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DEMOGRAPHIC VARIATIONS IN BODY IMAGE AND DISORDERED EATING AMONG COLLEGE STUDENTS

Dr. Syeda Razia Bukhari

Assistant Professor, & Student Counselor, Faculty of Education and Social Sciences, Shaheed Zulfikar Ali Bhutto Institute of

drsyedaraziabukhari@gmail.com

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Corresponding Author: *
Dr. Syeda Razia Bukhari

Abstract

This comparative study was conducted at AIMS Muzaffarabad, Azad Jammu and Kashmir, from April to September 2024, with the objective of evaluating the hemodynamic effects of two commonly used doses of intrathecal bupivacaine–12 mg and 15 mg–during spinal anesthesia for elective cesarean section. Maternal hypotension, a frequent and clinically significant complication of spinal anesthesia, was the primary outcome measure. Secondary outcomes included the incidence of associated adverse effects such as bradycardia, respiratory depression, nausea and vomiting, as well as overall patient discomfort during the perioperative period.

Participants were divided into two groups: Group A received 12 mg of bupivacaine, while Group B received 15 mg. Continuous monitoring of maternal blood pressure, heart rate, oxygen saturation, and clinical symptoms was carried out throughout the procedure. The results demonstrated a lower incidence of maternal hypotension in Group A, affecting 16% of patients, compared to 24% in Group B. Additionally, patients in the higher-dose group showed a greater tendency toward other anesthesia-related complications, including bradycardia and nausea, which often necessitated pharmacological intervention.

The findings suggest that a lower dose of intrathecal bupivacaine provides adequate anesthesia while maintaining greater hemodynamic stability. The reduced incidence of hypotension in the 12 mg group correspondingly decreased the need for corrective measures such as vasopressor administration and excessive intravenous fluid loading, both of which carry potential maternal and fetal risks. Based on these observations, the study concludes that a 12 mg dose of bupivacaine may represent a safer and more effective option for spinal anesthesia in elective cesarean deliveries, balancing sufficient anesthetic depth with improved maternal cardiovascular stability.

INTRODUCTION

The present study is aimed to investigate the demographic differences in body-image and disordered eating among College Students. There is a dramatic shift in self-image when the adolescents turn into adults, and this transition most especially happens in university. This particular age is characterized by liberalization and socialization, as well as exposure to diverse ways of life, development which can alter the student's way of self-reflection. The Correlation amongst self-image and body image and eating disorders are becoming important in the lives of college students and is associated to a multitude of factors such as gender, level of education and other sociological aspects (Merino et

al., 2024). Studies have shown that one's emergence, development and sustenance of their self-perception as well as their eating behaviors is greatly affected by the respondent's gender. It is noted that women students are more likely to suffer from body image issues or engage in eating order rather than men since they face more societal expectations to achieve certain idealized physical features.

According to other research, women are often more willing than men to go on diets if they perceive a cultural message about beauty (Foo, 2010). On the other hand, although male students often struggle with body image, they frequently face distinct social pressures associated with strength and muscle mass, which can have an equal effect on their eating habits and sense of self (Better Health, 2012). The cliché, however, minimizes their worries and the ways in which this problem affects men as well. In this sense, age is especially important since it includes not only the passage into maturity but also the bodily and psychological changes that take place throughout this period. Significant brain growth occurs in the late teens and early twenties, impacting social interactions, emotional control, and decision-making (National Institute of Mental Health, 2023). Younger college students are more susceptible to body dissatisfaction and disordered eating behaviors because of these developmental changes, which might increase susceptibility to peer pressure and cultural expectations around beauty (Uchôa et al., 2019). The wish to belong may lead to unhealthy looking up and down the hierarchy as they transition to new environments and new learning experiences.

This dynamic is further complicated by educational background. Undergraduate, graduate and even PhD students all cope with stress and peer pressure in varying degrees, which shapes their self-concept (Allen et al., 2020). Take, for instance, in the case of undergraduate students, especially in the first years, they are likely to face issues regarding social acceptance and identity development. Conversely, more mature students tend to face pressure related to the area of study they choose and career opportunities that follow. As the academic life of the student's progresses, these discrepancies may account for difference in experiences relating to eating patterns and one's self-image.

