

Examining the social media usage, body esteem, eating attitudes, and  
life satisfaction among gym users.

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## DECLARATION

### Declaration

‘I declare that this thesis that I have submitted to Dublin Business School for the award of BA (Hons) Psychology is the result of my own investigations, except where otherwise stated, where it is clearly acknowledged by references. Furthermore, this work has not been submitted for any other degree.’

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## ABSTRACT

This study aimed to examine relationships among disordered eating attitudes, life satisfaction, body esteem (weight, appearance, attribution), social media usage for fitness-related content, and gym usage in male and female gym users. A cross-sectional, correlational design used an online survey completed by 98 gym users, incorporating demographic questions, The Disordered Eating Attitude Scale, The Body Esteem Scale, and The Life Satisfaction Scale. Findings showed no significant difference in disordered eating attitudes between genders, but a significant relationship between body esteem (weight, appearance, attribution) and life satisfaction. No significant relationship was found between social media usage for fitness content and body esteem, or between social media usage, exercise frequency, and disordered eating attitudes. Results revealed the requirement for further research with larger, gender-balanced samples, particularly exploring the positive impacts of gym usage and the variables mentioned in the current study.

## 1. INTRODUCTION

### 4.1 Background

Exercise is an essential component of a person's entire physical and mental well-being. Exercise has been linked to a higher life expectancy and the prevention of approximately 40 chronic diseases (Ruegsegger & Booth., 2018). Exercise has been shown to alleviate anxiety and stress (Siddiqui et al., 2010). The gym is an area where people can engage in their preferred sort of physical activity. The number of people deciding to exercise at gyms is on the rise; according to Irish gym usage statistics, gym memberships are most common among those under 35, with the rate of memberships increasing in each quarter of 2021 (Stanley, 2022). It is probable that public health promotion initiatives emphasizing the value of exercise in preventing health issues are linked to the rise in gym memberships. Considering the increasing prevalence of gym usage, there arises a critical need for additional research to investigate the potential adverse impacts that gym participation may be causing users.

Social media may be a helpful resource for learning about different exercise regimens and diet ideas. It can also provide users with a sense of community by allowing them to discuss fitness-related topics with one another. According to recent research, social media users can learn about many health benefits and healthy lifestyles, which can help them adopt good behaviour (Miller, 2014). However, there may be certain difficulties for gym patrons, particularly if social media is abused to obtain an excessive amount of fitness-related content. Social media has been linked to a wide range of issues, such as body dissatisfaction, poor self-esteem, and heightened risks in developing disordered eating symptomology (Holland & Tiggemann., 2016). It is said that celebrities have the power to influence a lot of people's thoughts and actions in terms of health behaviours and information seeking (Hoffman & Tan.,

2015; Noar et al., 2013). However, with the rise of social media, "influencers," a new form of celebrity, many people are being influenced in terms of what they think, do and buy. The online fitness community is currently saturated with "fitness influencers" on apps such as Instagram and TikTok who aim to promote healthy lifestyles and gym culture. Many individuals may turn to social media for inspiration, also known as "fitspiration." These posts of "fitspiration" are created to inspire people to live healthy lifestyles, exercise, and diet (Boepple et al., 2016). The current study aims to examine if social media usage for fitness-related content is affecting the body esteem, eating attitudes, and life satisfaction of gym users. The following literature review aims to delve into the areas of disordered eating attitudes, gender differences, life satisfaction, social media usage, and body esteem of gym users.

#### ***4.2 Eating Attitudes and Gender Differences***

Maintaining an adequate energy intake is an important aspect of sports nutrition to maintain muscle growth, maintain activity, and overall health (Volek, 2006). Thus, many people who use gyms will often seek assistance in their nutrition. A nutritionist, a gym instructor, a general practitioner, or even social media can provide this guidance. Apart from possessing nutritional knowledge, it's crucial for individuals who train like athletes to have positive attitudes towards their diet because it can boost performance (Nazni & Vimala, 2010). Conversely, individuals who work out at a gym or in general may have disordered eating attitudes and unhealthy eating behaviours. Another prevalent drawback of gym membership is exercise addiction, which can make it difficult for certain users to cut back on or regain control over their activity volume (Colledge et al., 2020).

Disordered eating attitudes are factors that contribute to the development of an eating disorder (Alpaslan et al., 2015). Eating disorder (ED) symptomology can pose a significant risk

to a person's physical and psychosocial health (Goldschmidt et al., 2008). When individuals start working out at the gym, many will be focused on eating nutritious meals to suit their fitness goals whether that be losing weight, maintaining weight, or building muscle. Consequently, some people who are focusing on their fitness, or weight loss can become overly reliant on tracking calories and exercise which has been adversely associated with ED symptomology (Simpson & Mazzeo, 2017; Romano et al., 2018; Levinson et al., 2017). In Ireland, it is estimated that per year there are 1,757 new cases of eating disorders in the 10-49 age bracket (HSE, 2018). In 2022, the rate of ED in females was 92% and 8% males which displays a significant difference between the two (HSE, 2022). In 2022 the most prevalent EDs diagnosed in Ireland were anorexia nervosa, binge eating disorder, bulimia nervosa, and avoidant/restrictive food intake disorder (ARFID) (HSE, 2022).

Anorexia nervosa is characterized by the restriction of food leading to a person becoming extremely underweight, having a fear of gaining weight, and a disturbance in the way one sees their body shape when self-evaluating (Anorexia, 2023). Recurrent episodes of binge eating coupled with a sense of being out of control when eating are the characteristics of binge eating disorder (Binge Eating Disorder, 2023). However, binges and compensatory behaviors including self-induced vomiting are characteristics of Bulimia Nervosa (Bulimia Nervosa, 2023). Lastly, ARFID in adults can manifest itself in three ways: avoiding food because of sensory problems; not being interested in eating; or being concerned about the effects of eating (ARFID, 2024). The current study aims to investigate whether gym usage is associated with the increased likelihood of experiencing symptoms associated with eating disorders in both genders. Specifically, rather than diagnosing individuals with EDs, the study will examine disordered eating attitudes among

male and female gym users. Such attitudes have been identified as precursors to more severe eating disorders, such as AN.

Exercise is used as a weight management strategy by individuals with eating disorders, and a significant body of research indicates that some people exercise excessively to the point of psychological distress (Dalle Grave et al., 2008; Szabo et al., 2015). Müller et al. (2015) conducted research in a fitness setting and discovered that 10.9% of their sample of fitness center customers met the criteria for an ED as determined by the Eating Disorders Examination Questionnaire. In Ireland, there are more female ED diagnoses than male diagnoses. Stapleton and colleagues found at least one occurrence of dietary restrictions or binge eating in 15% of male fitness center users (Stapleton et al., 2014). Lewinsohn et al. (2002) conducted quantitative research into 1,056 young people and found that females displayed higher scores for disordered eating symptomology such as bulimia, drive for thinness, and inappropriate compensatory behaviours. However, in their study, males displayed higher scores for excessive exercise behaviours (Lewinsohn et al., 2002). Al Sabbah & Muhsineh. (2017) conducted a cross-sectional study on 60 female students using questionnaires. Their results also portrayed a high number of disordered eating behaviours in females who exercise.

According to Al Sabbah and Muhsineh.(2017), disordered eating attitudes were present in 31.4% of females, and membership in a leisure club was associated with these attitudes. Employees of fitness setting such as gyms have the responsibility to observe unhealthy behaviours displayed by users of the fitness setting (Colledge et al., 2020). In a study conducted by Colledge, (2020), they found that 75% of staff members in fitness settings had suspected a client of having an ED. This suggests that a high amount of gym users are possibly dealing with disordered eating symptomology. Research on how gender differs in eating disorder

symptomology and diagnosis, however, can be ambiguous, and it is plausible that females' greater rates of health-seeking behaviors account for the larger numbers and research for this population (Doherty & Kartalova-O'Doherty, 2010). Chen et al., (2022) conducted research into gender differences in disordered eating attitudes and found that there were so significant differences between males and females and their levels of disordered eating attitudes. However, they found that females have a higher drive for thinness, and males will use more compensatory behaviours such as vomiting (Chen et al., 2022). It is evident from the reading of past literature that there are limited studies on eating disorders that include male participants, therefore the aim of this current study is to test whether there are significant differences between the disordered eating attitudes of male and female gym goers.

#### ***4.3 Body Esteem & Life Satisfaction in male and female Gym Users***

Body esteem (BE) refers to the subjective evaluation and perception an individual has about their own body and is often associated with body weight (Williams et al., 2012). Diminished BE in children can significantly impact their health and can contribute to the development of disordered eating attitudes, depressive episodes, and lower levels of self-esteem in later life (Allen et al., 2006; Mond et al., 2011). A significant amount of literature into body image and BE is carried out on the female population. Rodin et al. (1984) were the first to introduce perceived body image dissatisfaction as being a normal part of western female society. The researchers suggested that women are driven by cultural values equating attractiveness with thinness and pressures to conform to the ideal body shape, which has led people to become preoccupied with becoming thin (Kostanski & Gullone, 1998).

Considering the amount of research into body image and BE in terms of females, researchers such as Murray et al. (2013) suggest that there is now a growing similarity in the

intensity and prevalence of body image concerns between males and females. Research has shown that a negative perception of one's body is often associated with regular exercise, when a person is exercising for an appearance-based reason (Campbell & Hausenblas, 2009). On the other hand, engaging in regular exercise could be considered a favourable outcome for one's body image as consistent exercise may bring about alterations in BE (Ginis et al, 2012).

A considerable number of males are observed to be aspiring to an ideal body that differs from their current physique (Murray et al, 2013). Previous research suggests that gym users are subjected to a higher level of body image disturbance and disordered eating pathology. Stapleton et al. (2014) conducted research on the BE of male gym users vs. male non-gym users. They hypothesised that male gym users would exhibit higher body image disturbance and disordered eating compared to non-gym users. Results found that body image dissatisfaction and eating pathology increased in male gym users (Stapleton et al, 2014). For females living today, body shape norms are constantly changing, and a lot of the time are influenced by social media. According to Lupton. (2018), the ideal body type for females in the 21<sup>st</sup> century is slim and toned, yet still muscular. The current study aims to investigate these factors by investigating whether social media usage causes a more negative impact on the body esteem of gym users due to these norms being spread on social media.

There is a current surge in the number of individuals being diagnosed with body dysmorphic disorder (BDD) and Muscle Dysmorphia. Body dysmorphic disorder is a mental health condition characterized by excessive preoccupation with perceived flaws in one's appearance (NHS, 2023). The amount of gym users showing signs of BDD and muscle dysmorphia is also on the rise according to research by Corazza and colleagues. Their research found that internationally there is an elevated risk of exercise addiction, appearance anxiety and

BDD across gym settings (Corazza et al., 2019). These disorders go hand in hand with a negative BE in individuals and can cause extreme mental health issues and a low level of life satisfaction (Davis et al., 2019).

