

Original Article

Prevalence and Determinants of Body Dysmorphic Symptoms among University Students in Alexandria, Egypt

Mai B. Alkiek ¹, Medhat S. Attia ², Zeinab N. Shata ², Heba A. Abdelaziz ^{2*}

¹ Fellow of Department of Family Health, High Institute of Public Health, Alexandria University, Egypt

² Department of Family Health, High Institute of Public Health, Alexandria University, Egypt

Abstract

Background: Body dysmorphic disorder (BDD) is a mental disorder that disrupts young adults' self-image and might damage their lives. BDD includes preoccupation with one or more perceived physical flaws that are not visible to others, along with repetitive behaviors or mental acts in response to appearance worries.

Objective(s): The study aimed to estimate the prevalence of body dysmorphic symptoms among university students in Alexandria, Egypt, and to identify some of its determinants.

Methods: A cross sectional study was conducted among 636 randomly selected first year university students in Alexandria. The data was collected using a predesigned structured self-administered questionnaire along with the Arabic version of the Body Dysmorphic Disorder Questionnaire (BDDQ).

Results: The prevalence of BDD symptoms was estimated to be 5.3% among Alexandria University students. BDD symptoms were significantly more common in females than males (8.5% Vs. 2.2%, $p < 0.001$). The most common areas of concern were skin (36.6%) and belly size (36.2%). The logistic regression revealed that four variables were proved to be significant predictors of BDD symptoms; female gender (OR=3.011, 95% CI=1.220-7.436), time spent on social media (OR=2.926, 95% CI=1.337 - 6.403), history of exposure to bullying (OR=6.202, 95% CI=1.994 - 19.291), and not asking for support when needed (OR=3.327, 95% CI= 1.296 - 8.542).

Conclusion: Symptoms of BDD are relatively common among university students in Alexandria and are more common among females. Preventive mental health services should be supported on the universal level as well as in schools and universities.

Keywords: Body dysmorphic disorder, Alexandria University students, self-image

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*Correspondence:

Email:

Hiph.hebamahmoud@alexu.edu.eg

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INTRODUCTION

Body Dysmorphic Disorder (BDD) is one of the relatively common mental disorders that could affect young adults. It causes a lot of worry about a perceived defect in the physical appearance, associated with feelings of shame, leading to depression and social withdrawal.⁽¹⁾ The prevalence of BDD in the community ranges about 0.5-3.2% in general population and 1.3-5.8% among university students.⁽²⁾ The prevalence of BDD was as high as 8.8% among the general population in Saudi Arabia⁽³⁾ and 13.5% among Lebanese females.⁽⁴⁾ In Egypt, the prevalence studies among general population are scarce. To the best of our knowledge, only a study in Ein Shams university students found the prevalence among students to be 4%.⁽⁵⁾ The most common age of onset is 12-13 years, in about two-thirds of cases

appearing before the age of 18 years and is usually chronic in nature, and it is more encountered among females.⁽⁶⁾

The Diagnostic and Statistical Manual of Mental Disorders 5th version (DSM-5) diagnostic criteria include preoccupation with one or more perceived physical flaws that are invisible or insignificant to others, along with repetitive behaviors (e.g., mirror checking, excessive grooming, skin picking) or mental acts (e.g., comparing his or her appearance to others) in response to the appearance worries. The preoccupation causes an impairment in social, occupational, or other functioning areas.⁽⁷⁾

BDD is more common in first-degree relatives and has been associated with high rates of childhood trauma, neglect, abuse or bullying.⁽⁸⁾ Studies have related the disorder to low self-esteem and self-locus of control as well as high reliance on body image.⁽⁹⁾

Additionally, social media idealization of certain figures and cultural factors have played an important role in the establishment of BDD symptoms.⁽¹⁰⁾ The disorder carries a huge impact that adds to its burden as it has devastating negative psychosocial consequences and high mortality rate, mainly due to suicide, especially in youth and university students.⁽¹¹⁾ Moreover it is associated with low self-esteem, depression, social phobia, Obsessive Compulsive Disorder (OCD), substance abuse, and Eating Disorders (ED).⁽¹²⁾ It's also linked to poor quality of life (QOL) in later adult life due to continuous feeling of shame and rejection, as well as the high level of rejection encountered among the affected individuals.^(11,13)

Being a mentally, emotionally, and financially consuming yet possibly treatable disorder^(1,7) and due to the gap of knowledge regarding its prevalence and determinants among university students in Egypt, who are important members of the general population. And as most studies focused on dermatology and plastic surgery patients, our study aimed to assess body dysmorphic symptoms among university students in Alexandria and its determinants.

