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Gym Anxiety: How it Affects the Mental Health and Body Image Perception of Female College Students in a Male Dominated Setting

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HONORS THESIS

By $\hat{O}a \cdot a^{\wedge}$ $\} \text{ } \hat{O}$

EDITORIAL REVIEWER • Šæ | æS[@

Submitted in partial fulfillment of the requirements for graduation
with honors in the Bryant University Honors Program
U&A 202G

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ABSTRACT

College females who attend the gym struggle with self-perception as they are surrounded by men who may be stronger and seem intimidating. This ultimately leads to feelings of self-consciousness and anxiety in college aged females that attend the gym. This paper analyzes the relationship women have formed with the gym, as well as how attending the gym can cause feelings of discomfort for many women. Women have experienced a fear of unwanted attention, lack of knowledge with certain equipment and exercises, and judgment from themselves, as well as other gym-goers. The study uses a self-report survey, and the collected data was used to determine how gender differences in the gym affect the mental health and body image perception of female college students. The results from the study reveal possible reasons why college aged females experience gym anxiety.

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INTRODUCTION

For years, the gym has been seen as a male-dominated setting. However, there has been a recent shift towards the gym becoming more evenly distributed in terms of gender. It has been argued that “while both men and women work out in contemporary gyms, popular conceptions of the gym as a masculine institution continue” (Craig & Liberti, 2007, p. 676). However, females are increasing their presence in the gym and are seeking to feminize working out. Today, more female college students have been attending the gym. While the gym has shifted towards a more gender inclusive setting, women still experience feelings of self-consciousness and anxiety while working out. Women most frequently observe these feelings when participating in activities such as weightlifting.

The goal of this study is to provide insight on how we can lower feelings of discomfort in the gym for women, as well as encourage more women to participate in the activities they wish to do regardless of if it has historically been considerably masculine. Researchers have shared that women feel uncomfortable in the weight room. At the gym, females are surrounded by males that may be bigger and stronger than them. This has led to the concept of gym anxiety, ultimately shifting females away from working out and especially turning them away from weightlifting. Previous research has shared that there is a glass ceiling for women that work out (Dworkin, 2001, p. 333). It is believed that women are limited in what they can achieve at the gym, as well as how strong they can be. However, these beliefs should not be a factor in whether or not women should attend the gym. Females should not be scared of the gym or gaining muscle. Women should feel empowered by the gym and should continue to have a place in the weightroom.

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LITERATURE REVIEW

Existing literature has focused on studying the topic of gender differences in the gym. Often, the gym has been characterized as a “‘sexinscribed’ space, with gym structures constituted through the interpretation of gender and culture” (Johnston, 1998, p. 244). Researchers in the field have analyzed the relationship between gender and the gym, as well as how exercising at the gym can affect one's mental health, both positively and negatively. Studies have identified the reasons females may experience gym anxiety in a typically male-dominated environment. Since the gym seems to attract a lot more males than females, females tend to experience gym anxiety much more than males. Researchers have discovered levels of discomfort with certain exercises, such as weightlifting, as well as general discomfort because males are present at the gym. This has ultimately led to the observation of these gender differences at the gym as it has become largely gender equal in recent years.

The Gender Binary

Before discussing gender differences in the gym, it is important to note that we live in a world where the cultural norm is to categorize people under two genders, male or female. This is often referred to as the gender binary or “the view that humans comprise only two types of beings, women and men. The gender binary has played a profound role in shaping the history of psychological science” (Hyde et al., 2019, p. 171). However, there are individuals that do not identify with either classification or are considered to be non-binary. Therefore, it is important to provide background information on the gender binary as the focus of this research is based on those who identify as male or female. The primary focus is also on females and their relationship with working out at the gym. All of the included studies examine how the gender-binary plays a role in differences within the gym.

Gender and the Gym

Studies have found that there is a correlation between gender and the gym. In general, gyms “often reflect and perpetuate gendered power relations and highly prescribed cultural expectations for femininity around women's bodies, appearances, strength, and abilities” (Fisher et al., 2018, p. 477). As a result, researchers have broken down gender differences in the gym based on various factors. Three factors that researchers have most commonly focused

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on are comfort levels, “the gaze” in the gym, and weightlifting. It has been found that gender can affect levels of comfort at the gym, which can also affect the types of exercises one may perform. Furthermore, women seem to feel more self-conscious when they are at the gym men because men, as well as other women, tend to gaze. It has also been argued that weightlifting is a male-dominated activity that females do not tend to participate in.

Comfortability

Several studies have been conducted to analyze how comfort levels in the gym vary by one's gender. Based on research in the field, we can see that there is certainly a difference in the comfort levels of each gender. In a study examining members of a Power First Fitness location, Rizzo compares the comfort levels of members of both genders when performing certain activities, such as weightlifting. Rizzo (2017) found that “there are gendered variations in comfort pertaining to certain activities in the gym, as the frequency with which women and men participate in certain activities is different” (p. 131). One of the activities where comfort levels may vary by gender is weightlifting. This is because weightlifting is male dominated. Furthermore, it was concluded that one’s age, as well as personal level of experience, can play a role in comfort levels. Those who have significantly more experience will reflect higher levels of comfort in the gym.

Similarly, in a study that looked at females who utilize their university's fitness center, Salvatore and Marecek (2010) found that “there are gender-differentiated patterns of gym equipment uses and reports of psychological discomfort in gyms” (p. 556). Their study found that women will actively go out of their way to avoid activities that would induce psychological discomfort. Additionally, it was found that women may avoid the gym altogether since it has been considered a male-dominated space for years. The authors concluded that “many college women's experiences with weight-based exercise were marked by psychological discomfort, heightened concern about social evaluation, and avoidance of certain activities” (Salvatore & Marecek, 2010, p. 565). Ultimately, women experience discomfort in the gym more often compared to men. However, men can also experience discomfort for various reasons, such as lack of experience. Both studies demonstrate how discomfort is related to specific activities within the gym. The research conducted by both

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studies corresponds to one another and can conclude that there is a correlation between gender and comfort levels.

The Gaze

Some scholars in the field have looked at the effect of “the gaze.” “The gaze” can be defined as staring intently at someone or something. Haelyon and Levy analyzed the relationship between females and the gym mirror. They discovered that there are different relationships women will form with the mirror for various situations. The study looked at “situations in which women prefer to avoid gazing in the mirror, situations in which women accept, and even need the mirror, and subversive usage of the mirror” (Haelyon & Levy, 2012, p. 1200). In each situation, women either have a positive or negative connection with the mirror. The researchers concluded that “the mirror is indeed a reflection of how the gaze shapes the female body and the female subject in the gym” (Haelyon & Levy, 2012, p. 1205). Ultimately, the mirror can either be a woman's best friend or enemy when at the gym. They either love it or hate it because it allows them to really analyze themselves and make comparisons.