In view of all this it becomes very important to understand self-esteem and eating behaviors which seems to be quite related in how individuals perceive and manage their bodies. According to Stets and Burke (2014) an individual's self-image is an essential component of their identity as it is influenced by both their own experiences and other people's opinions. It describes one's mental image and entire self-perception, which includes not just one's physical attributes but also one's personality, skills, and perceived conformity to social standards. It develops gradually and is impacted by a confluence of cultural norms, media portrayal, social input, and individual experiences. While a poor self-image can result in anxieties, self-criticism, and even hazardous behaviors, a positive self-image is frequently associated with self-acceptance and a healthy body image.

Conversely, "Eating Behavior's" refer to the patterns and customs related to dietary intake, which can be impacted by social settings, emotional states, and cultural norms. When people try to match their eating habits with social standards of beauty or with personal anxieties about their self-image, disordered eating patterns like binge eating, restrictive dieting, or undesirable weight management measures often result. According to research, these behaviors are more noticeable among college students who are under pressure to achieve well academically and fit in with their peers (Resimo et al., 2024).

Research aimed to investigate the correlation between body image, body mass index, body shape dissatisfaction and gender with self-esteem (Asma Shahzadi & Rasheed, 2024). Finding revealed that body shape had a negative association with gender and height but a positive correlation with BMI. It also shows that self-esteem is positively correlated with gender. The investigation found that body image and self-esteem are related during teenage growth, with gender differences (Latif, 2020) also playing a role. Obese teenage girls have worse self-esteem and body image than guys. Radwan et al. (2019) explored the relationship between perceived body mass index (BMI), actual BMI, body image dissatisfaction (BID), and weight-related behaviors in college students. The results depicted a significant association between perceived and real BMI (R2=

0.84, p< 0.001). The more actual BMI the respondents had, so the more positive BID (r = 0.57, r < 0.001).

According to Zaman and Khan (2019) body image dissatisfaction is a predictor of abnormal eating attitudes in university. Another research showed that the risk factors for eating disorders were low self-esteem and the mother's higher level of education, and it might be the predication role of body image may be mediated by other such as self-esteem (Naeimi & Haghighian, 2016). The findings revealed slightly elevated risks for male students over females, with male students showing a higher BMI and more significant condemnation regarding their body images than female students. In addition, there was a strong relationship between the risk of developing an eating disorder with a high BMI and body image dissatisfaction (Ganesh & Sharma, 2023; Zeigler-Hill & Noser, 2013; Khadija, et al.,2023; Mallaram, et al., 2023)

Riaz et al. (2024) aims to investigate how social comparison leads to body image dissatisfaction, which results in disordered eating behaviors. A quantitative cross-sectional research design was used with 200 college students (80 males and 120 females) aged 18 to 26 years old, using a non-probability convenient sampling strategy. Iowa-Netherlands Comparison Orientation scale, body Shape Questionnaire-16B, and Eating Attitude Test were used to collect data from the study sample. The results here point to a better understanding of those social influences over one's ideas, feelings, and actions with regard to dissatisfaction with one's body image and disordered eating behaviors. Arshad et al. (2023), recently explored the risks and prevalence of eating disorders among teenagers in Mirpur, AJK, leaving a significant gap in the literature, particularly in South Asia. The cross-sectional survey involved a sample of 384 adolescents who were recruited from high schools and colleges in an area of Mirpur through convenience sampling. The extensively used evaluation tools were adopted, including the SCOFF questionnaire and the Eating Disorder Examination Questionnaire (EDE-Q). Out of 384 teenagers, researchers found 61.5% of study participants were suffering from an eating disorder, with females being at higher risk.

