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Research Article

**KNOWLEDGE AND ATTITUDE REGARDING EATING
DISORDER AMONG NURSING STUDENTS OF UNIVERSITY
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MPH, BNSc, Assistant professor, Lahore school of nursing, The University of Lahore.,³Bachelor of science in nursing, AMC, Lahore.**Article Received:** November 2021 **Accepted:** December 2021 **Published:** January 2022**Abstract:**

The objectives of this survey were to assess knowledge and attitude towards eating disorder among nursing students of university of Lahore. The survey contained the sample of 111 participants between the ages of 18 to 25 years. Data were collected through Questionere. 77.5% correctly new the definition of bulimia nervosa and 61.3% knew the definition of anorexia. Female, overweight or obese individuals, and who had at least one parent with a college degree or higher level of education were more likely to have knowledge. More than half 77.5% had fear of getting fat. Female, who were overweight, did not know the definition of anorexia and bulimia nervosa, avoided eating when they were hungry, and who always and usually were engaged in dieting behavior were more likely to have fear of getting fat. Respondents who always had a strong desire to be thinner and who had a fear of getting fat were more likely to engage in dieting behavior. There is need to inform students about eating disorders, and healthcare workers may play a crucial role in distributing eating disorder-related knowledge.

Keywords: nursing students, attitude, cross sectional survey, eating disorders, knowledge.**Corresponding author:**

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INTRODUCTION:

Eating disorder is an abnormal eating behavior that risks physical and mental health. It can lead to organ damage, malnutrition, or even death. Most often they affect young women and teenage girls. However, Eating disorder can affect all ages and Gender. (Rosen, 2013).

Eating disorders are caused by a combination of sociocultural and psychological factors, such as the idealization of thinness, media exposure to the thin ideal, pressure to be thin, and the expectation that life will be better if the individual achieves the cultural ideal of thinness, as well as neuroticism, perfectionism, and impulsivity personality traits (Culbert, Racine, & Klump, 2015).

Prevalence rates in Western countries for anorexia nervosa ranged from 0.1% to 5.7% in female subjects. Prevalence rates for bulimia nervosa ranged from 0% to 2.1% in males and from 0.3% to 7.3% in female subjects in Western countries. Prevalence rates in non-Western countries for bulimia nervosa ranged from 0.46% to 3.2% in female subjects. Studies of eating attitudes indicate abnormal eating attitudes in non-Western countries have been gradually increasing. (Galmiche, Déchelotte, Lambert, & Tavolacci, 2019).

Anorexia nervosa and bulimia nervosa are the two major eating disorders and both primarily manifest in adolescence. Compared to men, women are as much as three times more likely to experience these disorders. There is dearth of empirical information on eating disorders in Pakistan. A study of 180 female nursing and medical students in Karachi reported a prevalence rate of 21.7% for anorexia nervosa. (Gorrell & Murray, 2019).

Crude mortality rates 4.0% for anorexia nervosa, 3.9% for bulimia nervosa, and 5.2% for eating disorder. (Iwajomo et al., 2021).

The most remarkable finding is the high prevalence 22.75% individuals were found to be at high-risk of eating disorders, with 87.9% females and 12.1% males, of eating disorders among Pakistani female nursing college students in their first year of study, which is higher than in other South Asian and Islamic countries like Oman and Turkey. The frequency of eating disorders among schoolgirls was explored in a survey done in Lahore, Pakistan.

Throughout the research, the reported prevalence of eating disorders in the general population fluctuated

from 0.1 percent to 3.8 percent. To address these issues, the author conducted a comprehensive study of the incidence of eating disorders in the general population in 2013. (Mitchison et al., 2020).

Anorexia nervosa and bulimia nervosa are significant and medical consequences associated with their progression account for a large portion of the death rate (Hail & Le Grange, 2018).

Chesney et al. (2014) found that persons with anorexia nervosa have a high mortality rate, which reduces their life expectancy by 10 to 20 years. (Chesney, Goodwin, & Fazel, 2014).

