ISSN : 2313-4919
Recognized by BM & DC
Peer Reviewed

Ad-din Sakina Women's Medical College Journal

Volume 6 Number 2 July 2025

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Full Name of the Journal	Ad-din Sakina Women's Medical College Journal
Abbreviated Form	*ASWMCJ*
Type of Publication	Peer Reviewed, Bi-Annual
Published by	Ad-din Sakina Women's Medical College
ISSN No.	2313-4919
Recognized	BM & DC
Address	Pulerhat, Jashore-7402, Bangladesh

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Editorial

Snakebite Envenoming: An Overlooked Public Health Issue

*Akhter M

Snakebite envenoming (SBE) refers to the medical condition that occurs when a venomous snake bites a person and injects venom into the body. When a poisonous snake bites and venom is injected, it can affect the body in different ways depending on the species of snake and the type and amount of venom injected. A bite by a venomous snake which produces specific symptoms and signs or a syndrome is considered as a venomous snakebite. It is important to note that a bite by venomous snake may not always produce signs and symptoms of SBE. Even biting with venomous snake, 50% of bites by Russell's vipers, 30% of bites by cobras do not result in any symptoms or signs of envenoming. A bite by a non-venomous snake does not produce the 'specific features' due to venom but due to the psychological impact a victim may develop some features due to anxiety.[1]

SBE is a serious, yet frequently neglected public health issue in Bangladesh. In contrast to many other serious health conditions, a highly effective treatment exists for this acute medical emergency. Most deaths and serious consequences of SBE are entirely preventable by efficient treatment with effective antivenoms.

Around 5.4 million cases of snakebite occur worldwide each year with 1.8 to 2.7 million cases of SBE. The WHO approximates 81,410 to 137,880 deaths each year because of SBE along with approximately three times as many amputations and other permanent disabilities. Serious morbidities from SBE include paralysis with respiratory failure, fatal hemorrhage, irreversible renal failure and tissue damage causing permanent disability and limb amputation. Children often suffer more severe effects than adults, due to their smaller body mass. Bangladesh is one of the most affected countries regarding morbidity and mortality from SBE due to its tropical climate, rural farming communities, and limited access to timely antivenom treatment.[2]

The highest burden of SBE is suffered in South Asia, Southeast Asia, and Sub-Saharan Africa.[3] High population density, widespread agricultural activities, numerous venomous snake species, lack of functional snake bite control programs and scarcity of antivenom has made South Asia (including Bangladesh) a heavily affected region of SBE in the world.[4] The true incidence is probably higher than what is reported. The incidence density of snakebite in rural Bangladesh is 623.4/100,000 person years with an estimated 6,041 death annually.[5] Based on records of the surveillance system of the Directorate General of Health Services (DGHS), Bangladesh, SBE was identified as a leading cause of death in several flood disasters, second only to drowning.

Most of the victim of snakebite is a poor, young and active individual. Most incidences occur when individuals are engaged in activities such as cultivation, fishing, plantation, wood collection, or tending crops or gardens. SBE in Bangladesh is thus an occupational health hazard of the rural people. Males were found to be most vulnerable with a risk of 1.5 times higher than female. People living in rural areas are almost 11 times higher at risk than people living in urban areas. 44% incidence occurs during evening and night and 94% of the victims are from poor socioeconomic condition. 34% victims are bitten in the leg.[6]

There are about 3000 species of snakes worldwide and 10% to 15% of which are venomous.[7] The snake fauna of Bangladesh includes 100 species of which 16 species of sea

snakes, 3 cobras (including 1 king cobra), 5 kraits, 2 coral snakes, 6 green pit vipers and 1 species of true viper (Russell's viper) are venomous.[1]

Management of SBE includes, providing appropriate first aid treatment, appropriate urgent treatments, antivenom administration and Identifying and managing antivenom reactions. Details management protocol is available from guidelines of Directorate General of Health Services, Ministry of Health & Family Welfare, Banglladesh.[1] WHO also provide a strategy for prevention and control of SBE.[2]

In rural communities, traditional healers (Ozhas) are the first respondent for snakebite victims in 70% cases. The treatment methods of these 'traditional healers' often lack scientific approach which may complicate the situation and also delay effective medical treatment.[8] Community education about venomous snakes and snakebite prevention is strongly recommended as the most effective strategy to reduce the incidence of bites.[3,9] Public awareness campaigns focusing on safe agricultural practices, avoidance of snake habitats, and prompt medical attention following a bite are essential components of prevention programs.[10]

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Original Article

Correlation of Somatometric Parameters with Stretched Penile Length of a Newborn Baby Boy: A Cross Sectional Study

***Rahman SI[1], Agarwala BK[2], Huq NA[3], Nessa A[4], Hossain KN[5], Rouf RSB[6], Afsana F[7], Amin MF[8]**

Abstract

Background: *For assessing of external genitalia abnormality, penile length plays an important role. The length of penis increases significantly with gestational age and this may be affected by several maternal illnesses & also by fetal congenital abnormality. Till date in Bangladesh there is no study regarding any correlation between penile lengths with somatometric parameter of newborn.* ***Objectives :*** *This study was designed to find out the correlation of stretched penile length (SPL) with age, body length, body weight and head circumference of newborn baby boy of Bangladesh.* ***Materials and Methods:*** *This cross sectional study was conducted in Multicenter of Dhaka city (Dhaka National Medical Institute Hospital & Sir Salimullah Medical College & Mitford Hospital) in & out patient departments from January 2022 to December 2022. As the study subjects, a total of 100 newly born male babies (up to age 28 days) were enrolled by using a random sampling technique. Data were collected in a structured questionnaire from patients (mother) file and physical examination findings of the newborn and analyzed by using MS Office tools and SPSS Version 23.0.* ***Results:*** *The mean(±SD) age was 39.7(±47.7) hours & most age distribution of the study subjects was 50% between 24-48 hours. Out of 100 newborn baby 82% were born at term. The mean(±SD) stretched penile length of all (n=100) newborn baby was 2.25(±0.66) cm & there were significant differences of SPL among the different age groups. The factors (body length, body weight and head circumference) that were examined in this study showed significant positive correlations with stretched penile length. The age of the newborn baby showed a moderate positive correlation with stretched penile length (r=0.344, p<0.001). Similarly, body weight (r=0.364, p<0.001), body length (r=0.410, p<0.001), and head circumference (r=0.251, p=0.012) also showed moderate positive correlations with stretched penile length. This study also shows significantly higher mean(±SD) SPL (2.33±0.67 cm) at term compared with preterm (1.90±0.52 cm) (p<0.013).* ***Conclusion:*** *The somatometric parameters have significant positive correlation with stretched penile length of a newborn that might help to find out the causal relationship of a short penile length.*

Keywords: Micropenis, Stretched penile length, Head circumference, Newborn baby.