The aim of the present study was to estimate the prevalence and to identify the determinants of body dysmorphic symptoms among university students in Alexandria, Egypt.

METHODS

A cross-sectional study was conducted between November 2021 and March 2022 among first year students of four faculties affiliated to Alexandria University: Faculty of Medicine, Faculty of Engineering, Faculty of Commerce and Faculty of Law.

Study sample

The calculated sample size was 369 students using Epi Info 7 software, based on a 4% prevalence of BDD among students at Ein-Shams University⁽⁵⁾, at 95% confidence level using 2% confidence limit and 80% power.⁽¹⁴⁾ A total of 636 students were recruited to increase the strength of the study. A multi-stage cluster sample with males and females almost equally recruited using a systematic random sampling technique (i.e., every other student) in more than one section/class that was randomly selected from each faculty. The sampled students were 161 (25.3%, 84 males and 77 females) from the faculty of medicine, 161 (25.3%, 82 males and 79 females) from the faculty of engineering, 156 (24.5%, 76 males and 80, females) from the faculty of commerce, and 158, (24.9%, 76 males and 82 females) from the faculty of law.

Data collection tools

I. A predesigned self-administered questionnaire

was developed and used to collect data regarding the following items:

1. Socio-demographic data:
 - a. Faculty, age, sex and residence.
 - b. The socio-economic score was categorized with some modification after Fahmy and El-Sherbini⁽¹⁵⁾, as follows: (Max. score = 26)
 - Very low (< 12)
 - Low (12- 16)
 - Moderate (17-21)
 - High (22-26)
2. Internet use, duration and purpose of use.
3. History of mental illness of the students and their families.
4. History of abuse or bullying especially about body appearance.
5. Stressful life events and perceived support of close friends in the past 6 months.

II. The Arabic version of the Body Dysmorphic Disorder Questionnaire (BDDQ) was used.^(10, 16)

It is a brief self-reported screening tool derived from the DSM-IV diagnostic criteria of BDD, with 5 close-ended questions inquiring if the appearance concerns are sources of preoccupation, the degree of interference with functioning. Cumulative scoring of 4 points is considered a positive BDD-screening. As positive answers to the first three questions in combination with question four (time criterion that should exceed an hour) were required to fulfill the BDD criteria, while the last (5th) question asked if the main concern was the body weight, to exclude people with eating problems that might lead to inaccurate diagnosis.^(10, 16)

Ethical considerations

The study was approved by the Ethics Committee of the High Institute of Public Health, Alexandria University, Egypt. The researcher complied with the International Guidelines for Research Ethics. Verbal consent was obtained from all study participants after explanation of the purpose and benefits of the research. Anonymity and confidentiality were assured and maintained. There was no conflict of interest.

Statistical analysis

The data was analyzed using SPSS version 22.0 (SPSS Inc., Chicago, IL, USA). Statistical significance was established at a p-value < 0.05. Descriptive and analytical statistical analysis was conducted. The Kolmogorov-Smirnov test was used to prove the normality of distribution, quantitative data were described using range (minimum and maximum), mean, standard deviation, and median. Statistical tests including mean and median, odd ratio (OR) and binary logistic regression analysis were used.

RESULTS

Table 1 illustrates the diagnostic criteria of BDD and its prevalence among the studied sample. A total of 636 students were studied, where more than two thirds (38.7%) of the participants were concerned about the appearance of some part(s) of their bodies. More than one fifth of them (21.5%) were preoccupied with their concern, and an equal percentage (21.5%) who responded positively to the first two questions had at least one of four impacts; 85.5% of them avoided

things or people because of their defect(s); 77.5% suffered a lot of distress, or pain; 49.3% mentioned significant interference with social life; and 28.3% had significance interference with school, job, or ability to function in their role. Besides meeting the previous 3 criteria, 9.4% of the students spent one hour or more per day thinking about their concern(s). 5.3% of the total sample stated that weight was not their main concern, excluding eating problems and hence meeting the BDDQ criteria indicating BDD.