Suicide is the second biggest cause of mortality among anorexics, and it is also a danger for individuals with bulimia nervosa. (Goldstein & Gvion, 2019).

Between 15 to 23 % of those with bulimia nervosa report current suicidal ideation. Lifetime suicidal ideation is between 26 to 38 % among patients with bulimia nervosa. Female patients with bulimia nervosa are 7 times more likely to die by suicide than females in the general population. (Franko & Keel, 2006)

Furthermore, anorexia nervosa, bulimia nervosa, and binge eating are difficult to treat and pose a significant public health issue (Schlegl, Maier, Meule, & Voderholzer, 2020)

Social media users discovered a correlation between increased Instagram usage and a higher incidence of orthopraxis nervosa symptoms, indicating social media's psychological influence. On social media, everything is shared. (Santarossa & Woodruff, 2017).

Knowledge about eating disorders among the general public may be a critical determinant in promoting public awareness, decreasing treatment hurdles, and enhancing early diagnosis of affected patients, as well as raising awareness among the general public, healthcare practitioners, and institutions. As a result, a few studies on teenagers' knowledge, attitudes, and behaviors about these problems have been done in various areas of the world, but little study has been completed on this issue in Italy to our knowledge. (Fang et al., 2020).

The eating attitudes and behaviors that are developed and cemented during adolescence will define adolescent health outcomes throughout life. Adolescent is considered as a nutritionally vulnerable stage of life, because of physical, hormonal, cognitive and emotional changes and these changes some time

give rise to body dissatisfaction which may lead to disturbed eating attitude and eating disorder.(Arain et al., 2013)

Adolescents and young adults concern about their body weight and shape may lead to disturbed eating and unhealthy weight control behavior such as starvation, fasting, frequently skipping meals, overeating and binge-eating followed by purging, also using of diet pills, laxatives and diuretics and excessive exercising. Although these disorders have been conceptualized as culture-bound syndromes of the west but several studies have verified that eating disorders are emerging in all part of world.(Winpenny et al., 2018)

Another research demonstrated a relationship between anorexia nervosa and depression³⁰, suggesting that anorexia nervosa may be considered a depression spectrum disorder. These data support the theory that eating disorders in Pakistan are connected to sadness and body shape.(Alfalahi et al., 2021).

Eating disorders are more widespread among women and in Western nations than in Asian countries, with South Korea being the only Asian country. Although the frequency has increased over time, this may be attributable to changes in diagnostic criteria. There were significant flaws, particularly from low- and middle-income countries, such as China.(Mitchison et al., 2020).

Problem statement:

Medical students are associated with high levels of stress that stands as a critically important causative factor of eating disorders. Thus, it is quite important to analyze all such instabilities in medical students who are an asset for the future of this country. Studies have been conducted in western scenario to assess eating disorders in medical students. A study from US showed that 15% of the female medical students had history of eating disorders.

Study Gap:

A study shows a gap between the attitude and practice of eating disorder. Studies shown that the majority of the people had knowledge about eating disorder but some people don't take it seriously even they are suffering with eating disorder. So there is much need to aware them about this order, because eating disorder and excessive use of social media impact can lead them towards severe mental disorders. Previous studies have been done on random selected participants, not specifically on medical students.

Significance of the study:

For participants:

After the completion of the research study, the contributors will show their interest and attitude towards the eating disorder. This study will led the people to know about how social media and other irrelevant activities affecting their diet, body imaging and moving them towards eating disorder.

For the researcher:

The research study will sever a model/example for the researchers owns understanding about the concept and knowledge of this research can help the researcher to enhance their knowledge, skills, attitude towards eating disorder.

Research objective:

Two objectives of this cross-sectional survey were defined.

- The first objective of the study is to assess the knowledge, attitudes, and behaviors about eating disorders among nursing students of university of Lahore.
- The second objective of the study is to investigate the determinants influencing the knowledge level, the positive attitudes, and the appropriate behavior of the participants.