Received: 24.01.2025, **Accepted:** 02.02.2025.

Ad-din Sakina Women's Medical College Journal. 2025; 6 (2) : 03-07

Introduction

The length and width of human male genitalia is refers to as penile size.[1] Many adult are not satisfy with their penile length and goes to different medical disciplines.[2] Having several study in Bangladesh regarding adult penile size measurement in different dimensions with correlation of somatic parameter, but still no study available regarding the correlation of somatometric parameter of Bangladeshi newborn. As penile length is used to assess the external genitalia abnormalities like hypospadias, micropenis, or undescended testes, may be clinical signs for disorders of sex development (DSD) in children, for that reason need a normal reference range of newborn penile length which is needed for further investigation, diagnosis and management of DSD.[3,4] Schonfeld and Beebe was defined the small phallus in their seminal work as when the penile length smaller than 2.5 (cm) standard deviations (SD) below the mean is considered as micropenis & the length varies in different ethnicities.[5,6] It may occur as an independent abnormality by itself or as a clinical finding of many syndromes.[7] Exposure to endocrine-disrupting chemicals (EDCs) like several insecticide and herbicide, which has domestic

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exposure been suggested to contribute for the increase of external genital malformation in male newborns. In Northeastern Brazil, widespread use of pesticides found in slum where poor sanitary conditions were reported.[8] Over the past several decades male external genitalia malformation are increasing as a trend and genetic factors surely contribute to this trend also environmental factors are probably involved for this increase.[4,9]

Congenital hypopituitarism (associated with hypogonadotropic hypogonadism) may present with micropenis along with undescended testes. It is also seen in several syndromes like Klinefelter, Prader Willi & Noonan.[10,11] Congenital adrenal hyperplasia may initially present as ambiguous genitalia in an under virialized male with hypospadias and undescended testes. Micropenis or small phallus with varying degrees of hypospadias may be the only identifiable feature of a Disorder of Sex Development (DSD) in the newborn babies.[11]

In routine clinical neonatal examination external genitalia of newborns should be evaluated. There are many published articles regarding the relationship between penile size, height, weight, and BMI. Some believe that size of a penis is directly proportional to the height of a man.[9–11] Because of these, it is necessary to investigate the relationship between BMI, height, and weight in comparison with penile size among Bangladeshi men.

So, it is very important to identify the presence of micropenis in neonatal clinical examination as well as to find out the relationship of baby's height, weight and head circumference to avoid delay in diagnosis of these serious, sometime life-threatening conditions.

Materials and Methods

This cross sectional study was conducted in Multicenter of Dhaka city (Dhaka National Medical Institute Hospital & Sir Salimullah Medical College & Mitford Hospital) in & out patient departments from January 2022 to December 2022. The newly born male babies (up to age 28 days) were considered as study population. After full explanation of the study procedure informed written consent was taken. Data were collected from patients (mother) file. Penile length was measured by using a scale while pressing the supra-pubic pad of fat maximally up to tip of the glans penis in supine position. Height and occipitofrontal circumference (OFC) were also measured by measuring tape. Data were collected in a structured questionnaire analyzed using MS Office tools and SPSS version 23.0.

Results

Majority of newborn (50.0%) were within the 24-48 hour's age group. Among the study subject 82% were born at term & 18% were at pre-term. The mean(±SD) stretched penile length (SPL) of all (n=100) newborn baby was 2.25(±0.66) cm (Table-3) & there were significant differences of SPL among the different age groups ($p<0.001$) such as SPL was 2.36(±0.65) cm of <24 hours age group (n=30), 2.06 ± (0.47) cm of 24-48 hours age group (n=50), 2.14 (±0.62) cm of 48-72 hours age group (n=14) and 3.60(±0.62) cm of >72 hours age group (n=6).

Table-1: Age distribution of the study subjects (n=100)

Age group	Frequency	%
<24 hrs	30	30.0
24-48 hrs	50	50.0
48-72 hrs	14	14.0
>72 hrs	6	6.0
Total	**100**	**100.0**
Mean(±SD) hours	39.7(±47.7)	
Median	24.0	
Range (min -max)	(0.5-240) hours	

Table-2: Distribution of the study subjects according to gestational age (n=100)

Gestational age (weeks)	Frequency	Percentage (%)
Term (>37 weeks)	82	82.0
Preterm (<37 weeks)	18	18.0
Total	100	100.0

Table-3: Comparison of stretched penile length (cm) among different age group (n=100)

Age group	Number of newborns	Stretched penile length (cm)		*p*
		Mean±SD	Min-Max)	
<24 hours	30	2.36±0.65	1.60–4.00	<0.001
24-48 hours	50	2.06±0.47	1.30–3.00	
48-72 hours	14	214±0.62	1.10–3.00	
>72 hours	6	3.60±0.62	2.80–4.00	
Total	**100**	**2.25±0.66**	**1.10–4.00**	

p-value obtained by ANOVA test, *p*<0.05 considered as a level of significant

Table-4: The correlation between stretched penile length (cm) with age (hours), body weight (kg), body length (cm) and head circumference (cm) (n=100)

	Factors	Pearson correlation test	
		r-value	*p*-value
Stretched penile length (cm) with	Age of newborn baby (hours)	+0.344	<0.001
	Weight (kg)	+0.364	<0.001
	Height (cm)	+0.410	<0.001
	Head circumference (cm)	+0.251	0.012

p <0.05 considered as 'statistically significant'.