Table (1): Diagnostic criteria and prevalence of body dysmorphic symptoms among Alexandria University students

BDD* criteria based on BDDQ**	No.	%	Meeting BDD criteria
First Criterion Concern about appearance (n=636)			
No	390	63.1	246 (38.7%)
Yes [‡]	246	38.7	
Second Criterion: The concern about appearance is preoccupying (n=246)			
No	108	43.9	138 (21.7%)
Yes [§]	138	56.1	
Third Criterion: Impact(s) caused by perceived defect(s) (n=138) ¶			138 (21.7%)
Pain/distress			
No	31	22.5	
Yes¶	107	77.5	
Interfering with social life			
No	70	50.7	
Yes¶	68	49.3	
Interfering with school/job			
No	99	71.7	
Yes¶	39	28.3	
Avoidance of events/people			
No	20	14.5	
Yes¶	118	85.5	
Fourth Criterion: Time spent thinking about the defect is one hour or more (n=138)			
No	78	56.5	60 (9.4%)
Yes [‡]	60	43.5	
Main concern is weight (n=60)			
No (= Fifth Criterion) [§]	34	56.7	34 (5.3%)
Yes	26	43.3	Positive for BDD

*BDD: Body Dysmorphic Disorder

** BDDQ: Body Dysmorphic Disorder Questionnaire Not mutually exclusive

‡ Met 1st criterion

§ Met 1st and 2nd criterion,

All the students (138) who met the first and second criteria stated at least one of the mentioned impacts indicating the fulfillment of the 3rd criterion [‡] Met 1st, 2nd, 3rd and 4th criteria [§] Met 1st, 2nd, 3rd, 4th and 5th criteria, indicating Positive for BDD = 34 students (BDD prevalence) met the first, second, third and fourth criterion and their main concern was not their weight.

Figure (1) shows the distribution of the body parts of concern of the studied sample. Where the most common areas of concern were skin (36.6%), belly size (36.2%) and nose/mouth/jaw/lips (32.9%), while the least percentage of concern was with that of the genitalia size (1.2%).

Table (2) The total number of studied students in Alexandria university was equally distributed among males and females. Nearly two-thirds (65.1%) of the students were in the age group 17 to less than 19

years. Less than one-third (31.9%) of the students aged 19 to less than 21 years and only 3% were in the age group 21 years or more, with a mean age of 18.46 ± 0.99 years. As for the socio-economic score, 48.6% of the students had high socio-economic score, 30.5% had moderate socio-economic score, and those with low and very low socio-economic score represented 11.2% and 9.7% respectively.

BDD symptoms were more associated to the age group 19 to less than 21 years than the younger age group 17 to less than 19 years (OR= 1.659, CI. 95% [0.825 – 3.337], p= 1.56), but the difference was not statistically significant. BDD was almost equal in very low (OR= 0.997, CI. 95% [0.280 – 3.551], p=0.996) and high socioeconomic score, while the association was more common in moderate (OR= 1.292, CI. 95% [0.592 – 2.823], p=0.520) than low socioeconomic score (OR= 1.170, CI. 95% [0.376 –

3.638], $p=0.786$) with no statistically significance. On the other hand, being a female was nearly 4 times more associated with BDD symptoms than being male

(OR=4.122, CI. 95% [1.768–9.611], $p=0.001$) and the difference was found to be statistically significant.