Variables:

1. Independent variable:

- Knowledge
- Attitude

2. Dependent variable:

Anorexia nervosa

Conceptual definition:

Eating disorder sits on a spectrum between normal eating and an eating disorder and may include symptoms and behaviors of eating disorders, but at a lesser frequency or lower level of severity. Eating disorder may include restrictive eating, compulsive eating, or irregular or inflexible eating patterns.

Operational definition:

There are 13 questions in the assessment of knowledge. Each correct answer will be given a score of 1 and wrong answer a score of 0. The minimum total score for assessment was 13. Score will be added and percentage will be calculated. Respondent with more than or equal to 75 % score 10 to 13 will be considered as with good assessment knowledge, and 7 to 9 scoring with greater than 53% to 74% considered as moderate knowledge, and below 7 score with 53% believed to have poor knowledge.

Attitude:

The attitude of the respondent of the study sample were distributed according to Likert scale which indicate the extent of a respondent agreement with the questioner's statement (1=agree, 2=disagree, 3= Neutral)

Total 13 attitude questioner used for my research study. If the participant, percentage is greater than 75%(10 to 13) then the attitude is positive, 53% to 74%(7 to 9) considered as moderate, below score less than 53% (7) considered as negative attitude.

Negative attitude = < 50 %

Positive attitude = >70%

LITERATURE REVIEW:

According to Ferguson, the goal in 2014 was to determine which BMI ranges had the best levels of body satisfaction based on WHO classifications. As previously indicated, females were divided into groups based on WHO-provided BMI levels. BMI under 18.5 suggests underweight, 18.5 to 24.9 represents ideal weight, 25.0 to 29.9 indicates overweight (i.e., pre-obesity), and 30 and above indicates obesity (Ganesan, Ravishankar, & Ramalingam, 2018).

A study conducted in Karachi on college students reported 3.8% prevalence of bulimia nervosa in females and 0.2% in males. Pyle et al. diagnosed 4.7% of female college students with eating disorders.(Memon et al., 2012)

The lifetime prevalence rates for bulimia nervosa ranged from 0.3% to 4.6% in females and from 0.1% to 1.3% in males in the extensive systematic review.(Galmiche et al., 2019)

In order to calculate BMI 217 females provided their height and weight. 32 (14.7%) of the participants were underweight, 139 (64.1%) were at or near the WHO weight goal, 32 (14.7%) were overweight, and 14 (6.5%) were obese. (Agrawal & Agrawal, 2016).

Terms of eating disorder knowledge, 59.4 % properly identified anorexia, 39.8% correctly identified bulimia nervosa, 5.6% accurately identified binge eating, and 7.5% correctly identified clinical sequelae of eating disorders. Only 22.8% grasped the definitions of anorexia and bulimia nervosa properly. (Littman, 2018).

The results of the respondents' eating attitudes and practices were provided. With an overall mean value of 3.2 and 2.9 out of a maximum score of 5, 20.4 % and 21.8% of teenagers were entirely happy with their

weight and how their weight affected judgment on themselves, respectively, in the eating attitudes questions. (Napolitano, Bencivenga, Pompili, & Angelillo, 2019).

Furthermore, 38.8% percent of men and 52.7 % of females were afraid of becoming obese, with an overall mean value of 3.4 out of a maximum score of 5 When questioned about their eating habits, just 7% said they were constantly aware of the calorie content of goods, 10.9 percent said they typically avoided eating when hungry, 7.3 percent said they normally avoided high-carbohydrate items, and 12.5% said they regularly ate diet foods.(Napolitano et al., 2019).

Moreover, 17.3 percent of those who usually/always engaged in dieting behavior (21.8 percent) were males, while 26.8% were females. 40.8 percent of people have never done so. About a quarter (27%) said they always or mostly always wished to be leaner.(Napolitano et al., 2019)

A study of women aged 18 to 25 identified a relationship between Instagram and increased self-objectification and body image issues, particularly among those who regularly viewed inspiration pictures. Americans spend more than two hours every day on social media, where they may be exposed to false beauty ideals, diet debates, body shaming, motivation, weight reduction messaging, and other issues.(Fardouly, Willburger, & Vartanian, 2018)

The findings of the multivariate logistic regression analysis revealed that individuals who had a strong desire to be slimmer (OR = 3.05; 95 percent CI: 1.59–5.85) and those who were afraid of being obese (OR = 1.42; 95 percent CI: 1.12–1.79) were more likely to engage in dieting on a regular basis.(Napolitano et al., 2019).