Table-4 indicates significant positive correlations between stretched penile length and all the factors examined. The age of the newborn baby showed a moderate positive correlation with stretched penile length (r=0.344, p<0.001). Similarly, body weight (r=0.364, p<0.001), body length (r=0.410, p<0.001), and head circumference (r=0.251, p=0.012) also showed moderate positive correlations with stretched penile length.

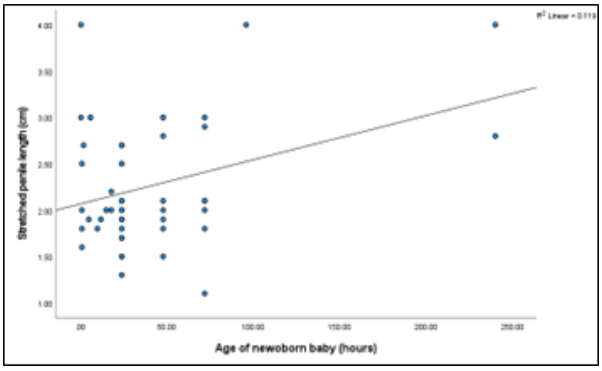

Figure-1: Scatter diagram showing significant positive correlation of stretched penile length with age of the newborn baby (r=0.344, p<0.001).

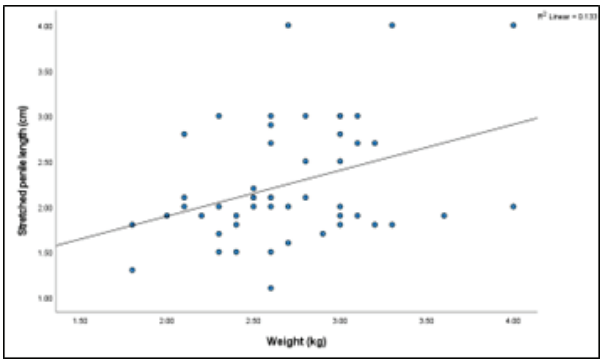

Figure-2: Scatter diagram showing significant positive correlation of stretched penile length with weight of the newborn baby (r=0.364, p<0.001).

Discussion

As derived from the present data, the mean(±SD) stretched penile length of all newborn infants was 2.25(±0.66) cm. Kollurage et al, a Sri Lankan study found that, SPL of their neonates was 3.03(±0.37) cm.[11] Both were compatible with other Asian studies, such as 2.83(±0.49) cm in Tamil Nadu[12] and 3.00(±0.4) cm reported from China. The Asian SPL considered as being shorter than Caucasian.[13] The

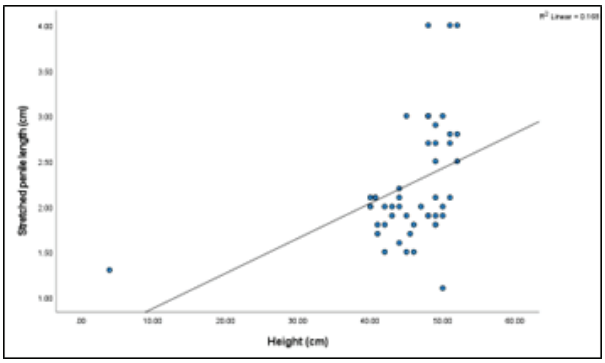

Figure-3: Scatter diagram showing significant positive correlation of stretched penile length with height of the newborn baby (r=0.410, p<0.001).

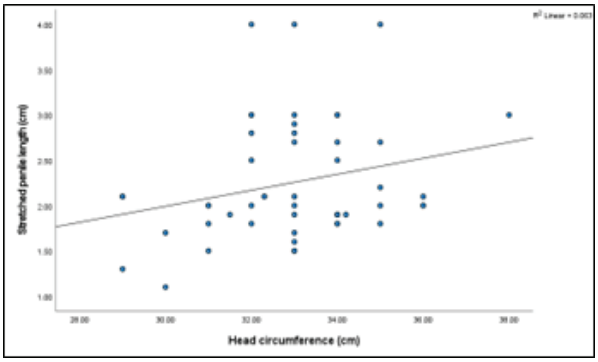

Figure-4: Scatter diagram showing significant positive correlation of stretched penile length with head circumference of the newborn baby (r=0.251, p=0.012)

present study shows, there were significant differences of SPL among the different age groups (p<0.001) such as SPL was 2.36(±0.65) cm of <24 hours age group (n=30), 2.06(±0.47) cm of 24-48 hours age group (n=50), 2.14(±0.62) cm of 48-72 hours age group (n=14) and 3.60(±0.62) cm of >72 hours age group (n=6). This study also shows significantly higher mean(±SD) SPL 2.33(±0.67) cm at term compared with preterm 1.90(±0.52) cm (p<0.013). Matsuo et al, study shows no apparent relationship between gestational age and penile length at 37-42 weeks. These findings suggest that gestational age may be an important factor to consider when evaluating stretched penile length in newborn baby boys.[14]

Table-4 indicates significant positive correlations between stretched penile length and all the factors examined. The age of the newborn baby showed a moderate positive correlation with stretched penile length (r=0.344, p<0.001). Similarly, body weight (r=0.364, p<0.001), body length (r=0.410, p<0.001), and head circumference (r=0.251, p=0.012) also showed moderate positive correlations with stretched penile length. On the other hand Kollurage et al, study showed no statistically significant correlation with birth weight, gestational age and OFC. The only statistically significant positive correlation with the length (Pearson r = 0.134, p= 0.01) is compatible with established data.[11] Fok et al, and Çamurdan et al, reported a weak but significant correlation between the SPL and birth weight.[13,16] However, parallel to the findings of Boas et al, we did not find any correlation between SPL and birth weight.[17] Fok et al reported statistically significant positive correlation with length and SPL, while Kutlu et al found statistically significant positive correlation of SPL with the length, weight and head circumference.[13,15]

Spyropoulos et al, found that penile length was insignificantly and negatively correlated with age, weight, BMI and waist/hip ratio and positively correlated with height. In the same study, a significant positive correlation was reported between penile length and index finger length.[18]

Limitations

A limitation of our study was the relatively small sample size compared to other studies on penile length.

Conclusion

The results of this study suggest that somatometric parameters such as height, weight and head circumference are related to penile length, though the clinical significance is not clear. Further studies are needed to find out this causal relationship.