Life satisfaction can be defined as an individual's "cognitive and affective evaluations of his or her life" (Diener et al., 2002). The term life satisfaction is often used interchangeably with the term happiness or wellbeing (Badri et al., 2022). Life satisfaction can be an indicator of an individual's overall wellbeing and can provide insight into an individual's positive or negative feelings towards their life at a given time (Prasoon & Chaturvedi., 2016). Research that has examined the associations between wellbeing/life satisfaction and body image has shown a relationship between the two, mostly a positive relationship between high BE and life satisfaction (Wójcik, 2021), and a negative relationship between low BE and life satisfaction (Özgür et al., 1998). A total of 9,667 western women were surveyed by Swami et al., (2014), and results indicated that 89% of the women had body dissatisfaction, with 84% of them desiring to be thinner. Further analysis of the research suggested that when females displayed higher body satisfaction it had a positive effect on their levels of happiness (Swami et al., 2014). A strong positive relationship between body esteem and life satisfaction was found by Frederick et al., (2016). They found that all scales of the body esteem scales had positive associations with life satisfaction, apart from body esteem attribution (Frederick et al., 2016). However, upon researching, there is limited research into the relationship between the life satisfaction and body esteem levels of gym users. Therefore, the current study aims to examine whether there is a relationship between life satisfaction and body esteem (weight, appearance, attribution) among gym users in specific, rather than the general population and whether this relationship is a positive or a negative one.

#### ***4.4 Social Media Usage, Gym Usage and Body Esteem***

In the last number of years, the use of social media for fitness related content has grown immensely. Since the COVID-19 lockdowns, people all around the world became active online, due to the closure of outdoor facilities and gyms. People were recommended to stay active by doing exercise at home (Hammami et al., 2020). This was the beginning of the rise in fitness influencers posting more content online to help people exercise from home. The online fitness community was at its highest with TikTok releasing statistics from China stating that in 2021 the total number of likes on sports related content on the platform exceeded 66 billion, and the number of sports influencers on TikTok with a following of above 10,000 followers exceeded 56 thousand (Archysport, 2021). Fitness influencers are active on social media platforms producing fitness content online such as workouts, food recipes and physique images (Li et al., 2023).

According to the Global Health and Fitness Association, the gym market is growing by approximately 5% annually, with a fast growth of 33% per year in the online fitness community (IHRSA, 2023). In research conducted by Durau et al., (2022), it was discovered that social media fitness influencers who are attractive, perceived as an expert, and trustworthy have a part to play in the increasing number of male and female physical activity rates. They found that these influencers motivating power is what predicts people's intentions to exercise (Darau et al., 2022). Similarly, Carpenter & Amaravadi. (2016), found that viewing fitness posts on social media made individuals more motivated to change their exercise behaviours. Findings from research conducted by numerous studies have shown the positive effects that social media and fitness influencers are having on individuals, especially their motivation to exercise. However, there is not enough research into how these social media fitness influencers are affecting people's fitness behaviours and mental health negatively.

“Fitspiration” is content produced on social media that aims to inspire individuals to exercise and participate in healthy eating and lifestyle habits (Jerónimo & Carraça, 2022). This fitspiration content has the potential to make a positive influence on the wellbeing of people through diet and exercise, and according to Raggatt et al., (2018) the people who consume this content are reported to feel inspired to adopt a healthy lifestyle into their life. Yet, emerging research findings indicate that the exposure to fitspiration content produced by fitness influencers can have a negative effect on body esteem (Cash & Smolak, 2011; Want, 2009). This content can cause some unhealthy behaviours according to Ramme et al., (2016) which is a cause for concern. Research conducted on the social media usage of women found that comparing oneself to others on social media was having a significant impact on the overall mood and body esteem of women (Fardouly et al., 2015). According to the use of Instagram for fitness related content, the amount of time an individual spends viewing fitness-related photos is positively correlated with an individual’s concern for their body image (Holland & Tiggemann., 2016). A significant gap in the research has been identified considering the current study. It is evident from research that the consumption of fitness content on social media is both positively and negatively impacting the lives of individuals. However, there is very little research stating how social media usage for fitness related content in specific is affecting the body esteem of gym users. Therefore, the current study will investigate this gap and research whether there is a relationship between the body esteem (weight, appearance, attribution) of gym users based on their use of social media for fitness-related content.

#### ***4.5 Social Media Usage, Gym Usage, and Disordered Eating Habits***

Gym users will use the gym often to train for certain physical outcomes. Many ideal physique outcomes are trending in the fitness industry. It has been found that gym users are at

risk of acquiring eating disorders (Yesildemir & Tek., 2022). This may be due to the strict dietary requirements of some desired physiques such as bulking to develop more muscle, and “cutting” to shred off fat to expose this lean muscle mass. A lot of this information on how to get your desired physique is spread on social media, and while it is easily accessible, and often free, it can also be damaging to an individual’s health. Online, people are exposed to the “ideal body image” that some individuals will strive to achieve as their end goal (Voelker et al., 2015). Research conducted by Holland & Tiggemann. (2016) and Talbot et al., (2017) indicates that social media usage may be partly to blame for the prevalence of EDs and disordered eating behaviours.

Research has emphasized that social media makes harmful eating disorder-prompting content too accessible (Lantos, 2020). The immense amount of weight loss trends that inspire fitness, and extreme thinness on social media apps are a danger to vulnerable groups which may also be contributing to the rise in EDs (Crawford, 2019; Perloff, 2014). A study conducted on people who consume fitspiration content on Instagram found that 17.7% of those were at risk of developing an ED according to Raggatt et al, (2018). The number of people following the “#fitness” hashtag on Instagram is more than 510 million according to Heath. (2024). Therefore, the number of gym users consuming fitness content on social media is possibly relatively high, which could be contributing to a high rate of ED symptomology in gym users. There is little research investigating gym users specifically when it comes to social media and disordered eating attitudes. Therefore, the current study aims to test whether there is a relationship between social media usage for fitness related content and disordered eating attitudes.

There is also the question as to whether the amount of time an individual uses a gym on a weekly basis affects disordered eating attitudes. Orthorexia is an eating disorder high in gym

users due to its nature (Hafstad et al., 2023). Compulsive exercise, or over-exercise is a condition characterized by a need to train physically, which results in excessive, and uncontrollable exercise behaviours (Lichtenstein et al., 2017). A study conducted on university students found that high orthorexia tendencies were linked to compulsive traits such as exercise addiction (Oberle et al., 2017). Similarly, research conducted by Bóna et al., (2018) found that exercise frequency also influenced orthorexia attitudes. Many gym users are infatuated with controlling their training and controlling their nutritional intake to see results; however, it may be contributing to the normalization of disordered eating attitudes (Cinquegrani & Brown, 2018). The current study aims to discover whether the results are similar for overall disordered eating attitudes. The current study will investigate whether there is a relationship between the number of times a gym user attends the gym per week and disordered eating attitudes.

#### **4.6 Rationale**

The current study builds upon prior research to investigate the relationships between disordered eating attitudes, life satisfaction, body esteem (weight, appearance, attribution), social media usage for fitness-related content, and gym usage in a sample of gym users. Previous findings suggest that lifestyle changes associated with gym usage can impact people mentally and physically (Yesildemir & Tek, 2022; Lichtenstein et al., 2017; Dalle Grave et al., 2008).

While exercise is acknowledged as beneficial for mental and physical well-being (Ruegsegger & Booth., 2018), it's important to explore adverse effects associated with gym usage. Despite the predominance of research focusing on positive effects of gym usage, excessive exposure to fitness-related content on social media may lead to body dissatisfaction, poor life satisfaction, and disordered eating attitudes. While fitness influencers aim to promote healthy lifestyles, their content may be inadvertently contributing to negative body image and

disordered eating. Gender differences in eating attitudes among gym users highlight the importance of gender-specific research in this context.

The current study aims to address these gaps by examining the impacts of social media and gym usage on body esteem (weight, appearance, attribution), life satisfaction, and disordered eating attitudes among gym users. This research aims to enhance understanding of how social media and gym usage overlap to influence well-being and health behaviours among individuals pursuing fitness goals.

#### **4.7 Hypotheses**

Based on the research that has been discussed in the above literature review, the current study will test the following four hypotheses:

1. There will be a significant difference between male and female disordered eating habits.
2. There will be a significant relationship between life satisfaction and body self-esteem (weight, appearance, attribution).
3. There will be a significant relationship between social media usage for fitness related content and the body esteem (weight, appearance, attribution) of gym users.
4. There will be a significant relationship between the social media usage for fitness related content and the disordered eating attitudes of gym users.
5. There will be a significant relationship between the number of times a gym user attends the gym per week and disordered eating attitudes.

## 2. METHODOLOGY

### 5.1 Participants

The study recruited gym users aged 18 and above through convenience sampling. Participants were invited to complete an online survey distributed via the researcher's social media platforms (Instagram, Facebook, LinkedIn). The survey was available for people to share on social media, leading to a snowball effect in the sample. Participation was voluntary, with no incentives offered. A total of 137 responses were received, but only 98 participants met the inclusion criteria as gym users. The final sample consisted of 98 gym users (Male = 19) (Female = 79), with ages ranging from 18-66 years (mean age = 30, SD = 9.7).

### 5.2 Design

The study used a quantitative, cross-sectional, and correlational survey design. An online questionnaire was used to investigate the relationships among gender, disordered eating attitudes, life satisfaction, body-esteem (weight, appearance, attribution) and social media usage. Hypothesis 1 examines differences between disordered eating attitudes (dependent variable) and gender (independent variable). Hypothesis 2 tests the relationship between body-esteem (dependent variable) and life satisfaction (independent variable). Hypothesis 3 investigates the relationship between social media usage for fitness-related content (independent variable) and body-esteem (dependent variable). Hypothesis 4 examines the relationship between social media usage for fitness-related content (independent variable) and disordered eating attitudes (dependent variable). Lastly, hypothesis 5 investigates the relationship between gym usage (independent variable) and disordered eating attitudes (dependent variable).

### 5.3 Materials

The materials for this research consisted of an online survey with demographic questions (see Appendix B), and 3 psychological testing scales.

The Disordered Eating Attitudes Scale (DEAS) (Alvarenga et al, 2010) consists of 25 items assessing attitudes towards eating, including concerns about food and weight, restrictive behaviours, and positive feelings about eating. For this study, items related to the idea of normal eating were excluded, resulting in a total of 22 items. However, items 2-12 (Part 1) and items 13-25 (part 2) were still included (see Appendix C). Items 2-11 include questions such as “do you track the calories of everything you eat?” and the participants will be asked to respond by choosing ‘yes’ or ‘no’. Item 12 asks a question and gives the participant a choice of 4 statements to answer from and questions 13-25 are answered using a 5-point Likert scale ranging from ‘Always’ to ‘Rarely/Never.’ Items 2, 9, and 11 are reverse coded. An example of a test item from part 2 of this scale is as follows: “I feel guilty when I eat something that I thought I should not eat for some reason” and response options are: Often, usually, sometimes, and rarely/never. All items in this scale are scored from 1 to 5. The lowest possible score is 37, while the highest possible score is 197. The responses to the statements are then totaled; the higher the score indicates a worse eating attitude. The DEAS demonstrates acceptable reliability and validity, with a Cronbach’s Alpha of .75 (Alvarenga et al, 2010).

The Satisfaction with Life Scale (Pavot & Diener., 1993) comprises 5 items measuring life satisfaction on a 7-point Likert scale ranging from ‘strongly agree’ to ‘strongly disagree’ (see Appendix D). An example of a test item from this scale is as follows: “In most ways my life is close to my ideal.” The responses from each statement are totaled and higher scores indicate greater life satisfaction. The scores range from 5: extremely dissatisfied to 35: extremely

satisfied. The scale exhibits good internal consistency (Cronbach's Alpha = .87) and has demonstrated reliability in various clinical settings (Pavot & Diener, 1993).

