-focused accommodations make sense to motivate women to feel comfortable in the gym. In fact, the ADF knows of no pushback from men regarding these accommodations and highlighted a recent power lifting competition where both men and women participants “cheered, clapped, yelled, and supported each other.” At the event,” said the ADF, “women felt empowered whether they were competing or not, which is a big ask to go into an environment like that where you know powerlifting has been seen as something that’s so male dominant.”

**Artifacts.** The ADF shared two items, a Ladies Night event flyer and a survey with women’s feedback from a recent Ladies Night event. The flyer depicted two women of differing body types as either dancing or exercising, with lines swirling around their bodies giving the impression of movement. One woman appeared confident, with her head held high and her long hair flowing backward, while the other appeared focused on her movements. The flyer was dated Wednesday, March 21 and included a website for event registration. Across the bottom, categories of fitness offerings included weight room, big pink volleyball, open swim, bike ride, group fitness, and paddleboard yoga.

The survey feedback, contained in a spreadsheet, asked 15 women: How much did you enjoy your Ladies Night experience on a scale of one to five? What events did you attend? What was the most impactful part of the event? What did you like the most? What did you like the least? What key messages did you take away from this event? Did this event make you feel valued as a part of the university community? Additional comments? In rating the level of enjoyment, 12 women replied with a “five” and three scored the event a “four.” For events attended, all 15 participated in Group Fitness Classes, 11 participated in Create Your Own Trail Mix, nine in the Panhellenic Empowerment Table and eight women attended Trash Your Insecurities. Phrases used to describe the most impactful part of the event were: “positivity and energy”; “seeing all the other girls walking around being their amazing self;” “seeing tons of women who were working to better themselves was empowering and made me feel more motivated to better myself;” women empowering women; interacting with other ladies; and “all of the encouragement from my ladies!!!!!!” Women most liked the sense of community and group fitness classes while the time frame of the late afternoon event was liked the least. Key messages included: women are strong and powerful; love yourself, no need for insecurities; “women are more powerful when they can see other women being powerful!” “you don’t have to be a certain size and shape to be a strong and powerful woman!” “ladies are more than capable of doing anything we want to do!!!”; “we gather power and strength from each other”; “community is awesome!!” and “girls rule!” Finally, all 15 women confirmed the event made them feel valued as part of the community, and an additional comment read, “I loved everything about this event. It made me want to work out more. Especially with other girlfriends!”

## **Women-Focused Fitness Accommodations Results by Category**

The interviews, taken together, yielded the following summary list of women-focused accommodations by areas, activities, programs, and processes. These accommodations are elaborated on in the next section.

### ***Areas***

- Pods or women's areas separate from the fitness center, which were repurposed for women, are private, and include an extensive variety of fitness equipment;
- Private spaces within the fitness center tailored to women with weights and cable machines;
- Creation of a new facility with a focus on women, including a holistic wellness program and a décor with muted color schemes;
- Private workout rooms which include mats and televisions to display video exercise programming;
- Women-exclusive swim times in CFC pools;
- Women-exclusive training areas where women can begin exercising, learn fitness techniques, and learn how to use equipment with the intention of eventually moving into the main fitness area;
- Circuit strength training and fitness group classes in secluded areas.

### ***Activities***

- "Ladies Night" events which include exclusive access to the swimming pool and rock-climbing wall with women instructors and trainers;
- CFC "orientation of floor" for freshman women.

### *Programs*

- “Women on Weights,” a three to eight-week strength training program with women personal trainers;
- “Women in Weights,” training workshops to learn proper use of weight training equipment;
- “Strong Her,” a small group weight training program offered two times per week for six to eight weeks;
- “Ementowerment,” a rock-climbing program for women;
- “Werq” and “Buti” group fitness classes;
- Bilingual yoga for women;
- Boot camps with partner activities;
- Student instructor training programs where CFC women-users are recruited and trained to instruct group fitness classes.

### *Processes*

- In every CFC leadership meeting, discuss women-focused fitness and how to motivate more women to use the CFC;
- In CFC marketing materials, depict women participating in programs and using equipment;
- Include gender-fluid terminology in CFC waivers and surveys;
- Survey women regarding their CFC usage patterns such as what equipment they use, how they are using it, and time of day, week, and semester upon entry and exit of the facility;

- Survey women regarding how they feel about women-focused areas, fitness goal attainment, and modifications they would like to see regarding women's accommodations;
- Add additional weight training programs when courses fill;
- Share the CFC with local universities to increase women students' access and usage;
- Provide tours of the CFC to other IHEs and share best practices of women-focused fitness accommodations;
- Identify women-focused fitness leaders at other HE CFCs and implement their best practices;
- Recruit and hire women instructors and personal trainers for women's classes and programs;
- Train instructors to be empathetic to women's needs, encourage women in their classes and programs, and interact and connect with women before, during, and after classes;
- Write and publish articles regarding women-focused fitness for publications such as Campus Rec Magazine;
- Walk around, notice, and approach women CFC beginners and offer, "Can I show you what to do so you won't hurt yourself?"
- Enact CFC policy regarding proper fitness behavior including no shouting, slamming of weights, and monopolization of facility and equipment.

## **Women-Focused Fitness Accommodations Results Thematically**

### ***Four Broad Themes of the Study***

Toward building an initial framework of women-focused fitness accommodations, five broad themes arose from the analysis.

- Women-focused areas provide social benefits when they are officially designed and designated for women.
- Women-focused programs, like Zumba, provide social benefits. The effect of a well-trained instructor is significant.
- Women-focused activities, like Ladies Nights, deliver social benefits and should be offered more than a few times a year.
- Women-focused processes, such as enacting and enforcing women-friendly CFC policies for etiquette, equipment training, affordable pricing, and sanitation, provide sense of belonging benefits. Other such processes include use of customized technology, gathering and analyzing women's feedback, and measuring and monitoring their outcomes.

### ***Women-Focused Areas: Importance of Design and Designation***

Women-focused areas identified in the study include the following:

- a new facility, smaller in size, decorated with soft, muted colors, and focused on a holistic approach to health/wellness;
- private rooms or pods designed and designated as "women's only," with new state-of-the-art equipment and bright-colored accessories;



- private rooms, designated primarily for women, with mats and televisions to view fitness programming;
- secluded or partitioned spaces within the main CFC with machines and equipment women tend to use;
- “training areas” in the main CFC so women can learn to use machines and equipment and eventually transition to the full facility;
- areas such as the swimming pool and the rock-climbing wall which schedule women’s-only use times.

In terms of providing social benefits, like a sense of belonging, Interviewee #1 explained their pods are the “most enjoyable” aspect of the women-focused fitness accommodations and provide feelings of safety, not being judged, and not being watched. According to literature, women find the CFC intimidating because participation makes them feel “self-conscious,” especially when “activities are dominated by a specific gender” (i.e., men) (Young et al., 2003, p. 57), and the pods mitigate those feelings. Also, the pods’ new, bright-colored design aligns with previous research that suggests women’s facilities should be appealing in design, as women are attracted to shiny fixtures and bright lighting (Attwood, 2017), and that CFCs should “soften” their fitness area’s appearance to be more inviting to women (Young et al., 2003). Interviewee #1 wants their CFC to be viewed as not only a place for men and/or athletes but an area where all students, including women, feel a sense of belonging and see the importance of campus recreation in their university experience.

Similarly, Interviewee #4 designed and equipped three small “pocket” areas in the gym according to “what women like to use,” such as glute machines, and with machines which are

user-friendly for women, for example, with easy-to-adjust seats. One of the areas is designated as a new member section, where women can learn to use full-body circuit weight equipment with a pin-select feature, at weights of no more than 40 pounds. Other women-focused equipment in the areas include “assisted” pull-up and dip machines because these movements are challenging for women; glute and inner/outer thigh machines, placed behind a wall or pillar, so women using them are not “out and exposed;” and narrow-grip bar bells or PVC pipes that women with smaller hands can lift while they learn technique. Policing of the women’s areas was not mentioned by the interviewees; in fact, Interviewee #4 mentioned that men sometimes use the women’s areas when the main fitness areas are crowded and congested.

