



Social Media and the Prevalence of Body Dysmorphic Disorder Symptoms in Adolescents Situated in the UAE

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Abstract

Body Dysmorphic Disorder (BDD) is a psychiatric condition characterized by the obsession of an individual on their appearance, affecting their psyche, leading to excessive discomfort. BDD, although a large issue globally, remains under/misdiagnosed, commonly mistaken for obsessive compulsive disorder (OCD) (Phillips). This paper aims to study the relationship between social media and the prevalence of BDD for adolescents in the UAE. A cross sectional survey was conducted with 41 adolescents (ages 16-18, predominantly male) in the UAE to assess the effect of social media on BDD symptoms. The survey assessed social media usage, participants satisfaction based on different body features (height, weight, torso, muscle tone, etc.), whether participants were likely to get help, etc. The findings depicted that an increased time spent on rumination of perceived flaws led to an increased likeness of comparing oneself with others on social media. Additionally, participants who spent more than 3 hours per day on social media were more likely to report a somewhat negative effect when asked how exposure to social media affected their psyche, compared to those with lower times spent on social media. Furthermore, participants who spend a longer time thinking about perceived flaws are more likely to avoid real life situations. To conclude, increased social media usage was positively correlated with the self-reported severity of Body dysmorphic disorder symptoms to a certain extent. Although the sample displayed BDD tendencies such as frequent rumination (repetitive thoughts on perceived flaws), behavioral impairment such as social avoidance could not be seen, suggesting that the severity of the symptoms was subclinical at most.

Keywords: Body Dysmorphic Disorder (BDD), social media, adolescents, United Arab Emirates (UAE), mental health

I. Introduction

Body Dysmorphic Disorder (BDD) is a psychiatric condition characterized by the obsession of an individual on their appearance, affecting their psyche, leading to excessive discomfort. Although a large issue around the globe, BDD has seen a rise in its prevalence, particularly with adolescents (Kaur et al, 2018).

Social media has been popularized since the early 2000's and has seen a surge in popularity with every passing year. Starting from broad websites with the aim of connecting with friends and family, with various content types, the most popular social media's current format is purely visual, such as Instagram and TikTok. Additionally, adolescents' screen times have faced a massive surge through the current years. It has been discovered that teens in the US are spending 5+ hours purely on social media (DeAngelis, 2024). This has been linked to an increased likelihood of anxiety and depression (Zaslowsky).

Research has been conducted on the effect of social media on BDD symptoms, in different regions around the world. Moreover, minimal studies are directed towards adolescents, though this has not been done in the UAE. Additionally, this study aims to provide a deeper insight, and while primarily focusing on social media's effect, and look at what else may affect the BDD symptom prevalence.

The past few decades have witnessed the rise of various internet subcultural belief systems, challenging traditional views on personal identity and self-expression. For example, The black pill. The black pill is an internet based subcultural belief system, based on extreme pessimism, and characterized by the belief that immutable features such as the jawline and eye shape of an individual determines their romantic/social success. The community is widely regarded as toxic due to its demeaning/dehumanizing nature, along with its dangerous solutions to cure its members who 'lost the genetic lottery'. The Black Pill community started off restricted to specific forums in the 2010s but spread to popular social media platform TikTok in the year 2023 where its popularity skyrocketed (Solea and Sugiura). The rise of Black Pill serves as an important theoretical backdrop for this study but is not operationalised. Testing the specific effects of black pill content consumption on BDD symptom severity remains a potential avenue for future studies.

With the existing rise of social media, and BDD on adolescents, this paper aims to investigate the relationship between social media use and prevalence of Body Dysmorphic Disorder symptoms in adolescents situated in the UAE.

It is hypothesized that 'Increased social media usage would be significantly positively correlated with the self-reported severity of Body dysmorphic disorder symptoms.' Thus, the null hypothesis is 'Increased social media usage would have no correlation with the self-reported severity of Body dysmorphic disorder symptoms.'

II. Literature Review

Research into the effect of social media on the prevalence of BDD has grown exponentially in recent years due to recent studies in the past decade discussing the growth of social media and the increased screen time spent specifically on social media. Research by DeAngelis (2024) shows that teens are spending nearly 4.8 hours per day on average on social media, and it is taking a serious toll on mental health, such as suicidal intent/self-harm.