Conflict of interest: No conflict of interest.

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Original Article

Study of Complications - Morbidity and Mortality in Vaginal Hysterectomy

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Abstract

Background: *Hysterectomy, surgical removal of all or part of uterus, is one of the most commonly performed major operations following caesarean section in gynaecological practice. Vaginal hysterectomy was initially only used for uterine prolapse, but its indications are now increasing.* ***Objective:*** *To evaluate complications - morbidity and mortality of vaginal hysterectomy.* ***Materials and Methods:*** *This was a cross-sectional observational study conducted in- the Indoor patient Department of Obstetrics & Gynaecology in Jalalabad Ragib Rabeya Medical College Hospital (JRRMCH), Sylhet. Collected data was analyzed statistically using SPSS-17.* ***Results:*** *Out of 90 cases majority of the vaginal hysterectomy was > 4 para. Indication of hysterectomy was uterovaginal prolapse, dysfunctional uterine bleeding, fibroid uterus and adenomyosis. Post-operative complications were fever, per vaginal bleeding and postoperative bleeding requiring laparotomy and pelvic hematomas. Mean age was 54.61(±6.47) years and majority (52.22%) came from poor class socio-economic condition. Mean preoperative hemoglobin was 12.84(±1.2) g/dl. Mean duration of operation was 42.76(±11.53) min, mean blood loss was 289.50(±197.42) ml and mean drop in hemoglobin was 0.89(±0.81) g/dl. Indication of hysterectomy in majority (62.22%) was uterovaginal prolapse. Postoperative complication was found in 13.3% cases and postoperative bleeding requiring laparotomy for pelvic hematoma was 1(1.11%). Mean hospital stay was 2.56(±1.4) days and cost of operation was 8467.35(±1420.82) taka.* ***Conclusion:*** *The present study showed that vaginal hysterectomy, when feasible, is a safe, cost-effective procedure for removal of the uterus and is the surgical route of choice for benign hysterectomy.*

Keywords: Vaginal hysterectomy, Morbidity & mortality, Complications, Duration of operation, Mean hospital stay.

Received: 02.02.2025, **Accepted:** 16.02.2025.

Ad-din Sakina Women's Medical College Journal. 2025; 6 (2) : 08-13

Introduction

Hysterectomy is surgical removal of all or part of uterus.[1] In gynaecological practice it is one of the most commonly performed major operations following caesarean section. Approximately 600,000 hysterectomies are performed in US each year, 20% women in UK undergo hysterectomy before the age of sixty years.[2] The US Centers for Disease Control and Prevention (CDC) estimated 3.1 million US women had hysterectomy from 2000-2004. The overall rates were highest among women aged 40-44 years and lowest among women aged 15-24 years.[3]

Vaginal hysterectomy was initially only used for uterine prolapse, but its indications are now increasing. The other indications for hysterectomy are symptomatic uterine leiomyomas (<12 weeks size of gestation), dysfunctional uterine bleeding and adenomyosis.[4,5] Vaginal hysterectomy is accepted as less invasive than abdominal hysterectomy and there are reports of its preferential use as it has many advantages over laparoscopic and abdominal hysterectomy.[6–8]

Currently, standard gynaecological practice dictates that vaginal hysterectomy, when feasible, is the safest, most cost-effective procedure for removal of the uterus and is the surgical route of choice for benign hysterectomy.[9–11]

Dicker et al.[12] stated that vaginal hysterectomy (VH) is associated with less febrile morbidity, less bleeding, necessitating less blood transfusion, shorter hospitalization, better cosmetics and faster convalescence than abdominal hysterecto-

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my. Silva-Filho et al.[7] reported better postoperative quality of life i.e functional capacity, physical aspect, pain and higher satisfaction rate was found in the VH compared to total abdominal hysterectomy (TAH). Miskry and Magos,[13] found that vaginal hysterectomy was associated with significant benefits in terms of reduced hospital stay and improved patient recovery. Whereas Dorsey et al.[14] found that postoperative morbidity and complications were similar between abdominal and vaginal hysterectomy but duration of the operation, hospital stay and recovery time is significantly greater in abdominal hysterectomy than vaginal hysterectomy.

Though vaginal hysterectomy is a common gynaecological operation but there is lack of literature about its complications, morbidity and mortality in Bangladesh. So, this study was designed to evaluate the complications, morbidity and mortality of vaginal hysterectomy in our perspective.

Materials and Methods

This was a cross-sectional observational study done in the Department of Obstetrics and Gynaecology, Jalalabad Ragib-Rabeya Medical College Hospital, Sylhet from May, 2014 to April, 2015. About 90 patients admitted in different units during the study period with justified gynaecological symptoms for hysterectomy who had fulfill the inclusion and exclusion criteria was selected as study population by purposive sampling method. Detailed information was obtained in each cases according to protocol. Complete history was taken from accompanying attendants. Thorough clinical examination was done. Relevant investigations report was collected. Outcome variables were Mean duration of operation, mean blood loss, mean drop in hemoglobin, post-operative complication, mean hospital stay and cost of operation. All relevant data was recorded in pre-designed data collection sheet. Data was processed manually and analyzed with the help of SPSS (Statistical package for social sciences) 17.0 for windows. Quantitative data was presented as mean and standard deviation. Qualitative data was presented as frequency and percentage. Written informed consent was obtained from every patient. Ethical implications and confidentiality were duly considered.

Results

Mean(±SD) age was 54.61(±6.47) years, maximum age group between 51-60 years of age which was 41.11% (Table I). Majority (52.22%) came from poor class socio-economic condition, 42.22% came from middle class and rest of 5.56% came from upper class (Figure 1).