In another study, conducted by Amy Clark, the researcher examined how women feel towards “the gaze” and ways they may interpret it. The study looks at different situations where “the gaze” may be present. It was found that something as simple as the type of clothing worn or how women present themselves can cause men to gaze at women while they are working out. The study also found that while most gyms are for both men and women, there still seems to be a sense of gender divisions. Specifically, some areas of the gym may be male-dominated and considered “male territory.” However, women “may pass through these ‘male spaces’ and are bombarded with gazes from the men” (Clark, 2019, p. 9). This can lead to women feeling intimidated or uncomfortable. Both of these studies demonstrate how “the gaze” can cause discomfort or anxiety for women attending the gym. The conclusions from both studies found that “the gaze” is certainly present in the gym and is a contributing factor to how women feel about the gym. It can be concluded that “the gaze” has caused women to feel both uncomfortable when visually analyzing their own bodies, as well as being stared at by others.

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Weightlifting

While the gym has shifted to become more gender inclusive in recent years, the concept of weightlifting seems to be categorized as a masculine activity that many female gym goers do not participate in frequently. In a study that examined fifty-six female college students, Salvatore and Marecek (2010) found that “there are gender-differentiated patterns of gym equipment uses and reports of psychological discomfort in gyms” (p. 556). Certain gym activities have been stereotyped as being more masculine or more feminine. This has led to gender differences when it comes to the type of exercises one may perform. Weightlifting, specifically, has been categorized as a masculine activity. This has caused women to avoid weightlifting or feeling judged if they do participate in it. These barriers within the gym are discouraging women from participating in weightlifting, an activity that could physically benefit them.

Looking back at Rizzo’s study, which was previously mentioned, weightlifting was a key factor of discomfort. In her study, men were significantly more comfortable with weightlifting compared to women. Additionally, women do not spend as much time training in the weightlifting areas of the gym. The study found that this could be related to lack of experience, as well as discomfort (Rizzo, 2017). Both studies found that weightlifting is considered more masculine, leading to the gym being gendered (Rizzo, 2017; Salvatore & Marecek, 2010). However, many women will still participate in weightlifting. They may just feel a little uncomfortable doing so.

Mental Health

Many of the studies conducted in the field look at how individuals experience anxiety about their physical appearance. Additionally, some studies have looked at the relationship between mental health and physical activity. Researchers in the field have also gone a step further and relate one’s amount of physical activity to overall feelings of self-efficacy. Mental health in relation to the gym is a notable factor worth looking at. Researchers have ultimately found that there can be gender differences when it comes to anxiety about one’s social appearance. Specifically, in females, mental health can explain what causes feelings of anxiety and self-

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perception when attending the gym. However, both genders are susceptible to feelings of anxiety regarding appearance.

General Mental Health

Some studies have analyzed how exercise has an effect on the general mental health of individuals that attend the gym. It has been found that physical exercise can both directly and indirectly affect levels of mental health. In a study that compared amounts of exercise to overall mental health, Zhao (2021) found that “there is a relationship between physical exercise, mental health, and general self-efficacy” (p. 167). This study utilized random sampling in order to remain unbiased. The participants of the study were college females and males. The study used three different scales including the Physical Exercise Scale, the General Self-Efficacy scale, and the Symptom Self-Rating scale (Zhao, 2021, p. 167). Based on the findings from the study, Zhao concluded that there is a positive correlation between the amount of physical exercise an individual completes and the level of self-efficacy and mental health of the individual. Therefore, physical exercise can have a direct effect on the mental health of college students.

Anxiety

Scholars in the field have discovered through their research that individuals may experience anxiety in relation to appearance at the gym. Levels of anxiety can differ based on factors such as gender and amount of physical activity. In a study that used participants from four different fitness centers, Alemdag et al. found that social appearance anxiety (SPA) can affect both genders and bring about feelings of distress in regard to image at the gym. The researchers claimed that “theoretical foundations of social appearance anxiety show that individuals seek to create a positive impression in the eyes of others, and it has been suggested that social appearance anxiety appears when individuals feel incapable of presenting a desired image to others” (Alemdag et al., 2016, p. 2). Female gym goers strive to achieve a certain image. However, with this comes a substantial amount of anxiety. Females are more likely to reflect feelings of anxiety as they are easily affected by how others view them. This is especially common at the gym where “the gaze” is present.

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Likewise, Portman et al. (2018) found in their study that “considerable gender differences remain a prominent feature of social physique anxiety and may influence the type of physical activity males and females perform” (p. 263). Females are more likely to experience higher levels of SPA due to current beauty expectations. Present beauty standards have generated a rise in SPA as females strive to attain a specific image. This can ultimately affect how females view themselves, leading to a decline in their mental health. The findings from both studies show that anxiety can affect whether individuals will choose to attend the gym or not (Alemdag et al., 2016; Portman et al., 2018). Furthermore, women tend to experience higher levels of anxiety when attending the gym and in relation to their physical appearance.

Self-Perception

Several studies have been conducted to analyze how self-perception can vary by gender. Furthermore, attending the gym can affect self-perception, both positively and negatively. In a study that compared undergraduate students that either attend or do not attend the gym, Nida and Ali (2020) saw that “those who go to the gym and female students tend to be more apprehensive towards their body shape compared to those students who are male and do not go to gym” (p. 3). Students who attend the gym were more susceptible to criticizing their appearance as they are likely to compare themselves to other gym goers or fitness influencers. Members of this category are also particularly more likely to express concern towards body shape compared to other age groups. Females also indicated that they experience higher levels of anxiety regarding self-perception as beauty expectations continue to favor specific body shapes. This has caused female students that attend the gym to really analyze themselves and feel apprehensive about their image. In Haelyon and Levy’s study (2012) which was previously mentioned, the authors also discuss the effects of self-perception. In their study, they focus on how the mirror can affect one's self-perception at the gym. The mirror allows individuals to compare themselves to others, as well as examine their own body. This can cause both positive and negative feelings towards one’s image. Both studies primarily focus on variations in self-perception and relate these differences to gender.

In another study, Drake and Radford (2021) discovered that fitness advertisements can affect the mental health and self-perception of female college students. The media portrays

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unrealistic ideals of the female body. This can have a significant effect on females that frequently workout. When females see these images, they often compare themselves to these unrealistic physiques. This ultimately has a negative effect on the body image perception of college-aged females that attend the gym. The study found that “advertisements treat the body as a machine, prescribing and normalizing an obsession with athletics. They glorify the pursuit of the ideal body through athletics and discount women’s potential in and contributions to sport” (Drake & Radford, 2021, p. 1). By displaying these “perfect” images in fitness advertisements, there is an increase in negative body image perception. This has caused college-aged females that frequently workout to compare themselves to other women working out at the gym. Similarly, Furnham et al. (2002) conducted a study that focused on gender differences in body image dissatisfaction. The study found that females are more likely than males to be dissatisfied with their body image, causing negative self-perception. The study shares that there are different reasons for body image dissatisfaction. Specifically in females, they tend to feel that they are overweight and compare their body to unhealthy standards (Furnham et al., 2002, p. 583). In general, there are stereotypes behind what the female body should look like. This has prompted college females to experience negative self-perception while at the gym. There is a clear relationship between self-perception and female body image stereotypes. Both of these studies share the impact stereotypes truly have on how females that attend the gym view themselves in comparison to these stereotypes.