A study conducted by Lavell et al. (2024) suggests that more time spent on social media may be a cross diagnostic process in adolescents. A strong correlation between BDD, victimization, social media and other peer factors was found.

Gupta, Jassie and Krebs (2023) found that adolescents with higher appearance motivated social media usage had higher self-reported BDD symptoms, whereas other motivations for using social media did not associate directly to Body dysmorphic symptoms. This was interesting as studies show mixed results, with some showing a correlation between BDD symptoms and social media, whereas others do not, urging more research to reach a definitive conclusion.

Buali, Ahmed and Juhrami (2024) also assessed the relationships between social media and BDD in Bahrain, done using an internet-based survey. Though this was done on adults as the target population and not adolescents. It reported a BDD prevalence of 1.8% in their sample and found that increased overall social media use was significantly associated with BDD status. It reported that people with BDD were far more likely to compare their own appearance to others on social media and more likely to judge others based on their appearance. Furthermore, an interesting conclusion showed that certain social media themes correlated to a higher BDD risk.

Another key study was conducted by Mancin et al. (2024) exploring whether adolescents' behaviours like taking, editing, and sharing photos on social media relate to body dysmorphic symptoms. Additionally, whether body positivity can buffer any effects. The researchers found that BDD symptom severity was significantly associated with photo-based social media activities specifically, and youth who obsess more over creating the "perfect" online images of themselves tend to have more dysmorphic concerns. Overall, the findings support that social-media photo activities and BDD are linked.

While studies do exist in the UAE such as Hussain et al., that examined the effect of social media and cultural ideas on BDD among adult males in the UAE, no research was done specifically on adolescents in the UAE within the age range 10-19. With the rise of social media among adolescents, who are amongst the highest social media consumers, along with the fact that the adolescent age range is highly susceptible to social feedback and pressure, due to brain development at this stage (Hardy). Addressing this research gap would be essential to find out how this affects adolescents in the UAE, and to incorporate programmes to lessen these effects such as digital literacy programs.

III. Methods

3.1 Study Design

The study utilized a cross sectional survey garnering quantitative results, thus a primary research method. This was done through a google form questionnaire, containing ranging question types, with the majority of questions making use of Likert-scales.

A survey was the most effective research design as it allows for effective quantifiable data collection in a short timeframe. As BDD is a psychological issue with symptoms based on self-perceived flaws, a survey was the best method to collect personal data anonymously without causing undue stress or psychological harm. Additionally, it was the most effective and ethically suitable for an adolescent population. Unlike interviews which may have provided deeper qualitative insights, they are extensively time consuming, less anonymous leading to potential bias in answers due to social desirability and interviewers requiring training, a survey was the best choice.

Questions in the survey were based on the brown assessment of beliefs scale (BABS) which is a measurement tool to test for delusionality within the bounds of multiple psychiatric disorders such as BDD and Obsessive-compulsive disorder or OCD (Eisen et al.).

Additionally, the questions took influence from the DSM-5 BDD diagnostic criteria. The DSM 5 is a diagnostic manual used by mental health professionals in the USA. It is a standard compilation of multiple disorders. (Cleveland Clinic).

It is important to note that though the questions took influence from the BABS and the DSM-5, the aim of these questions is not to diagnose, but test for prevalence of symptoms, and explore patterns of self-recognition related to body image.

3.2 Sample

The sample consisted of 41 adolescents ranging from 16-18 living in the UAE. A majority of participants were male 60.9% (25/41), with the remaining 39.1% (16/41) of participants being female. A convenience sample method was used, as it was the most practical due to the time constraints and materials available. Additionally, the reach for the survey was limited to people within the school community, mainly school students, who were willing and easily accessible. This allowed data to be collected quickly and efficiently, allowing more time for data analysis and conclusions to be drawn. Though other sampling methods such as random sampling would lead to increased generalizability and reduced biases

such as sampling bias, it was difficult to implement in a school setting, as it would require full student lists. Additionally, as the experiment was a survey, convenience sampling was the most practical/feasible.