Table I: Age distribution of the study population

Age in years	Number	Percentage
41-50 yrs	29	32.22
51-60 yrs	37	41.11
>60 yrs	24	26.67
Total	90	100.00
Mean (±SD)	54.61(±6.47) **Range:** 41-72 years	

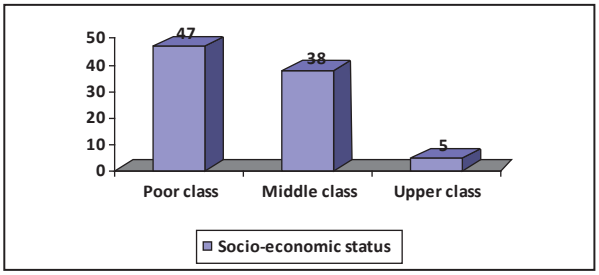

Figure 1: Socio-economic status of the study population

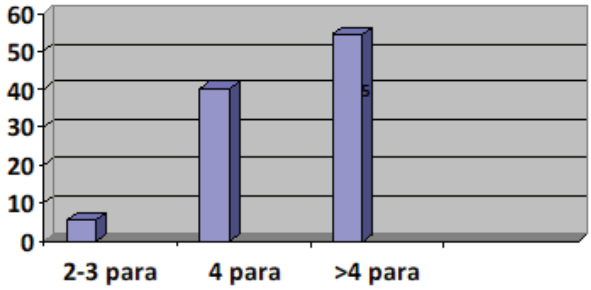

Figure 2: Distribution of parity of the study population.

Majority of the patients with vaginal hysterectomy had > 4 para which was 49(54.44%),

followed by 36(40%) were 4 para and 05(5.56%) were 2-3 para (Figure 2). Table II sows mean(±SD) preoperative hemoglobin 12.84(±1.2) g/dl, minimum 9.8 g/dl and maximum 14.1 g/dl, mean(±SD) duration of operation was 42.76(±11.53) minutes, mean(±SD) blood loss was 289.50(±197.42) ml and mean(±SD) drop in hemoglobin was 0.89(±0.81) g/dl.

Table II: Characteristics of pre and post operative events

Events	Mean(±SD)	Range (Min–Max)
Preoperative Hemoglobin (g/dl)	12.84(±1.2)	9.8-14.1 g/dl
Duration of Operation (minute)	42.76(±11.53)	25-65 min
Blood Loss (ml)	289.50(±197.42)	150-460 ml
Drop in Hemoglobin (g/dl)	0.89(±0.81) g/dl	0.41-1.40 g/dl

Table III: Post-operative complication

Events	Number	Percentage
Injury to		
• Ureter	--	--
• Bowel and bladder	--	--
Postoperative bleeding needs laparotomy	01	1.11
Post-operative per vaginal bleeding	03	3.33
Pelvic hematoma	01	1.11
Fever	07	7.78
Post-operative wound infection	--	--
Morbidity	--	--
Mortality	--	--

Table IV: Blood transfusion status of the study population (n=90)

Blood transfusion	Number	Percentage
Preoperative	35	38.89
Intraoperative	16	17.78
Post-operative	07	7.78

Table V: Mean hospital stay and cost of operation

Events	Mean ±SD	Range
Hospital stay (days)	2.56 (±1.4)	3-5
Total cost (Tk)	8467.35 (±1420.82)	8,000-10,000

Discussion

This was a cross-sectional observational study conducted in the department of Obstetrics and Gynaecology, Jalalabad Ragib-Rabeya Medical College Hospital, Sylhet over a period of one year after the acceptance of protocol with a view to evaluate complications of vaginal hysterectomy.

In present study mean(±SD) age was 54.61(±6.47) years, maximum age group between 51-60 years of age which was 41.11%. Majority 52.22% came from poor socio-economic condition, 42.22% came from middle class and rest of 5.56% came from upper class. In the study of Mehta ST et al[15] showed most common age group affected was 41-50 years (52%), second most common 30-40 years (38%) and only 5 patients were >60 years. Mean age group in Doppa G et al[16] study was 40.93 years and it was comparable with Robert Kovac's[17] Study. In study by Saha R et al[18] showed majority of the patients were in the age group of 41-45 year. Similar age prevalence was noted in other case series reviews.[19–21]

In this study majority of the patients with vaginal hysterectomy had > 4 para which was 49(54.44%), followed by 36(40%) who had para 4 and 05(5.56%) were 2-3 para. In the study of Mehta ST et al[15] showed mostly multipara (93%) patients who had completed their family. Similarly most of the patients were parous comparable to other studies.[19–21] In the study of Dawood NS et al mean(±SD) parity was 3.34(±1.47).[22]

In present study mean(±SD) preoperative hemoglobin was 12.84(±1.2) g/dl, minimum 9.8 g/dl and maximum 14.1 g/dl, mean(±SD) duration of operation was 42.76 (±11.53) min, mean(±SD) blood loss was 289.50(±197.42) ml and mean(±SD) drop in hemoglobin was 0.89(±0.81) g/dl. In the study by Doppa G et al[16] showed that mean operating time was to 53.21 min. Range was from 30 to 135 minutes.

In the study by Dawood et al[22] preoperative mean(±SD) hemoglobin was 12.36±1.00 g/dl, mean(±SD) duration of operation was 73.20(±20.35) min, mean(±SD) blood loss was 291.50(±201.39) ml and mean(±SD) drop in hemoglobin level 0.87(±0.93) gm/dl.

The mean blood loss was 205.26 ml and the amount of loss depend on uterine size and duration of surgery.[18] It was lesser than that reported in other studies like 268ml, 290ml [19], and 316.4ml.[20] But it was more as compared to some other studies as 100 ml and 35.56ml.[23] Seven (15%) of the patients required blood transfusion which is double. Mean duration of surgery was 2 hours as compared to Goel et al (64 minutes),[24] Dewan et al. (54.5 minutes)[19], Bharatnur et al. (65minutes)[20] and Bhadra et al. (55 minutes).[21] The operative time was definitely more in the earlier phase of the learning curve. It was also dependent on the size of uterus. Same was noted by Seth SS in his personal series of 5655 cases.[25]

Current study showed regarding indication of hysterectomy, majority (62.22%) had uterovaginal prolapse, 23(25.56%) had dysfunctional uterine bleeding, 07(7.78%) had fibroid uterus and 04(4.44%) had adenomyosis. In the study of Mehta et al15 first most common indication was dysfunctional uterine bleeding (41%) not responded with medical treatment, second most common was fibroid (35%) and third most common indication was adenomyosis (20%) of uterus. Dorsey JH et al[26] study supported Mehta et al[15] study. In the study by Saha R et al[18] showed the commonest indication was fibroid uterus (46%). Leiomyoma of uterus remained commonest indication in case series by Goel et al,[24] Dewan et al[19], Bharatnur et al[20] and Bhadra et al.[21]

In this study, out of 90 cases post-operative complication was found in 13.3% cases, among them, 07(7.78%) were fever, 03(3.33%) pervaginal bleeding and postoperative bleeding which needed laparotomy for pelvic hematoma was 1(1.11%).