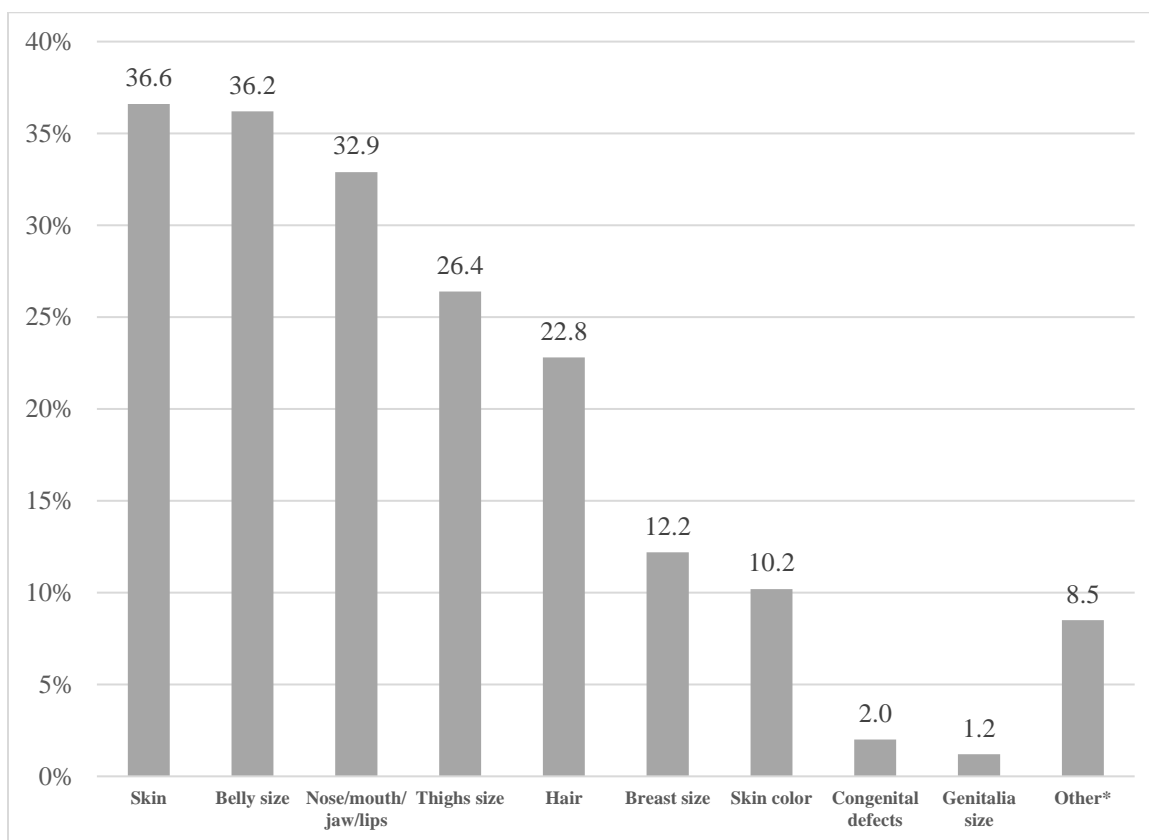


Figure (1): Body parts of concern for Alexandria University students (n=246)

*Other concerns: e.g. head shape, ears and teeth

Table (3) The students with history of mental illness were significantly found to be 3.5 times more likely to have associated BDD symptoms than those without (OR= 3.482, CI. 95% [1.732–7.033], $p<0.001$). Moreover, students with family history of mental illness were 2.9 times more likely to have associated BDD symptoms than those without and the difference was statistically significant (OR= 2.911, $p= 0.004$, CI. 95% [1.393- 6.081]). In addition, students with history of abuse were significantly found to be 3 times more likely to have associated BDD symptoms than those without. (OR= 3.066, $p=0.002$, CI. 95% [1.523- 6.170]). Students who reported history of exposure to bullying were nearly 10 times more likely to have associated BDD symptoms than those who have not been exposed to bullying and the difference was statistically significant (OR= 10.000, CI. 95% [3.480–28.739], $p<0.001$).

Table (4) Students spending 5 hours or more on social media were 3.6 times more likely to have associated BDD than those spending less than 5 hours and that was statistically significant (OR= 3.605, CI. 95% [1.724 - 7.535], $p<0.001$). Moreover, students who had a recent trauma or severe stress in the past 6

months, those who reported no satisfaction with perceived support, who did not ask for support when needed and those were found to be 4.623, 4.256 and 2.330 times more likely to have associated BDD symptoms than their counterparts without such elements respectively. The results were found to be statistically significant (OR = 4.256, CI. 95% [2.101–8.621], $p = <0.00,1$ and OR = 2.330, CI. 95% [1.160–4.680], $p=0.017$ respectively).

Table (5) shows the results of binary logistic regression analysis of significant variables associated with BDD symptoms among Alexandria university students. According to the findings on univariate analysis, 9 variables were introduced for the stepwise multiple logistic regression, and 4 of them proved to be significant predictors of association with BDD symptoms, namely; female gender (OR=3.011, 95% CI 95% [1.220-7.436], $p=0.017$), time spent on social media (OR=2.926, CI 95% [1.337 - 6.403], $p=0.007$), history of exposure to bullying (OR=6.202, CI 95% [1.994 - 19.291], $p=0.002$), and not asking for support when needed (OR=3.327, CI 95% [1.296 - 8.542], $p=0.012$).