RESEARCH QUESTION AND HYPOTHESIS

The goal of this thesis is to demonstrate how gym anxiety affects female college students in a male dominated setting. This paper focuses on answering the following research question:

How does attending the gym as a female college student affect one’s self-perception in a male dominated setting and ultimately lead to feelings of self-consciousness and anxiety?

This thesis answers the research question through the data and evidence that was gathered. The study that was conducted provides additional data in support of the proposed hypothesis. The hypothesis is that college females experience self-consciousness and anxiety at the gym

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far more than males. These feelings lead to negative self-perception and can cause females to avoid the gym. Connections are made between levels of discomfort and anxiety in college females that attend the gym.

The purpose of this thesis is to examine the gender differences in college gym attendance and to analyze the explanations behind these differences. Information on how gym anxiety is a growing issue in college gyms is shared, as well as how females can become more comfortable in the gym and lower overall feelings of anxiety. This thesis is important as it builds upon current research and answers the questions that researchers may have missed in the past. The reason for completing this research is to provide explanations as to why gym anxiety occurs. However, based on the findings, this thesis also provides insight on how we can encourage females to attend the gym and break the stereotype that gyms and weightlifting are only meant for males.

METHODOLOGY

This study uses a survey in order to gather sufficient data that supports the research question. A Qualtrics survey was distributed to college students that frequently participate in working out and attending the gym.

Procedure

The Qualtrics survey is a self-report survey that was sent to students enrolled in an undergraduate program. This survey was limited to college students since the study focuses primarily on college females. However, college males were also asked to participate in order to collect data that will demonstrate the gender differences that exist in the gym. The survey asked basic demographic questions and then moved into questions concerning comfortability within the gym, as well as feelings of anxiety. Questions include rating how comfortable you are with using certain equipment and how comfortable you feel when there are more members of the opposite sex present. The survey also includes two scales borrowed from previous studies: the Social Appearance Anxiety Scale (Hart et al., 1999) and the Subjective Exercise Experience Scale (McAuley & Courneya, 1994). The Social Appearance Anxiety scale was included in order to gauge the levels of anxiety experienced amongst males and females when

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attending the gym. The Subjective Exercise Experience Scale was included in order to gauge the levels of positive and/or negative well-being while working out and how these levels may affect mental health and body image perception. A quantitative analysis of the survey results was carried out following the collection of the survey data to assist in answering the research question.

Participants

The present study surveyed undergraduate students at universities across the United States. Participants of the survey were not asked what college or university they attended. However, it is known that most participants came from Bryant University. 108 responses were collected. All responses were useable and are analyzed in the results section. 68, or 63% of respondents identified as female, 40, or 37% identified as male, and 0% of respondents identified as other.

Measures

Participants of the survey were asked several demographic questions including gender, age, and ethnicity. The survey also asked questions regarding mental health, self-perception, and overall feelings of anxiety in individuals who work out at the gym. Additionally, it examined comfort levels for different categories, as well as current gender differences at the gym. Questions pertaining to gym anxiety asked which factors may contribute to one's feeling of anxiety at the gym, as well as if one has ever skipped the gym due to these feelings. Questions pertaining to comfortability focused on how comfortable individuals were with various pieces of gym equipment. A scale from 0 – 10 was used to analyze levels of comfortability, with 0 being "Not that comfortable" and 10 being "Very comfortable". See Appendix A for the entirety of the survey questions, including the two scales explained below.

The first scale utilized in this survey was the Social Appearance Anxiety Scales (SAAS). The SAAS is a 16-item self-report measure that analyzes one's fear of situations in which appearance will be evaluated. The gym is certainly an example of a situation where appearance is evaluated. Therefore, it was important to include this scale as a way to measure how appearance is affected in a gym setting. A five-point Likert scale, with scores ranging from one (not at all) to five (extremely), was used to rate social appearance anxiety in different cases. Scores on the SAAS can range from 16 – 80. A higher score would indicate

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higher levels of social appearance anxiety. The resulting data from this scale was able to determine if females are more likely to experience social appearance anxiety compared to males. Additionally, the resulting data was used to draw conclusions regarding the relationship between social appearance anxiety and gym anxiety.

The second scale that was used, the Subjective Exercise Experience Scale (SEES), contains three categories of subjective responses to exercise: positive well-being, psychological distress, and fatigue (McAuley & Courneya, 1994). Participants were prompted to indicate the extent to which exercise affected their feelings within each of the three categories and were asked to choose from options such as “crummy,” “great” and “drained.” This assessment utilized an eleven-point Likert scale, with scores ranging from negative five (reflecting a significant decrease), zero (indicating no change), and plus five (reflecting a substantial increase). The data collected from this assessment was used to determine how exercising and attending the gym may affect the mental health of individuals, both positively and negatively. Additionally, the resulting data was used to draw conclusions regarding the relationship between mental health and gym anxiety.

RESULTS

The following section presents the results of the survey, which ultimately answers the research question previously proposed. The survey questions and answers were used to answer the research question and prove the hypothesis. To reiterate, the purpose of this thesis is to analyze how gym anxiety ultimately affects the mental health and body image perception of female college students within a male dominated setting. Through the gathered data, the results were able to be analyzed and comparisons were made. After this analysis, the hypothesis previously mentioned can be accepted. As hypothesized, the survey found that females are more likely to experience anxiety or fear about going to the gym. Most female respondents reported feeling uncomfortable using certain equipment due to their gender. Additionally, the results suggest that fear of judgment and feeling self-conscious are the leading causes of female college students experiencing gym anxiety. The following sections

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go into more detail and break these results down further. See Appendix B through Appendix L for survey results.

Feelings of Anxiety or Fear at the Gym

When asked if anxiety or fear about going to the gym has ever been experienced, most respondents reported that they either often or somewhat often experience anxiety or fear about going to the gym. Out of 108 respondents, 24 reported that they often experience anxiety or fear, while 36 reported that they somewhat often experience anxiety or fear about going to the gym. Furthermore, out of these 60 respondents, 44, or 73%, were female. On the other hand, 16, or 27%, were male. There was a strong correlation between higher levels of anxiety and/or fear about going to the gym and identifying as female. Additionally, it should be noted that the respondents that reported never experiencing anxiety or fear about going to the gym all identified as male. Therefore, it was concluded that females are far more likely to experience anxiety and/or fear often or somewhat often when attending the gym. The comparison between gender and feelings of anxiety and/or fear when going to the gym can be seen in *Figure 1* below.