Moreover, the study of Mehta et al[15] showed postoperative complications 10%. They had noted less morbidity and no mortality. In Doppa[16] study, total post-operative complications were 11 (11%). In Robert Kovac's study the rate of complications was 17.7% in vaginal hysterectomy group alone.[17]

In our study mean(±SD) hospital stay was 2.56 (±1.4) days and the mean(±SD) cost of operation was 8467.35 (±1420.82) taka. In Doppa16 study postoperative hospital stay was 5.95 days (Range 2-10 days).

Current study found no morbidity and mortality, other studies also found similar results, no mortality in Dawood et al[22] study cases is consistent with some reports,[27] although mortality rates ranging from 0.25% to 1.5% have been stated in some studies.[28,29] Short hospital stay was possible due to start of early feeding[30] and early mobilization of patients after surgery. A shorter length of stay is a desirable outcome for both the patient and the hospital. Many factors contributed towards lower hospital costs in vaginal hysterectomy like shorter operation time, shorter hospital stay, reduced quantity of antibiotics usage and lesser quantity of consumable use in vaginal hysterectomy.

Conclusion

The present study concludes that vaginal hysterectomy, when feasible, is a safe and cost-effective procedure for removal of the uterus with less hospital stay and less or no morbidity and mortality. Majority of the patients with vaginal hysterectomy faces minor postoperative complications like fever, pervaginal bleeding, a very few patients need laparotomy for pelvic hematoma. So, it can be suggested as a safe surgical route of choice for benign hysterectomy when feasible.

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Original Article

Physical Activity and Fitness Levels Among the Students of Ad-din Sakina Women's Medical College in Jashore, Bangladesh

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Abstract

Background: *Physical inactivity is a global public health concern, strongly associated with chronic diseases and poor mental health. Medical students are particularly vulnerable due to academic pressure and limited time for physical activity. Despite this, localized data on their physical activity and fitness patterns in Bangladesh remains limited.* ***Materials and Methods:*** *This study aimed to assess the physical activity and perceived fitness levels among medical students at Ad-din Sakina Women's Medical College, Jashore, Bangladesh, and to identify influencing factors such as academic stress and extracurricular involvement. A cross-sectional study was conducted using a self-reported questionnaire combining the International Physical Activity Questionnaire - Short Form (IPAQ-SF) and the International Fitness Scale (IFIS). Data were collected from students across all academic years using convenience sampling. Descriptive statistics were used to analyze demographic, academic, and physical activity data.* ***Results:*** *A total of 293 students participated in the study. Most were aged 21–22 years and lived in urban areas. A majority reported moderate to high academic stress, and only a small number participated in extracurricular activities. Physical activity levels were generally low, with 77.5% reporting no vigorous and 79.2% no moderate activity. Walking activity was also limited, and a considerable number reported high or very high sitting times. Perceived fitness levels were largely average, with only 24.9% rating their fitness as good or very good.* ***Conclusion:*** *The study reveals concerning trends of low physical activity and moderate perceived fitness among medical students, exacerbated by academic stress and sedentary behavior. Interventions to promote physical activity and reduce stress among medical students are urgently needed to support their physical and mental well-being and academic success.*

Keywords: Physical activity, Medical students, Academic stress, Perceived fitness.

Received: 20.02.2025, **Accepted:** 28.02.2025.

Ad-din Sakina Women's Medical College Journal. 2025; 6(2) : 14-22

Introduction

The global concern about physical inactivity continues to rise because research shows that sedentary behavior leads to multiple chronic health conditions. Research demonstrates that inactivity leads to cardiovascular diseases while also increasing the risk of type-2 diabetes, hypertension, obesity and some types of cancer.[1] People who do not exercise while maintaining unhealthful eating patterns accelerate their chance of developing these diseases. Physical inactivity stands as a leading factor for global mortality according to the World Health Organization (WHO).[2] A sedentary lifestyle creates health problems that go beyond physical well-being because it also impacts mental health. Medical research demonstrates that insufficient physical movement leads to higher stress levels and increased anxiety alongside depression while also causing cognitive decline.[3] Physical activity functions as an essential foundation for physical health maintenance and provides dual support for mental health and cognitive function and mood enhancement. Research demonstrates that regular exercise leads to better academic performance through its positive effects on concentration and memory alongside stress management abilities which results in superior learning results.[4] Students who study medicine or other demanding programs face persistent obstacles when trying to maintain consistent physical exercise schedules.[3] Medical students face extensive academic demands through long study hours

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and clinical requirements along with stringent academic standards which reduce their available time for physical activity. Students who do not exercise regularly face increased stress which damages their physical and mental health while affecting their academic success and personal growth.[3-4]

The definition of physical activity includes body movements that use energy across a spectrum from basic activities such as walking and gardening up to intense exercises like running and weight training.[5] The range of physical activities differs substantially based on how intense they are and how long they last and which body systems they activate. Physical fitness levels describe an individual's capability to execute physical activities with efficiency by measuring their muscular strength together with cardiorespiratory endurance and flexibility and total stamina.[6] Medical students frequently experience academic stress which results in burnout together with fatigue and diminished mental health.[3–7] Students who allocate their time to prolonged study sessions and clinical placements and exam preparation face higher risks of declining fitness levels. Lack of physical exercise together with low fitness levels create additional stress which ultimately impacts their academic achievement negatively.[8] Physical activity and physical fitness are crucial for students, as they significantly impact both physical and mental well-being. Regular exercise enhances cognitive function, concentration, and memory, all of which are essential for academic success. Physical fitness also helps reduce the risk of chronic diseases and improves overall mood, reducing stress and anxiety.[9] For medical students, maintaining good fitness levels is especially important due to the demanding nature of their studies, long hours, and high academic pressures.[3] Regular physical activity can help them manage stress, prevent burnout, and stay mentally and physically healthy, ultimately supporting their academic performance and personal development in a challenging environment.[3,7,9]

This cross-sectional research examines physical activity and fitness levels among medical students. The study evaluates physical activity patterns through measurement of its frequency and intensity together with student-perceived fitness to determine activity patterns and areas needing improvement. The physical activity and fitness levels of medical students in Bangladesh remain understudied through localized research specifically within the setting of Ad-din Sakina Women's Medical College. Most existing studies on student health in Bangladesh focus on general populations of students rather than specific academic groups. The present study fills an essential literature gap by studying medical student physical activity patterns and fitness levels in Bangladesh to guide future health and academic performance enhancement initiatives.