3.3 Data Collection

A cross sectional survey consisting of 18 questions was conducted through Google Forms was conducted to explore the relationship between social media and body dysmorphic disorder symptoms in adolescents. The study assessed various factors such as:

- **Demographics** (Age, Gender)
- **Social media usage** (Hours used per day, social media used)
- **BDD behaviours** (Time spent thinking about flaws, comparison with others, if they think flaws are noticeable by others, avoidance of social gatherings due to flaws, time spent grooming)
- **Body image satisfaction** (Face, hair, upper torso, mid torso, lower torso, muscle tone, weight, and height)
- **Effects on psyche** (Effect on mood and self-esteem, effort required to resist thoughts about appearance, effectiveness rating on controlling thoughts about perceived flaws, cause of concerns about perceived flaws,)
- **Likeness to seek help** (How likely participants are to seek help)

To adhere to ethical guidelines, informed consent and anonymity were ensured at the start of the survey urging volunteers to participate only if accepted. No names/emails were recorded, though data was logged automatically onto a spreadsheet for later statistical analysis.

3.4 Data Analysis

Survey responses were automatically logged onto a google spreadsheet, where basic data analysis using percentages and frequencies was conducted. Pie charts and bar charts were generated based on survey responses to provide an accurate picture of the disbursement of responses. Though the survey was pushed around and repeatedly requested to be filled out, a total of 41 responses were collected. Given this sample size, an analysis focused on the identification of patterns and trends with emphasis on individual responses was done instead of a deep statistical analysis.

IV. Results

The survey garnered 41 responses. 14 respondents were 16, 26 were 17, with 1 18-year-old. 39.1% (16/41) of respondents were female, with the remaining 60.9% (25/41) of respondents being male. Results showed an average screen time between 2-4 hours per person, leading towards the higher value, with 5hrs being the second most popular response. Most participants reported Instagram and Snapchat being the most used social media applications with 34/41 or 82.9% of participants, with TikTok coming in a close second with 19/41 or 46.3% reported.

The most interesting results are depicted below:

How much time per day do you spend thinking about perceived flaws in your appearance?

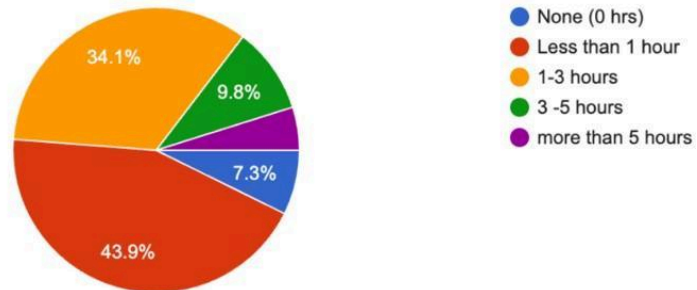


Figure 1. Survey Results. Time spent per day thinking about perceived flaws in appearance.

43.9% of participants reported time spent thinking about perceived flaws to be less than an hour, with 1-3 hours coming in a close second with 34.1% of participants.

When you see images on social media, how often do you feel the need to compare your appearance with others?

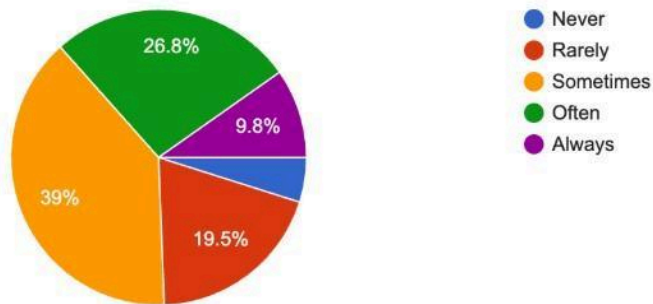


Figure 2. Frequency of appearance-related thoughts when viewing social media images.

39.9% of participants reported thinking about their flaws sometimes, with the second most popular response being often.

How does exposure to social media images affect your mood and self-esteem? 