Table (2): Distribution of the Alexandria University students according to socio-demographic characteristics and body dysmorphic symptoms

Socio-demographic characteristics	Not meeting BDD* criteria ^(R) (n=602)		Meeting BDD criteria (n=34)		Total (n=636)		OR	p	CI. 95%
	No.	%	No.	%	No.	%			
Age (years)									
17 ^{-(R)}	395	95.4	19	4.6	414	65.1	1.000		
19–	188	92.6	15	7.4	203	31.9	1.659	0.156	0.825 – 3.337
21–	19	100.0	0	0.0	19	3.0	0.0	0.998	0.0 –
Min- Max						17.0 – 28.0			
Mean ± SD.						18.46 ± 0.99			
Sex									
Male ^(R)	311	97.8	7	2.2	318	50.0	1.000		
Female	291	91.5	27	8.5	318	50.0	4.122	0.001*	1.768–9.611
Socioeconomic score									
Very low (< 12)	59	95.2	3	4.8	62	9.7	0.997	0.996	0.280 – 3.551
Low (12–16)	67	94.4	4	5.6	71	11.2	1.170	0.786	0.376 – 3.638
Moderate (17–21)	182	93.8	12	6.2	194	30.5	1.292	0.520	0.592 – 2.823
High (22–26) ^(R)	294	95.1	15	4.9	309	48.6	1.000		

*BDD: Body Dysmorphic Disorder p value for Odd's ratio * Statistically significant at $p \leq 0.05$ (R): Reference group OR: Odd's ratio
 CI.: Confidence interval LL: Lower limit UL: Upper Limit

Table (3): Distribution of the Alexandria University students according to the history of mental disorders, abuse and bullying

History of Mental Disorders, Abuse, and Bullying	Not meeting BDD criteria ^(R) (n=602)		Meeting BDD criteria (n=34)		OR	p	CI. 95%
	No.	%	No.	%			
Student history of mental illness							
No ^(R)	455	96.6	16	3.4	1.000	<0.001*	1.732–7.033
Yes	147	89.1	18	10.9	3.482		
Family history of mental illness							
No ^(R)	507	95.8	22	4.2	1.000	0.004*	1.393–6.081
Yes	95	88.8	12	11.2	2.911		
History of abuse							
No ^(R)	426	96.6	15	3.4	1.000	0.002*	1.523–6.170
Yes	176	90.3	19	9.7	3.066		
History of exposure to bullying							
No ^(R)	344	98.9	4	1.1			
Yes	258	89.6	30	10.4	1.000	<0.001*	3.480–28.739
Yes	344	98.9	4	1.1	10.000		

p value for Odd's ratio * Statistically significant at $p \leq 0.05$ (R): Reference group OR: Odd's ratio CI.: Confidence interval
 LL: Lower limit UL: Upper Limit ** Not mutually exclusive

*** Other purposes: educational websites, listening to lectures, chatting with friends, reading books or articles, self-learning.

Table (4): Distribution of Alexandria University students according to the use of internet, recent stressful life events and perceived social support

Use of Internet, Recent Stressful Life Events and Perceived Social Support	Not meeting BDD criteria ^(R) (n=602)		Meeting BDD criteria (n=34)		OR	p	CI. 95%
	No.	%	No.	%			
Purpose of internet use**							
Videos	298	94.9	16	5.1	0.907	0.782	0.454 – 1.812
Other***	73	96.1	3	3.9	0.620	0.644	0.082 – 4.699
Number of hours spent on social media							
<5 hours ^(R)	381	97.2	11	2.8	1.000		
≥5 hours	221	90.6	23	9.4	3.605	0.001*	1.724 – 7.535
Mean ± SD.					4.30 ± 2.59		
Recent trauma/severe stress							
No ^(R)	267	98.2	5	1.8	1.000	0.002*	1.765–12.105
Yes	335	92.0	29	8.0	4.623		
Asking for support when needed							
No	104	86.7	16	13.3	4.256	<0.001*	2.101–8.621
Yes ^(R)	498	96.5	18	3.5	1.000		
Satisfaction with perceived support							
No	212	91.8	19	8.2	2.330	0.017*0.002*	1.160–4.680
Yes ^(R)	390	96.3	15	3.7	1.000		
p value for Odd's ratio		* Statistically significant at p ≤ 0.05			(R): Reference group OR: Odd's ratio		
C.I: Confidence interval		LL: Lower limit			UL: Upper Limit		