Materials and Methods

This cross-sectional study assessed the physical activity and fitness levels among medical students at Ad-din Sakina Women's Medical College in Jashore, Bangladesh, using a self-administered questionnaire that combined the International Physical Activity Questionnaire - Short Form (IPAQ-SF) and the International Fitness Scale (IFIS).[10,11] The study aimed to explore patterns of physical activity and fitness, and the various factors influencing these, including academic stress, extracurricular involvement, and health conditions. The target population consisted of medical students from all academic years, ranging from the 1st to the 5th year. A convenience sampling method was used, and informed consent was obtained from all participants. The questionnaire was divided into two main sections: demographic information (age, gender, academic year, residence type, monthly family income, family living situation, part-time employment status, academic stress, extracurricular involvement, and health status) and physical activity and fitness assessment (using IPAQ-SF and IFIS).[10,11] The inclusion criteria for the study were medical

students enrolled at Ad-din Sakina Women's Medical College, Jashore, who were willing to participate and provide informed consent. Exclusion criteria included students who refused to give informed consent. The study measured various demographic variables, such as age, gender, academic year, residence type, family income, living situation, part-time employment status, academic stress, extracurricular activities, and co-morbidities. Physical activity was assessed through frequency and duration of vigorous and moderate activities, walking, and sitting time using the IPAQ-SF. Fitness levels were measured through self-reported perceptions of general physical fitness, cardiorespiratory fitness, muscular strength, speed/agility, and flexibility using the IFIS. The IPAQ-SF assessed the frequency and duration of vigorous, moderate physical activities, walking, and sitting time, while the IFIS measured participants' self-reported perceptions of their general physical fitness, cardiorespiratory fitness, muscular strength, speed/agility, and flexibility. The questionnaire was distributed online using Google Form Questionnaire, with an estimated completion time of 15-20 minutes. The data collection procedure continued from 6th February to 19th February of 2025, taking a total of 14 days. Descriptive statistics were used to summarize demographic data and physical activity levels, and physical activity/fitness levels using the statistical software SPSS (Version 20). Ethical approval was obtained from the ethical review committee of Ad-din Sakina Women's Medical College, and confidentiality was maintained.

Results

The demographic information of the participants is provided in Figure 1, 2 and 3. The majority of participants were in the 21-22 years age group, with 141 participants, followed by 93 participants in the 23-24 years group (Figure 1). The youngest group (19-20 years) included 48 participants, while only 11 participants were in the 25-26 years age category.

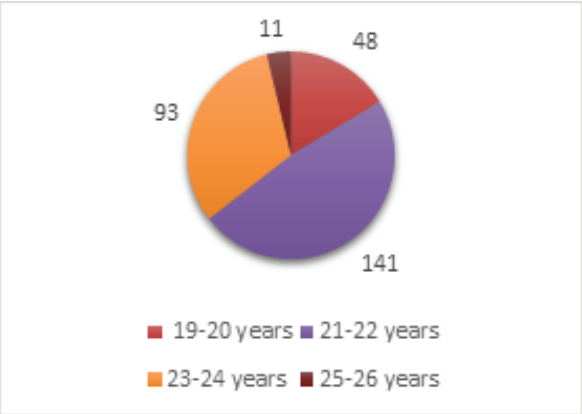

Figure 1: Age categories of the participants

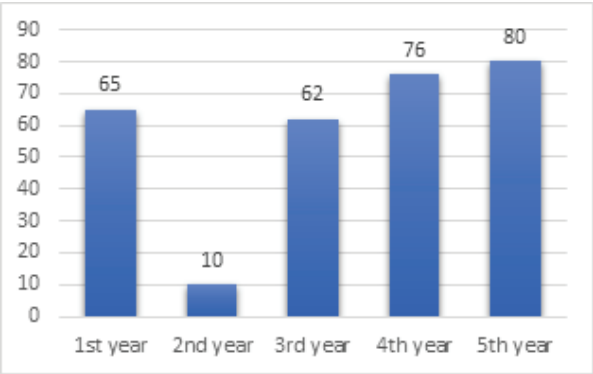

Figure 2: Academic year of participants

The highest number of participants were in the 5th year (80), followed by 4th year (76) and 3rd year (62). Only 10 participants were in their 2nd year, and 65 participants were in their 1st year of study (Figure 2). The majority of participants lived in urban areas (244), while 49 participants resided in rural areas (Figure 3).

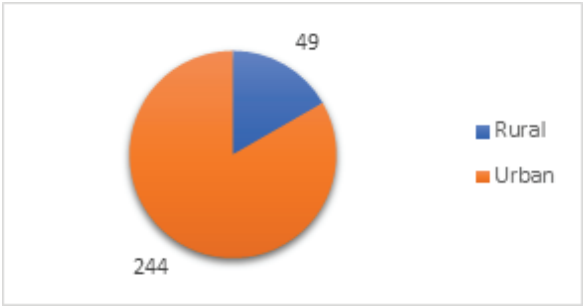

Figure 3: Residence type of participants

Table 1 displays the personal information of the participants. The largest group of participants (108) reported a monthly family income between taka 20,000 to 40,000 . A significant number of participants (90) reported an income between taka 40,001 to 60,000, while 45 participants had a family income between taka 60,001 to 100,000. The least represented income groups were those with incomes above 100,000 (10 participants) and those earning less than 20,000 (16 participants). Additionally, 24 participants preferred not to disclose their family income.