Almost all of the participants (93.4%) had heard about eating disorders, and 44.9 percent mentioned their parents as a helpful source of knowledge, followed by friends (25.3%), the media (21.1%), the internet (15.7%), healthcare professionals (8.5%), and schools (8.5%). (6.2 percent). Furthermore, more than half of those polled (58.4%) said they wanted more knowledge about eating disorders.(Huynh et al., 2021).

Napolitano, 2019, performed a research in which 33 children or their parents did not provide written informed consent among 420 kids picked at random. A total of 387 persons agreed to participate in the survey and completed it, yielding a 92.1 percent

response rate. The sample was gender-balanced, nearly entirely Italian, 17.1% had at least one parent who worked in healthcare, two-thirds were of normal weight with a mean BMI of 21.7, and only 10.2% had a chronic disease. 59.4 percent correctly recognized anorexia, 39.8% correctly identified bulimia nervosa, 5.6 percent correctly identified binge eating, and 7.5 percent correctly defined clinical features of eating disorders in terms of eating disorder expertise. Only 22.8 percent properly defined anorexia nervosa and bulimia nervosa.

Almost every participant (93.4%) had heard about eating disorders, and 44.9 percent cited their parents as a helpful source of knowledge, followed by friends (25.3%), the media (21.1%), the internet (15.7%), healthcare professionals (8.5%), and schools (8.5%). (8.5 percent). 6.2 percent Furthermore, more than half of those polled (58.4%) said they wanted more knowledge about eating disorders.(Napolitano et al., 2019).

In the year 2021, the global social media penetration rate was 53.6 percent. 2021) (Statist). People in Western Europe utilized it 79 percent of the time, 74 percent in North America, and 71 percent in Central America. Southeast Asia had a rate of 69 percent, while Oceania had a rate of 64 percent (Statista, 2021).

Although there were considerable disparities, the African continent had the lowest %age in the north, 45% of the population uses social media, while in Central Africa, just 8% of the population uses social media, the world's lowest regional proportion (Ganesan et al., 2018).

Several studies have found that using and being exposed to social media causes body image issues as well as the development of EDs (Holland & Tiggemann, 2016).

Eating disorders are etiologically linked to the internalization of societal pressure coming from contemporary industrial society's or Western culture's expectations of feminine beauty (Stice et al., 2011).

The spread of these expanded aesthetic models on social media puts people at risk of developing and maintaining health problems, such as EDs (Grabe et al., 2008). In addition, users experience body dissatisfaction as a result of social comparison on social media when they discover they cannot reach the generic skinny ideal.(Holland & Tiggemann, 2016).

Saleh, 2018 did a study in which the researchers distributed around 2500 questionnaires as part of their examination. The poll was completed and returned by a total of 2001 female students, providing a 97.1% response rate. More than half of the participants (1092, or 54.6%) were from humanities and arts faculties, with the rest (909, or 45.4%) from medicine, science, or engineering institutions. The majority of respondents (1676, or 83.8 percent) lived at home with their families, with the remainder living in student accommodation.(Chamay-Weber, Narring, & Michaud, 2005) The average age of the responders was 19.5 1.4 years, and their BMI was 21.7 3.4 kg/m2. According to BMI categorization, 1467 (73.3%) of the participants had a BMI in the "normal" range, 281 (14.0%) in the "underweight" range, and 253 (12.6%) in the "overweight/obese" range.(Saleh, Salameh, Yhya, & Sweileh, 2018).

METHODOLOGY:

Study design:

The cross sectional descriptive study design was used in the study.