RATIONALE

Disorders related to eating habits and skewed self-perceptions have a tendency to be more common among younger audiences, including college students (Mallaram et al., 2023). Young people are under certain clear and noticeable demands due to the height and complexity of the higher education area, which may eventually affect their eating habits. These pressures are further exacerbated by the students past self-perceptions. For many young people who are still in their teens and hence on the cusp of maturity, trying to get admission to a college or college in order to pursue higher education can be a little frightening. For many adolescent pupils, these factors are crucial. In order to improve our comprehension of the mental health concerns that students face during this crucial transition, the current project will highlight some of the relationship issues related to eating disorders and the perception of their self-image which are adequately known in various population subsets.

HYPOTHESIS

- Female will have higher disordered eating and Body image concern compared to male.
- Younger students will show higher disordered eating and Body image concern than older students.
- Disordered eating positively associated with Body image concern

METHODOLOGY

Research Design

The cross-sectional method has been used to collect data from the college students.

Sample/Participants

Three hundred participants in this study has been selected through purposive sampling technique, between age 18-30. Both Male and Female, from difference colleges of Islamabad and Rawalpindi.

INSTRUMENTS

The Body shape Questionnaire (BSQ-16) is a self-report questionnaire that assesses body shape obsessions common in Bulimia Nervosa and Anorexia Nervosa. The BSQ allows researchers to investigate the role of extreme concern with the look of one's body in the development, pursuit, and

treatment of eating disorders. This questionnaire was used to measure the self-image in the study. It consists of 34 items but after some research shorter form of BSQ is available including 16 items and the one which was used in our study. BSQ has a total score range of 34 to 204. Lower scores suggest less worry about one's physical appearance and higher score suggests more worry about one's physical appearance. The scoring of the short form is based on the same principal as of 34 items with each item scored on a scale of one to six, with "Never" equaling one and "Always" equaling six, the scores are added up across all the items with the overall total score range between 34 to 204. Body shape Questionnaire (BSQ-16B) was used to measure self-image it was developed by Cooper and C.G. Fairburn (1986). The questionnaire consists of 16 items rated on 6-pointscale (1=never, 2=rarely, 3=Sometimes, 4= Often, 5=Very often, 6= Always) all items were further scored. Eating disorder examination questionnaire (EDE- Q 6.0) was used to measure eating disorder it was developed by Nicole Gideon, Nick Hawkes, and Lucy Serpell in 2016. It consists of 28 items and for scoring which are further divided into subscales (Gideon, et al.,2016).

The semi-structured Eating Disorder Examination (EDE) interview served as the basis for the Eating Disorder Examination Questionnaire (EDE-Q). Using four subscales, it is intended to assess the scope and severity of the characteristics linked to eating disorder diagnosis. The study's eating problems and habits were measured using this questionnaire. With a final global score, it comprises 28 items that were then broken down into 4 subscales: Restraint, Eating Concern, Shape Concern, and Weight Concern. Two types of data are produced by the EDE-Q. Subscale scores that indicate the severity of eating disorder characteristics are determined when the frequency of episodes on the major behavioral features of eating disorder is first calculated. Subscale item scores are added up and divided by the number of items in the subscales for scoring, and the final subscale scores are then divided by the total number of subscales in the subscales for the global score (Berg, et. al., 2011).

RESULTS

Table 1: Demographic Representation of the Data (N = 300)

Variables	Categories	M	SD	f(%)
Age		2.1967	0.604	
	Adolescents			25(8.3%)
	Young Adults			197(65.7%)
	Adults			72(24.0%)
	Middle Aged Adults			6(2.0%)
Gender	Male Female			124(41.3%) 176(58.7%)
Weight		67.44	13.487	
Height		2.812	0.283	
Birth order	First born Middle born Last born Only child			97(32.3%) 104(34.7%) 82(27.3%) 17(5.7%)
Education	Doctorate Undergraduate Graduate Post Graduate			6(2.0%) 177(59.0%) 81(27%) 36(12.0%)

Demographics of the study included an age range from 17 to 26 years. The gender of the participants included 124 males (41.3%) and 176 females (58.7%). Height was measured in meters, and the average weight of the participants was 67.44 kg (SD = 13.49). Birth order included first-born (32.3%), middle-born (34.7%), last-born (27.3%), and only child (5.7%). The level of education of participants consisted of 2.0% with a doctorate, 59.0% with an undergraduate degree, 27.0% with a graduate degree, and 12.0% with post-graduate education.