Figure 1:

Comparison Between Gender and Fear/Anxiety

Comparison Between Gender and Feelings of Fear and/or Anxiety					
	Often	Somewhat Often	Neutral	Rarely	Never
Female	20	24	12	8	0
Male	4	12	8	8	12
Sum	24	36	20	16	12

	Often	Somewhat Often	Neutral	Rarely	Never
Female	83%	67%	60%	50%	0%
Male	17%	33%	40%	50%	100%
Sum	100%	100%	100%	100%	100%

Correlation Between Gender, Discomfort and Gym Anxiety

When asked if one has ever felt unwelcome or judged at the gym, ultimately leading to feelings of discomfort, many respondents reported that they either somewhat often or never feel unwelcome or judged at the gym. Out of 108 respondents, 28 reported that they

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somewhat often feel unwelcome or judged at the gym, while 40 reported that they never feel unwelcome or judged at the gym. Furthermore, out of the 28 respondents that said somewhat often, all of them identified as female. On the other hand, out of the 40 respondents that said they never have felt unwelcome or judged at the gym, 12, or 30%, identified as female. The other 28, or 70%, identified as male. Therefore, it was concluded that females are far more likely to experience feeling unwelcome or judged at the gym. The comparison between gender and feeling unwelcome or judged at the gym can be seen in *Figure 2* below.

Figure 2:

Comparison Between Gender and Feeling Unwelcome/Judged

Comparison Between Gender and Feeling Unwelcome/Judged					
	Often	Somewhat Often	Neutral	Rarely	Never
Female	8	28	12	8	12
Male	0	0	4	8	28
Sum	8	28	16	16	40
	Often	Somewhat Often	Neutral	Rarely	Never
Female	100%	100%	75%	50%	30%
Male	0%	0%	25%	50%	70%
Sum	100%	100%	100%	100%	100%

Additionally, all 28 of the respondents that reported feeling unwelcome or judged at the gym also reported that they often or somewhat often experience anxiety and/or fear about going to the gym. Furthermore, when asked about what factors contribute to one's gym anxiety, most respondents reported that fear of judgment, feeling self-conscious, and not knowing how to use equipment all contribute to their gym anxiety. Out of 68 female respondents, 64, or 94%, reported that two or more of these factors contribute to their gym anxiety. Out of 40 male respondents, only 16, or 40%, reported that two or more of these factors contribute to their gym anxiety. Therefore, it was concluded that females are more likely to experience a fear of judgment, feel self-conscious, and not know how to use certain equipment. All of these factors contribute to women experiencing anxiety at the gym.

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DISCUSSION

Conclusions

The present study provides extensive results from which many conclusions can be drawn. The results suggest that female college students are more likely to experience anxiety or fear about going to the gym. Additionally, these feelings can often affect mental health and self-perception. The study found that there is a strong correlation between gym anxiety, mental health, and self-perception.

It can be concluded that gender certainly has an impact when it comes to who is more likely to experience gym anxiety. Female participants were found to experience anxiety or fear about attending the gym far more than male participants. Females are more likely to feel unwelcome or judged in a male dominated setting, such as the gym. These feelings have caused women to become scared about heading to gym and even avoid the gym altogether. Male participants were found to not experience anxiety or fear about attending the gym as much as females do. The current research provides insight into what factors lead to gym anxiety and how these factors differ amongst male and female gym-goers.

The goal of this study was to pave the way for future researchers who may be interested in this field of research. The findings from this study adhere to the proposed hypothesis and provide insight into how gym anxiety has a significant impact on female college students in a male dominated setting, ultimately affecting mental health and self-perception. Overall, gym anxiety and how it impacts college-aged females is a real issue that needs to be addressed. These feelings can negatively affect females that frequently attend the gym. Those who experience these feelings often reported a much higher score on the Social Appearance Anxiety Scale, meaning they lack a positive body image perception. Furthermore, female participants that experience gym anxiety often reported more negative feelings on the Subjective Exercise Experience Scale. These negative feelings indicate that the mental health of females that attend the gym is impacted by their gym anxiety. It is crucial that we address these issues and combat gym anxiety once and for all.

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Ethical Considerations

This research involved the use of human participants; therefore, it is crucial to acknowledge the ethical measures that were taken. To ensure confidentiality, all responses were strictly anonymous throughout the duration of this study. Some of the questions included in the survey asked about mental health and appearance, which are topics they may be sensitive to some individuals. Therefore, due to the nature of these topics and the questions pertaining to them, it should be noted that participants may experience psychological or emotional discomfort. In order to ensure all participants felt comfortable and safe during this study, a research consent form was provided to all individuals that opted to participate. Participants were informed that their participation in the study was optional and that they were free to stop participation at any time if they began to feel uncomfortable. The survey followed all appropriate and ethical guidelines, as the Bryant University IRB approved it. Lastly, to remain ethical, the survey included gender non-binary options for any questions that asked respondents to identify their gender. This was important in order to ensure that the survey was inclusive of all respondents.

Limitations

The present study was limited by a variety of factors that ultimately impacted the overall results. First, the unequal distribution of gender may have created certain biases. With more than half of the respondents identifying as female, there was a lack of male representation throughout the survey and results. Gender is the main proponent within this study and was used as a variable when making comparisons. Therefore, the disproportionate number may have skewed the results. Another limitation would be that the study was conducted in an uncontrolled environment and many participants were people from the researcher's personal life. If the study were to have been done in a controlled environment, as well as in a more formal manner, there would be less room for error. Furthermore, participants would be taking the survey under the same conditions and within the same environment. The survey was also limited to college students, making the response pool very specific. If the survey were open to anyone that attends the gym, different perspectives and insights would have been obtained from a much larger pool. This may have allowed for further comparison between gender, age, location, and gym anxiety. A final limitation would be the lack of respondents and the limited

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time frame. While the survey received 108 responses, a higher number of respondents would have provided more data. This could have helped achieve a more equal gender distribution, as well as provide other insights. Additionally, the survey was shared over a two-month period. If time permitted for a longer research period, this also could have assisted with gaining more survey responses.

Opportunities for Future Research

This paper acknowledges the research completed on gender and the gym and discusses the ideas that have been previously addressed. It also reveals that our knowledge on the topic continues to grow as research progresses. However, after analyzing the field, there are still gaps in our understanding since the topic and research associated with it is still fairly new. Therefore, research on this topic should be taken a step further. Further research should be conducted in order to determine what truly causes females to feel discomfort and anxiety about attending the gym. Addressing the limitations within this study would provide future researchers with greater results. A study that is conducted in a controlled environment with a greater number of respondents, an equal gender distribution, is not limited in who can take the survey, and takes place over a longer research period would be ideal for this research and answering the proposed research question. Expanding this survey to other groups than just college students would also provide future researchers with new insights from other age groups. This information can be used to see if age could also be a factor when it comes to determining who is more likely to experience gym anxiety. Examining different age groups may prompt researchers to address disparities in responses amongst age groups. Lastly, future researchers should consider taking a different approach for collecting data on this subject. In the future, researchers should consider taking an observational approach. Researchers can utilize an observational study where they observe gym-goers and compare behavior between males and females at the gym. This could be done through observing body language, what equipment an individual is using, or how an individual dresses. By doing so, researchers would have access to raw data that could make a difference in this field of research. Lastly, since this topic is fairly new, the door is wide open for future researchers to explore this area and prompt further analysis. Ultimately, future research on this topic can spread awareness of

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gym anxiety and establish a clear connection between gender and feelings of anxiety at the gym.