It’s important to note, however, that social benefits like social interaction did not appear in an observation of a temporary weight machine area to which women migrated during the pandemic. When women were viewed using the space, they were exercising separately, wearing ear buds, and pausing on machines to look down and check their phones. When two additional women entered the space together, they immediately separated and occupied separate machines. At the same time, I noticed men cheering, high-fiving, and hugging in a basketball game being played about 30 feet away. In this observation, the perceived men’s social benefits in the basketball game outweighed the perceived women’s social benefits in the temporary weight machine area. Therefore, the social benefits of the women’s pods, as opposed to the lack of social interaction in the temporary area, could indicate that areas designed or designated for women deliver social benefits more effectively than areas which are not designed or designated for women.

### ***Women-Focused Programs: Social Benefits and Importance of the Instructor***

A minority of the interviewees commented about social benefits of the women-focused areas; however, a majority agreed women-focused programs provide social benefits. Interviewee #1, for example, shared that while the pods are popular with women, the “most engaging” and “most adding to confidence” part of their women’s accommodations is the WOWs program. Also known as Strong Her, WOWs is a three-to-eight-week group training course that teaches women proper weight lifting techniques and the benefits of weight training. In a post-WOWs survey shared by Interviewee #1, the women’s favorite parts of the program were social benefits like new friendships, camaraderie, and feeling confident. The WOWs program also delivered the “most bonding” aspect of the women’s accommodations, a buddy system which requires women to connect with a partner to complete their homework.

Interviewee #2 agreed that women’s programming fulfills social needs, because the classes are comprised of like-minded women who work alongside each other in a learning environment. Specifically, University B’s post-WOWs feedback noted that the “most enjoyable” part was the feel of “community where women are seen, acknowledged, and welcome.” A higher level of confidence in using the CFC was reported by 92% of women respondents, and 39% of women reported a higher level of confidence overall. Regarding what they enjoyed and learned, social benefits such as inclusivity, making friends, empowerment, and an opportunity to participate were also reported.

Another post-survey, shared by Interviewee #3, provided post-feedback from women students and staff about online group fitness classes and highlighted social benefits. Specifically, 88% of the participants strongly agreed or agreed that the classes boosted their confidence, 90%

strongly agreed or agreed that the classes helped them feel more connected to the campus community, and 97% of the students agreed that the classes helped them model healthy behaviors to other students. Feedback phrases that related to social benefits from the classes included “enjoy being able to feel close to the campus community”; “feel comfortable and happy”; “feel upbeat and supported”; “enjoy energy and friendliness”; “experience community in classes”; “love engaging and caring instructors”; “experience virtual bonding”; “saved my sanity;” and “improved mood and lowered stress levels.” Finally, Interviewee #5 shared that the “most enjoyable” aspect of women’s accommodations are the group fitness classes, because they provide a sense of community without the pressure to perform technically correctly, and the “most bonding” aspect is Strong Her. The social benefits of group fitness for women align with previous research reporting that women are motivated to participate in fitness by group classes (Beaudry et al., 2019; Farren et al., 2017), particularly indoor cycling (Chukhlantseva, 2019).

However, I observed a similar situation in the Yoga and Zumba classes as in the temporary weight machine area; obvious social benefits were not identified. While one woman accessed and positioned a mat for a second woman in the Yoga class, the pair were not viewed interacting and they did not arrive together; however, they did exit together. Two women spoke to the Yoga instructor briefly, however one conversation was inaudible and the second was referencing the download of an app to view the class schedule. In the Zumba class, women appeared to be engaged with the instructor and enjoying the class; however, the camaraderie was more perceived than obvious. Previous research does, however, support dancing as a “fun and engaging” form of fitness and social activity for women, especially African American, Black, Hispanic, or Latina women (Williams, Sienko et al., 2018). Therefore, while all the interviewees

confirmed that women's programming provides social benefits, further observation and study of women participants could clarify what those social benefits look like and how they are experienced/represented.

In addition to the women's programs themselves, this study highlights the importance of instructors in delivering social benefits. Interviewee #1 shared a pre-WOWs survey where women identified social expectations of their instructor such as providing motivation, encouragement, and positive energy. In the post-survey, all the women participants realized their "top three expectations of the instructor," and their "favorite part" of the course was the helpful, approachable, and supportive instructor. The women's "least favorite part" also related to the instructor, a lack of personal feedback.

Interviewee #2 mentioned the importance of the instructor to social benefits and shared that women enjoy the instructors' one-on-one attention; the "most engaging" aspect of their women's accommodations is the instructors' quality, passion, and excitement; the "most adding to confidence" is the instructors' validation of student accomplishments; and the "most bonding" aspect is the student-instructor relationship. In the post-WOWs survey, instructor importance was again emphasized with comments ranging from, "instructors were nice, answered every question and were so knowledgeable," to "I felt like I didn't get the assurance in my form when doing some of the activities," and "overall, I came in unsure and left still unsure about weight training." Therefore, while the instructor's influence on social benefits is important to women's needs, the instructor should also be trained to deliver the course content using effective teaching methods.

Continuing with effective training and evaluation, Interviewee #3 shared that group fitness instructors, who are predominantly women because they gravitate toward the position, should be trained to provide empathy for women's diverse needs; attention to correcting movements; a "check-in" with each woman during class; and referrals to other fitness resources. Instructors should also be open to growth within their teaching and not act as if they "know everything," as ego-driven instructors are not as effective at motivating women. In terms of evaluating instructors, Interviewee #3 noted how many women positively comment on the instructor, whether the instructor connected with the women before and after class, and whether their teaching style was encouraging as opposed to critical. Finally, Interviewee #4 also reinforced instructor importance and reported the "most engaging" part of their women's accommodations are student-instructor relationships; in a post-survey, women highlighted their instructor's engagement and providing of sense of community in 36% of the comments, the most mentioned category of feedback.

***Women-Focused Activities: A Sense of Belonging from Social Benefits***

Women-focused activities such as Ladies Nights and Zombie Zumba, which occur once or twice a year, also provide social benefits such as empowerment, motivation, and confidence. A post-Ladies Night survey, shared by Interviewee #4, reported the "most impactful" parts of the event, as described by the participants, were the "positivity and energy"; "seeing all the other girls walking around being their amazing self;" "seeing tons of women who were working to better themselves was empowering and made me feel more motivated to better myself;" "interacting with other ladies"; and "all the encouragement from my ladies!!!!!!!" The women also received the following key messages from the event relating to social benefits: "women are

more powerful when they can see other women being powerful!"; "gathering power and strength from each other"; "community is awesome!!"; and "girls rule!" Finally, all 15 women respondents confirmed the event made them feel valued as part of the campus community, and an additional comment read, "I loved everything about this event. It made me want to work out more. Especially with other girlfriends!"

Turning now to an observation of a *Zombie Zumba* event where overhead lights were turned off and loud music was playing, I identified social benefits such as women focused on and engaged with the instructor, some smiling, and most looking excited to be participating. The women also wore similar clothing, such as colorful shorts and leggings and bright t-shirts and tank tops, some appearing fluorescent or glow-in-the-dark. Their clothing was accompanied by glowing accessories such as light-up necklaces, bracelets, and swords. Because the clothing and accessories were unique, consistent, and worn by almost all the women, the attire appeared to provide the women with a sense of belonging to both the group and the event. This concept aligns with previous research which reports a shared frame of reference, like wearing similar clothing, increases a sense of belonging, and that a sense of belonging is a critical component of retention (Hall, 2006).