Study site:

The study were conducted at University of Lahore.

Study population:

Target population of the present study were nursing students both male and female, BSN generic 4 year (age ranging from 18-25) year at University of Lahore.

Sample population:

By using Solvin's Formula

If the target population is 170

If N= Population

n= Sample size

E= Margin of Error= 0.05

By using the Solvin's formula:

$n = N / (1 + Ne^2)$

$n = 155 / (1 + 155(0.05)^2)$

$n = 155 / (1 + 155(0.0025))$

$n = 155 / (1 + 0.3875)$

$n = 155 / 1.3875$

$n = 111$

Sample size of this research was 111.

Sampling strategy:

The required sample of n=111 recruited through Convenient sampling technique.

Inclusion criteria

Following criteria were used in the study

- Both male and female nursing students of UOL were included.

Exclusion criteria

Following nursing students were excluded from study

- Those who refused to take part in the study

Data Collection: (Instrument/ tool)

For the purpose of data collection, a close ended questionnaire will be used having a consent form attached with each questionnaire. Participant will be requested to first read and sign the consent form before putting an eye on the questionnaire. Data will be collected from University of Lahore and people present at the time and meeting inclusion criteria of the study.

Data Analysis Method:

The information gathered were analyzed by using SPSS version 21. Analyzed by frequency using descriptive statistics, which were displayed as frequencies and percentages. The study sample were characterized by using measures tendency (mean). The descriptive data was about demography includes age, gender, education, marital status. Data

were analyzed and determined knowledge and attitude regarding eating disorder among nursing students.

Ethical Consideration:

The rules and regulations set by the ethical committee of University of Lahore followed:

- While conducting the research and the rights of the research participants will be accepted.
 - Written informed consent attached will be taken from all the participants.
 - All the information and data collection will be kept confidential.
 - Participants will remain anonymous throughout the study.
 - The subjects will be informed that there are no disadvantages and risk on the producer of the study.
 - They will also be informed that they will be free to withdraw at any time during the process of the study.
 - Data will be kept under the key and lock while keeping keys in hands in laptop it will be kept under password.
- Study Duration:
- The study will approximately take in 4 months from October 2021 to January 2022

RESULTS:

Table#1:

Questions		frequency	percentage
What is anorexia nervosa?	Know	68	61.3
	Don't know	43	38.7
Do you know taking extra calories in unhealthy way caused eating disorder	know	74	66.7
	don't know	37	33.3

Table#2:

	Eating disorder characterized by an abnormally low body weight.	know	62	55.9
		don't know	49	44.1
	ED frequently consuming unusually large amount of food with lack of ability to stop eating	Know	58	52.3
		Don't know	53	47.7
5	Do you feel, fear of getting fat?	know	86	77.5
		don't know	25	22.5
	Do you believe that eating too much cause overweight	know	77	69.4
		don't know	34	30.6
	Do you believe that eating too much cause overweight	know	77	69.4
		don't know	34	30.6
	What is binge eating	know	72	64.9
		Don't know	39	35.1
	ED characterized by recurrent episode of eating large amount of food	Know	60	54.1
		Don't know	51	45.9
	Do you know a loss of control over eating and then purging cause binge eating	Know	60	54.1
		Don't know	51	45.9
	Do you know ED can lead towards death	Know	70	63.1
		Don't know	41	36.9

Table#3: Mean, median, mode, standard deviation.

questions	μ	M	Mo	SD
What is anorexia nervosa?	61	1.00	1	489
Do you know taking extra calories in unhealthy way caused eating disorder	67	1.00	1	474
Eating disorder characterized by an abnormally low body weight.	56	1.00	1	499
ED frequently consuming unusually large amount of food with lack of ability to stop eating	52	1.00	1	502
Do you feel, fear of getting fat?	77	1.00	1	501
What is bulimia nervosa?	53	1.00	1	501
ED characterized by eating large amounts of food with a loss of control, over the eating	51	1.00	1	502
Do you know ED characterized by abnormally body weight	47	00	0	501
Do you believe that eating too much cause overweight	69	1.00	1	463
What is binge eating	65	1.00	1	480
ED characterized by recurrent episode of eating large amount of food	54	1.00	1	501
Do you know a loss of control over eating and then purging cause binge eating	54	1.00	1	501

Table#5: Mean, mode, median, standard deviation of respondents attitude.