The Body Esteem Scale for Adolescents and Adults (Mendelson et al., 2001) includes 21 items measuring body esteem across 3 subscales: BE-Weight, BE-Appearance, and BE-Attribution. (see Appendix E). BE- Weight consists of 7 items (3, 4, 8, 10, 16, 18, and 19), with scores ranging from 7 to 35. The BE-Appearance consists of 9 items (1, 6, 7, 9, 11, 13, 15, 17, and 21) with scores ranging from 9 to 45, the BE-Attribution consists of 5 items (2, 5, 12, 14, and 20) with scores ranging from 5-25. Questions 4, 7, 9, 10, 12, 16 and 17, are reverse coded and added together with remaining scores to give a total score. The range of scores for this scale is from 25-105, the higher the score will indicate a greater level of body satisfaction. The subscales are scored in the same way. Examples of test items from this scale are as follows: "I worry about the way that I look" and, "I think my appearance would help me get a job." The response options are: Never, seldom, sometimes, often, and always. The subscales for this scale have high internal consistency, with a 3-month test-retest reliability according to Mendelson and colleagues. BE-Weight demonstrated internal validity and consistency, with a Cronbach's alpha score of .95, Cronbach's Alpha score for BE-Appearance was .93 and for BE-Attribution Cronbach's Alpha was .81 (Mendelson et al, 2001).

#### **5.4 Procedure**

The study adhered to the ethical guidelines of Dublin business School (DBS). A research proposal was submitted to the DBS ethics committee and approved with minor changes, which were addressed with feedback from the thesis supervisor.

The survey was created using Microsoft Forms and distributed on the researcher's social media platforms (Instagram, LinkedIn, Facebook), as well as within the DBS BA Psychology

full-time students WhatsApp group, facilitating a snowball effect for a larger sample size. Participants received an information sheet outlining the study's nature and were asked for their informed consent (see Appendix A). Participants were informed of their right not to participate and that their responses would be collected anonymously. The survey took approximately 5-10 minutes to complete, and participants received a thank-you message and a debrief sheet upon completion, providing contact information for support if needed (see Appendix F). After 6 weeks, data collection concluded, and the survey was closed to new responses for analysis.

### **5.5 Ethics**

Adherence to the PSI code of ethics (Psychological Society of Ireland, 2024) was essential throughout this research. Approval from the DBS Ethics Board was obtained before commencing the study. Given the potentially sensitive nature of the questionnaire, provisions were made to address any negative emotions among participants, with support services detailed in the debrief sheet upon completion. Data was securely stored on a password-protected computer in accordance with ethical guidelines.

### **5.7 Data Analysis**

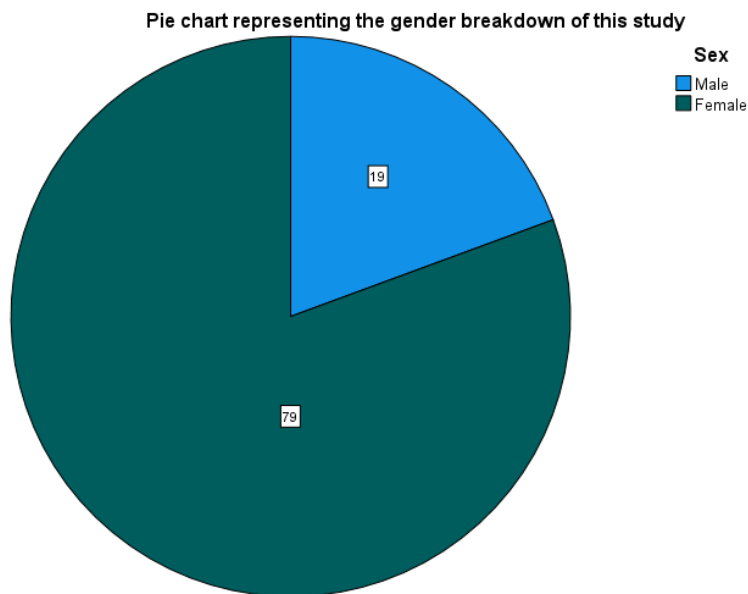
After closing the survey to further responses, the data was transferred from Microsoft Forms to an Excel spreadsheet and prepared for transfer to SPSS. Once in SPSS, the data was recoded and computed as necessary. Descriptive and inferential statistics were then conducted to test the hypotheses. Hypothesis 1 was tested using a Mann Whitney-U test, while hypothesis 2 utilised a Pearson's R correlation test to examine the relationship between variables. Hypotheses 3, 4, and 5 were tested using a Kendall's Tau-b test.

## 6. RESULTS

### 6.1 Descriptive Statistics

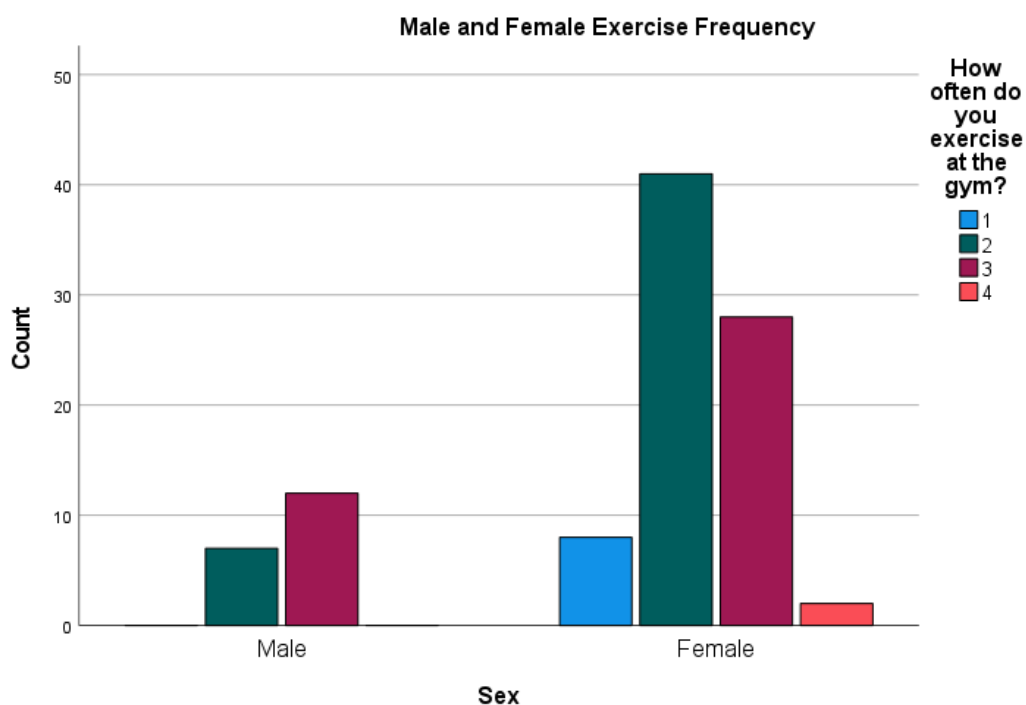
A total of 98 gym users participated in this voluntary research. There were 19 males and 79 females (see Figure 1). The ages ranged from 18-66 years old ( $M = 30$ ;  $SD = 9.7$ ).

**Figure 1.** *Gender Breakdown of Participants.*



The mean number of days that participants spent training at the gym is 2.37 (SD = .66) which indicates that the individuals were on average exercising between 2-3 times per week at the gym (see Figure 2).

**Figure 2.** *Gym Usage of Males and Females.*



The mean score for viewing fitness-related content on social media is 3.74 (SD = 1) suggesting that many participants view fitness-related content on social media. The mean score for the Disordered eating attitude total is 69.07 (SD =15.85) indicating that on average, participants exhibit some degree of disordered eating attitudes. However, there is a large range of scores for this scale with the minimum score being 29 and the maximum score being 107. Satisfaction with life has a mean score of 22.83 (SD = 6.93) which indicates the sample surveyed are moderately satisfied with their life. Body esteem total has a mean of 57.78 (SD = 14.67) which indicates a medium level of body esteem. Similar scores can be seen in the three

subscales. Body esteem weight  $M = 16.61$  ( $SD = 5.93$ ), Body esteem appearance  $M = 23.86$  ( $SD = 7.39$ ), and Body esteem attribution  $M = 13.74$  ( $SD = 3.55$ ) (see Table 1).

Table 1. *Descriptive Statistics of Variables.*

| Variable     | Mean  | Median | Mode | SD    | Range | Min | Max |
|--------------|-------|--------|------|-------|-------|-----|-----|
| Exercise     | 2.37  | 2.00   | 2    | .66   | 3     | 1   | 4   |
| Frequency    |       |        |      |       |       |     |     |
| Viewing      | 3.74  | 4      | 4    | 1     | 4     | 1   | 5   |
| content      |       |        |      |       |       |     |     |
| Disordered   | 69.07 | 4      | 63   | 15.85 | 78    | 29  | 107 |
| Eating       |       |        |      |       |       |     |     |
| Attitude     |       |        |      |       |       |     |     |
| total        |       |        |      |       |       |     |     |
| Life         | 22.83 | 23     | 30   | 6.93  | 30    | 5   | 35  |
| Satisfaction |       |        |      |       |       |     |     |
| total        |       |        |      |       |       |     |     |
| Body         | 57.78 | 58     | 50   | 14.67 | 62    | 29  | 91  |
| Esteem total |       |        |      |       |       |     |     |
| Body Esteem  | 16.61 | 17     | 16   | 5.93  | 32    | -4  | 28  |
| Weight       |       |        |      |       |       |     |     |
| Body         | 23.86 | 24     | 28   | 7.39  | 33    | 10  | 43  |
| Esteem       |       |        |      |       |       |     |     |
| Appearance   |       |        |      |       |       |     |     |
| Body         | 13.74 | 14     | 14   | 3.55  | 20    | 2   | 22  |
| Esteem       |       |        |      |       |       |     |     |
| Attribution  |       |        |      |       |       |     |     |

All scales demonstrated acceptable levels of internal consistency and reliability in the current study apart from one subscale in the Body Esteem Scale (see Table 2). Body Esteem Attribution showed Cronbach's Alpha score of .423 indicating that this subscale did not have internal consistency and reliability in the current study.

Table 2. *Cronbach's Alpha Scores for Scales.*

| Scale Name                              | $\Omega$ Value |
|---|----------------|
| Disordered Eating Attitude Scale (DEAS) | .81            |
| Satisfaction with Life Scale            | .89            |
| Body Esteem Total                       | .90            |
| Body Esteem Weight                      | .60            |
| Body Esteem Appearance                  | .87            |
| Body Esteem Attribution                 | .42            |

## 6.2 Inferential Statistics

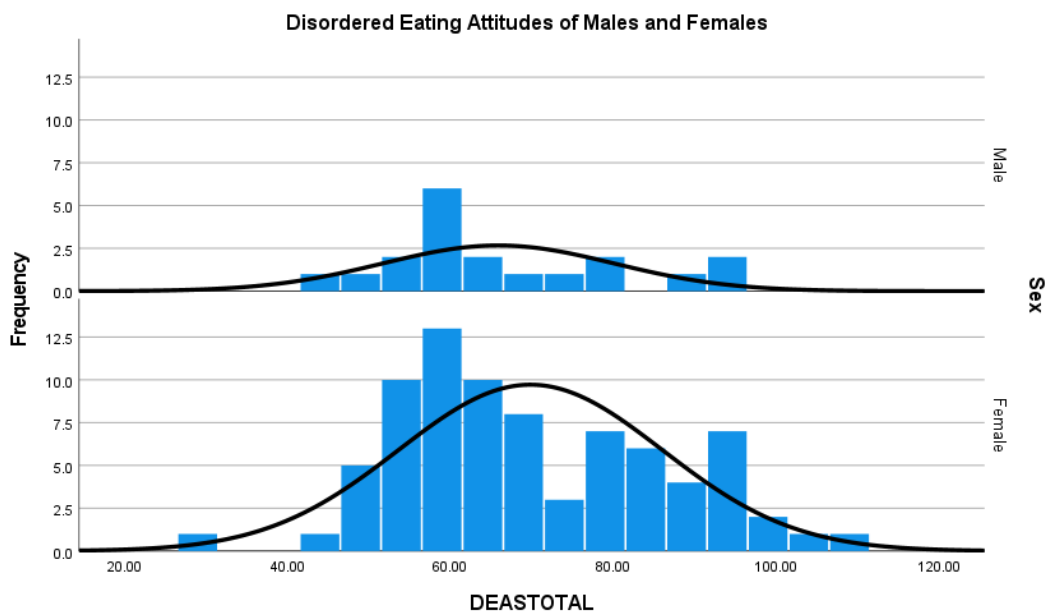
### *Hypothesis 1*

Due to the non-normality between variables, a Mann-Whitney U test was conducted to test whether there is a significant difference between the disordered eating attitudes of males and females. Results revealed that males (mean rank = 44.73) and females (mean rank = 50.73) did not differ significantly in terms of their disordered eating Attitudes ( $Z = -.88$ ,  $p = .38$ ).