### ***Women-Focused Processes: A Sense of Belonging from Policy and Technology***

Women-focused fitness processes, such as discussing diversity and inclusion at CFC meetings, including diversity and inclusion in the CFC's mission and goals, and learning and sharing women-focused best practices, indirectly influence women's sense of belonging, and women-friendly CFC policies can directly reinforce a sense of belonging. Specifically, this study uncovered the importance of women-friendly CFC policies regarding etiquette, equipment

training, affordable pricing, and sanitation. For example, Interviewee #4's etiquette policy, created because a group of men were bullying women users, the staff, and herself, changed the CFC culture from one which was intimidating to women to a culture today which is "welcoming." Previous research supports mitigating women's feelings of intimidation or discomfort in the weight room and explains that doing so increases women's participation and sense of belonging (Cole, 2020). Moreover, according to the Carnegie Foundation for the Advancement of Teaching (1990), effective policy toward providing students a sense of belonging should include high standards of civility, appreciation of and respect for diversity, and a community creed that identifies the standards of conduct and outlines the responsibilities that one accepts upon becoming a member, which an effective etiquette policy helps provide.

In addition to a CFC policy addressing women's need to feel safe from intimidation, this study reports women also need to feel safe from injury which can be addressed through proper equipment training. In a pre-WOWs survey at University A, for example, 50% of the women reported not engaging in any or much resistance exercise because they were afraid of hurting themselves. Similarly, at University B, 25 women in a pre-WOWs survey reported they became interested in the course to avoid getting hurt, as well as work with other women and make friends and because men were not participating. In the same survey regarding "barriers faced" to exercise, the women again identified the concern of "getting hurt," along with judgment, intimidation, and lack of confidence.

This study also uncovered a common women's CFC behavior which could increase their chance of injury, a tendency to misuse equipment. Interviewee #1 shared that women sometimes use the hamstring machine incorrectly as a glute exercise, and Interviewee #2 commented that



“something to change” about their women’s accommodations would be enhancing education and training regarding equipment because it can be misused. Interviewee #4 agreed that women can misuse equipment and shared that they walk around, notice, and help women who may be new in the CFC and are using equipment improperly. Interviewee #4 also noted that CFC leaders, whether women or men, should be trained on how to approach women, what to say and how to say it, in order to appear non-threatening and non-accusatory. “Maintaining a friendly and approachable stance is important,” she explained. Therefore, an approach such as “Hey, my name is such-and-such. I work here at the Rec and I notice you're doing this exercise, but I want to show you a different way to do it,” can be effective. Previous research also supports CFC training for women and reports women would use the free weights more if they knew how to use them properly (Farren et al., 2017).

A third women’s need, this time for affordable pricing, was uncovered in this study and previous research also supports this need. Interviewee #1, for example, shared “something to change” in their WOWs program would be lengthening the program from six to eight weeks because women desire it, but they were not certain if women would pay more than the \$139 course fee. To help address women’s financial concerns, the institution provides an affordable price point for fitness classes, \$20/semester for two classes/week. Interviewee #2 also identified women’s concern for cost and explained they address this concern by including women’s programming and amenities in the price of tuition. Finally, Interviewee #5 shared they believe women’s two biggest obstacles to fitness are time and cost; therefore, their CFC leaders may decrease the price of Strong Her in the hope more women will participate. The effectiveness of financial incentives for women for fitness aligns with previous research which reports women

are influenced to participate in fitness, at least initially, by monetary reimbursements (Hooker et al., 2018), especially scholarships and discounted health insurance (Williams, Greene, et al., 2018).

The study also identified a fourth need which aligns with sense of belonging for women, the desire for cleanliness and sanitation at the CFC. Interviewee #3, for example, shared that when they first started exercising at the CFC as a student, the facility was male dominated and “smelled poorly,” both reasons why they did not like to use it and did not feel welcome. In observations, the researcher noted cleaning wipes, a spray bottle of cleaning solution, and Covid-19 face coverings in University A’s pods and a woman walking to a container of cleaning wipes three times in University B’s temporary weight machine area, each time returning to clean her machine. Finally, previous research identifies cleanliness as a significant indicator of CFC satisfaction for women. As cleanliness increases, women’s satisfaction increases, and women maintain a lower level of satisfaction overall compared to men (Fine et al., 2016). These two statements could imply that one reason women are dissatisfied with the CFC overall is the facilities’ lack of cleanliness.

Women’s use of fitness technology to providing sense of belonging also surfaced in this study, although the process should be individualized and customized according to women’s needs. For instance, University A’s WOWs program uses WhatsApp so women partners can communicate outside of class, and University B uses an app as well to communicate fitness class schedules. At the same time, in observations, the use of technology appeared to hinder women’s social interaction, for example in the temporary weight area where women were viewed wearing ear buds and pausing to check their phones on machines instead of interacting. Previous research

is also mixed regarding women and fitness technology. Haney (2018) identified social benefits from wearable fitness devices toward team support and positive health outcomes. However, Widawska-Stanisz (2020) found that while technology can promote healthy habits, it can also cause negative behaviors for women such as exercise obsession. Therefore, fitness technology provides the most social benefits for women when it is individualized and customized for their level of fitness and needs.

### ***Women-Focused Processes: A Sense of Belonging from Feedback and Outcomes***

The gathering and analyzing of women's feedback and the measurement and monitoring of their outcomes both play a role in providing a sense of belonging. All four institutions included in this study gather and analyze women's feedback before and after WOWs programs, before and after group fitness classes, and post-Ladies Night events, while most measure and monitor women's CFC usage. None of the institutions measure women's retention rates exclusively according to usage; however, University B monitors students' CFC usage as it relates to GPA and likeliness of graduating. University B also measures their CFC's effect on retention for FTIC freshmen students, as well as the number of CFC visits which provide optimal effect on student retention. These feedback and measurement processes are important because although research shows use of the CFC increases retention, research is lacking about how that outcome relates to gender. Listening to women's CFC feedback about their attitudes and opinions and monitoring women's outcomes according to usage are especially important given that women are less likely to use the facility than men. Through this information, HE leaders can better understand women's needs, how to accommodate their needs, and how to modify and enhance the

accommodations to provide maximum social benefits so more women will use the CFC, remain in college, and be more likely to graduate.

### **Chapter Summary**

In summary, with over 38% of students not returning for their sophomore year to their original HE institution (National Student Clearinghouse Research Center, 2019), motivating students to use the CFC to increase their retention should be important to HE leaders, especially for women who are less likely to use it (Stankowski et al., 2017). This chapter reported on case studies of four HE CFCs from diverse regions of the United States and Canada and compiled their best practices regarding women-focused fitness accommodations. The case studies highlighted how the best practices identified align with social factors, specifically social interaction and sense of belonging. In chapter five, I present a first-of-its kind framework of the women-focused fitness accommodations which align with social benefits, so HE leaders can potentially implement the framework to more effectively leverage the CFC's retention influence for women.

## CHAPTER 5: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Only a little over 61% of HE students who begin as freshmen return to their original institution for sophomore year (National Student Clearinghouse Research Center, 2019). It has been shown that use of the CFC increases retention, but women are less likely to use it (Stankowski et al., 2017). However, research demonstrates that women are more likely to use the CFC if they can experience social benefits (Stankowski et al., 2017) such as social interaction and sense of belonging. This dissertation study presents a first-of-its-kind women-focused fitness framework which has the potential to increase women's CFC usage and ultimately improve women's retention rates. Guided by Tinto's (1999) Theory of Student Departure and derived from case study research on institutions in the United States and Canada, this study uncovered college campuses that deliver women-focused fitness and highlighted the accommodations they provide which provide social benefits and thus motivate women. Therefore, a key feature of the framework is accommodations that have social benefits for women. The framework identifies and explains women-focused fitness areas, activities, programs, and processes and highlights the "best practice" accommodations that produce the social benefits. This framework is intended to explicate for HE leaders what women-focused fitness looks like. By reproducing this women-focused fitness framework at CFCs, HE leaders have a tool for increasing women's CFC usage and retention so more women will stay in college and graduate. In this chapter, the framework is presented and explained.