Table 2: Gender bases comparison of BSQ and EDQ.

BSQ And EDQ	Male		Female		t(298)	p	Cohen's d
	M	SD	M	SD			
BSQ	1.01	0.09	1.13	.33	-3.83	0.00	0.92
EDQ_Q_R	2.28	1.57	2.33	1.83	-2.72	0.01	0.03
EDQ_Q_EC	1.71	1.16	1.83	1.69	-0.66	0.00	0.08
EDQ_Q_SC	2.11	1.34	1.98	1.79	-4.96	0.00	0.08
EDQ_Q_WC	1.98	1.20	2.80	1.80	-4.44	0.00	0.54
EDQ_Q_GlobalScore	2.02	1.20	2.51	1.62	-2.83	0.00	0.33

An independent samples t-test was conducted to examine gender differences in the BSQ and subscales of the EDQ. The analysis revealed significant gender differences on several scales, with varying effect sizes. For BSQ, males (M = 1.01, SD = 0.09) and females (M = 1.13, SD = 0.33) showed a significant difference, with a large effect size (Cohen's d = 0.92), indicating that females reported higher body dissatisfaction. Regarding the EDQ, there were small differences between males (M = 2.28, SD = 1.57) and females (M = 2.33, SD = 1.83) on the Q_R subscale (Cohen's d = 0.03), indicating minimal gender influence on restriction behaviors. For Q_EC, males (M = 1.71, SD = 1.16) and females (M = 1.83, SD = 1.69) showed a slight difference (Cohen's d = 0.08), suggesting a small gender difference in emotional coping. On the Q_SC subscale, males (M = 2.11, SD = 1.34) and females (M = 1.98, SD = 1.79) showed a small difference (Cohen's d = 0.08). Q_WC scores were significantly higher for females (M = 2.80, SD = 1.80) compared to males (M = 1.98, SD = 1.20), with a moderate effect size (Cohen's d = 0.54). Finally, for the Q_GlobalScore, females (M = 2.51, SD = 1.62) reported higher overall eating disorder symptoms than males (M = 2.02, SD = 1.20), with a small to moderate effect size (Cohen's d = 0.33).

Table 3: One-Way ANOVA for BSQ and EDQ Scores by Age Group

Measure	Adolescents		Young Adults		Adults		Middle Aged Adults		F(296)	η^2
	M	SD	M	SD	M	SD	M	SD		
BSQ	1.20	0.41	1.04	0.21	1.08	0.28	1.50	0.55	8.30***	0.078
EDQ_Restraint	2.99	1.94	2.17	1.68	2.31	1.69	4.13	1.31	4.10***	0.040
EDQ_Eating Concern	2.07	1.79	1.68	1.39	1.81	1.53	3.27	2.38	2.63**	0.026
EDQ_Shape Concern	3.54	1.87	2.50	1.57	2.72	1.76	4.13	1.70	4.56***	0.044
EDQ_Weight Concern	3.18	1.65	2.30	1.57	2.53	1.67	4.07	1.56	4.36***	0.042
EDQ_GlobalScore	2.94	1.63	2.16	1.37	2.34	1.54	3.90	1.65	4.70***	0.045

P<0.001 = *** p<0.05 = **

The results revealed significant differences in BSQ scores between age groups,

F(3,296)=8.30,p<0.001,η2=0.078F(3, 296) = 8.30, p < 0.001, \eta^2 = 0.078F(3,296)=8.30,p<0.001,η2=0.078.

These findings suggest that younger students tend to exhibit higher BSQ scores, supporting the hypothesis in part, though middle-aged adults also reported elevated scores.