Questions	μ	M	MO	SD
Do you believe that your weight influence the judgement on yourself	44	00	0	499
Do you believe you have fear of getting fat	41	00	0	495
Do you satisfied of your weight	53	1.00	1	501
Do you agree restrictions in your regular diet can make you healthy	50	00	0	502
Do you feel guilty whenever you eat one of foods that you try to cut off from your diet	41	00	0	493
Do you feel pleasure when you eat	44	00	0	499
Do you agree that self cooking diminish hunger	44	00	0	499
When you eat sweets, junk food, or go to party, do you eat in different manner	34	00	0	477
Do you usually eat the meals that you prepare	49	00	0	502
Do you believe eating in front of others bother you	41	00	0	493
Do you believe in food or anything else that melts fat	45	00	0	500
Do you believe that overeating in one meal automatically makes you put on weight	50	00	0	502
Do you believe that not eating for one day can make you lose weight	36	00	0	482

DISCUSSION:

The results represented in the research work used questionnaire after the investigation and survey about knowledge and attitude regarding nursing students, research conducted in university of Lahore. The results from this research indicated moderate knowledge of 71%. 8.1% students have good knowledge about eating disorder and its types such as anorexia nervosa

and bulimia nervosa respectively. 20.7% participants had poor knowledge regarding eating disorder. Identification of authentic and trusted sources for gathering of information is important because it is essential that it might improve the level of knowledge about anorexia nervosa. Though, this study only conducted on students and only they participated in this study not their siblings and parents. In this

research, technology, such as social media, tv, cell phone and other applications were also included as the source of information. The study indicated that there is need to provide nutritional information in the early pre-school and in college years as well in universities so that so students will acquire proper and enriched nutrients nutrition. It is necessary that parents should show their involvement in their childrens eating habits and should try to use less social media and other apps that consumes so much time and disturb eating habits. 61.3% participants heard about anorexia nervosa. as this study shos that with the moderate knowledge, participants should implement the measures to improve eating habits. 49.5% participants believe that overeating in one meal can put on weight, so don't eat much to avoid overweight. 44.1% participants, repounded that by self cooking diminishes the hunger so they cant eat their food and enjoy it, leading them towards bad eating habits. 77.5% participants showed response that they do not eat food as much because of fear of getting fat, this is also a leading cause of eating disorder. 53.2% participants responded, that they are satisfied from your weight and 46.8% participants responded that they didn't satisfied of their weight, because of body imaging, trying to be thin acording totv models and tv actresses, and their perception is due to the excessive use of social media and other irrelevant app, wastage of time. These results were consistent with previous research, despite the fact that the majority of the sample scored very low on the EAT. The main objective of this study was to assess the knowledge and attitude of adolescents regarding eating disorder, staisfection of weight of participants, attitude towards eating habits, eating too much cause overweight etc. Moreover, more than one third of students have fear of getting fat. This result was similar to the findings observed in italy among adolescents. Understanding the students concerns with respect to body size may be useful but this can lead towards bad eating habits, eating disorder which can lead towards death. The study indicated that there are multiple factors influencing different kind of outcomes of interest among surveyed population. As 71.1% participants showed negative disorders and this result was matched with previous studies don on the adolescents in italy. Negative attitude led them towards eating disorder due to the wrong perception about eating patterns. Females had a significantly higher level of knowledgeo on eating disorder and they are also more likely to have a fear of getting fat. An interesting finding is that students having educated parents and who belongs to medical profession, were more likely to know the definition of bulimia nervosa and anorexia. The positive impact from acquiring population of higher educational level on knowledge

confirmed other investigations in the same area. Moreover, consistent with previous studies, it has been observed that the students who desired to be thinner were more likely to be engaged in dieting behavior.