### **Summary of Methodology and Findings**

Five senior CFC leaders from four IHE's in the United States and Canada were selected based on their responses to a preliminary telephone interview. They were interviewed in depth

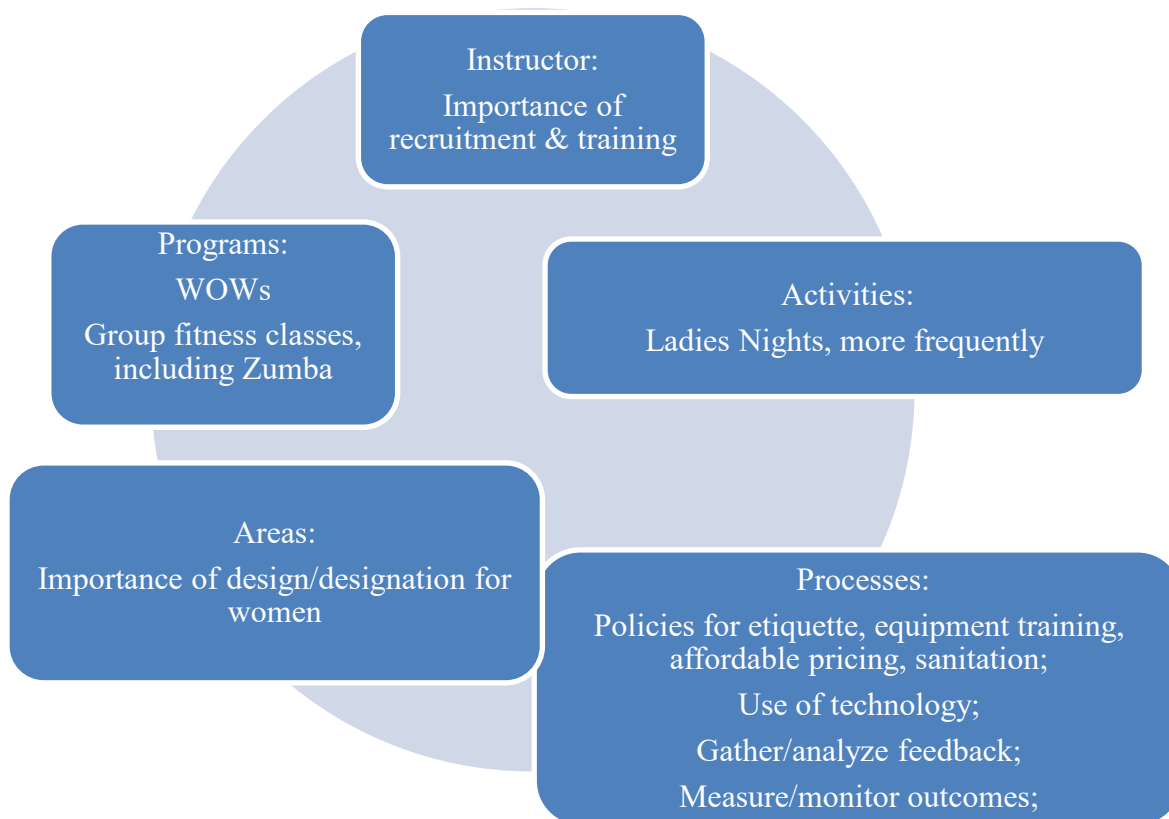
about their women-focused fitness accommodations, provided artifacts and in some cases observations were carried out. Data coding and analysis was carried out as described in Chapter

2. Four broad themes arose from the analysis.

- Women-focused areas provide social benefits when they are officially designed and designated for women.
- Women-focused programs, like Zumba, provide social benefits. The effect of a well-trained instructor is significant.
- Women-focused activities, like Ladies Nights, deliver social benefits and should be offered more than a few times a year.
- Women-focused processes, such as enacting and enforcing women-friendly CFC policies for etiquette, equipment training, affordable pricing, and sanitation, provide sense of belonging benefits. Other such processes include use of customized technology, gathering and analyzing women's feedback, and measuring and monitoring their outcomes.

### **A Framework for Women-Focused Fitness Accommodations**

Based on these findings, I created a framework for women-focused fitness accommodations (Figure 1). Given the conclusions of this study, I present a first-of-its-kind, women-focused fitness framework, which provides recommendations for policy and practice. The framework's elements are superimposed on a circle because they all provide social benefits; therefore, while no one aspect stands out as more important than another, ideally, they should be implemented together, to provide maximum social benefits.

**Figure 1***Framework for Women-focused Fitness Accommodations*

The model is comprised of the following parts:

- Women-focused activities, especially Ladies Nights events, which provide numerous social benefits and should be held on a regular basis or more than once or twice a year. Events should include women's-only exercise times at the swimming pool and rock-climbing wall, women's-only group fitness classes, like Yoga and Zumba, and special events like Zombie Zumba, where women wear similar clothing and accessories, dance to music, and experience discotheque-type lighting.

- Women-focused processes to create a sense of belonging, specifically enacting and enforcing CFC policies for etiquette, equipment training, affordable pricing, and cleanliness and sanitation, and use of technology to support positive health outcomes and healthy habits according to women's fitness level and needs. Finally, gather and analyze feedback to identify women's CFC needs, how best to accommodate their needs, and measure and monitor outcomes of the accommodations regarding women's CFC usage rates and their effect on retention rates.
- Women-focused fitness areas, which are designed and designated as women's only, to provide a sense of belonging. The area should be in a private room or location, so women can exercise separately from the main facility, and should include bright lighting and a variety of colorful fitness equipment and accessories that women like to use.
- Women-focused programming which provide social benefits, specifically group fitness classes like Zumba, as well as a WOWs course, a three-to-six-week small group training course, which teaches women proper weight-lifting technique and its benefits. The WOWs course should include a buddy system so women can practice weight-lifting activities outside of the classroom with their partner.
- Women-focused instructors, predominantly women, who are recruited and trained to provide social benefits as well as proper instruction. Instructors should engage with women before, during, and after class, use a motivational rather than critical teaching style, validate women's accomplishments, provide personal feedback and correct movements, and display a welcoming, supportive, and confidence-building demeanor.



## **Tinto's Theory of Student Departure: Alignment with the Women-Focused Fitness**

### **Accommodations Model**

Returning to the breakdown of Tinto's Theory and its alignment with CFC best practices (Table 1), I'll now include facets of the women-focused fitness framework (Table 2) to show how its elements can positively influence women's usage and retention. For example, a sense of belonging, or the feeling that women matter and belong in a new community, can be fulfilled through women-friendly policies for etiquette, training, pricing, and sanitation; these policies create a CFC environment where women feel welcome. Second, social engagement, or the practice of positive interactions, the more the better, can be enhanced by trained instructors who check in with women before, during, and after group fitness classes. Similarly, the Rite of Passage's first step, where words of encouragement and positive gestures are needed, can also be fulfilled by instructors, who are trained to display a cheer-led, championing teaching style; the second step, the need to feel part of a community rather than isolated, can be accomplished through the women-focused fitness areas, a safe space for PA where women don't feel judged, uncomfortable, or stared at. Finally, for the Rite of Passage #3 to occur, the final phase toward association with a new culture, the repetitive social contact can be fulfilled through Ladies Night events which provide women multiple opportunities for social contact and connection.

**Table 2**

*Tinto's Theory of Student Departure and Alignment with the Women-focused Fitness Framework*

<b>Tinto's Theory Elements</b>	<b>Application to Freshman Year Experience</b>	<b>CFC Community Atmosphere</b>	<b>CFC Health &amp; Wellness Programs</b>	<b>CFC Intramural Programs</b>	<b>CFC General Best Practices</b>	<b>CFC's Women-Focused Fitness Model</b>
<b>Sense of Belonging</b>	Students feel they matter and belong to the new community	Students feel more "at home" (Watson et al., 2006)	Students connect with similar health goals (Dalgarn, 2001)	University benefits; sense of belonging (Miller, 2011; Artinger et al., 2006)	Outdoor fitness; hiking & bicycling (Petruzello et al., 2020; Sparling, 2003; Hook & Marcus, 2020)	Policies <ul style="list-style-type: none"> <li>• Etiquette</li> <li>• Training</li> <li>• Pricing</li> <li>• Sanitation</li> </ul>
<b>Engagement</b>	More positive interactions are better than fewer.	More often used, more likely to benefit (Watson et al., 2006)	CPE such as GRAD & ARTEC courses (Hook & Marcus, 2020; Williams, Greene et al., 2018)	Social benefits; bonding (Artinger et al., 2006; Williams, Sienko et al., 2018)	Convenient location & 24-hour access (Atwood, 2017)	Instructor: <ul style="list-style-type: none"> <li>• Empathy</li> <li>• Check-In</li> <li>• during group fitness classes</li> </ul>
<b>Rite of Passage #1: Separate from Prior Association</b>	Encouraging words, positive gestures in social endeavors	Gathering place for celebration, teaching & learning (Dalgarn, 2001)	Self-esteem through healthy habits (Dalgarn, 2001)	Alliance benefit; peer trust (Artinger et al., 2006)	Varied instruction about equipment use (Stankowski et al., 2017)	Instructor: <ul style="list-style-type: none"> <li>• Attention</li> <li>• Encourage during "Ladies Nights"</li> </ul>