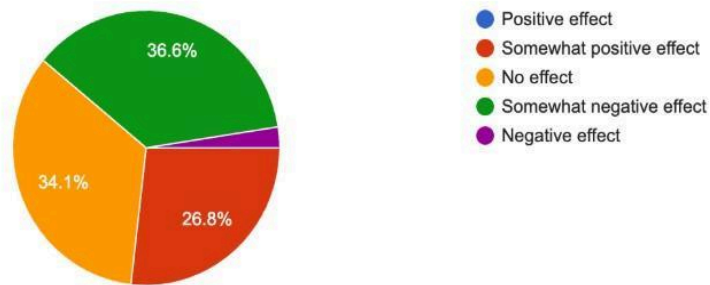


Figure 3. Self-reported effects of social media exposure on participants' psyche.

The most popular response (15) here was a somewhat negative effect. The second most popular response was no effect (14), and a somewhat positive effect was also reported (11).

Interestingly, only 1 participant reported a negative effect.

Do you avoid social situations or activities due to concerns about your appearance?

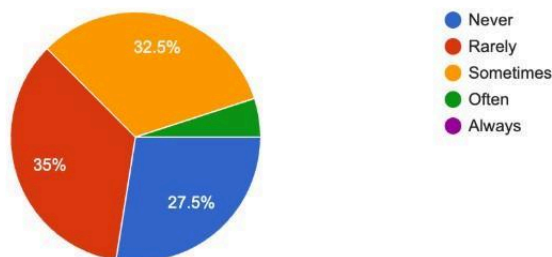


Figure 4. Frequency of avoiding social activities due to appearance concerns.

Participants reported rarely missing activities due to concerns as the most popular answer with 14 respondents. Sometimes was the second most popular option with 13 respondents.

27.5% chose never, with often having 2 responses. Always had 0 responses, showing that no participant has BDD symptoms on an extreme scale.

How satisfied are you with your body?

	very dissatisfied				very satisfied
1. face	1	2	3	4	5
2. hair	1	2	3	4	5
3. lower torso	1	2	3	4	5
4. mid torso	1	2	3	4	5
5. upper torso	1	2	3	4	5
6. muscle tone	1	2	3	4	5
7. weight	1	2	3	4	5
8. height	1	2	3	4	5

Table 1. Body satisfaction ratings across different physical features.

4.1 Responses

Table 2. Raw frequency data for body satisfaction ratings by feature.

Feature	Face	Hair	Lower Torso	Mid Torso	Upper Torso	Muscle Tone	Weight	Height
Rating	-	-	-	-	-	-	-	-
1	1	0	7	5	4	4	5	4
2	4	4	15	14	13	12	10	8
3	20	12	8	12	12	16	11	7
4	14	22	9	8	8	7	11	14
5	2	3	2	2	4	2	4	8

Table 3. Descriptive statistics for body satisfaction ratings across physical features.

Feature	Face	Hair	Lower Torso	Mid Torso	Upper Torso	Muscle Tone	Weight	Height
Mean	3.29	3.59	2.61	2.71	2.88	2.93	2.93	3.49
Standard deviation	0.81	0.77	1.16	1.08	1.14	1.05	1.14	1.18

What do you believe is the cause of your concerns about your appearance?

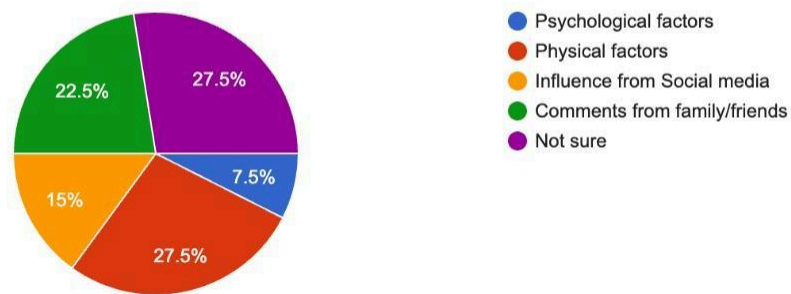


Figure 5. Perceived causes of appearance-related concerns among participants.

