



ROLE OF SOCIAL MEDIA AND FITNESS APPS IN THE DEVELOPMENT OF EATING DISORDERS AMONG YOUNG ADULTS

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ABSTRACT

The present research investigates the increasing role of social media and fitness applications in eating disorders formation among young adults between 18 and 30 years, who are extremely involved in the digital ecosystem. The survey of the 250 participants was cross-sectional, and descriptive and inferential statistics were used to analyze the data to ascertain the connection between digital engagement and disordered eating symptoms. Findings indicated a positive significant relationship existed between long-term social media usage and the occurrence of poor dietary habits whereby those spending over three hours daily were associated with a high possibility of dissatisfaction in their body and restrictive food habits. Equally, active involvement with fitness application, especially when used on a daily basis, was linked with obsession in the management of calories, exercise, and anxiety about body image. There were also gender-related differences as females and non-binary people were far more vulnerable than males, which also adds to the overall impact of cultural beauty standards and identity-related pressures. These results underline the two aspects of digital platforms: they can be used as an instrument of health awareness and self-development, but their excessive consumption may lead to the development of harmful psychological effects. The paper highlights that there is an urgent requirement to promote awareness, digital health, body positivity, and gender-specific intervention to promote balanced digital time usage to curb the increasing prevalence of eating disorders in the modern young adult demographic.

Keywords: Social Media, Fitness Apps, Eating Disorders, Young Adults, Body Image, Gender Differences, Digital Engagement, Disordered Eating Behaviors.

1. INTRODUCTION

The problem of eating disorders in young adults has become a burning issue of the population, which is strictly linked to the active expansion of digital technologies and online culture (Goodyear, 2021). The popularity of social media based on visual content and communication with peers has a major role in forming body image, beauty and lifestyle ideals perception (Honary, 2019). The regular exposure to edited photos, exercise routines, and influencer-based stories makes the environment very competitive where the standard of appearance is in many cases identified with self-esteem (Ioannidis, 2021). Such a setting contributes to unrealistic body images of thinness or body muscle, and predisposes individuals to become dissatisfied with their bodies and engage in disordered eating habits (Kasson, 2021). In the case of young adults, who are at a peak of identity development, the pressures of comparison and validation with likes, comments and online activities may add into the negative eating attitudes, restrictive dieting habits or compulsive exercise programs (Lupton, 2021). The psychological effect of such digital interaction is the fact that social media is not just a medium of communication but a strong determinant of health behaviors.

Fitness applications have become very popular in the field of personal development that introduces self-improvement, calorie counting, fitness tracking, and weight loss (Marks, 2020). Although such apps can help change lives to more healthful ones, when used more often or excessively, these apps can contain the obsessive-compulsive approach to food and body image (McCaig, 2020). The gamer aspects of most fitness applications, including daily notifications, goal setting, and tracking progress can create a feeling of accomplishment, but also can lead to feelings of guilt, anxiety or compulsive behavior on missing the target (Padín, 2021). This excessive dependence on digital monitoring can further make young adults more vulnerable to disordered eating, especially among young adults who may be struggling to balance academic, work, and social demands (Pilgrim, 2019). The synergistic interaction of social media and fitness apps exemplifies a complicated process: on the one hand, both technologies are capable of enhancing health awareness, but at the same time, they openly run the risk of promoting the harmful obsessions with body image (Rounsefell, 2020). It is thus necessary to analyze their contribution to the emergence of eating disorders in young adults in order to develop evidence-based interventions that can mitigate the psychological risks and take advantage of the positive effects of digital engagement.

2. LITERATURE REVIEW

Chung et al. (2021) researched the effect of peer communication on the eating habits of adolescents via social media systems. Their literature review indicated that peer-created content on diet, fitness, and body

image were very vulnerable to adolescents. The researchers established that the exposure to these contents frequently resulted in adopting bad eating habits such as restrictive dieting and eating binge as a result of the need to get accepted and validated socially. It highlighted the fact that peer influence on the online space acted as a major predictor of disordered eating behavior among teenagers.

Dane and Bhatia (2023) evaluated the linkage between social media usage, concern with body image and eating disorders among youth. Their analysis showed that the long-term exposure to edited images, fitness trends, and influencer-related stories made people feel dissatisfied with their bodies and at risk of developing an eating disorder. The research also found that platforms that gave importance to visual content enhanced the pressure to be gender conforming to standards of unrealistic beauty. It was also noted that the frequency and the nature of social media use had a great moderating impact in the interaction between digital exposure and the symptoms of disordered eating.