Table 4 : Correlation of BMI with BSQ and EDQ. (N=300)

Variables	M	SD	1	2	3	4	5	6	7
1. BSQ	1.08	5.48	-						.2.02**
2.EDQ_Restraint	2.31	.27		-					.377**
3. EDQ_Eating Concern	1.78	1.72			-				.351**
4. EDQ_Shape Concern	2.67	1.50				-			.335**
5. EDQ_Weight Concern	2.47	1.69					-		.351**
6. EDQ_Global Score	2.30	1.62						-	.392**
7. BMI	23.54		.202**	.377**	.351**	.335**	.351**	.392**	-

P<0.01 = ***

The correlation analysis reveals, BMI is related to concerns over body image, measured using the BSQ and EDEQ shape concern scores.. There were also positive correlations of BMI with EDE-Q Shape Concern scores(r=.335,p<0.01r = .335, p < 0.01r=.335,p<0.01).

DISCUSSION

In the present study, a higher percentage of female college students were found to have disorder eating as compare to male. The results were similar to the results of the waves of the National Longitudinal Study III on Adult Health (ADD Health). This revealed that a higher proportion of female adolescents face unhealthy weight management, eating behavior, and diagnosis of eating disorders compared to male ceilings. The evil for a disorder, which is associated with problems of excessive weight, diet, vomiting and passing of food, have served as a proxy for the risk of food disorders based on fine delegate purposes, oriented towards body size, which can be more relevant for women. This is due to the fact that women generally want a thinner or smaller body than men who want a more harmonious and more muscular or larger form of body size(Nagata et al 2016).

It focuses on revealing the complex interplay that exists between body image and eating behaviors with the influence of some demographic factors on college students. The college years remain a significant period for forming identities, amid the pressures students experience concerning body image and eating habits. Such pressures may thus be differentially gendered. In particular, such experiences are more probable among females, as they are under societal pressure to conform to standards of physical appearance and thus most likely find themselves with elevated body dissatisfaction and disordered eating behaviors as compared to their male counterparts (Merino et al., 2024; Foo, 2010). The disinterest of males about their body image is mainly attributed to increased perceptions of masculinity, though males also encounter a totally different kind of pressure in terms of body image, particularly muscle weight and strength. While men may not as vividly articulate their concerns about body image as women do, they, too, face considerable external influences from their peers and the media to shape what it means to be masculine (Latif, 2020). Herein lies the importance of a strategic understanding of how both genders navigate society expectations boundaries that lead to disordered patterns of eating.

It is another important determinant for self-image and eating behavior, namely age. According to Uchôa et al. (2019), younger students are especially susceptible to peer comparisons and cultural

expectations as they are undergoing changes associated with the developmental phase typical of late adolescence and early adulthood. In fact, the transition into college life served to intensify these risks, as students deal with changing social contexts and new academic pressures. Thus, effective measures promoting healthy self-image and eating patterns must consider the specific development level of one's population. Also, educational status is an important factor through which students perceive themselves and their eating habits. The multiple stresses exposed to undergraduates seem to be very different from that which a graduate or Ph.D. student experiences but, in a different way, tend to affect an individual's self-esteem and body image (Allen et al., 2020). For example, undergraduates may suffer much more from social acceptance in their first years at college, while older students might have pressures of career expectations and academic excellence. The relationship existed between self-esteem and body image. Lower self-esteem was related to disordered eating behaviors among individuals as a coping mechanism for negative self-perceptions (Radwan et al., 2019; Ganesh & Sharma, 2023). Therefore, a positive self-image can reduce the risk of disordered eating among college students. This study thus purports the many facets of college students' body images and eating behavior. It further emphasizes the need to develop effective interventions on the grounds of gender-alleged differences, vulnerability according to age, educational background, and self-esteem. The actors in the study will create targeted programs for healthy eating plus self-perception in different student groups experiencing the challenges of college life within these dynamics. Future studies should go further on painting pictures of these relations in the development of preventive strategies as well as support systems for unique needs differing among college students.

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