LIMITATIONS:

There are many of possible limitations to this research that needed to be adressed. Firstly, study design was cross sectional, it is not possible to draw conclusions of the association found between the main explanatory variables such as knowledge and attitude. Secondly, sampling population was restricted to more than one geographic areas, thus findings may not be generalized to the overall student of the university. Thirdly, as participant were asked question about themselves, so their will pay respect to their data, their contribution for this study, that will be kept honor.

CONCLUSIONS:

8.1% participants had good knowledge. 71.1% participants had moderate knowledge. 20.7% participants had poor knowledge. 3.6% had good attitude, 25.2% had moderate knowledge and 71% had poor attitude. There is need to inform the students of university of lahore regarding eating disorder. Policy makers, and educators include teachers and parents as well should direct their efforts firmly to enhance the students knowledge to adopt better attitudes. Such efforts can be done through compaigns, food nutritional seminars and compaigns or during general practitioner visits. Healthcare workers may play a greater role in distributing eating disorders- related knowledge, as they are only group involved in patient physician interactions.

Recommendations:

Anorexia nervosa:

- Most adults with anorexia nervosa should be managed on an outpatient basis with psychological treatment provided by a service that is competent in giving that treatment and assessing the physical risk of people with eating disorders.
- People with anorexia nervosa requiring inpatient treatment should normally be admitted to a setting that can provide the skilled implementation of refeeding with careful physical monitoring (particularly in the first few days of refeeding) and in combination with psychosocial interventions.
- Family interventions that directly address the eating disorder should be offered to children and adolescents with anorexia nervosa.

Bulimia nervosa:

- As a possible first step, patients with bulimia nervosa should be encouraged to follow an evidence-based self-help programme.
- As an alternative or additional first step to using an evidence-based self-help programme, adults with bulimia nervosa may be offered a trial of an antidepressant drug.

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REFERENCES:

1. Agrawal, S., & Agrawal, P. K. (2016). Association between body mass index and prevalence of multimorbidity in low-and middle-income countries: a cross-sectional study. *International journal of medicine and public health*, 6(2), 73.
2. Alfalahi, M., Mahadevan, S., Balushi, R. a., Chan, M. F., Saadon, M. A., Al-Adawi, S., & Qoronfleh, M. W. (2021). Prevalence of eating disorders and disordered eating in Western Asia: a systematic review and meta-Analysis. *Eating Disorders*, 1-30.
3. Arain, M., Haque, M., Johal, L., Mathur, P., Nel, W., Rais, A., . . . Sharma, S. (2013). Maturation of the adolescent brain. *Neuropsychiatric disease and treatment*, 9, 449.
4. Chamay-Weber, C., Narring, F., & Michaud, P.-A. (2005). Partial eating disorders among adolescents: A review. *Journal of adolescent health*, 37(5), 416-426.
5. Chesney, E., Goodwin, G., & Fazel, S. (2014). *World Psychiatry*.
6. Culbert, K. M., Racine, S. E., & Klump, K. L. (2015). Research Review: What we have learned about the causes of eating disorders—a synthesis of sociocultural, psychological, and biological research. *Journal of Child Psychology and Psychiatry*, 56(11), 1141-1164.
7. Fang, E. F., Xie, C., Schenkel, J. A., Wu, C., Long, Q., Cui, H., . . . Zou, H. (2020). A research agenda for ageing in China in the 21st century: Focusing on basic and translational research, long-term care, policy and social networks. *Ageing Research Reviews*, 101174.
8. Fardouly, J., Willburger, B. K., & Vartanian, L. R. (2018). Instagram use and young women's body image concerns and self-objectification: Testing mediational pathways. *New Media & Society*, 20(4), 1380-1395.
9. Franko, D. L., & Keel, P. K. (2006). Suicidality in eating disorders: occurrence, correlates, and clinical implications. *Clinical psychology review*, 26(6), 769-782.
10. Galmiche, M., Déchelotte, P., Lambert, G., & Tavolacci, M. P. (2019). Prevalence of eating disorders over the 2000–2018 period: a systematic literature review. *The American journal of clinical nutrition*, 109(5), 1402-1413.
11. Ganesan, S., Ravishankar, S., & Ramalingam, S. (2018). Are body image issues affecting our adolescents? A cross-sectional study among college going adolescent girls. *Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine*, 43(Suppl 1), S42.
12. Goldstein, A., & Gvion, Y. (2019). Socio-demographic and psychological risk factors for suicidal behavior among individuals with anorexia and bulimia nervosa: A systematic review. *Journal of affective disorders*, 245, 1149-1167.
13. Gorrell, S., & Murray, S. B. (2019). Eating disorders in males. *Child and Adolescent Psychiatric Clinics*, 28(4), 641-651.
14. Hail, L., & Le Grange, D. (2018). Bulimia nervosa in adolescents: prevalence and treatment challenges. *Adolescent health, medicine and therapeutics*, 9, 11.
15. Holland, G., & Tiggemann, M. (2016). A systematic review of the impact of the use of social networking sites on body image and disordered eating outcomes. *Body image*, 17, 100-110.
16. Huynh, T. T. T., Pham, H. T. M., Trinh, H. T., Duong, T. T., Nguyen, T. M., Hernandez, R., . . . Vuong, V. T. (2021). Partial food systems