The most popular responses were Not sure and physical factors sitting at 11 responses each. Comments from family/friends came in a close second, with the influence from social media sitting at a surprising 6 responses.

How likely are you to seek help for your concerns about your appearance?

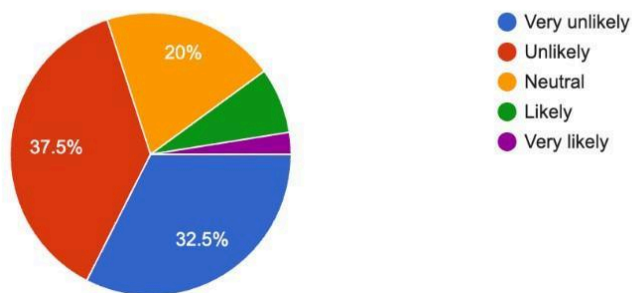


Figure 6. Likelihood of seeking professional help for appearance-related concerns.

The most popular responses were unlikely and very unlikely at a combined 28 responses, with the 3rd most popular being neutral.

V. Discussion

The current study explored the effect of social media on BDD symptoms of adolescents living in the UAE. Many interesting results were garnered through this survey. The findings showed that adolescents spend an average of 3-5 hours on social media per day as supported by existing studies. (DeAngelis).

The main takeaway from this study would be that BDD tendencies can be observed on average, but not to the seriousness of a clinical level, where participants would require professional help. This was because though BDD tendencies were seen, behavioral impairment was minimal. For example, results showed that participants reported rarely missing activities due to concerns when presented with the question 'Do you avoid social situations/activities due to concerns about your appearance'. Additionally, a significant finding was that participants were unsure of the cause of their concerns and did not primarily blame social media. When asked 'What do you believe is the cause of your concerns about your appearance?', the most popular responses were 'Not sure' and physical factors sitting at 11 responses each. Comments from family/friends came in a close second, with influence from social media sitting at a surprising 6 responses. This shows that participants are not aware of the reason for their concerns and that they focus on visible, verbal or social factors as the cause. This points to a critical awareness gap. This indicates that pressure from social media may be so pervasive and normalized to the point where it is not considered by many as an issue. Following on, when asked 'How likely are you to seek help for your concerns about your appearance?', The most popular responses were unlikely and very unlikely at a combined 28 responses, with the 3rd most popular being neutral. Respondents here made it clear that they were not very likely to seek professional help for their BDD issues. This could be due to a variety of factors such as the stigmas surrounding help seeking, fear of judgement, perceived ineffectiveness of treatment, all of which could lead to internalization of negative thoughts/feelings.

An average of participants spent a low to moderate amount of time thinking about perceived flaws. Partnered with the fact that 39.1% of participants reported thinking about their flaws sometimes when viewing images on social media, with the second most popular response being often, based on individual responses, it can be inferred that there is a higher likeness to compare oneself with others on social media, if there is a higher time spent thinking about perceived flaws. Moreover, participants who spent more than 3 hours per day on social media were more likely to report a somewhat negative effect when asked how exposure to social media affected their psyche, when compared to participants who spent less than an hour. This depicts, the more time spent on social media, the higher the likeness of it having a somewhat negative effect.

A cross analysis of individual responses across the time spent thinking about perceived flaws and avoidance of social situations showed that participants who spend a longer time thinking about perceived flaws are more likely to avoid real life situations due to this.

The dual role of social media could be seen as when participants were asked about how social media affects their self-esteem, the most popular answers were a somewhat negative effect (15), no effect (14) and a somewhat positive effect (11). This shows that social media has the ability to affect participants both positively and negatively. This may be due to participants' feeds, where the content shown to an individual is based on what they most interact with and watch. Participants with more exposure to the black pill content on social media may be more susceptible to negative effects, compared to participants who are not.

A deep analysis on the body satisfaction scale questions produced the following results. Changeable features such as the torso area and muscle tone had a mean of ranging from 2.6-2.9, showing more dissatisfaction than satisfaction, whereas unchangeable features such as hair and height had a mean of 3.5 to 3.6, indicating a higher satisfaction.