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APPENDICES

Appendix A – Survey Questions

Honors Thesis Survey: Gym Anxiety Research Consent Form

1. Statement of Purpose

You are invited to participate in a study about gym anxiety. We hope to learn who is affected by gym anxiety and what factors may cause it. We also hope to learn how mental health and appearance may play a role in gym anxiety. You were selected as a possible participant in this study because you are currently enrolled in an undergraduate program at a college or university.

2. Description, Including Risks and Benefits

If you decide to participate, we will conduct an experiment involving the following procedures: You will be asked to complete one brief online survey which should take no longer than 15 minutes to complete. The questions in the survey will ask you to reflect upon feelings of gym anxiety, comfortability, and gender differences within the gym. If you choose to participate but begin to experience feelings of psychological or emotional discomfort, you may choose to withdraw from the survey at any time and recorded responses will be discarded. Participation in this survey may provide you with insight into how exercising and attending the gym can have an effect on mental health and overall well-being.

3. Confidentiality

Any information obtained in connection with this study will remain confidential and will not be disclosed to the general public in a way that can be traced to you. In any written reports or publications, no participant other than the researchers will be identified, and only anonymous data will be presented. This consent form, with your signature, will be stored separately and independently from the data collected so that your responses will not be identifiable.

4. Statement that Participation is Voluntary

Your participation is totally voluntary, and your decision whether or not to participate will not affect your future relations with Bryant University or its employees in any way. If you decide to participate, you are also free to discontinue participation at any time without affecting such relationships. However, it is requested that you notify the investigator of this.

5. Persons to Contact

If you have any questions, please contact Carissa Penta at cpenta@bryant.edu or Ronald Deluga at rdeluga@bryant.edu. If you have any additional questions later, we will be happy to answer them.

6. Signature Indicating Informed Consent

By selecting the "I agree" option below, you are indicating that you are at least 18 years of age, are currently enrolled in an undergraduate program at a college or university and have read the information provided above. Selecting the "I agree" option below does not obligate you to participate, and you may withdraw from the study at any time without consequences.

- ☐ I agree and I am over the age of 18 and I am currently enrolled in an undergraduate program at a college or university.
- ☐ I do not agree and/or I am under the age of 18 and/or I am not currently enrolled in an undergraduate program at a college or university.

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What is your age?

- ☐ 18
- ☐ 19
- ☐ 20
- ☐ 21
- ☐ 22
- ☐ 23+

What is your gender?

- ☐ Male
- ☐ Female
- ☐ Other

- ☐ Prefer not to say

What is your ethnicity?

- ☐ Caucasian/White
- ☐ African-American
- ☐ Latino or Hispanic
- ☐ Asian
- ☐ Native American
- ☐ Native Hawaiian or Pacific-Islander
- ☐ Two or more
- ☐ Other

- ☐ Unknown/Prefer not to say

What year of your undergraduate education are you in?

- ☐ Freshmen
- ☐ Sophomore
- ☐ Junior
- ☐ Senior
- ☐ I am not currently enrolled in an undergraduate program

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How frequently do you attend the gym on a weekly basis?

- ☐ 0 days
- ☐ 1-2 days
- ☐ 3-4 days
- ☐ 5-6 days
- ☐ 7 days

Do you go to the gym alone or with others?

- ☐ Alone
- ☐ With others. If so, who?
- ☐ I don't go to the gym

The following questions pertain to gym anxiety:

Have you ever experienced anxiety or fear about going to the gym?

- ☐ Often
- ☐ Somewhat often
- ☐ Neutral
- ☐ Rarely
- ☐ Never

What factors contribute to your gym anxiety? Select all that apply:

- ☐ Fear of judgement
- ☐ Feeling self-conscious
- ☐ Not knowing how to use equipment
- ☐ Other

Have you ever skipped going to the gym because of anxiety or fear?

- ☐ Often
- ☐ Somewhat often
- ☐ Neutral
- ☐ Rarely
- ☐ Never

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The following questions pertain to comfortability:

On a scale from 0-10, how comfortable are you with using free weights at the gym?

Not that comfortable Neutral Very comfortable
0 1 2 3 4 5 6 7 8 9 10

Please select:

On a scale from 0-10, how comfortable are you with using machines at the gym?

Not that comfortable Neutral Very comfortable
0 1 2 3 4 5 6 7 8 9 10

Please select:

Have you ever felt unwelcome or judged at the gym?

- ☐ Often
- ☐ Somewhat often
- ☐ Neutral
- ☐ Rarely
- ☐ Never

The following questions pertain to gender differences:

Have you ever noticed any gender-based differences in the way people use gym equipment (e.g. men tend to use weights more, women tend to use cardio machines more)?

- ☐ Often
- ☐ Somewhat often
- ☐ Neutral
- ☐ Rarely
- ☐ Never

Have you ever felt self-conscious or uncomfortable using certain pieces of gym equipment because of your gender?

- ☐ Often
- ☐ Somewhat often
- ☐ Neutral
- ☐ Rarely
- ☐ Never

Have you ever received unwanted attention from someone of the opposite gender while working out at the gym?

- ☐ Often
- ☐ Somewhat often
- ☐ Neutral
- ☐ Rarely
- ☐ Never

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Please indicate the degree to which each reason motivates you to exercise from 1 (not at all) to 5 (extremely).