Derenne and Beresin (2018) gave a detailed review of the connections between media exposure, body image and eating disorders in the last ten years. They discovered that traditional and electronic media always had impacts on people as to what they deem to be the ideal body perfects which lead to body dissatisfaction and poor eating habits. The authors emphasized that these effects were especially sensitive to young adults and adolescents because of developmental and psychosocial reasons. Moreover, they highlighted the importance of social comparison and pressure created by the media in the onset and sustenance of disordered eating patterns.

Eikey (2021) used a qualitative study to examine the influence of diet and fitness applications on eating disorders. The study indicated that excessive use of these applications tended to result in the occurrence of compulsive tracking of calories, physical activities and body weight. Respondents said that they felt increased anxiety, guilt and pressure to achieve daily goals, which in others strengthened disordered eating patterns. The paper has pointed out that although these applications were meant to be healthy and physically fit, their gamification and constant feedback systems have the unintended effect of leading to poor wellness behaviors especially to young adults who are prone to body image insecurities.

Fitzsimmons-Craft et al. (2020) examined teenagers and young adults who followed the pro-eating disorder social media content, paying attention to the eating disorder symptoms, comorbid psychopathology, healthcare use, and feelings about the use of technological interventions. In their research, they discovered that people who were exposed to pro-eating disorder communities had increased

disordered eating habits, depression, and anxiety. The obstacles to treatment have been discovered, such as stigmatization, ignorance, and inability to find professional help. Notably, the study implied that technology would be a source of intervention under the right conditions, which provided the possible means of providing mental health care and encouraging healthy use of social media and fitness-related applications.

3. RESEARCH METHODOLOGY

The researchers sampled 250 young adults (18-30 years) through a quantitative cross-sectional survey and found statistical relationships between social media/fitness app use and eating disorder symptoms. Data were gathered through questionnaires and processed through SPSS by means of descriptive statistics as well as inferential statistics.

3.1 Research Design

The paper adopted a cross-sectional survey as a quantitative study design in an attempt to investigate how the use of social media and fitness apps contributes to eating disorder signs in young adults. The design was selected as a way of creating a correlation between the digital engagement patterns and eating related behaviors among a specific sample population.

3.2 Study Area and Population

The study was carried out on young adults with age ranges of 18-30 years, which is a representative sample of college students, working individuals and idle youth. The respondents were recruited in both urban and semi-urban regions to reflect different trends in the use of digital media.

3.3 Sample Size and Sampling Technique

The study involved 250 respondents. The sample size was calculated in such a way that it was statistically reliable and represented the gender and usage category. The stratified random sampling method was used to balance the gender category (male, female, non-binary) and include participants with the different intensity of social media and fitness apps use.

3.4 Data Collection Tools

Data collection was done using a structured and self-administered questionnaire comprising of four parts:

1. **Demographic Profile-** age, gender, education and occupation.

2. **Social Media Usage-** hours on a daily basis, favorite platforms and the type of engagement.
3. **Fitness App Usage-** how often, what type of apps, what is the use (e.g., calorie tracker, exercise app, etc.).
4. **Eating Attitudes Test-** (EAT-26) is a standardized screening tool, which was used to measure Eating Disorder Symptoms, a measure of eating disorder symptoms.

3.5 Data Analysis

Analysis of the collected data was done through SPSS (Statistical Package for Social Sciences). Frequency, percentage, mean were the dependence variables that summarized the usage patterns of social media, fitness apps. The chi-square tests and correlation analysis were used to explore the relationship between the social media use, fitness app use, and eating disorder symptoms. Comparative percentage distributions were made to analyze the difference in gender. The presentation of results was in the form of tables and figures to be understandable.

4. RESULT

The findings indicate that increased disordered eating symptoms are strongly associated with increased social media use and active use of fitness apps, with females and non-binary people being the most susceptible to these disorders compared to males. Such discoveries indicate the significance of online platforms in forming unhealthy eating behavioral attitudes and the relevance of gender-specific interventions.

4.1 Social Media Usage Patterns

The daily social media use among the young adults is represented in table 1 and Figure 1. Among the 250 respondents, 32 (12.8) people spent less than an hour a day on social media, and 61 people (24.4) spent 1-2 hours a day on it. Another 50 participants (20.0%) spend their time with social media 2-3 hours a day. It is worth noting that the biggest population, consisting of 107 respondents (42.8%), reportedly spent over 3 hours per day on the social media sites. This brings to the fore the fact that a high number of the young adults spend longer hours on online interaction, especially beyond the 3-hour point.