Table (5): Multivariate analysis Binary Logistic Regression for the variables associated with body dysmorphic disorder (n = 636)

Independent variables	B	SE	p	OR	CI. 95%	
					LL	UL
Female	1.102	0.461	0.017*	3.011	1.220	7.436
Time spent on social media (≥5 hours)	1.074	0.400	0.007*	2.926	1.337	6.403
Student history of mental illness	0.513	0.433	0.236	1.671	0.715	3.903
Family history of mental illness	-0.136	0.476	0.775	0.873	0.343	2.218
History of abuse	-0.077	0.436	0.859	0.925	0.394	2.174
History of exposure to bullying	1.825	0.579	0.002*	6.202	1.994	19.291
Satisfaction with perceived support	0.290	0.486	0.551	1.336	0.516	3.464
Not asking for support when needed	1.202	0.481	0.012*	3.327	1.296	8.542
Recent trauma/severe stress	0.986	0.526	0.061	2.680	0.956	7.510
B: Unstandardized Coefficients		SE: Estimates Standard error	OR: Odd's ratio	C.I: Confidence interval		LL: Lower limit
UL: Upper Limit		* Statistically significant at p ≤ 0.05	Model Chi-square = 62.961, P = 0.000			

DISCUSSION

The present work reported the prevalence of BDD symptoms among university students in Alexandria, Egypt to be 5.3%. Consistently, close results were

recorded in South Africa (5.1%) by Aflakseir et al., (2021)⁽¹⁷⁾, and in Saudi Arabia (4.2%) by Alsaïdan et al., (2020)⁽¹⁰⁾. In contrast, lower prevalence was found by Mulholland et al. (2022)⁽¹⁸⁾ in South Africa (3.3%). On the other hand, higher prevalence was reported by

Rajabi et al. (2022)⁽¹⁹⁾ in Iran and Hakim et al. (2021)⁽²⁰⁾ in Saudi Arabia (10.4% and 13.9% respectively). It is worth mentioning that the higher percentage in other studies could be explained by the inclusion of participants whose main concern was weight, while in our study they were excluded according to BDDQ. In addition, variations in prevalence could be due to different study design (cross-section or case control), target population (female versus both sexes), or assessment tool (screening tools versus semi-structured interviews).

Furthermore, this study concluded that most of the students (85.5%) who reported being negatively affected by their perceived defect avoided things/people because of their defect. Moreover, more than three quarters of the students suffered a lot of pain or distress, the social life of almost half of them was affected, and nearly one third suffered interference with functioning. That was nearly consistent with Alsaïdan et al., (2020)⁽¹⁰⁾ who reported percentages of 74.8%, 74.5%, 55.8%, and 38.6% for people avoidance, pain or distress, social life being affected and interference with function respectively.

The current findings showed that more than one third (38.7%) of the students' sample were preoccupied with the appearance of some body parts, and 21.7% were very preoccupied by those concerns. Results of Liao et al., (2010)⁽²¹⁾ in China were almost consistent with our work as they found that about one-third of participants were highly concerned with aspects of appearance other than weight. Higher percentages were reported by other studies such as Alsaïdan et al. (2020)⁽¹⁰⁾ in Saudi Arabia who found 60.8% preoccupied about an aspect of their appearance, and 39.2% of these individuals preoccupied by this concern.

In our study the most common area of concern was the skin, belly, followed by the nose/mouth/jaw, then hair and lastly breast. In partial concordance numerous studies, like Hakim et al., (2021)⁽²⁰⁾ study in Saudi Arabia, Aflakseir et al., (2021) in Iran⁽¹⁷⁾ found the skin to be the most unattractive area followed by the nose, the belly while the breasts came late in their order of concern with different percentages. The variable order and percentages could be due to the difference in cultural opinions, type and gender of students.

Hereby, BDD symptoms were more observed among those aged 19 to less than 21 years -however the difference was not statistically significant - which was in partial concordance to Alghamdi et al (2022) in Saudi Arabia⁽³⁾ and Alsaïdan et al., (2020)⁽¹⁰⁾ findings, where BDD symptoms were more reported among younger age,. As previously mentioned, BDD has a chronic course even if it appeared early in life and could negatively impact life at any point,⁽²⁾ which

could explain the absence of statistically significant difference regarding the affected age.