<b>Rite of Passage #2: Transition into New Association</b>	Isolated if not part of a community; withstand stressors	Making friends (Watson et al., 2006)	Build social relationships by supporting others' health (Dalgarn, 2001)	Personal benefit; self confidence (Artinger et al., 2006)	Group class variety (Williams, Sienko et al., 2018)	Pods
<b>Rite of Passage #3: Incorporate into New Association</b>	Sense of connectedness; repetitive contact is important	Caring for and about others (Dalgarn, 2001; Henchy, 2011)	Interpersonal skills through team collaborations (Dalgarn, 2001)	Cultural benefit; acceptance (Artinger et al., 2006)	Technology for goals; emphasize sociability (Haney, 2018)	WOWs course with buddy system

## **Recommendations**

Considering this framework's alignment with Tinto's Theory and CFC general best practices, recommendations for implementation include the following:

### ***Recommendations for Practice***

- With a minimal investment, CFCs could introduce this framework, or elements of it, and potentially increase women's usage and retention rates.
- CFCs in this study are currently using novel and innovative strategies to increase the usage of their women students, for example Zombie Zumba and GFIT, a student-instructor recruitment program, and more CFCs should consider implementing these strategies.
- Retention rate increases from use of the CFC are enormously promising; for example, using the CFC between 31 and 45 times per semester was shown at one institution, from a sample of 5,836 students, to increase student retention rates almost four percentage points
- For-profit fitness brands are not necessarily guiding what CFCs are providing for their women's accommodations; for example, the GFIT program at one IHE recruits students to become teachers and a for-profit company may require a more stringent instructor certification process.

### ***Recommendations for Policy***

- Given their potential to improve the retention of women students, federal and state funding should be directed toward HE CFCs and designated for women-focused fitness accommodations from this framework.

- State mandates for CFC policy, such as for etiquette and sanitation, could increase women's sense of belonging, usage and retention and would help CFC leaders by providing consistent guidelines, instead of leaders enacting and enforcing policy on their own.
- CFCs leaders should share best practices and innovative ideas on international websites, such as in NIRSA discussion threads.

### ***Recommendations for Future Research***

Based on the findings and conclusions of this study, the complicated relationship between women and fitness, their use or lack thereof of the CFC, and considering what is still lacking in research regarding how best to motivate them toward use, recommendations for future research include:

- Gather primary data from women CFC non-users and users, after implementing the framework, to determine its effect on use.
- Further study women's need for cleanliness and sanitation in the CFC and how that need continues to evolve in a Covid-19 and post-pandemic environment.
- Further analyze the costs and benefits of the women-focused accommodations to IHEs.
- Consider how the framework could be adjusted effectively in the event of another pandemic.
- Study CFCs which are not providing women-focused accommodations to determine what social benefits women experience and how they are perceived by the women.

## Reflections

Upon reflection, and considering my bias of being a fitness lover and advocate, a proud parent of a past-NCAA women's athlete, and a HE instructor who observes men seizing leadership opportunities more than women in the classroom, what surprised me the most about the results of this study are the following:

- given what is known about the positive effects of PA on physical and mental health, that women are still less likely to exercise than men;
- the interviewees' lack of discussion regarding women's issues like body dysphoria, given research reports that women exercise for extrinsic factors (Dobersek & Jeffery, 2018), and that doing so is linked to negative consequences such as poor body image and self-esteem, disordered eating, and body dissatisfaction (DiBartolo et al., 2007; Gonçalves & Gomes, 2012);
- that women upward compare themselves up to 30 times per day and how that practice decreases their PA and self-efficacy, while for men upward comparisons have the opposite effect, increasing their PA and self-efficacy (Arigo et al., 2020);
- the differing feedback from interviewees regarding men's responses to women-focused fitness accommodations, from "they really don't care that much," to a report of men bullying CFC leaders who were attempting to implement women-friendly CFC policies;
- that some HE CFCs are providing numerous and elaborate women-focused fitness accommodations, while most seem to be providing few accommodations, or only women's intramurals (a common, baseline accommodation);

- the skepticism and beliefs on the part of some women CFC leaders (who were not chosen as interviewees), after I shared my topic and previous research, that women's accommodations were either unnecessary, demeaning because "women can do anything men can do," or that my research sounds interesting but they "prefer to wait and see what this generation thinks."

What surprised me the least about the results of this study are that:

- the CFC leaders most engaged in women-focused fitness accommodations are mainly women, and they believe in equal opportunity, equity, and creating a welcoming environment for all students at the CFC;
- Canada is ahead of the curve in providing women-focused fitness accommodations, as I perceive Canada as intentional in its focus on and creation of equity experiences;
- CFC leaders were planning and implementing their re-openings, after closing due to Covid-19, and were excited to be back in the CFC;
- primary" observation data did not fully align with "secondary" interview data; for example, when I didn't observe obvious social benefits in a Zumba class after the CFC leader shared it was the "most engaging" part of their women's-focused fitness accommodations. CFC leaders were proud of their women's-focused fitness accommodations and therefore could have bias toward their accommodations' effectiveness in providing social benefits.

### **Study Conclusion**

All in all, IHEs are experiencing a severe student retention problem, with average rates measuring just above 61% prior to the pandemic (National Student Clearinghouse Research

Center, 2019) and depressed an additional 20% due to Covid-19 (Gardner, 2020). While use of today's state-of-the-art CFCs improves retention (Danbert et al., 2014), HE women, compared to men, are less likely to use it (Stankowski et al., 2017). In response to students' decreasing retention rates and women's low CFC usage rate, this dissertation study studied IHEs in both the United States and Canada and developed a first-of-its-kind women-focused fitness framework. The framework is aligned with Tinto's (1999) Theory of Student Departure's recommendations toward increasing retention and has the potential to increase women's CFC usage and subsequently, improve women's retention rates. This unprecedented study uncovered, analyzed, and presented not only women-focused fitness accommodations, but also highlighted, as facets of the framework, the accommodations which provide maximum social benefits to women such as social interaction and sense of belonging (Stankowski et al., 2017). By implementing this first-of-its-kind framework, HE leaders will have a tool for increasing their women students' CFC usage, and most importantly, improve their women students' retention rates so that more women will remain in college and be more likely to graduate.