Table 1: Daily Social Media Usage among Young Adults

Daily Usage	Frequency	Percentage (%)
Less than 1 hour	32	12.8
1–2 hours	61	24.4
2–3 hours	50	20.0
More than 3 hours	107	42.8

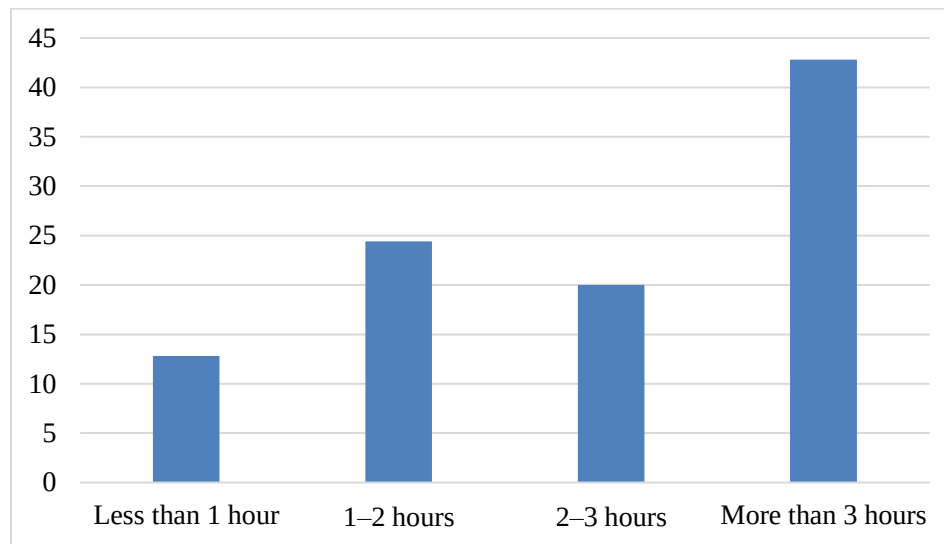


Figure 1: Graphical Representation of Daily Social Media Usage among Young Adults

The evidence suggests that the high social media use among the young adults has a strong trend, and almost half of the sample spends more than 3 hours a day on the social media. With this kind of lengthy exposure, the chances of being exposed to appearance-related information, fitness trends, and peer comparisons, which have been known to influence body image perceptions, are more likely to occur. A relatively low percentage of the population that uses it less than 1-hour means that social media has become a focal point of everyday life. This eating style can be a predisposing factor to the development of unhealthy eating attitudes and practices with excessive exposure to these standards strengthening the body ideals and diet-centered messages.

4.2 Fitness App Engagement

Table 2 and Figure 2 show the percentage of fitness application use by young adults. Among 250 respondents, 23 individuals (9.2%) said that they rarely used fitness apps i.e. once a month or less. There were 54 respondents who used such apps occasionally, not more than a few times a month (21.6%). The

number of those who engaged weekly was also reported to be 77 (30.8%), with the largest number of 96 respondents (38.4%), using fitness apps on a daily basis. This shows that the use of fitness apps is very widespread with most of the participants using it either on a weekly or daily basis.

Table 2: Frequency of Fitness App Usage

Usage Frequency	Frequency	Percentage (%)
Rarely (once a month or less)	23	9.2
Occasionally (few times a month)	54	21.6
Weekly	77	30.8
Daily	96	38.4