Therefore, the null hypothesis can be accepted. To visually represent the differences between male and female disordered eating attitudes a histogram was generated. The histogram illustrates the normal curve for both male and female groups. Despite the lack of significance difference found through the Mann-Whitney U test, visual inspection of the histograms can provide an

insight into the higher patterns of disordered eating attitudes in female participants (see Figure 3).

**Figure 3.** Disordered Eating Attitudes of Males and Females.

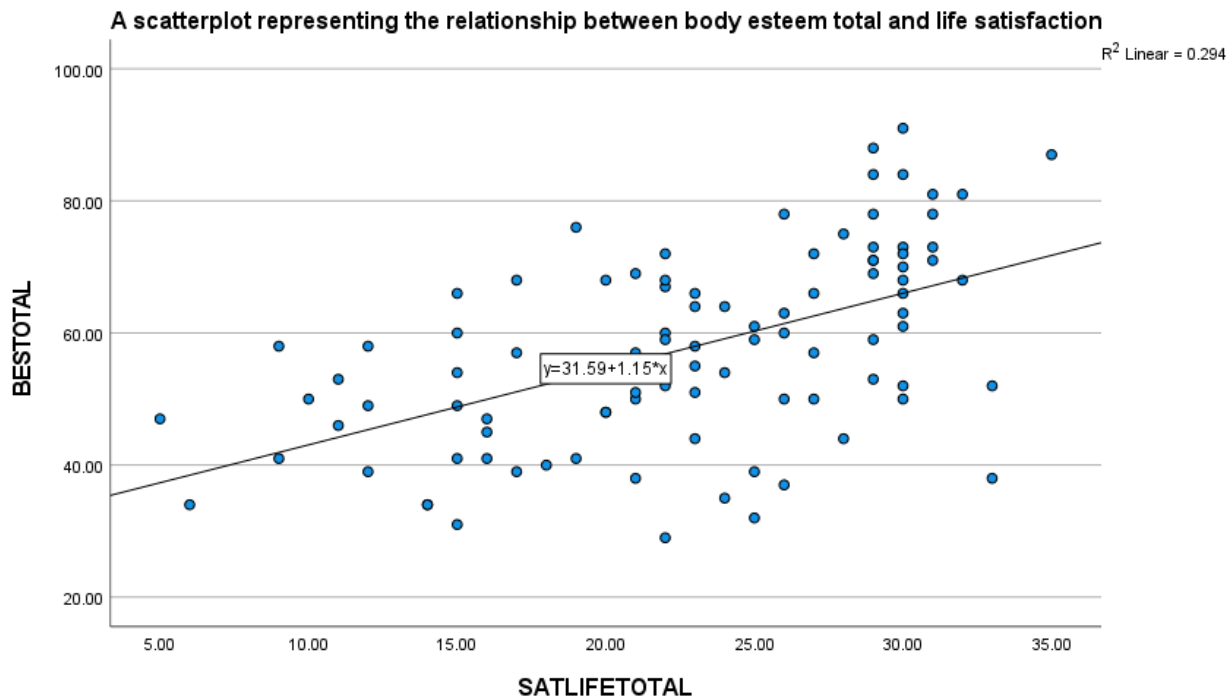


### *Hypothesis 2*

A Pearson's correlation coefficient was used to test whether there is a significant relationship between body esteem (weight, appearance, attribution), and life satisfaction. A scatterplot was carried out to determine the slope of the relationship between the two variables. The slope was positive, with some clustering around the line, and outliers shown (see Figure 4).

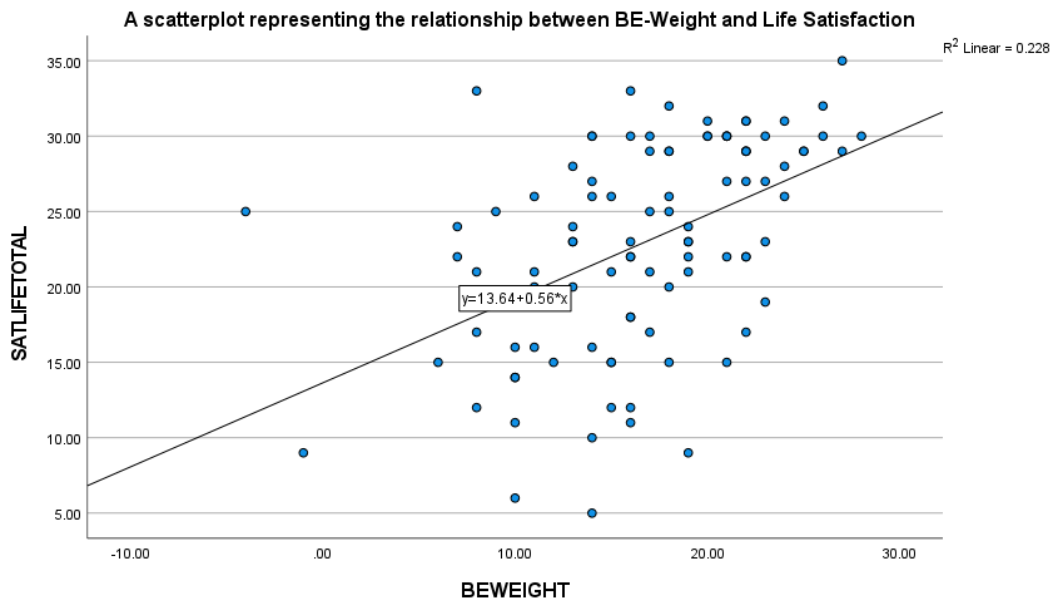
A Pearson correlation coefficient found that there was a strong positive significant relationship between Body esteem ( $M = 57.79$ ;  $SD = 14.67$ ) and Life satisfaction ( $M = 22.83$ ;  $SD = 6.93$ ) ( $r = (94) = .54$ ,  $p < .01$ ). Higher levels of body-esteem relate to higher levels of life satisfaction in participants. Therefore, the null hypothesis can be rejected. This relationship can account for 29.61% of the variation of scores.

**Figure 4.** Relationship between Body Esteem and Life Satisfaction.



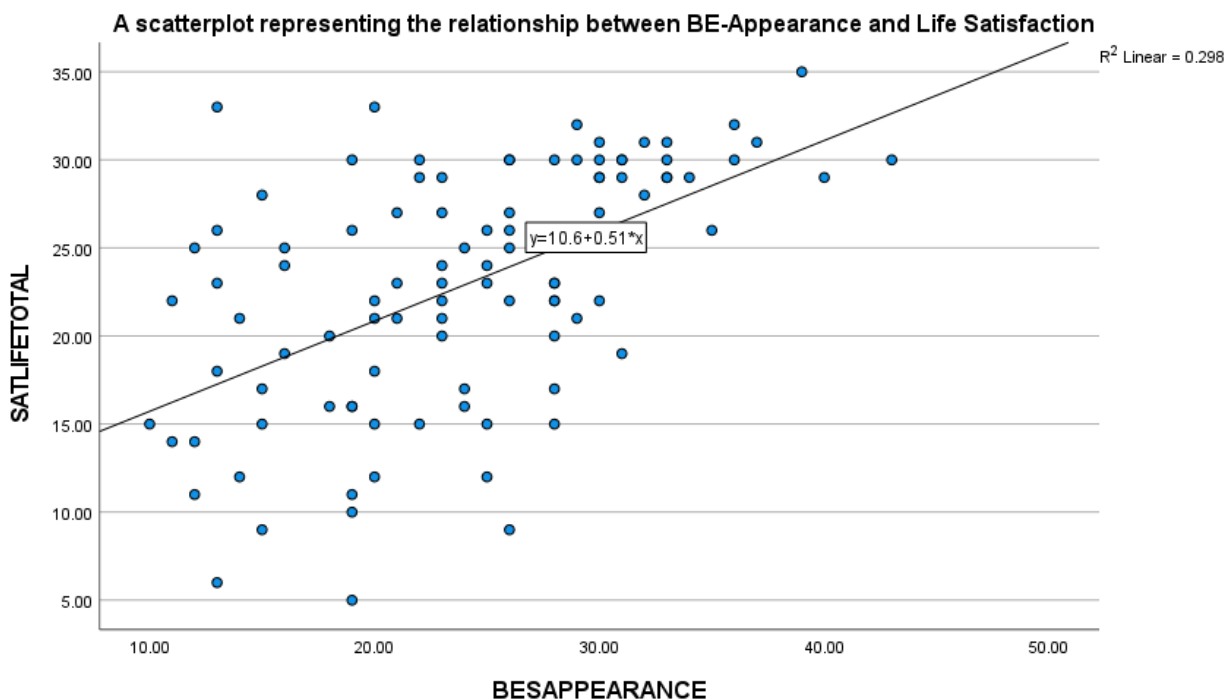
A Pearson correlation coefficient found that there was a moderate positive significant relationship between body esteem weight ( $M=16.61$ ;  $SD = 5.93$ ) and life satisfaction ( $M = 22.83$ ;  $SD = 6.93$ ) ( $r = (95) = .48$ ,  $p < .01$ ). Higher levels of body esteem weight relate to higher levels of life satisfaction in participants. A scatterplot was carried out to determine the slope of the relationship between the two variables. The slope was positive with some clustering around the line, and outliers are shown (see Figure 5). Therefore, the null hypothesis can be rejected. This relationship can account for 22.09% of the variation of scores.