## REFERENCES

- Adams, G., Shannon, J., & Shannon, S. (2020). Return to university campuses associated with 9% increase in new COVID-19 case rate. *MedRxiv*.  
<https://doi.org/10.1101/2020.10.13.20212183>
- American College Health Association. (2021). *American College Health Association-National College Health Assessment III: Reference group executive summary spring 2021*.  
[https://www.acha.org/NCHA/ACHA-NCHA\\_Data/Publications\\_and\\_Reports/NCHA/Data/Reports\\_ACHA-NCHAIII.aspx](https://www.acha.org/NCHA/ACHA-NCHA_Data/Publications_and_Reports/NCHA/Data/Reports_ACHA-NCHAIII.aspx)
- Arigo, D., Pasko, K., & Mogle, J.S. (2020). Daily relations between social perceptions and physical activity among college women. *Psychology of Sports and Exercise, (47)*, 101528.
- Artinger, L., Clapham, L., Hunt, C., Meigs, M., Milord, N., & Sampson, B. (2006). The social benefits of intramural sports. *NAPSA Journal, 43*, 69–86. <https://doi.org/10.2202/0027-6014.1572>
- Astin, A.W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel, 25*(4), 297–308.
- Astin, A.W. (1999). Student involvement: A developmental theory for higher education. *Journal of College Student Development, 40*(5), 587-598.
- Attwood, E. (2017, March 21). The evolution of campus recreation facilities and programs. *Athletic Business*. <https://www.athleticbusiness.com/rec-center/the-evolution-of-campus-recreation-facilities-and-programs.html>

- Ball, J. W., Bice, M. R., & Maljak, K. A. (2018). Exploring the relationship between college students' barriers to exercise and motivation. *American Journal of Health Studies, 33*(2), 61-69.
- Bean, J. P. (2005). Nine themes of college student retention. In A. Steidman (Ed.), *College student retention: Formula for student success* (pp. 215-243). Praeger.
- Beaudry, K., Ludwa, I., Thomas, A., Ward, W., Falk, B., & Josse, A. (2019). First year university is associated with greater body weight, body composition and adverse dietary changes in males than females. *PLOS ONE, 14*(7): e0218554.  
<https://doi.org/10.1371/journal.pone.0218554>
- Bentley, J. (2015). *Influencing retention to the second college year: The impact of performance-based merit aid and success coaching* [Doctoral dissertation, Central Michigan University]. CMU Campus Repository. <https://scholarly.cmich.edu/?a=d&d=CMUGR2015-117.1.29>
- Bray, S.R., & Born, H.A. (2004). Transition to university and vigorous physical activity: Implication for health and psychological well-being. *Journal of American College Health, 52*(4), 181-188. <https://doi.org/10.3200/JACH.52.4.181-188>
- Cardinal, B.J., Sorensen, S.D. & Cardinal, M.K. (2012). Historical perspective and current status of the physical education graduation requirement at American 4-year colleges and universities. *Research Quarterly for Exercise & Sport, 83*(4), 503-512.  
<https://doi.org/10.1080/02701367.2012.10599139>

- Carnegie Foundation for the Advancement of Teaching (1990). *Campus life in search of community*. Princeton University Press.
- Chukhlantseva, N. (2019). Effectiveness of an indoor cycling program in improving the physical condition of young women. *Polish Journal of Sport & Tourism, 26*(3), 14–19.  
<https://doi.org/10.2478/pjst-2019-0015>
- Cole, S. (2020, January 9). Women in the weight room. *Campus Rec Magazine*.  
<https://campusrecmag.com/women-in-the-weight-room/>
- Cole, S. T., & Illum, S. F. (2006). Examining the mediating role of festival visitors' satisfaction in the relationship between service quality and behavioral intentions. *Journal of Vacation Marketing, 12*(2), 160–173. <https://doi.org/10.1177/1356766706062156>
- Craig, M. L., & Liberti, R. (2007). “Cause that’s what girls do”: The making of a feminized gym. *Gender and Society, 5*, 676-699. <https://doi.org/10.1177/0891243207306382>
- Dalgarn, M. K. (2001). The role of the campus recreation center in creating a community. *Recreational Sports Journal, 25*(1), 66–72. <https://doi.org/10.1177/1356766706062156>
- Danbert, S. J., Pivarnik, J. M., McNeil, R. N., & Washington, I. J. (2014). Academic success and retention: The role of recreational sports fitness facilities. *Recreational Sports Journal, 38*(1), 14–22.
- DiBartolo, P. M., Lin, L., Montoya, S., Neal, H., & Shaffer, C. (2007). Are there “healthy” and “unhealthy” reasons for exercise? Examining individual differences in exercise motivations using the Function of Exercise Scale. *Journal of Clinical Sport Psychology, 1*, 93–120.  
<https://doi.org/10.1123/jcsp.1.2.93>

- Dobersek, U., & Jeffery, K. A. (2018). Self-objectification in the fitness center environment: A qualitative perspective. *Pamukkale Journal of Sport Sciences, 9*(2), 54–72.
- Durkheim, E. (1951). *Suicide: A study in sociology*. Free Press.
- Enochs, W. K., & Roland, C. B. (2006). Social adjustment of college freshmen: The importance of gender and living environment. *College Student Journal, 40*, 63-73.
- Farren, G., Zhang, T., Martin, S., & Thomas, K. (2017). Factors related to meeting physical activity guidelines in active college students: A social cognitive perspective. *Journal of American College Health, 65*(1), 10-21. <https://doi.org/10.1080/07448481.2016.1229320>
- Festiger, L. (1954). A theory of social comparison processes. *Human Relations, 7*, 117-140. <https://doi.org/10.1177/001872675400700202>
- Fine, M. B., Clark, M. N., & Scheuer, C. L. (2016). Value-added university services: The importance of on-campus recreational facilities. *Services Marketing Quarterly, 37*(1), 24. <https://doi.org/10.1080/15332969.2015.1112181>
- Fischer, D. V., & Bryant, J. (2008). Effect of certified personal trainer services on stage of exercise behavior and exercise mediators in female college students. *Journal of American College Health, 56*(4), 369–376. <https://doi.org/10.3200/JACH.56.44.369-376>
- Forrester, S. A., McAllister-Kenny, K., & Locker, M. (2018). Association between collegiate recreational sports involvement and undergraduate student retention. *Recreational Sports Journal, 42*(1), 64–74. <https://doi.org/10.1123/rsj.2017-0004>
- Gardner, L. (2020, May 18). Inside the scramble for students. *The Chronicle of Higher Education*. <https://www.chronicle.com/article/inside-the-scramble-for-students>

- Gonçalves, S. F., & Gomes, A. R. (2012). Exercising for weight and shape reasons vs. health control reasons: The impact on eating disturbance and psychological functioning. *Eating Behaviors, 13*(2), 127-130. <https://doi.org/10.1016/j.eatbeh.2011.11.011>
- Gruber, K. J. (2008). Social support for exercise and dietary habits among college students. *Adolescence, 43*(171), 557–575.
- Hall, D. A. (2006). Participation in a campus recreation program and its effect on student retention. *Recreational Sports Journal, 30*, 40–45. <https://doi.org/10.1123/rsj.30.1.40>
- Haney, A. (2018). *Young female college millennials' intent for behavior change with wearable fitness technology* [Doctoral dissertation, Walden University]. Walden University Scholar Works. [ScholarWorks@waldenu.edu](mailto:ScholarWorks@waldenu.edu).
- Haydarov, R., Moxley, V., & Anderson, D. (2013). Counting chickens before they are hatched: An examination of student retention, graduation, attrition, and dropout measurement validity in an online master's environment. *Journal of College Student Retention: Research, Theory & Practice, 14*(4), 429–449. <https://doi.org/10.2190/CS.14.4.a>
- Henchy, A. (2011). The influence of the campus recreation beyond the gym. *Recreational Sports Journal, 35*, 174-181. <https://doi.org/10.1123/rsj.35.2.174>
- Higgins, L. C., & Oldenburg, B. (2003). Predictors of progression and regression in exercise adoption in young women. *Journal of Applied Social Psychology, 4*, 716-729. <https://doi.org/10.1111/j.1559-1816.2003.tb01921.x>