	Not At All 1	2	3	4	Extremely 5
I feel comfortable with the way I appear to others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel nervous when having my picture taken.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I get tense when it is obvious people are looking at me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am concerned people would not like me because of the way I look.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I worry that others talk about flaws in my appearance when I am not around.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am concerned people will find me unappealing because of my appearance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am afraid that people find me unattractive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I worry that my appearance will make life more difficult for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am concerned that I have missed out on opportunities because of my appearance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I get nervous when talking to people because of the way I look.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel anxious when other people say something about my appearance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am frequently afraid I would not meet others' standards of how I should look.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I worry people will judge the way I look negatively.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am uncomfortable when I think others are noticing flaws in my appearance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I worry that a romantic partner will/would leave me because of my appearance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am concerned that people think I am not good looking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

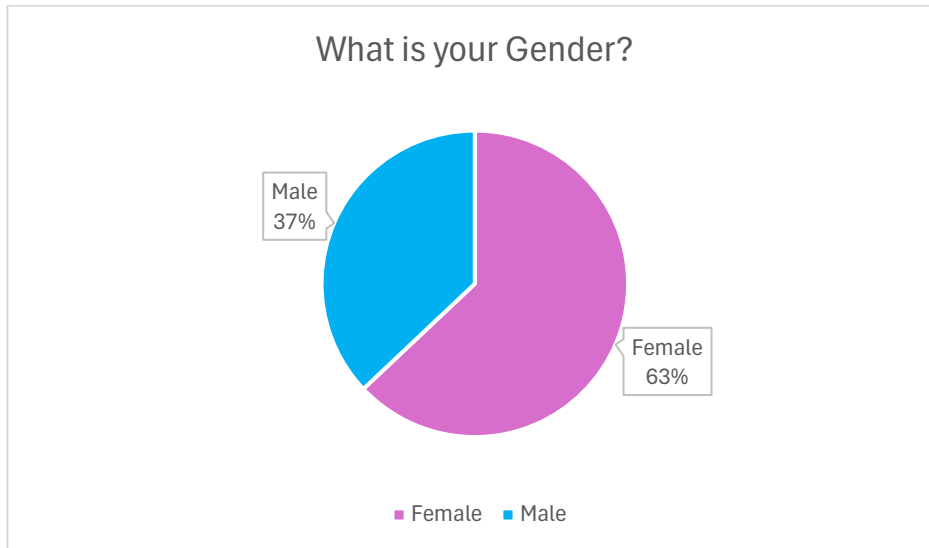
Please indicate the degree to which you experience a change in each statement after exercising with -5 indicating "A large decrease," 0 indicating "No change," and 5 indicating "A large increase."

After exercising, I feel...

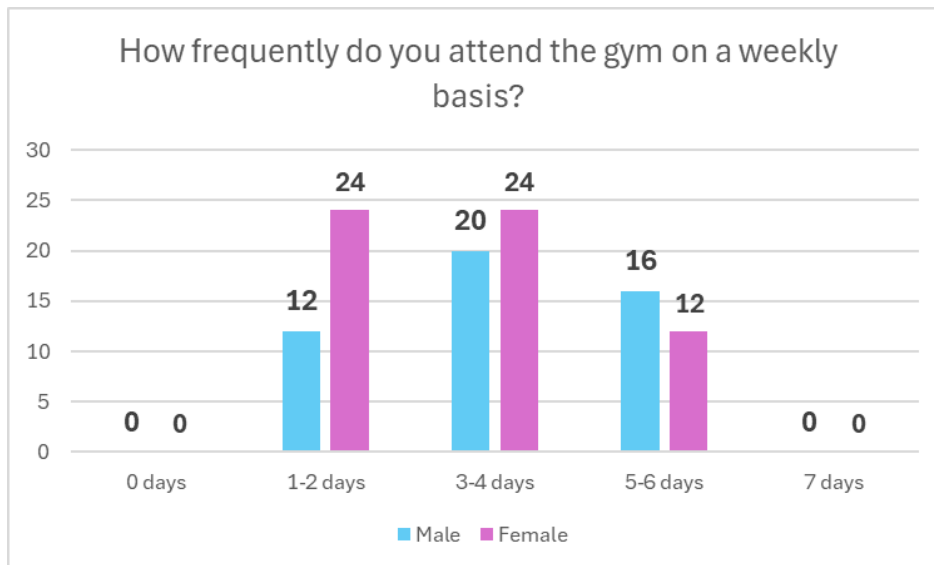
	A Large Decrease -5	-4	-3	-2	-1	No Change 0	1	2	3	4	A Large Increase 5
Great	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Awful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drained	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Positive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Crummy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exhausted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strong	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discouraged	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fatigued	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Terrific	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Miserable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Appendix B – Survey Question #2

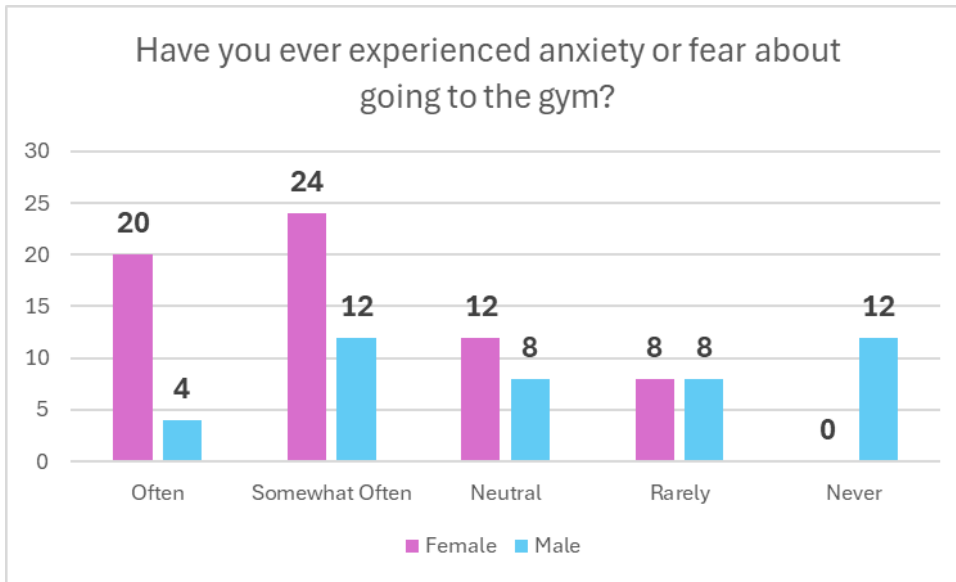


Appendix C – Survey Question #5

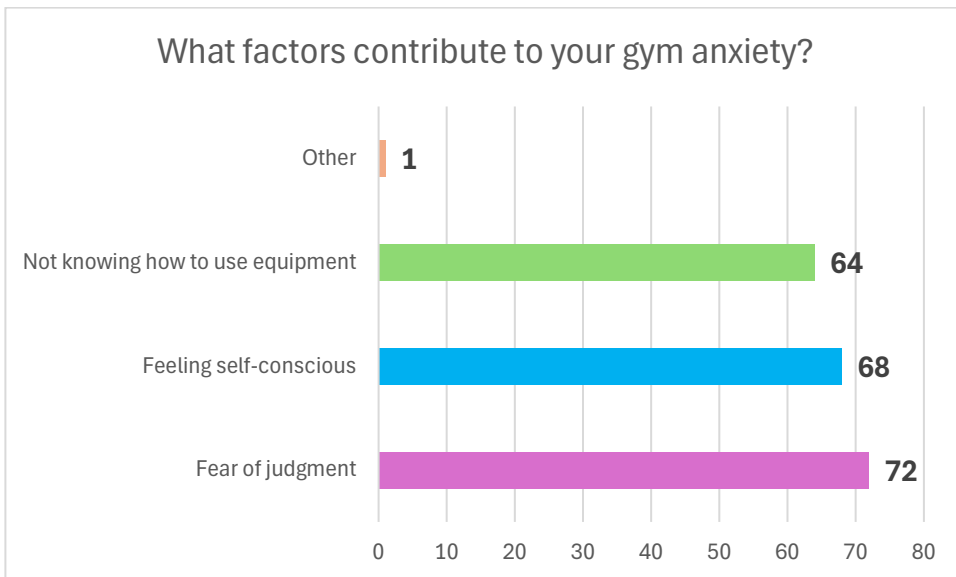


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Appendix D – Survey Question #7