Based on our findings, BDD symptoms were significantly more experienced in females than males, with the female to male ratio being 3.9. That was agreeing with other studies but with different ratios, such as Enander et al., (2018)⁽¹⁾ in Sweden, where BDD was statistically more in females than males with higher ratio of 6.5. Other studies noted lower ratios, such as, Rajabi et al., (2022)⁽¹⁹⁾ in Iran who recorded 2.2 female to male ratio. Moreover, ratios ranging between 1.6 to 1.1 were reported by several studies in Saudi Arabia, Iran.^(17, 20) Inconsistently, Alsaïdan et al., (2020)⁽¹⁰⁾ did not record any gender difference in association with BDD. Disagreeable results related to gender differences could be explained by the variation in cultures and environmental factors, in addition to different sampling techniques.

Expectedly, students with history of mental illness in this study were 3.5 times more likely to have associated BDD symptoms than their counterparts without such history. Alsaïdan et al. (2020)⁽¹⁰⁾ in Saudi Arabia also reported 2.4 times increased risk for BDD in the group with history of mental illness.

In addition, students with family history of mental illness had 2.9 more odds to be associated with BDD symptoms. That was in agreement with Strong (2021) in the United States who recorded that individuals with BDD were four times more likely to have a family member with BDD compared to the general population.⁽²²⁾

Moreover, the association between BDD symptoms in students with history of abuse was found to be 3 times more than those with no such history. Malcolm et al., (2021)⁽⁶⁾ in Australia and the metaanalysis of Longobardi et al., (2022)⁽²³⁾ also reported that some type of abuse or childhood maltreatment in BDD patients. Obviously, abuse is generally under-reported and under-recorded, which makes the percentages variable and not precisely indicative of the real occurrence of abuse.

Additionally, our study revealed that students who experienced bullying in the past had 10 folds higher association with BDD symptoms than those who had not. Alsaïdan et al., (2020)⁽¹⁰⁾ and Longobardi et al., (2022) in their metanalysis⁽²³⁾ also found that the BDD group reported varying degrees of exposure to bullying, threat and harassment than the control group with variable percentages. Some of the studies were clinic based with different sampling and methodology, which explains the variable percentages of association between bullying and future BDD symptoms.

Interestingly, the current research concluded that BDD symptoms showed 3.6 more odds to be associated with spending 5 or more hours on social media. Supporting these findings, Alsaïdan et al.,

(2020)⁽¹⁰⁾ in Saudi Arabia found that the majority of those with BDD were among social media users whose average time on social applications exceeded 4 hours a day.

Our findings were supportive of the fact that recent trauma or severe stress in the past 6 months endorsed 4.6 times more association with the development of BDD symptoms in students than those who hadn't been exposed to such factors. This was consistent to Alghamdi *et al.* (2022) in Saudi Arabia⁽³⁾ and Valderrama *et al.* (2022) in USA,⁽²⁴⁾ who found that individuals with BDD symptoms were significantly more likely to have experienced a lifetime traumatic event than individuals without BDD symptoms.⁽²³⁾

Last but not least, Satisfaction with received support was significantly less among students with BDD symptoms in the current work. In agreement with this finding in the Kuck *et al.*, (2021)⁽²⁵⁾ in their meta-analysis concluded almost the same results, where they highlighted the low self-esteem of those suffering from BDD and their urgent need for family and friends support and that the general feelings of worthlessness and shame could be among the reasons behind their concerns and lack of seeking support as well as their maladaptive way of thinking.

Limitations of the study design

Include the use of BDDQ which is a screening tool rather than a diagnostic tool and inclusion of first year students only which limited full representation of the prevalence among Alexandria students.

CONCLUSION AND RECOMMENDATIONS

Body Dysmorphic Symptoms are relatively common among Alexandria university students, particularly females. It is associated with high levels of perceived distress and impairment of functioning.

Recommendations:

- Raising awareness of the community about BDD and its risk factors through educational campaigns.
- Provision of university based BDD psychoeducational interventions, particularly screening of BDD among first year university students and early referral for intervention through the university mental health services.
- Further studies are needed to investigate the causal relationship between BDD and use of social media and to provide evidence for effective preventive interventions in youth.

CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

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