On the other hand, standard deviation showed that modifiable features such as weight ($SD = 1.19$), were much higher compared to non-changeable features, which makes sense as they can be influenced through exercise. This meant there was a much higher variability in satisfaction ratings. On the other hand, features such as hair had a much lower standard deviation ($SD = 0.77$) showing that participants on average were satisfied. This shows that modifiable factors had much higher variability in satisfaction scores compared to unmodifiable factors. This suggests that participants' anxiety is not just about perceived flaws, but about a perceived failure to fix those flaws. As social media is saturated with various content types, with a huge emphasis on fitness, healthy living, etc., a pressure may be created there, as a responsibility to adhere to those standards.

It can be seen through the survey, on average, participants tend to display BDD tendencies, but that does not affect them to the point where severe help is required. This can be seen as participants on average rarely missing activities due to concerns and when asked if they would seek help for their flaws the most popular responses were unlikely and very unlikely at a combined 28 responses.

Through these findings, it can be established that the null hypothesis 'Increased social media usage would have no correlation with the self-reported severity of Body dysmorphic disorder symptoms.' was rejected, and the hypothesis 'Increased social media usage would be significantly positively correlated with the self-reported severity of Body dysmorphic disorder symptoms.' 'Though a positive correlation can be seen, as increased social media usage leads to increased rumination, appearance comparison, avoidance of real-life situations exists, the significance is not as high as hypothesized, and the severity of BDD symptoms remain at a subclinical level at most.

However, the findings carry notable implications. As the study utilized a mere 41 participants, the sample size was too small to generalize the findings to a larger group. The study consisted of mainly male participants, with 25 males and 16 females. Additionally, the study had only 16–17-year-olds, with one 18-year-old. This is not representative of the adolescent population. The cross-sectional design of this study does not allow for cause and effect to be determined, only correlations to be identified. Additionally, due to the self-reportive nature of this study, it introduces biases such as social desirability and due to the impact of leading questions used in the surveys, this may have additionally led to researcher bias.

VI. Conclusion

This study investigated the effect of social media on BDD symptoms on adolescents situated in the UAE. It identified a series of notable correlations leading us to infer the following. A higher time spent thinking about perceived flaws leads to higher likeness to compare oneself with others on social media. Additionally, participants who spent more than 3 hours per day on social media were more likely to report a somewhat negative effect when asked how exposure to social media affected their psyche, compared to those with lower times spent on social media. Furthermore, participants who spend a longer time thinking about perceived flaws are more likely to avoid real life situations. Moreover, modifiable factors (Weight, torso, muscle tone, etc.) had much higher variability in satisfaction scores compared to unmodifiable factors (height, hair, face, etc.).

The dual role of social media could also be seen, as participants reported both somewhat positive and somewhat negative outcomes from social media exposure. Finally, it could be seen that participants are either not aware of the cause of their concerns about their appearance, or tie it to visible, verbal, or social factors as the cause. This highlights the requirement for psychoeducation, to help individuals understand their underlying issues.

The study suggests the need for integration of health awareness in schools, in order to highlight the effect of a healthy lifestyle on overall health and not just appearance. Measures could be taken to encourage students to seek help from school counsellors, in order to normalize the act of seeking help. Additionally, digital literacy programmes may be promoted to train students to evaluate their social media habits and stay away from potentially harmful content.

Future research should focus on including a larger number of participants with equal male and females and target global audiences to push for high generalizability as this has not been done by other studies. Longitudinal studies may help provide deeper qualitative insights and to be able to establish a cause and effect. Future studies may benefit from additionally testing the effectiveness of measures already provided such as school-based interventions already established to figure out how to improve them.

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Acknowledgements

I would like to express my sincere gratitude to my primary advisor Ms. Bhavika for all her guidance throughout this project. Her insightful feedback, patience and feedback were invaluable.

Additionally, I would like to thank my psychology teacher, Ms. Shiza Amir. Her passion for this subject inspired me throughout my studies in psychology. This paper would not have been written if not for her influence.

Finally, I would like to express my appreciation for my mentor Mr. Michel Sherif, whose support throughout the course of this assignment has been indispensable. I am deeply grateful for the time he has invested in making sure I stayed focused and motivated.