**Figure 5.** *Relationship between Body Esteem Weight and Life Satisfaction.*



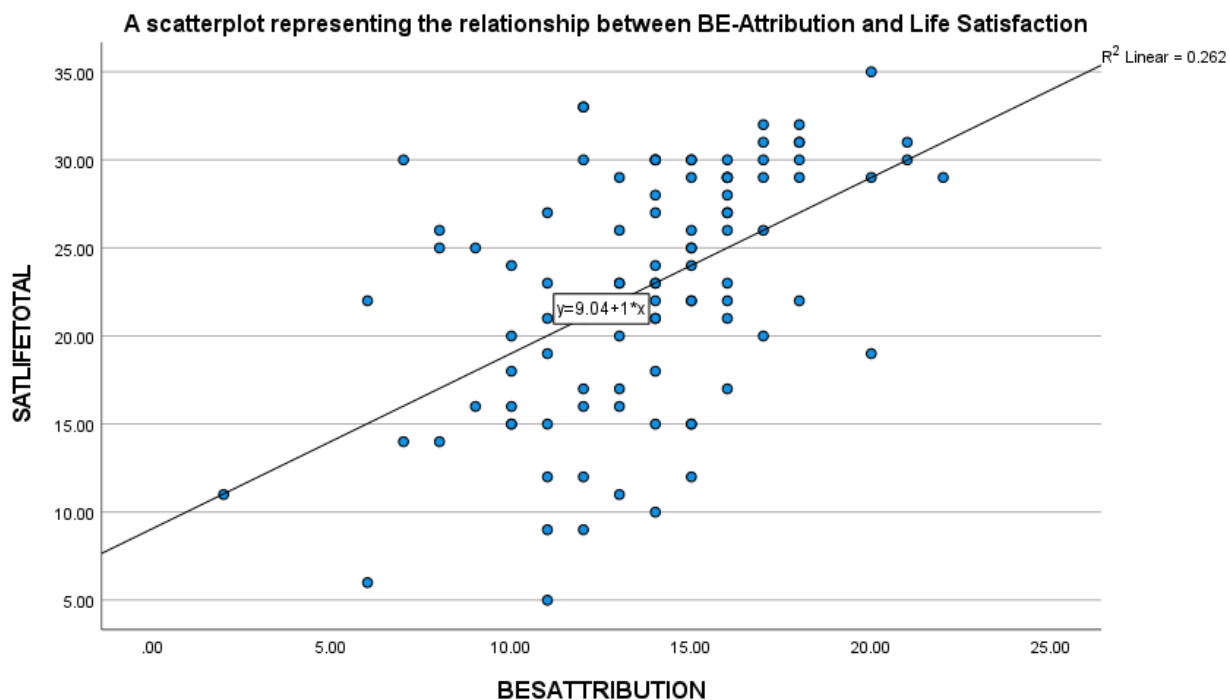
A Pearson correlation coefficient found that there was a strong positive significant relationship between body esteem appearance ( $M = 23.86$ ;  $SD = 7.39$ ) and life satisfaction ( $M = 22.83$ ;  $SD = 6.93$ ) ( $r = (96) = .55$ ,  $p < .01$ ). Higher levels of body esteem appearance relate to higher levels of life satisfaction in participants. A scatterplot was carried out to determine the slope of the relationship between the two variables. The slope was positive with some clustering around the line, and outliers are shown (see Figure 6). Therefore, the null hypothesis can be rejected. This relationship can account for 30.25% of the variation of scores.

**Figure 6.** Relationship between Body Esteem Appearance and Life Satisfaction.



A Pearson correlation coefficient found that there was a strong positive significant relationship between body esteem attribution ( $M = 13.74$ ;  $SD = 3.55$ ) and life satisfaction ( $M = 22.83$ ;  $SD = 6.93$ ) ( $r(95) = .51$ ,  $p < .01$ ). Higher levels of body esteem attribution relate to higher levels of life satisfaction in participants. A scatterplot was carried out to determine the slope of the relationship between the two variables. The slope was positive, with some clustering around the line (see Figure 7). Therefore, the null hypothesis can be rejected. This relationship can account for 26.01% of the variation of scores.

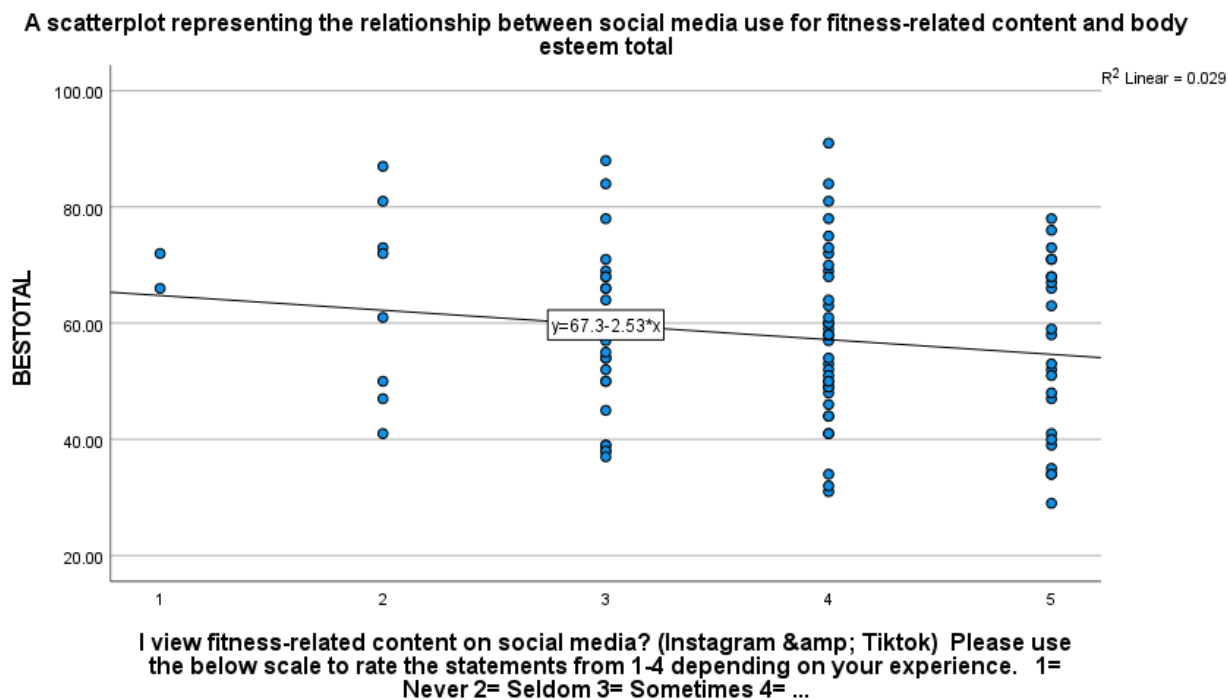
**Figure 7.** Relationship between Body Esteem Attribution and Life Satisfaction.



### ***Hypothesis 3***

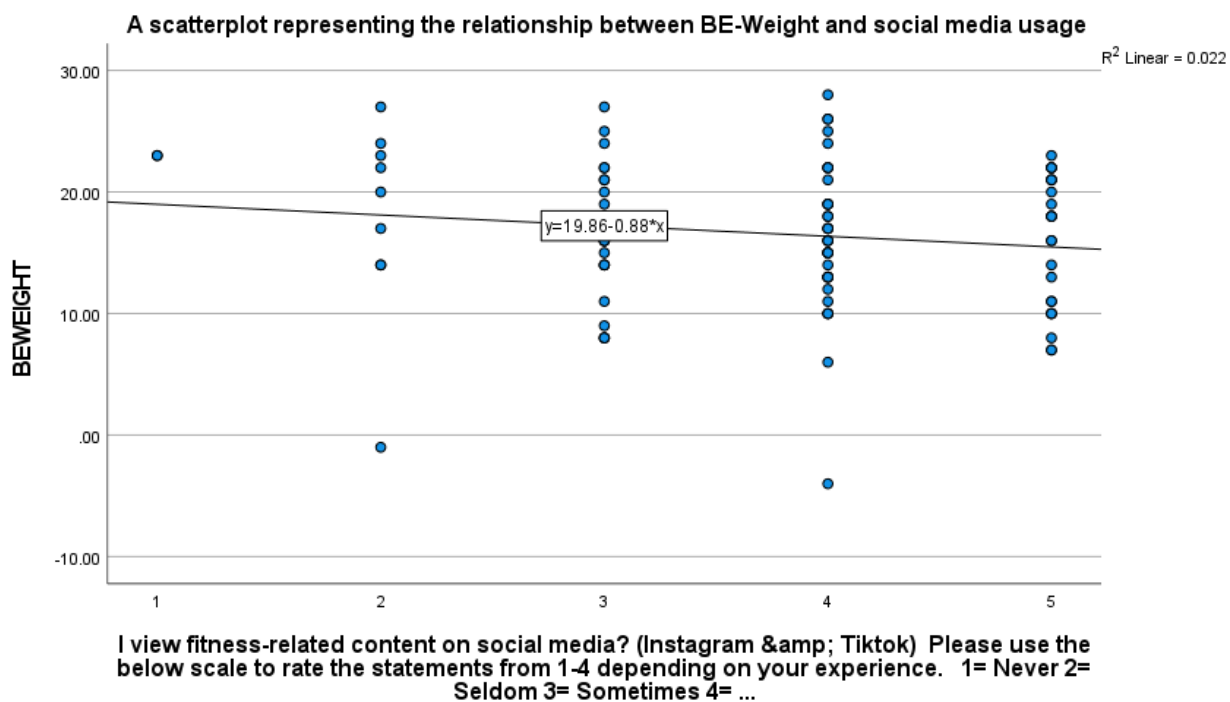
A Kendall's tau-b correlation found that there was a negative, non-significant correlation between social media usage for fitness-related content and body esteem total ( $\tau b(95) = -.10$ ,  $p = .19$ ). This suggests that there is no sufficient evidence to conclude a significant association between the two variables. A scatterplot was carried out to determine the relationship of the slope between the two variables. The slope was slightly negative with minimal clustering around the line (see Figure 8). Therefore, the null hypothesis can be accepted.

**Figure 8.** Relationship between Social Media Usage for Fitness Content and Body Esteem Total.



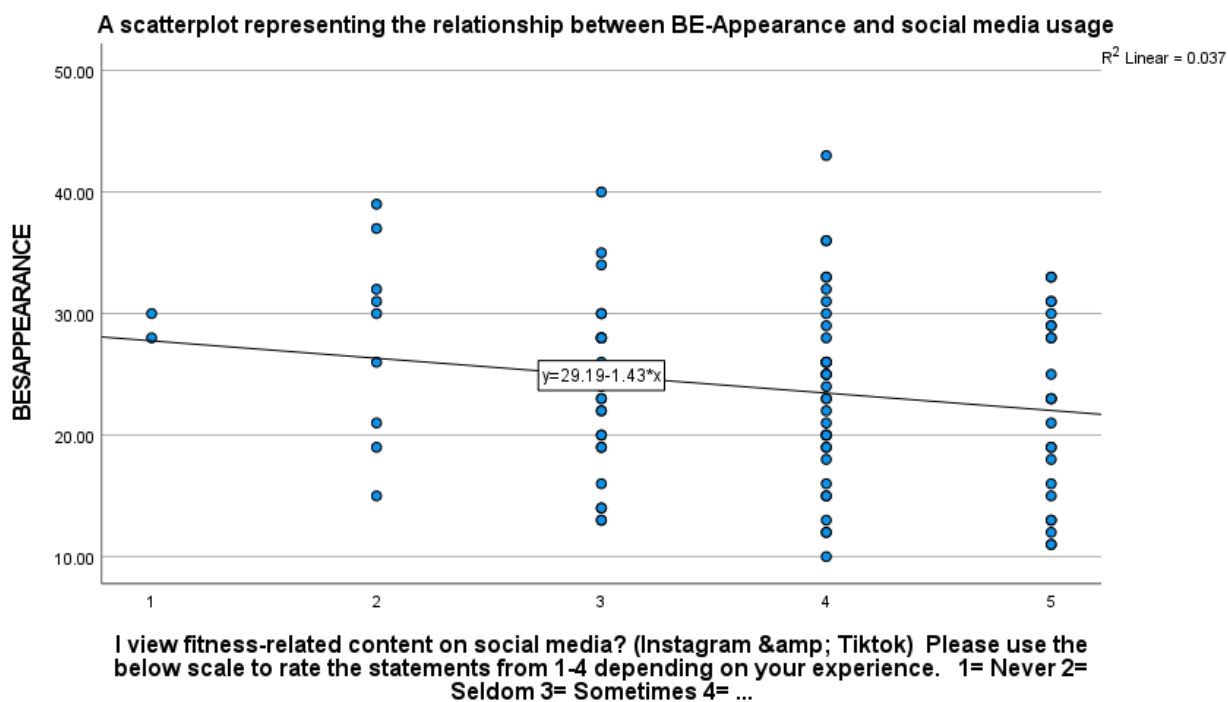
A Kendall's tau-b correlation found that there was a negative, non-significant correlation between social media usage for fitness-related content and body esteem weight ( $\tau b(95) = -.12$ ,  $p = .14$ ). This suggests that there is no sufficient evidence to conclude a significant association between the two variables. A scatterplot was carried out to determine the relationship between the slope of the two variables. The slope was slightly negative, with few clustering around the line and many outliers identified (see Figure 9). Therefore, the null hypothesis can be accepted.