- Hook, C. J., & Marcus, H. R. (2020). Health in the United States: Are appeals to choice and personal responsibility making America sick? *Perspectives of Psychological Science, 15*(3), 643-664. <https://doi.org/10.1177/1745691619896252>
- Hooker, S. A., Wooldridge, J. S., Ross, K. M., & Masters, K. S. (2018). Do monetary incentives increase fitness center utilization? It depends. *American Journal of Health Promotion, 32*(3), 606–612. <https://doi.org/10.1177/0890117116689321>
- IES/NCES. (2020). *Undergraduate retention and graduation rates*. National Center for Education Statistics. [https://nces.ed.gov/programs/coe/indicator\\_ctr.asp](https://nces.ed.gov/programs/coe/indicator_ctr.asp)
- Jacobi, L., & Cash, T. F. (1994). In pursuit of the perfect appearance: Discrepancies among self-ideal percepts of multiple physical attributes. *Journal of Applied Social Psychology, 24*(5), 379-396. <https://doi.org/10.1111/j.1559-1816.1994.tb00588.x>
- Jones, Z. C. (2021, March 20). NCAA apologizes for disparities between women's and men's facilities. *CBS News*. <https://www.cbsnews.com/news/ncaa-tournament-womens-facilities-march-madness/>
- Kampf, S., Haines, S. G., & Gambino, S. (2018). The impact of new or renovated collegiate recreation centers on recruitment and retention. *Recreational Sports Journal, 42*(1), 18–32. <https://doi.org/10.1123/rsj.2017-0005>
- Kennedy, J. F. (1960). The soft American. *Sports Illustrated, 13*(26), 13-17.
- Leslie, E., Sparling, P. & Owen, N. (2001). University campus settings and the promotion of physical activity in young adults: Lessons from research in Australia and the US *Health Education, 101*(3), 116–125. <https://doi.org/10.1108/09654280110387880>

- Lindsey, R., & Sessoms, E. (2006). Assessment of a campus recreation program on student recruitment, retention, and frequency of participation across certain demographic variables. *Recreational Sports Journal*, 30(1), 30–39. <https://doi.org/10.1123/rsj.30.1.30>
- Lorin, J. (2020, June 15). Getting into college just got easier if your kid is wait-listed. *Bloomberg News*. <http://www.detroitnews.com/story/business/2020/06/15/getting-into-college-just-got-easier-if-your-kid-wait-listed/3153986001/>
- Mandatory physical education in colleges and universities is at all-time low, report shows. (2013, January 7). [https://www.huffpost.com/entry/physical-education-college-university-mandatory\\_n\\_2425627#](https://www.huffpost.com/entry/physical-education-college-university-mandatory_n_2425627#):
- Martin, J. (2017). It just didn't work out: Examining non-returning students' stories about their freshman experience. *Journal of College Student Retention: Research, Theory and Practice*, 19(2), 176-198. <https://doi.org/10.1177/1521025115611670>
- Matteucci, A., Albohn, D., Stoppa, T. (2012). Exercise behavior among college students and sex differences in a health-promotive intervention. *The International Honor Society in Psychology*, 17(4), 163-169. <https://doi.org/10.24839/2164-8204.JN17.4.163>
- McElveen, M., & Rossow, A. (2014). Relationship of intramural participation to GPA and retention in first-time-in-college students. *Recreational Sports Journal*, 38(1), 50–54. <https://doi.org/10.1123/rsj.2013-0027>
- Merriam, S., & Tisdell, E. (2016). *Qualitative research* (4<sup>th</sup> Ed.). Jossey-Bass.
- Metz, G. W. (2002, October 16-19). *Challenges and changes to Tinto's Persistence Theory* [Paper presentation]. Annual meeting of the Mid-Western Educational Research Association, Columbus, OH.

- Miller, J. J. (2011). Impact of a university recreation center on social belonging and student retention. *Recreational Sports Journal*, 35, 117–129. <https://doi.org/10.1123/rsj.35.2.117>
- Murray, B. (2002). How to evaluate the implementation of Title IX at colleges and universities and attitudes and interest of students regarding athletics. *Gender Issues*, 20(2/3), 87–99. <https://doi.org/10.1007/s12147-002-0019-z>
- National Coalition for Women and Girls in Education (2002, August 27). *Title IX athletics policies: Issues and data for educational decision makers*.
- National Student Clearinghouse Research Center (2019). *National, persistence, postsecondary snapshot report*. <https://nscresearchcenter.org/snapshotreport35-first-year-persistence-and-retention/>
- Nebel, M. A. (1995). *Prevention of disordered eating among college women: A clinical intervention* [Doctoral Dissertation, University of Arizona]. UA Campus Repository. <https://repository.arizona.edu/handle/10150/187085>
- Nora, A. (2001). The depiction of significant others in Tinto’s “rites of passage”: A reconceptualization of the influence of family and community in the persistence process. *Journal of College Student Retention: Research, Theory & Practice*, 3(1), 41–56. <https://doi.org/10.2190/BYT5-9F05-7F6M-5YCM>
- Park, R. J. (2017). Is today’s physical education the legacy that Franklin Henry had hoped for? *Kinesiology Review*, 6(2), 187-194. <https://doi.org/10.1123/kr.2017-0010>



- Petruzzello, S. J., & Box, A. G. (2020). The kids are alright--right? Physical activity and mental health in college students. *Kinesiology Review*, 9(4), 279–286.  
<https://doi.org/10.1123/kr.2020-0039>
- Powers, K., & Schloss, P. (2017). *Organization and administration in higher education* (2nd ed.). Routledge. <https://doi.org/10.4324/9781315630656>
- Reynolds, G. L. (2007). The impact of facilities on recruitment and retention of students. In N. A. Valcik (Ed.), *Special issue: Space: The final frontier for institutional research. New Directions for Institutional Research*, 2007(135), 63–80. <https://doi.org/10.1002/ir.223>
- Sale, C., Guppy, A. & El-Sayed, M. (2000). Individual differences, exercise and leisure activity in predicting affective well-being in young adults. *Ergonomics*, 43, 1689-1697.  
<https://doi.org/10.1080/001401300750004096>
- Seidman, A. (2012). *College student retention: Formula for student success*. Rowman & Littlefield.
- Schiffman, L., & Wisenblit, J. (2019). *Consumer behavior*. Pearson Education.
- Spady, W. (1970). Dropouts from higher education: An interdisciplinary review and synthesis. *Interchange*, 1, 64-85. <https://doi.org/10.1007/BF02214313>
- Sparling, P. B. (2003). College physical education: An unrecognized agent of change in combating inactivity-related diseases. *Perspectives in Biology & Medicine*, 46(4), 579-587.  
<https://doi.org/10.1353/pbm.2003.0091>

- Stankowski, C. L., Trauntvein, N. E., & Hall, S. L. (2017). I use the student recreation center, but I would use it more if . . . : Understanding male and female constraints to student recreation center use. *Recreational Sports Journal*, *41*(1), 55–66. <https://doi.org/10.1123/rsj.2015-0026>
- Stapleton, D. T., Taliaferro, A. R., & Bulger, S. M. (2017). Teaching an old dog new tricks: Past, present, and future priorities for higher education physical activity programs. *Quest*, *69*(3), 401–418. <https://doi.org/10.1080/00336297.2016.1256825>
- State University System of Florida (n.d.). 2019 accountability plans. <https://www.flbog.edu/board/accountability-plans/>
- Summerskill, J. (1962). Dropouts from college. In N. Sanford (Ed.), *The American college* (pp. 627-657). John Wiley & Sons. <https://doi.org/10.1037/11181-019>
- Sweeney, M. M. (2011). Initiating and strengthening college and university instructional physical activity programs. *Journal of Physical Education, Recreation & Dance*, *82*(4), 17–21. <https://doi.org/10.1080/07303084.2011.10598609>
- Teixeira, P. J., Carraça, E. V., Markland, D., Silva, M. N., & Ryan, R. M. (2012). Exercise, physical activity, and self-determination theory: A systematic review. *International Journal of Behavioral Nutrition & Physical Activity*, *9*, 78-107. <https://doi.org/10.1186/1479-5868-9-78>
- Thelin, J. (2011). *A history of American higher education* (2nd ed). Johns Hopkins University Press.
- Tiggemann, M., & Zaccardo, M. (2015). Exercise to be fit, not skinny: The effect of fitspiration imagery on women's body image. *Body Image*, *15*, 61-67. <https://doi.org/10.1016/j.bodyim.2015.06.003>