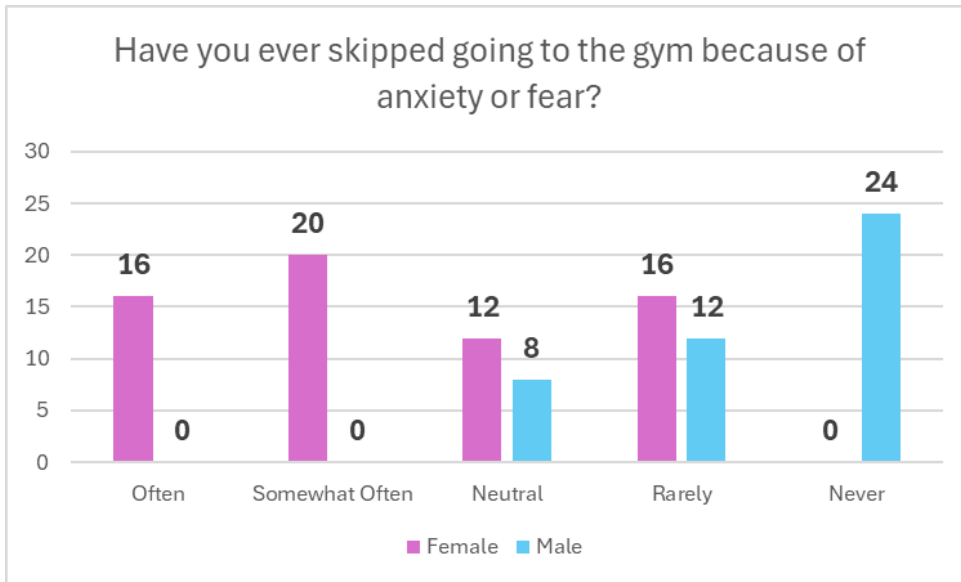


Appendix E – Survey Question #8

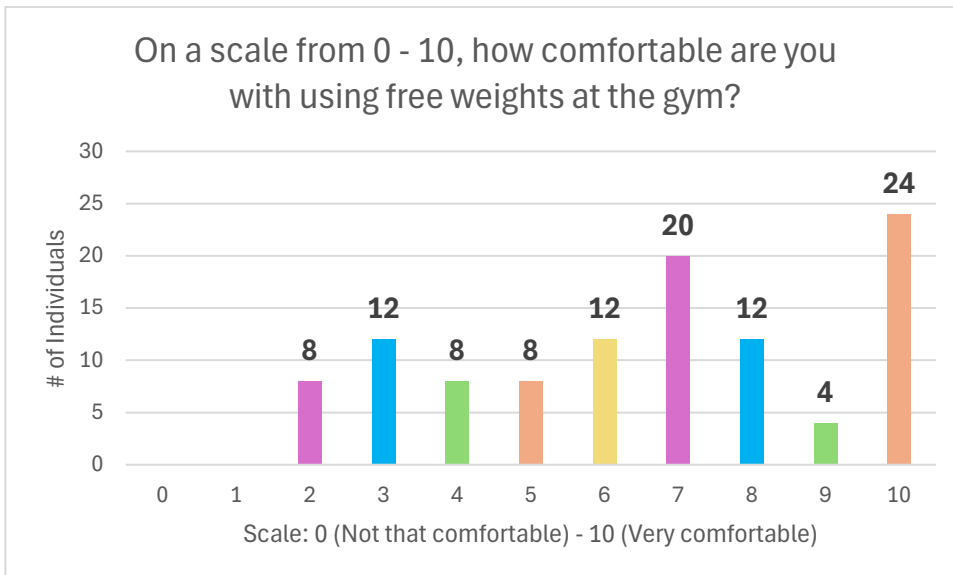


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Appendix F – Survey Question #9