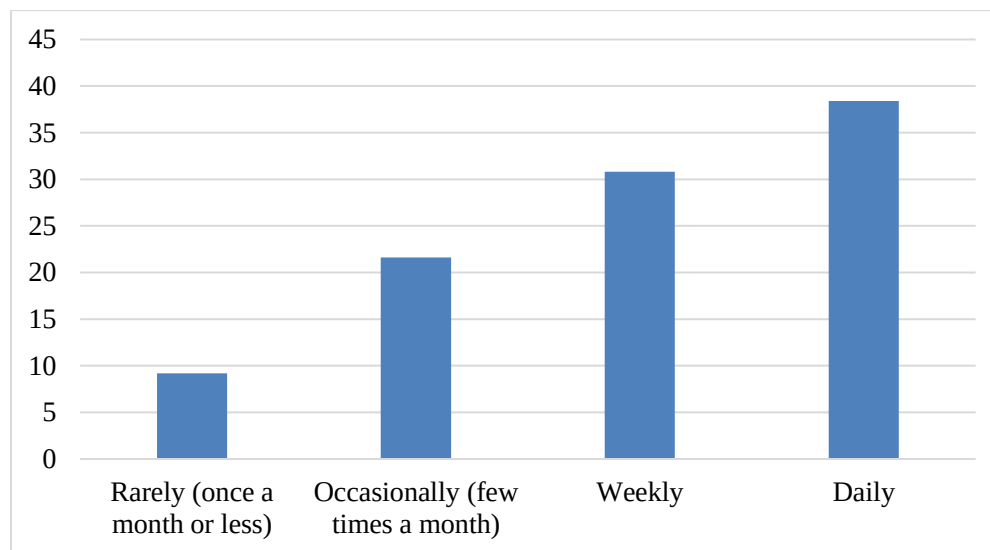


Figure 2: Graphical Representation of Frequency of Fitness App Usage

The statistics indicate a steady usage of the fitness applications by young adults with about 70 percent of them utilizing them every week or day. The most widespread is the aspect of daily engagement that implies that fitness apps are now deeply integrated into the way of life and are frequently used to track calories and analyse exercise and manage weight. Although the hourly use of this might lead to health consciousness, it is also an issue of over-reliance, with the anxiety levels nearer to diet and body image. The occasional and rare users, on the other hand, are also a smaller percentage, which suggests that in the majority of

young adults, fitness apps are not informal but a part of a routine that can affect their eating habits and psychological health.

4.3 Correlation with Eating Disorders

Table 3 and Figure 3 indicate the occurrence of disordered eating symptoms in the cases of young adults concerning their daily use of social media. The results indicate that the percentage of people who spend less than 1 hour per day on social media is only 10.5% who reported disordered eating tendencies. This percentage is growing with the further increase in usage: 18.0% among people who use social media 1-2 hours per day, 27.4% among those who spend 2-3 hours per day, and 43.9% of those who spend more than 3 hours per day. This upward trend over time shows that the number of hours spent on social media and reported disordered eating behaviors are on an upward trend.

Table 3: Prevalence of Disordered Eating by Social Media Usage

Social Media Usage	% Reporting Disordered Eating Symptoms
< 1 hour daily	10.5
1–2 hours daily	18.0
2–3 hours daily	27.4
> 3 hours daily	43.9

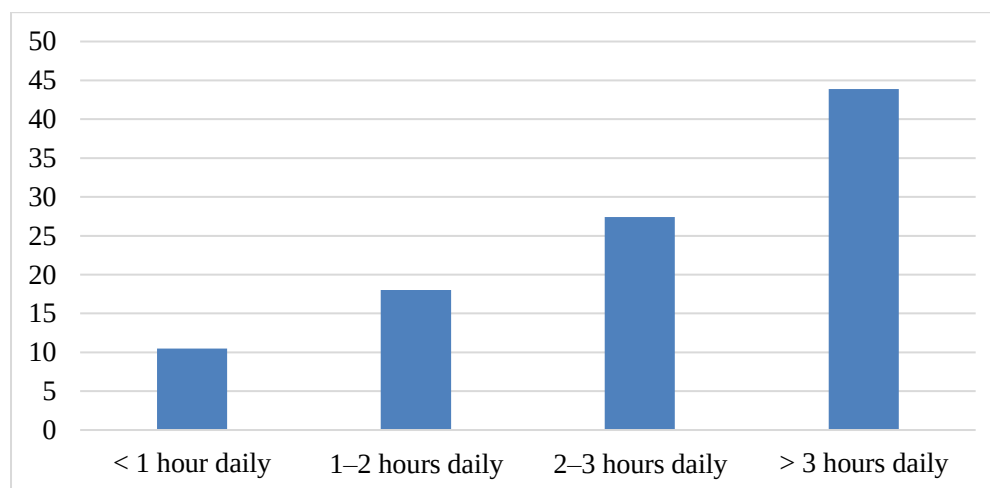


Figure 3: Graphical Representation of Prevalence of Disordered Eating by Social Media Usage

The results indicate that there is a positive correlation of disordered eating symptoms with the exposure to social media in young adults. Individuals who devote more than 3 hours a day are more than four times more prone to report problematic eating habits than minimal users (less than 1 hour a day). This implies that the long-term consumption of image-oriented and diet-oriented content, comparisons with peers, and influencer-inspired body images could be major causes of body dissatisfaction and poor eating habits. The steady rise in all the usage types justifies the claim that the usage of social media is not incidental but it is a possible risk factor in the occurrence of eating disorders. These results are compatible with the already available literature that focuses on the influence of digital environments on eating attitudes and has to acknowledge the necessity of awareness campaigns and healthier online engagement strategies.

4.4 Gender and Eating Disorder Symptoms

Table 4 and Figure 4 describe the differences in disordered eating symptoms in young adults based on gender. Among 111 male participants, 22.5% of them said that they experienced disordered eating behaviors. However, of 123 female respondents, the prevalence was significantly higher, 41.2% exhibiting the symptoms. The overall rate was the highest with 16 respondents who identified as non-binary/other with 47.6 percent of them having a disordered tendency of eating. These results indicate that there is a remarkable difference in the prevalence of disordered eating between gender groups with non-binary/other respondents being the most impacted, then females, and finally males.