- Tinto, V. (1999). Dropout from higher education — Theoretical synthesis of recent research. *Review of Educational Research*, 45(1), 89–125.  
<https://doi.org/10.3102/00346543045001089>
- Tinto, V. (2017). Reflections on student persistence. *Student Success*, 2, 1.  
<https://doi.org/10.5204/ssj.v8i2.376>
- Trostel, P. (2017). The tip of the iceberg. *Change*, 49(3), 8–18.  
<https://doi.org/10.1080/00091383.2017.1321425>
- Turner, P., & Thompson, E. (2014). College retention initiatives meeting the needs of millennial freshman students. *College Student Journal*, 48(1), 94–104.
- Watson, J. S., Ayers, S., Zizzi, S., & Naoi, A. (2006). Student recreation centers: A comparison of users and non-users on psychosocial variables. *Recreational Sports Journal*, 30, 9-19.  
<https://doi.org/10.1123/rsj.30.1.9>
- Watts, P. (2021, January 26). NIRSA Executive Director introduces COVID-19 impact survey results. *NIRSA, Leaders in Collegiate Recreation*. [nirsa.net/nirsa/2021/01/26/executive-director-pam-watts-introduces-coronavirus-survey-responses/](https://nirsa.net/nirsa/2021/01/26/executive-director-pam-watts-introduces-coronavirus-survey-responses/)
- Webb, O. J., & Cotton, D. R. E. (2018). Early withdrawal from higher education: A focus on academic experiences. *Teaching in Higher Education*, 23(7), 835–852.  
<https://doi.org/10.1080/13562517.2018.1437130>
- White, G. (2021, April 23). Why now? Transgender bill part of GOP push. *Florida Times Union*.
- Widawska-Stanisiz, A. (2020). Use of modern technologies as a tool to support measures promoting physical activity: Differences according to the gender of respondents. *Journal of Physical Education & Sport*, 20, 3002–3009.

- Williams, S. E., Greene, J. L., Fry, A., Neuberger, J., & Satinsky, S. (2018). A study of conceptually based physical education in higher education. *The Physical Educator*, 3, 471. <https://doi.org/10.18666/TPE-2018-V75-I3-7929>
- Williams, W., Sienko, D. M., & Chittams, J. (2018). Promoting physical activity among female college students: Identifying possible racial differences. *American Journal of Health Studies*, 33(3), 137-146.
- Young, S. U., Ross, C. M., & Barcelona, R. J. (2003). Perceived constraints by college students to participation in campus recreational sports programs. *Recreational Sports Journal*. 27(2), 47-62. <https://doi.org/10.1123/rsj.27.2.47>

## APPENDIX A: EMAIL CORRESPONDENCE TO OBTAIN TELEPHONE INTERVIEWS

Hi \_\_\_\_\_,

I write because I just read about your women-focused fitness in \_\_\_\_\_. I am a student in the Education Doctoral program at the University of North Florida, as well as a Marketing instructor at the university. I'm currently working on gathering data for my dissertation study. My topic is: Student Retention in Higher Education: Effect of the Campus Fitness Center and Women.

As you probably know, use of the campus fitness center increases student retention; however, research demonstrates HE women are less likely to use it, three times less likely to exercise, and experience numerous fitness obstacles and fewer motivators, compared to HE men.

I'm collecting data regarding HE women-focused fitness areas/activities/programs/processes and college campuses that deliver women-focused fitness. From the data, I will create an initial model of these women-focused areas, so HE fitness facilities can learn how these areas look and how to potentially implement them to motivate women to use the campus fitness center and increase their retention.

I see that you do offer women's fitness and I would like to learn more about your women-focused fitness areas/activities/programs/processes. Could I speak with you over the telephone (10 or 15 minutes) to learn more about your women-focused fitness? The telephone interview is a precursor, to learn more about the HE women-focused practices. If the information is then suited to my study, I would like to follow up with a more in-depth interview.

I'd also be interested in other HE fitness center directors or program directors in HE fitness that you believe may be able to inform or steer me toward women-focused areas/activities/programs/processes.

Thank you so much for your help, \_\_\_\_\_.

Leslie Gordon  
Adjunct Instructor  
University of North Florida  
Department of Marketing and Logistics  
l.gordon@unf.edu

## APPENDIX B: INTERVIEW QUESTIONS

### I Warm-up/Introduction – background questions

- A. What's your name and title?
- B. What is/are your role/job duties?
- C. When did you begin working at the fitness facility?

### II History – knowledge questions

- A. Does your fitness facility measure its' effect on student retention and if so how?
- B. Does your facility measure women and men's retention rates separately and if so how?
- C. When and how did the idea of women-focused fitness come to be?
- D. Who was involved in the idea of women-focused fitness at your facility?

### III Present – knowledge, opinion/values, feeling questions

- A. How would you describe your women-focused fitness area/activity/program/process?
- B. What characteristics of the women-focused area/activity/program/process specifically relate to women's needs?
- C. What do you hear about your fitness facility, in general?
- D. What do you hear about your women-focused fitness and how do you hear it? (for instance, directly to you or other managers, overhear conversations, written surveys, or through the "grapevine" or a third party)
- E. How do you measure the effectiveness of your women-focused fitness?
- F. What are the outcomes of your women-focused measurements (for instance, concerning usage rates, retention rates) and how do you learn about them?
- G. In terms of feedback received about the women-focused fitness, what stands out as "most enjoyable"?
- H. In terms of feedback received, what stands out as "most engaging"?
- I. In terms of feedback received, what stands out as "something you would change"?
- J. What's the craziest thing you've seen/heard in your fitness facility overall?
- K. What is the craziest thing you've seen/heard in terms of the women-focused fitness?
- L. As a researcher I'm interested in stories. Tell me a story about your women-focused fitness.
- M. Some people would say women-focused fitness takes something away from men-focused fitness areas/activities/programs/processes? What would you say to them?

### IV Future – knowledge questions

- A. What future plans are you aware of for your fitness facility, overall, what is the timeline, who is involved and how were these plans decided (based on what)?
- B. What future plans are you aware of for your women-focused fitness, what is the timeline, who is involved and how were these plans decided (based on what)?
- C. Is there anything else you'd like to share about your fitness facility, in general?
- D. Is there anything else you'd like to share about your women-focused fitness?

## APPENDIX C: AXIAL CODING PROCESS

	<b>Needs</b>	<b>Provide Areas</b>	<b>Provide Activity</b>	<b>Provide Programs</b>	<b>Provide Processes</b>	<b>Fulfill Social Benefits</b>	<b>Measure Usage, Retention</b>
<b>A</b>	WOWs pre & post surveys	Pods	None	WOWs  Importance of hygiene	None	Pods “most enjoyable,” WOWs “most bonding”	Usage only
<b>B</b>	WOWs pre & post surveys	Boutique facility	None	WOWs, Emtowerment  Importance of Instructor	Discuss diversity & inclusion, in mission & goals	14/14 women increased confidence post WOWs	Usage, FTIC retention, ideal number of times
<b>C1</b>	In-person feedback from women	Secluded pockets	Chef activities at pool	GFIT	Recruit & train instructors for women’s needs	Self-worth, sense of self	None
<b>C2</b>	Post group fitness survey (online classes)	Pocket areas with designed equipment	Zombie Zumba	Zumba especially popular, 100 women	Etiquette policy	“Most engaging” staff & instructor relationships; “feeling of community” group fitness	None
<b>D</b>	Post Ladies Night surveys	Women’s fitness rooms with Echelon mirrors	Ladies Nights & Welcome Week	Strong Her & WOWs	Post Ladies Night Surveys	“Most enjoyable” group fitness, “most bonding” Strong Her	Usage, moods

## APPENDIX D: WOWS INITIAL QUESTIONNAIRE FROM UNIVERSITY A

**Women on Weights (WOW) Program****INITIAL QUESTIONNAIRE**

Name:

Level (please circle): Beginner OR Intermediate OR Advanced

On a scale of 1-5, how would you rate your current knowledge of resistance training (1= no knowledge, 5=advanced knowledge)? \_\_\_\_

What are the primary reasons/obstacles that you have not engaged in any/much resistance exercise? Please check any that apply:

- Lack of interest
- Lack of knowledge/technique
- Intimidated by men/women in the gym
- Lack of time
- Don't want bulky muscle
- Afraid of hurting myself

Other:

What are your top 3 goals/reasons for joining this course?

- 1)
- 2)
- 3)

What are your top 3 expectations of the instructor?

- 1)
- 2)
- 3)