**Figure 9.** Relationship between Social Media Usage for Fitness Content and Body Esteem Weight.



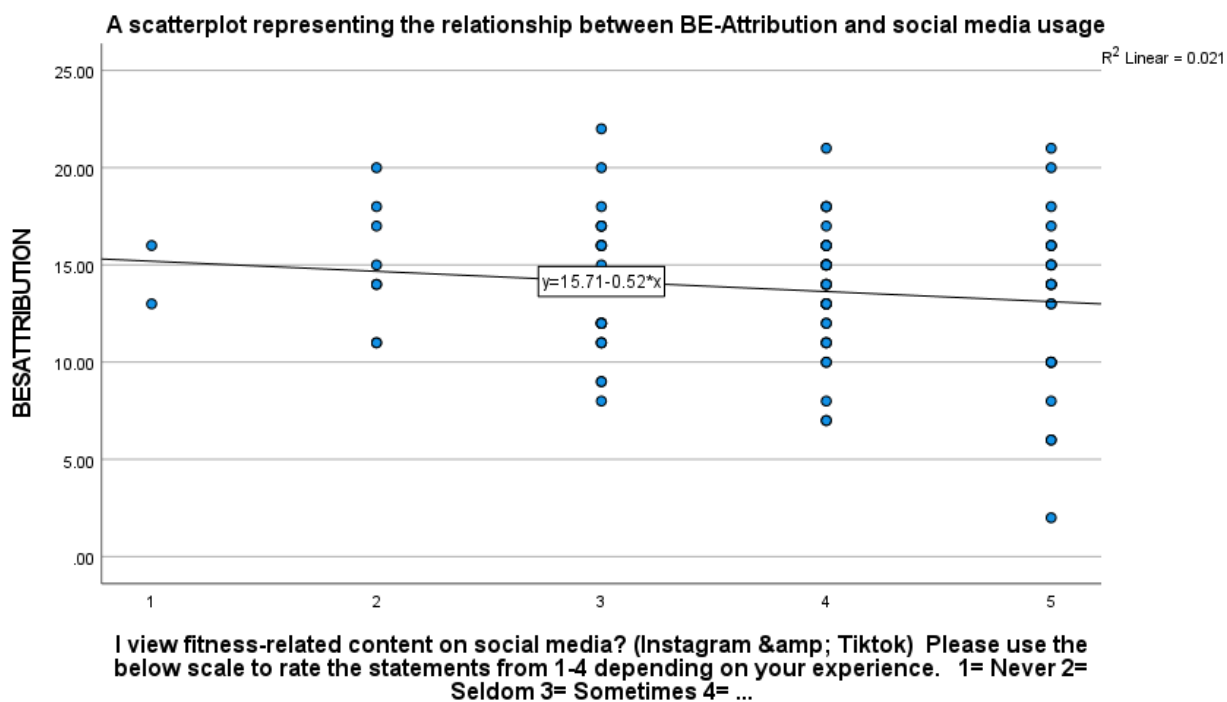
A Kendall's tau-b correlation found that there was a negative, non-significant correlation between social media usage for fitness-related content and body esteem appearance (tau b(96) = -.13,  $p = .11$ ). This suggests that there is no sufficient evidence to conclude a significant association between the two variables. A scatterplot was carried out to identify the slope of the relationship between the two variables. The slope was negative, with few clusters around the line, and many outliers. A negative, linear relationship was identified (see Figure 10). Therefore, the null hypothesis can be accepted.

**Figure 10.** Relationship between Social Media usage for Fitness Content and Body Esteem Appearance.



A Kendall's tau-b correlation found that there was a negative, non-significant correlation between social media usage for fitness-related content and body esteem attribution ( $\tau b(95) = -.08, p = .32$ ). This suggests that there is no sufficient evidence to conclude a significant association between the two variables. A scatterplot was carried out to determine the slope of the relationship between both variables. The slope was negative, with few clusters around the line, and outliers shown. A negative linear relationship was identified (see Figure 11). Therefore, the null hypothesis can be accepted.

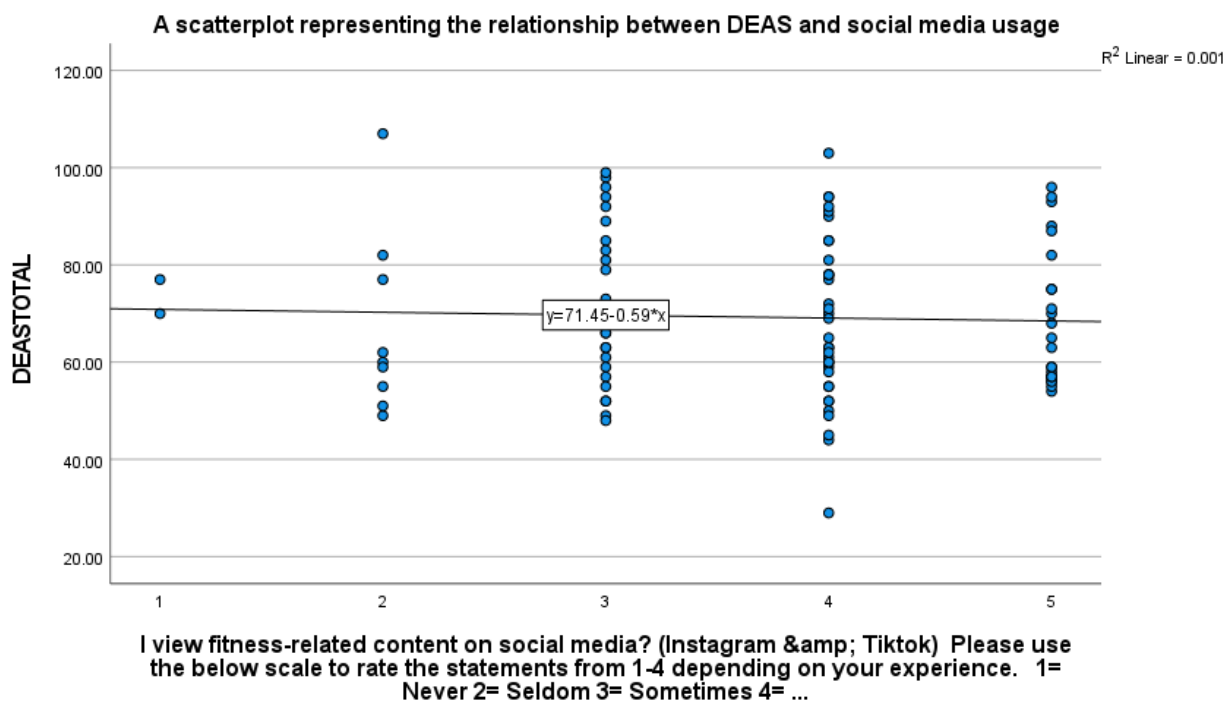
**Figure 11.** Relationship between Social Media Usage for Fitness Content and Body Esteem Attribution.



#### **Hypothesis 4**

A Kendall's tau-b correlation found that there was a negative, non-significant correlation between social media usage for fitness related content and disordered eating attitudes (tau b(96) = -.03,  $p = .74$ ). A scatterplot was carried out to determine the slope of the relationship between both variables (see Figure 12). This suggests that there is no sufficient evidence to conclude a significant association between the two variables. Therefore, the null hypothesis can be accepted.

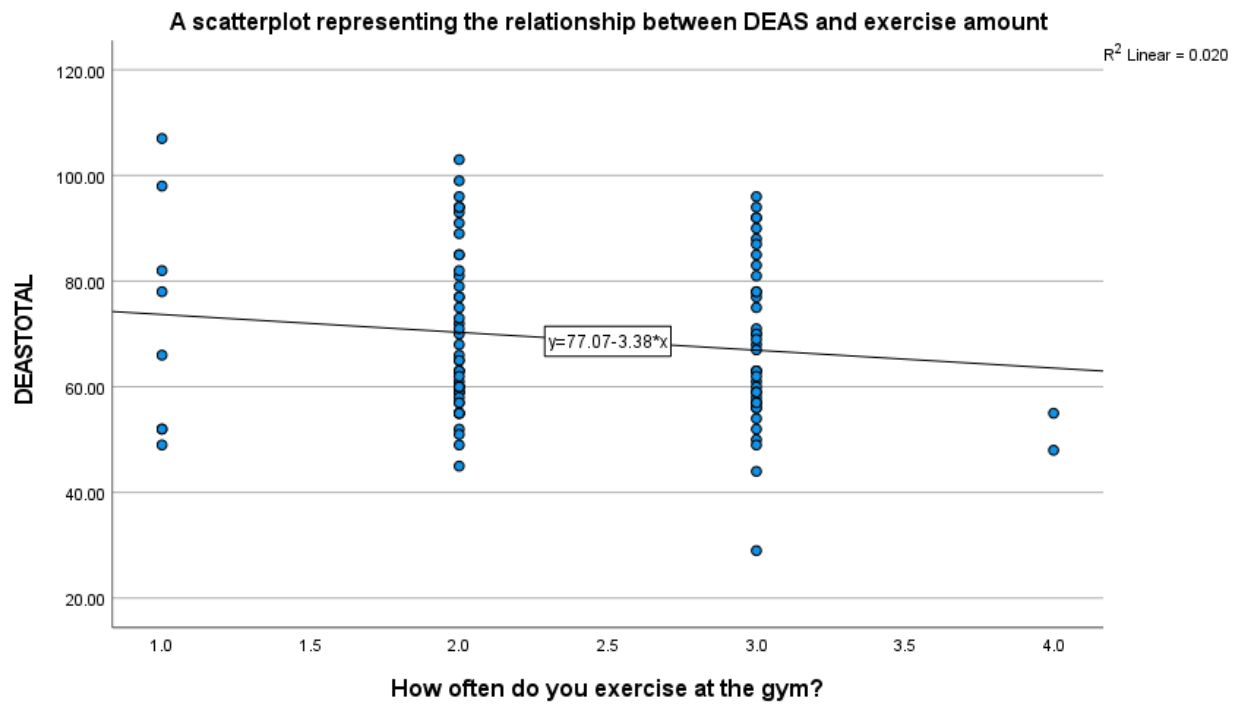
**Figure 12.** Relationship between Social Media Usage for Fitness Content and Disordered Eating Attitudes.