Table 4: Gender Differences in Disordered Eating Symptoms

Gender	Frequency (N)	% Reporting Disordered Eating Symptoms
Male	111	22.5
Female	123	41.2
Non-binary/Other	16	47.6

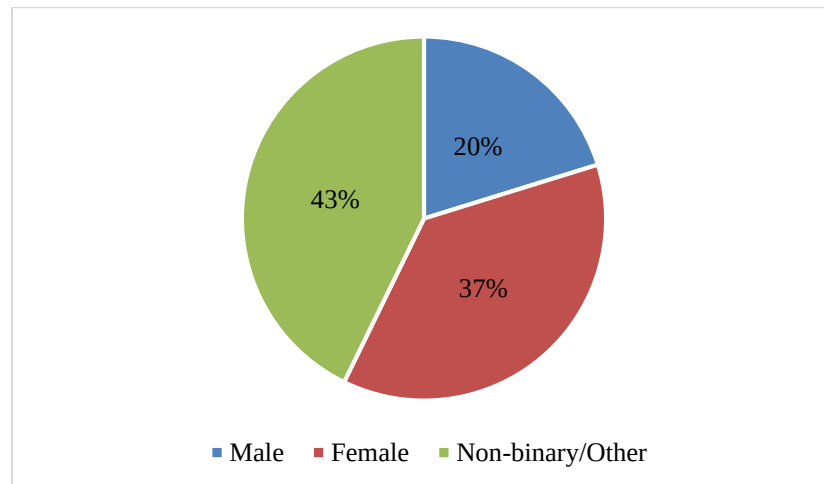


Figure 4: Graphical Representation of Gender Differences in Disordered Eating Symptoms

The statistics show that there is a strong correlation between gender and disordered eating predisposition. The prevalence was found almost twofold by female respondents compared to male respondents, as the society and its culture have continued to take a toll on ideal body image, thinness, and beauty requirements. The disproportionately large prevalence of non-binary/other respondents indicates an increased vulnerability in this cohort, which could be explained by the compounded nature of stressors, including gender identity challenges, marginalization by the rest of society, and an absence of mainstream health discussion representations. These results are still in line with previous studies that establish that females and gender-diverse groups are at higher risk of eating disorders than males. This highlights the importance of gender-sensitive sensitization, and inclusive mental health programs that respond to individual challenges of the various genders.

5. DISCUSSION

The results of the research prove that there is a highly significant correlation between digital involvement and disordered eating symptoms among young adults. The prevalence of disordered eating behaviors was found to be significantly higher when social media was used more than three hours per day, which is an indication that exposure to appearance-related material and peer comparisons can exacerbate body dissatisfaction. On the same note, the regular use of fitness apps and especially using it on a daily basis is indicative of the inclusion of digital technologies in health practices, but also demonstrates the over-dependence that can support the self-centered focus on the diet and exercise.

The differences between genders also highlight the additional complexity of this problem because females and non-binary people tend to be more vulnerable disproportionately than males. These differences indicate that the differences in cultural body ideals, paired with identity-related stressors, can increase vulnerability to disordered eating. Altogether, the information supports the position that digital platforms have a dual role, as they can be not only health-supportive but also risky, and specific, gender-sensitive, and balance intervention is required to support healthier digital interactions and avoid negative psychological effects.

6. CONCLUSION

The authors find that pride of place as to the observation that excessive social media utilization as well as regular engagement with fitness applications are significant areas of dysfunction among young adults and that the influence thereof is especially intensive in females and individuals identifying with not classified in either of the two poles. The results show how repeated exposure to appearance-focused content, fitness trends, and influencer discourses on social media lead to body dissatisfaction and unattainable beauty standards whereas the day-to-day appearances of checking diet, calories, and workouts on fitness apps promote obsessive flagellation. Collectively, these digital influences result in a risk environment with the uptake of limiting eating habits and concerns with body image. These evident gender-based differences also give reason to believe that social and cultural pressure; as well as identity-related issues increase vulnerability among specific groups. These lessons underscore the high urgency in creating awareness campaigns, training on digital welfare and gender-sensitive engagements that can inculcate a fair mix of utilization of digital tools. Probability the encouragement of more healthy lifestyle tendencies of internet use, encouragement of body positivity, and less reliance on health-related technology products and applications could help to address the current epidemic of eating disorders in digital native generations.

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