- baseline assessment at the Vietnam benchmark sites.
17. Iwajomo, T., Bondy, S. J., de Oliveira, C., Colton, P., Trottier, K., & Kurdyak, P. (2021). Excess mortality associated with eating disorders: population-based cohort study. *The British Journal of Psychiatry*, 219(3), 487-493.
 18. Littman, L. (2018). Rapid-onset gender dysphoria in adolescents and young adults: A study of parental reports. *PloS one*, 13(8).
 19. Memon, A. A., Adil, S. E.-e.-R., Siddiqui, E. U., Naeem, S. S., Ali, S. A., & Mehmood, K. (2012). Eating disorders in medical students of Karachi, Pakistan—a cross-sectional study. *BMC research notes*, 5(1), 1-7.
 20. Mitchison, D., Mond, J., Bussey, K., Griffiths, S., Trompeter, N., Lonergan, A., . . . Hay, P. (2020). DSM-5 full syndrome, other specified, and unspecified eating disorders in Australian adolescents: prevalence and clinical significance. *Psychological Medicine*, 50(6), 981-990.
 21. Napolitano, F., Bencivenga, F., Pompili, E., & Angelillo, I. F. (2019). Assessment of knowledge, attitudes, and behaviors toward eating disorders among adolescents in Italy. *International journal of environmental research and public health*, 16(8), 1448.
 22. Rosen, J. C. (2013). Body-image disorder: Definition, development, and contribution to eating disorders *The etiology of bulimia nervosa* (pp. 173-194): Taylor & Francis.
 23. Saleh, R. N., Salameh, R. A., Yhya, H. H., & Sweileh, W. M. (2018). Disordered eating attitudes in female students of An-Najah National University: a cross-sectional study. *Journal of eating disorders*, 6(1), 1-6.
 24. Santarossa, S., & Woodruff, S. J. (2017). # SocialMedia: Exploring the relationship of social networking sites on body image, self-esteem, and eating disorders. *Social Media+ Society*, 3(2), 2056305117704407.
 25. Schlegl, S., Maier, J., Meule, A., & Voderholzer, U. (2020). Eating disorders in times of the COVID-19 pandemic—Results from an online survey of patients with anorexia nervosa. *International Journal of Eating Disorders*, 53(11), 1791-1800.
 26. Winpenny, E. M., van Sluijs, E. M., White, M., Klepp, K.-I., Wold, B., & Lien, N. (2018). Changes in diet through adolescence and early adulthood: longitudinal trajectories and association with key life transitions. *International Journal of Behavioral Nutrition and Physical Activity*, 15(1), 1-9.