### **Hypothesis 5**

A Kendall's tau-b correlation found that there was a negative, non-significant correlation between exercise amount and disordered eating attitudes ( $\tau b(98) = -.08, p = .30$ ). This suggests that there is no sufficient evidence to conclude a significant association between the two variables. A scatterplot was carried out to determine the slope of the relationship between the two variables. A negative relationship was identified with few clusters around the line (see Figure 13). Therefore, the null hypothesis can be accepted.

**Figure 13.** Relationship between Exercise Amount and Disordered Eating Attitudes.



## 6. DISCUSSION

The aim of this study was to examine the relationships between the variables; disordered eating attitudes, life satisfaction, body esteem (weight, appearance, attribution), social media usage for fitness-related content, and gym usage in a sample of gym users using an online survey with a set of demographic questions, and 3 self-administered questionnaires. The following sections will discuss the main findings of this study and how it can be compared to previous literature in the field. This will be followed by some strengths and weaknesses of the current research, and some recommendations for future research.

### 7.1 Summary of the Main Findings

#### *Hypothesis 1*

Hypothesis 1 predicted that there would be a significant difference between the disordered eating attitudes of male and female gym users. Results found that there was no significant difference in the disordered eating attitudes of male and female gym users. Although there was no significant difference in the current study, the number of female gym users demonstrating disordered eating attitudes was somewhat high. A mean score of 69.84 on the DEAS is a moderate score, which supports the findings discussed by Lewinsohn et al. (2002) who found that females exhibited more disordered eating attitudes, a drive for thinness, and weight loss than males.

The current study also supported previous findings by Chen et al., (2022) who found that there were no significant differences between the prevalence of eating disorders in male and female participants. Thus, like the current study, Chen et al (2022) did note the slightly higher disordered eating traits in female participants. The current research did not support the findings of researchers such as Doherty & Kartalova-O'Doherty, (2010). They found that females had

significantly higher disordered eating attitudes than males and hypothesised that this was due to the greater amount of health seeking behaviours in women. The non-significant results could be due to the lower ratio of males to female gym users in the current study which may have resulted in the results not being accurate. The results also could have differed from most previous research, as the gym user sample could have had positive eating attitudes due to their participation in the gym and knowledge on nutrition, which requires further research.

### ***Hypothesis 2***

Hypothesis 2 predicted that there would be a statistically significant relationship between life satisfaction and body esteem (weight, appearance, attribution) of gym users. Results found a strong positive significant relationship between body esteem total, body esteem appearance, body esteem attribution and the life satisfaction of gym users which supports the hypothesis. A moderate positive significant relationship was found between body esteem weight and life satisfaction of gym users, which also supports the current studies hypothesis.

The results indicate that the higher level of body esteem total, body esteem weight, body esteem appearance, and body esteem attribution that a gym user has, the higher their satisfaction with life. The findings of the current study support previous research by Wójcik, (2021) who found that there is a positive relationship between body esteem and life satisfaction. Similarly, the current study supports the findings of Özgür et al., (1998) who concluded that a more negative body image would result in lower levels of life satisfaction. The results of the current study also support the findings of Swami et al., (2014), who found that when females have a higher level of body esteem, it resulted in higher levels of happiness and life satisfaction.

In terms of the subscales BE-weight and BE-appearance, the current study presents similar results to those of Frederick et al., (2016). Frederick and colleagues found life satisfaction to be strongly linked to appearance and weight in a sample of males and females. However, Frederick et al., (2016) found body esteem attribution not to be a predictor of life satisfaction, but the current study did. The current study found a strong positive relationship between BE-attribution and life satisfaction. The difference in findings could be due to a difference in sample demographics. Frederick et al., (2016) conducted their research on over 12,000 participants from the general population, whereas the current study surveyed 98 gym users specifically, which could have caused differences in results. The current study found similar results to those of Wójcik, (2021) as they also found all three subscales to be positively associated with life satisfaction. Overall, this study has demonstrated a positive relationship between body esteem weight, appearance, and attribution with overall life satisfaction in a sample of 98 gym users, which supports many pieces of previous research.

### *Hypothesis 3*

Hypothesis 3 predicted that there would be a significant relationship between the social media usage for fitness-related content and body esteem (weight, appearance, attribution) of gym users. Results found that there were no significant relationships between social media usage for fitness-related content and body esteem (weight, appearance, attribution). This result did not support the initial hypothesis as the consumption of fitness-related content on social media did not directly influence the body esteem of gym users in the sample. These results do not support findings such as those by Raggatt et al., (2018) who found that “fitspiration” content on social media has a positive impact on the wellbeing and body esteem of individuals who consume it.

Despite the results being non-significant, there was a negative relationship between social media usage for fitness-related content, and the body esteem of gym users, including the three subscales of the body esteem scale. This suggests that a higher engagement with fitness-related content on social media may have a slightly negative effect on the body esteem of gym users. This finding supports that of Want., (2009) who suggests that exposure to fitness content on social media has a negative effect on body esteem. The current study also found a negative non-significant association between body esteem attribution and life satisfaction, which can be compared to research conducted by Holland & Tiggemann, (2016). They found that more time spent looking at fitness related photos on social media correlated negatively with body esteem attribution, which is somewhat like the current study.

Despite the comparisons with previous findings being similar in nature, the current study found non-significant results for body esteem and each of the subscales. Results may have been different if there was a larger sample size. The current research only found a mean score of 3.74 for social media usage on a scale of 1-5. If all participants surveyed used social media for fitness-related content very often, results may have differed, as some participants did not use social media for fitness content at all, which could have affected the results. There may have also been a high amount of variability in the data which would have made it difficult to determine a relationship between the two variables. Finally, the body esteem attribution subscale had not got a reliable Cronbach's Alpha score for the current study, but did in previous research by Mendelson et al., (2001). This unreliability may have made the measurement invalid and affected the test scores. Further research is required into this topic to identify whether results would differ using a larger sample of individuals who specifically use social media for fitness related content.

#### *Hypothesis 4*

Hypothesis 4 predicted that there would be a significant relationship between social media usage for fitness-related content and disordered eating attitudes of gym users. Results found that there was no significant association between the two variables. This did not support the initial hypothesis. However, a negative slope between the relationship of social media usage for fitness-related content and disordered eating attitudes of gym users was identified, suggesting that the more gym users used social media to consume fitness-related content, the higher level of disordered eating attitudes they exhibited which does support previous findings by Talbot et al., (2017) who suggested social media usage is to blame for a higher prevalence of eating disorders.

Previous research found that social media can make harmful eating disorder content too easily accessible (Lantos., 2020). This could be the case in the current study as despite non-significant results, the mean social media usage was 3.74 and the mean disordered eating attitude score was moderately high at 69.07. With a negative relationship also being present, it can be said that the population of this study may have been displaying higher levels of disordered eating attitudes due to social media usage for fitness-related content. A larger sample of social media users who train at the gym is required to test this assumption at a larger scale to try to find significant results.

Much of the previous research into this topic has been conducted on the general population, and not gym users in specific. Therefore, the results of the current study could have differed due to this factor. It is a possibility that gym users who consume social media fitness content are not as likely to be exposed to disordered eating attitudes, due to the knowledge that they acquire while training and gaining experience in fitness. Social media for gym users may be a more positive space than it is for non-gym users and future research should consider

investigating the type of content that is being consumed on social media to answer the question of whether the content being posted on social media is beginning to be more knowledge-focused and positive, rather than exposing gym users to negative facts about nutrition and weight loss.

### *Hypothesis 5*

Hypothesis 5 predicted that there would be a significant relationship between the number of times a gym user exercised at the gym, and their disordered eating attitudes. Results found no significant relationship between the two variables. This result does not support the current studies hypothesis. Due to the relationship between the two variables being negative, it suggests that the more a gym user exercises at the gym, the higher their disordered eating attitude results are, despite the results being non-significant.

This result does not support previous research by Oberle et al., (2017) who found a significant relationship between excessive gym usage and disordered eating attitudes such as Orthorexia. Oberle et al., (2017) carried out their research on university students, which suggests a potential younger sample. The current study carried out research on a general sample of gym users with ages ranging from 18-66 years old, and a mean age of 29. Younger populations of gym users who exercise at the gym may be more inclined to have traits of disordered eating attitudes due to levels of exercise. This is an area for further research, to distinguish if there are differences in disordered eating attitudes and gym usage between age groups.

Research conducted by Bóna et al., (2018) found that high levels of exercise does have an influence on disordered eating attitudes. Similarly with the current study, a negative slope was observed. The negative slope of the relationship between the two variables may support the results of Bóna et al., (2018) study, that exercise levels do negatively impact disordered eating

attitudes. The current study may have found no significance due to the sample size, or possibly the scale used. A part of the scale was removed from the questionnaire for the current study; therefore, it is recommended that future researchers use the full DEAS questionnaire to check for significance.

## **7.2 Strengths & Limitations**

A strength of the study is the novelty of the research. While research does exist in terms of investigating the variables used in the current study, little research was found that investigated the variables in terms of gym users exclusively, which is what this study set out to achieve. There were also many ethical considerations considered in the creation of this survey; to inform participants of the nature of the study, informing them on their rights to withdraw from the survey before they submitted it, and to ensure participants were over the age of 18 years old. In the case of the survey causing any distress to participants, a debrief sheet was included with appropriate resources for them to reach out to if required to avoid any harm being caused (see Appendix F). Cronbach's alpha reliability testing demonstrated appropriate levels of internal consistency and reliability for the DEAS, Satisfaction with Life scale, Body Esteem total, Body Esteem Weight, and Body Esteem Appearance. This reliability increases the strength of the current study.

However, while most scales demonstrated internal consistency and reliability, the Body Esteem Attribution subscale did not. This scale demonstrated a Cronbach's Alpha of .423, indicating that BE-Attribution was not reliable, and perhaps caused results to differ slightly to those predicted. Furthermore, a distinction could have been made between the different types of exercise performed by individuals at the gym, to determine whether participation in different forms of exercise would have had a more significant impact on disordered eating attitudes and

body esteem. Finally, another limitation lies with the sample. There was a large difference in the number of male and female participants which could have influenced the results of the study. This made the results of the first hypothesis difficult to judge as it was a comparison between genders, with a large difference between the two.

### **7.3 Recommendations**

There are some recommendations that future research should consider if replicating the current study. Future research should replicate the current study with the inclusion of the studies limitations. Research has Future research should gather a more representative sample of gym users with a more even distribution of male and female participants to gather more accurate results. Research conducted by Lewinsohn et al. (2002), could be used as inspiration to elaborate and replicate the current research. Comparing male and female gym users on all scales may allow for more insight into the effects on gym usage. The idea that males are more inclined to over exercise than females should be researched in terms of disordered eating attitudes to check for any significant differences. In future, the full DEAS scale should be used without the removal of section 1, as this may help to find more significant results when it comes to disordered eating attitudes.

Due to the results of the current study, future research should consider looking into this topic on a with a qualitative approach. The study could be replicated with the use of mixed methods, adding in some qualitative questions to gain a broader understanding of how social media and other environmental circumstances effect the disordered eating attitudes, body esteem, and life satisfaction of gym users. Future research may investigate whether social media has changed in the last number of years, to become a more positive place for gym users to express themselves and go to for tips and advice, given the results of the study. Finally, longitudinal

studies could provide future researchers with a deeper understanding into the long-term effects of social media usage, and gym usage, on the eating attitudes, body esteem and life satisfaction of gym users.