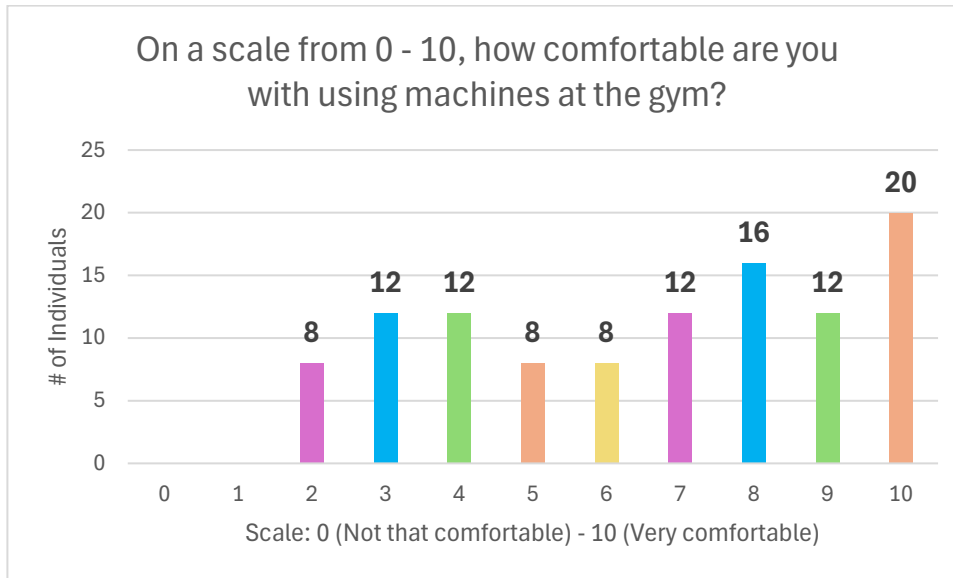


Appendix G – Survey Question #10

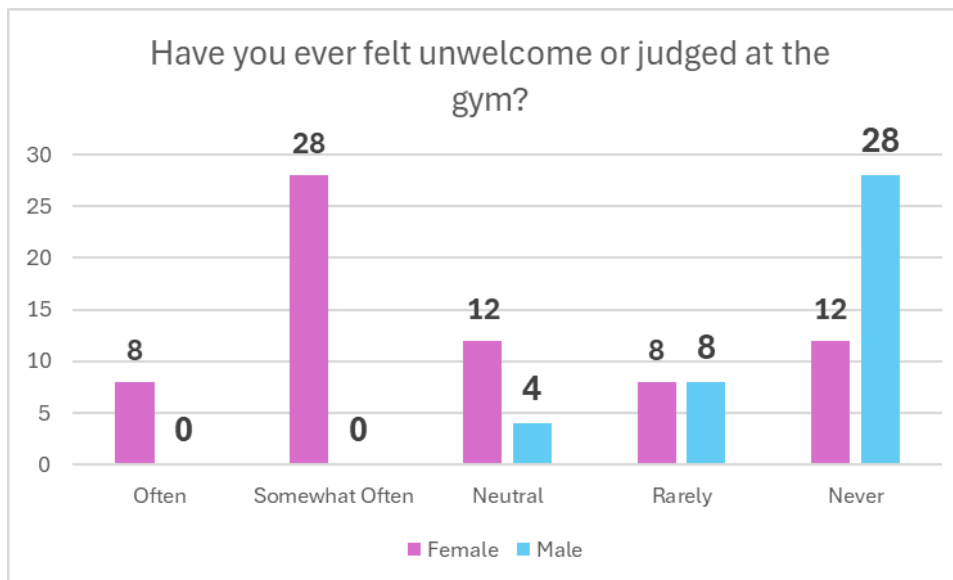


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Appendix H – Survey Question #11

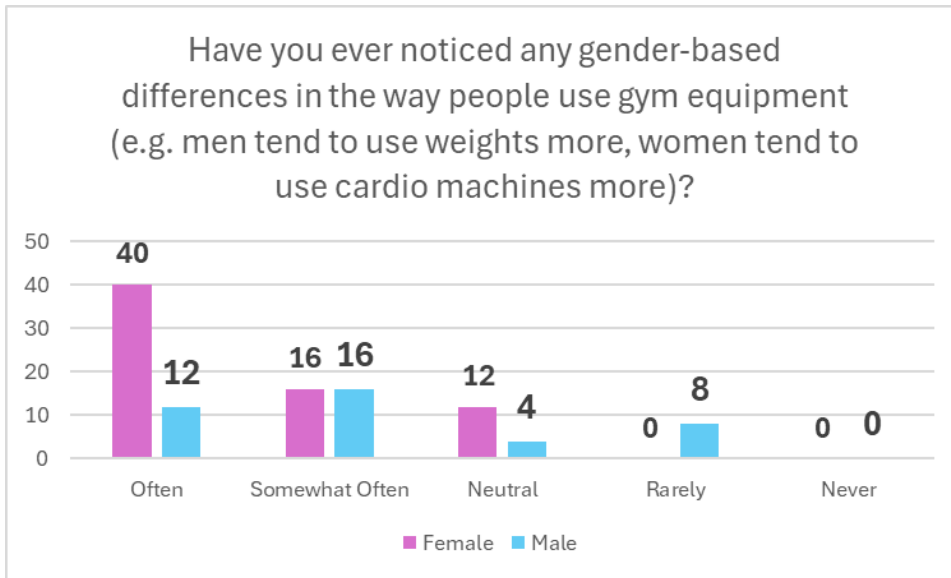


Appendix I – Survey Question #12

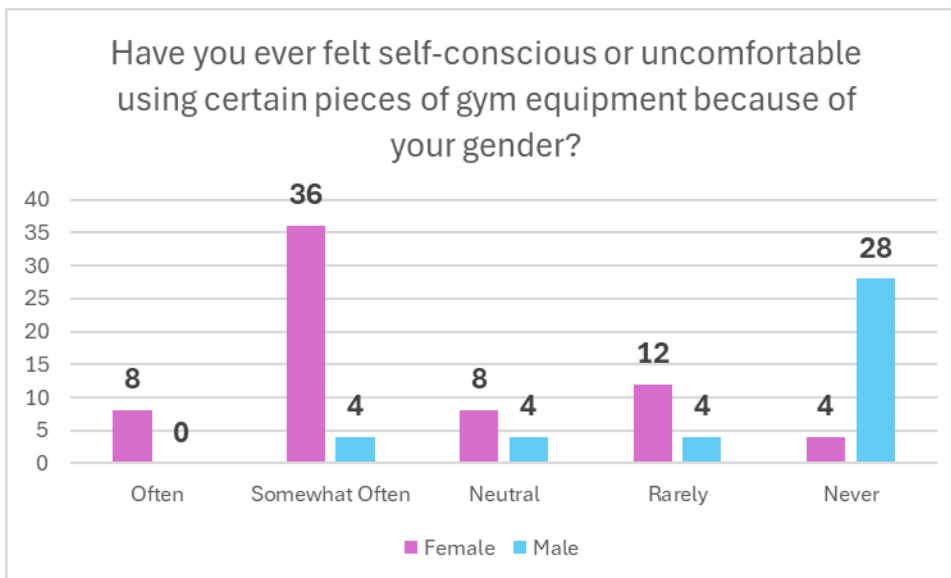


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Appendix J – Survey Question #13

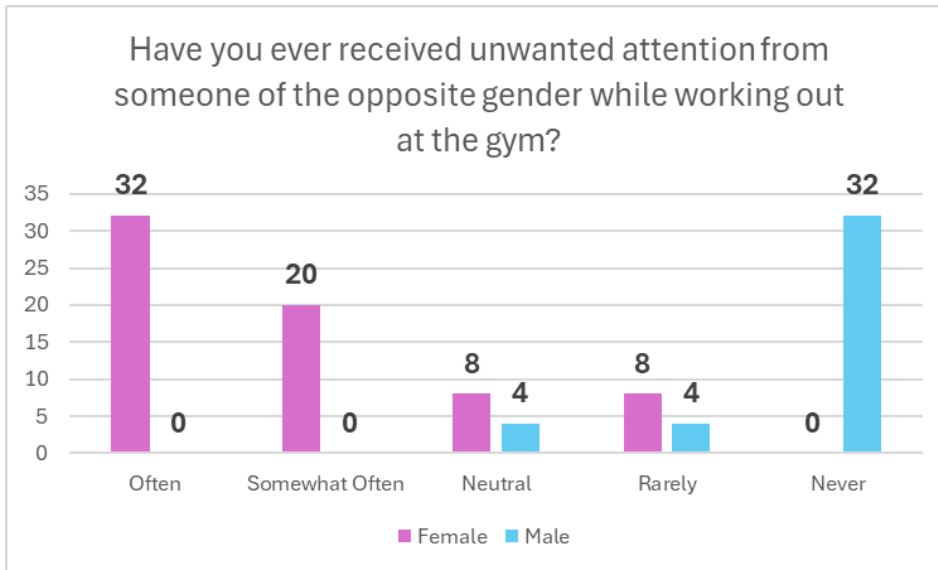


Appendix K – Survey Question #14



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Appendix L – Survey Question #15



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