#### **7.4 Implications and Applications**

The findings of the current study have several practical implications for gym users and for social media content creators that promote fitness content. The results emphasise the importance of understanding the relationship between gym usage, exposure to fitness content on social media, and life satisfaction. Having an awareness of the negative effects, such as disordered eating attitudes, and a negative impact on one's satisfaction with life, can inform fitness influencers, and gym users on the importance of having a healthy balanced lifestyle, and to promote healthy behaviours instead of negative eating behaviours etc. These findings and insights can be used by healthcare practitioners to develop interventions aimed at reducing the negative impacts of social media usage on body image and wellbeing.

The findings may also contribute to policy decisions regarding the regulation of the content uploaded by social media influencers. Policy makers should take into consideration the need for guidelines, to ensure social media influencers are providing information to the public that is evidence based and promotes body positivity. Educational institutions may also implement the findings of this study into school curriculums to educate young people about the possible consequences of excessive gym usage, and social media usage. Education within the fitness industry would also be beneficial to personal trainers as they can integrate the promotion of body positivity, and supporting the mental health of their clients, alongside their fitness goals.

## 7.4 Conclusion

This research found differences in the disordered eating attitudes of males and female gym users, and a strong positive relationship between body esteem and life satisfaction. No significant relationship was found between social media usage for fitness related content and body esteem, or disordered eating attitudes. However, negative relationships were found between these variables suggesting that social media usage has the potential to negatively impact gym users in terms of their disordered eating attitudes and body esteem. Finally, no significant relationship was found between exercise frequency and disordered eating attitudes, but the relationship was slightly negative, suggesting over exercise may have a negative effect on a gym users disordered eating attitudes. Future research should carry out this research again with an even gender-distribution, while using the full disordered eating attitude scale to interpret the results again. Future research should also consider looking into the regulation of fitness content that is uploaded on social media and encourage fitness influencers to promote evidence-based findings and body positivity to prevent adverse effects of gym, and social media usage.

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## 9. APPENDICES

### Appendix A: Information Sheet

Examining the social media usage, body image, eating attitudes and life satisfaction among gym users.

My name is Abigale Gartland, and I am conducting research in the Department of Psychology of Dublin Business School. The research will explore the social media usage, disordered eating attitudes, body image, and life satisfaction among individuals who use the gym as their preferred form of exercise. This research is being conducted as part of my studies. The results will be submitted for examination and will also be presented at a poster presentation in Dublin Business School. The research may also be used for future publication.

You are invited to take part in this study which will form the basis for my undergraduate thesis which will involve completing an anonymous online survey. Please read the following information sheet before deciding whether to participate. The survey may ask some questions that may cause some minor negative emotions; however, it has been widely used in research to date. If any of the questions raise negative feelings for you, there will be some contact information for support services on the survey's final page. Participation is voluntary, you are not obliged to take part in this research.

Participation is completely anonymous and confidential. Responses cannot be attributed to any one participant. For this reason, it will not be possible to withdraw from participation after the questionnaire has been collected. All individual information collected as part of the study will be used solely for research purposes. The questionnaires will be securely stored, and data collected will be stored on a password protected computer. Data collected is stored in the EU, for five years, and will be used for research purposes to generate research content such as publications and presentations. It is important that you understand that by completing and submitting the questionnaire that you are consenting to participate in the study.

Should you require any further information about the research, please contact me via email at [xxxxxxx@mydbs.ie](mailto:xxxxxxx@mydbs.ie). My supervisor, Dr Garry Prentice can be contacted at [xxxxxxx@dbs.ie](mailto:xxxxxxx@dbs.ie).

Thank you for taking the time to complete my research.

## Appendix B: Survey Demographic Questions

**1. What is your gender?**

- Male
- Female
- Non-Binary
- Prefer not to say

**2. What age are you?**

**3. Do you exercise at the gym?**

- Yes
- No

**4. How often do you exercise at the gym?**

- 1 time per week
- 2-3 times per week
- 4-5 times per week
- 6 times per week or more

**5. Select any types of training that you perform at the gym**

- Weight/Strength training
- Cardiovascular training (cardio)
- Group training (fitness classes, pilates, yoga etc)
- Crossfit
- Calisthenetics
- Other (Please state)

**6. I view fitness related content on social media (Instagram & TikTok)**

1 = Never

2 = Seldom

3 = Sometimes

4 = Often

5 = Always

**7. I use Instagram and/or TikTok to post fitness related content**

- 1 = Never
- 2 = Seldom
- 3 = Sometimes
- 4 = Often
- 5 = Always

**8. I see fitness models post on my TikTok/Instagram newsfeed**

- 1 = Never
- 2 = Seldom
- 3 = Sometimes
- 4 = Often
- 5 = Always

**9. Do you follow any fitness influencers/models?**

- Yes
- No

**10. Do you feel inspired to workout and/or change your diet after looking at these photos/videos that fitness influencers/models post?**

- 1 = Never
- 2 = Seldom
- 3 = Sometimes
- 4 = Often
- 5 = Always

**Appendix C: Disordered Eating Attitude Scale Questionnaire (Alvarenga et al, 2010).*****Instructions***

**Please answer the following questions from the DEAS. Please be as honest as possible in your responses.**

**2. Do you Feel pleasure when you eat?**

- Yes
- No

**3. Does eating ever feel unnatural to you?**

- Yes
- No

**4. Have you ever spent one or more days without eating or having only liquids because you believed that you could lose weight?**

- Yes
- No

**5. Do you count the calories of everything you eat?**

- Yes
- No

**6. Do you enjoy the feeling of an empty stomach?**

- Yes
- No

**7. Do you “Skip” meals to avoid putting on weight?**

- Yes
- No

**8. Does eating make you feel “dirty”?**

- Yes
- No

**9. Do you have good memories related to food?**

- Yes
- No

**10. Would you like to not need to eat?**

- Yes
- No

**11. Do you believe that it is normal to eat sometimes just because you are sad, upset or bored?**

- Yes
- No

**12. When you eat more than usual, what is your behaviour afterwards?**

- Restart eating as usual.
- Assume you have lost control and keep eating even more.
- Decide to go on a diet to compensate.
- Use some kind of compensation, such as physical activity, vomiting, laxatives and diuretics.

## **PART II DEAS**

### ***Instructions***

**Please indicate your feeling towards each statement by selecting the appropriate option**

**13. I feel guilty when I eat something that I thought I should not eat for some reason**

- Always
- Usually
- Often
- Sometimes
- Rarely/Never

**14. I quit eating a kind of food if I find out it has more calories than I thought.**

- Always
- Usually
- Often
- Sometimes
- Rarely/Never

**15. I worry all of the time about what I am going to eat, how much to eat, how to prepare food and whether I should eat or not**

- Always
- Usually
- Often
- Sometimes
- Rarely/Never

**16. I worry about how much a certain kind of food or meal will make me gain weight.**

- Always
- Usually
- Often
- Sometimes
- Rarely/Never

**17. I am angry when I feel hungry.**

- Always
- Usually
- Often
- Sometimes
- Rarely/Never

**18. It is hard to choose what to eat, because I always think I should eat less or choose the option with fewer calories.**

- Always
- Usually
- Often
- Sometimes
- Rarely/Never

**19. When I desire a specific kind of food, I know I won't stop eating until I have finished with it.**

- Always
- Usually
- Often
- Sometimes
- Rarely/Never

**20. I would like to have my appetite and eating behaviour under control.**

- Always
- Usually
- Often
- Sometimes
- Rarely/Never

**21. I try eating less in front of others in order to overeat when I am alone.**

- Always
- Usually
- Often
- Sometimes
- Rarely/Never

**22. I am afraid to start eating and not be able to stop.**

- Always
- Usually
- Often
- Sometimes
- Rarely/Never

**23. I dream of a pill that would replace food.**

- Always
- Usually
- Often
- Sometimes
- Rarely/Never

**24. I get nervous and/or lose my self-control at parties and buffets, due to a great amount of foods available.**

- Always
- Usually
- Often
- Sometimes
- Rarely/Never

**25. My relationship with food messes up my life as a whole.**

- Always
- Usually
- Often
- Sometimes
- Rarely/Never

**Appendix D: The Satisfaction with Life Scale (Pavot & Diener, 1993)*****Instructions***

**Below are five statements that you may agree or disagree with.**

**Using the 1 -7 scale below; indicate your agreement with each item by placing the appropriate number on the line preceding that item.**

**Please be open and honest in your responding.**

7 - Strongly agree

6 - Agree

5 - Slightly agree

4 - Neither agree nor disagree

3 - Slightly disagree

2 - Disagree

1 - Strongly disagree

**In most ways my life is close to my ideal.**

**The conditions of my life are excellent.**

**I am satisfied with my life.**

**So far I have gotten the important things I want in life.**

**If I could live my life over, I would change almost nothing.**

## Appendix E: Body Esteem Scale for Adolescents and Adults

### *Instructions*

Please indicate how often you agree with the following statements by choosing the appropriate option.

**I like what I look like in pictures.**

- Never
- Seldom
- Sometimes
- Often
- Always

**Other people consider me good-looking.**

- Never
- Seldom
- Sometimes
- Often
- Always

**I am proud of my body.**

- Never
- Seldom
- Sometimes
- Often
- Always

**I am preoccupied with trying to change my body weight.**

- Never
- Seldom
- Sometimes
- Often
- Always

**I think that my appearance would help me get a job.**

- Never
- Seldom
- Sometimes
- Often
- Always

**I like what I see when I look in the mirror.**

- Never
- Seldom
- Sometimes
- Often
- Always

**There are lots of things that I would change about my looks if I could.**

- Never
- Seldom
- Sometimes
- Often
- Always

**I am satisfied with my weight.**

- Never
- Seldom
- Sometimes
- Often
- Always

**I wish I looked better.**

- Never
- Seldom
- Sometimes
- Often
- Always

**I wish I looked like someone else.**

- Never
- Seldom
- Sometimes
- Often
- Always

**People my own age like my looks.**

- Never
- Seldom
- Sometimes
- Often
- Always

**My looks upset me.**

- Never
- Seldom
- Sometimes
- Often
- Always

**I'm as nice looking as most people.**

- Never
- Seldom
- Sometimes
- Often
- Always

**I'm satisfied with how I look.**

- Never
- Seldom
- Sometimes
- Often
- Always

**I feel I weigh the right amount for my height.**

- Never
- Seldom
- Sometimes
- Often
- Always

**I feel ashamed of how I look.**

- Never
- Seldom
- Sometimes
- Often
- Always

**My weight makes me unhappy.**

- Never
- Seldom
- Sometimes
- Often
- Always

**My looks help me to get dates.**

- Never
- Seldom
- Sometimes
- Often
- Always

**I worry about the way that I look.**

- Never
- Seldom
- Sometimes
- Often
- Always

**I think I have a good body.**

- Never
- Seldom
- Sometimes
- Often
- Always

**I look as nice as I would like to.**

- Never
- Seldom
- Sometimes
- Often
- Always

## **Appendix F: Debrief Sheet**

The survey has now ended. Please read the following debrief sheet.

Thank you for taking the time to complete this survey; your responses have been anonymously recorded. If any issues have emerged because of completing this survey, please get in touch with one of the support groups below:

AWARE helpline: 01 611 7211

Bodywhys helpline: 1890 200 444

Samaritans helpline: 1890 200 091

MyMind: [MyMind.org](http://MyMind.org)

Remember to take care of yourself!

You can also contact me at xxxxxxxxxxxx or my supervisor on xxxxxxxxxxxx with any queries.

Thank you for participating in my research!