Table 1: Personal Information of the Participants

Variables	Categories	Count (*n*)
Monthly Family Income	20,000 to 40,000	108
	40,001 to 60,000	90
	60,001 to 100,000	45
	Above 100000	10
	Less than 20,000	16
	Did not share	24
Currently Living with Family	No	163
	Yes	130
Part-Time Employment	No	286
	Yes	7
Co- morbidities or Chronic Diseases	No	237
	Yes	56

A larger proportion of participants (163) reported that they were not living with their family, while 130 participants were living with their family. The vast majority of participants (286) did not engage in any part-time employment or earning activity, with only 7 participants reported that they were involved in such activities. The majority of participants (237) reported no co-morbidities or chronic diseases, while 56 participants had some form of chronic disease or co-morbidity. Among the participants with comorbidity, asthma was the most reported one. Academic information of the participants is presented in table 2.

Table 2: Academic Information of the participants

Variables	Categories	Count (n)
Perceived Academic Stress Level	High	108
	Low	2
	Moderate	131
	Very high	51
	Very low	1
Engagement in Extracurricular Activities	No	269
	Yes	24
Satisfaction Regarding Medical Education	Dissatisfied	11
	Neutral	69
	Satisfied	178
	Very dissatisfied	2
	Very Satisfied	33

The study revealed that most participants reported a moderate level of academic stress (131), followed by high academic stress (108) and very high stress (51). A very small number of participants reported low (2) or very low (1) academic stress. The majority of participants (269) did not engage in extracurricular activities, with only 24 participants involved in such activities.

Most participants were satisfied with their medical education (178), while 69 were neutral, and 11 were dissatisfied. A smaller number of participants were either very dissatisfied (2) or very satisfied (33). Information related to weekly physical activity of the participants is presented in Table 3.

The physical activity levels of participants varied across vigorous, moderate, and walking activities. A majority of participants (227) reported no vigorous physical activity, while 38 participants engaged in 1-150 minutes of vigorous activity. A smaller number of participants (19) reported 151-300 minutes, and just 5 participants engaged in 301-600 minutes. Only 4 participants engaged in more than 600 minutes of vigorous physical

activity each week. Similarly, in moderate physical activity, 232 participants reported no engagement, while 32 engaged in 1-150 minutes, and 13 reported 151-300 minutes. Twelve participants engaged in 301-600 minutes, with only 2 participants reporting more than 600 minutes per week. For walking physical activity, 145 participants did not engage in any walking activity, whereas 77 participants walked for 1-150 minutes. Forty-five individuals walked for 151-300 minutes, 19 walked 301-600 minutes, and 7 participants walked more than 600 minutes weekly.

Table 3: Physical Activity of the participants per week

Physical Activity per Week	Vigorous Physical Activity	Moderate Physical Activity	Walking
0 minute	227	232	145
1-150 min	38	32	77
151-300 min	19	13	45
301-600 min	5	12	19
More than 600 min	4	2	7

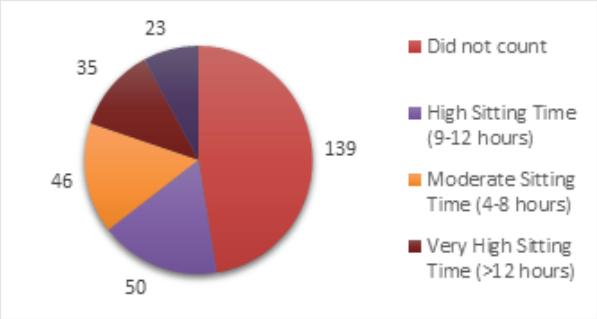

Figure 4: displays the daily sitting time of the participants.

The majority of participants (139) did not record their sitting time, but among those who did, 50 participants reported high sitting time (9-12 hours per day), and 46 participants reported moderate sitting time (4-8 hours per day). Thirty-five participants reported very high sitting time (>12 hours per day), while 23 participants reported low sitting time (<4 hours per day).

Table 4 presents the perceived physical fitness level of the participants. When assessing general physical fitness, a small proportion of participants (5) rated their fitness as very good, while 71 participants considered themselves to have good physical fitness. The majority (176) rated their fitness as average, and 30 participants reported poor fitness, with 11 participants indicating their fitness was very poor.

For cardiorespiratory fitness, only 8 participants rated their fitness as very good, while 52 rated it as good, and 171 reported average cardiorespiratory fitness. Fifty-two participants indicated poor cardiorespiratory fitness, and 10 participants rated it as very poor.

Muscular strength was rated by 9 participants as very good, 65 participants as good, and 185 participants as average. A smaller number (26) rated their muscular strength as poor, while 8 participants rated it as very poor.

In terms of speed and agility, 13 participants reported very good speed/agility, 79 participants rated their speed/agility as good, and 179 rated it as average. A total of 17 participants considered their speed/agility poor, while 5 participants rated it as very poor.

For flexibility, 13 participants rated their flexibility as very good, 67 as good, and 175 as average. Thirty-two participants reported poor flexibility, and 6 participants rated their flexibility as very poor.

Table 5 presents the IPAQ and IFIS scores of the participants who were used to define the physical activity levels and perceived overall physical fitness respectively. The IPAQ score provides an understanding of the participants' physical activity levels, categorizing them into various activity groups. A small proportion of participants, only 21, reported engaging in high levels of physical activity, indicating a relatively low number of individuals with high activity. In contrast, 59

Table 4: Level of perceived personal fitness across five domains

Level of Fitness	Categories of Physical fitness				
	General Physical Fitness	Cardiorespiratory Fitness	Muscular Strength	Speed/Agility	Flexibility
Very Good	5	8	9	13	13
Good	71	52	65	79	67
Average	176	171	185	179	175
Poor	30	52	26	17	32
Very Poor	11	10	8	5	6

participants were classified as engaging in low physical activity, representing a moderate level of engagement. A larger group, consisting of 81 participants, reported moderate physical activity levels, reflecting a more balanced level of activity. However, the largest group, 132 participants, reported no additional physical activity, highlighting a significant portion of individuals with little to no engagement in physical activity.

Table 5: the IPAQ and IFIS scores of the participants who were used to define the physical activity levels and perceived overall physical fitness respectively

Variables	Categories	Count
Physical Activity Levels (IPAQ Score)	High Physical Activity	21
	Low Physical Activity	59
	Moderate Physical Activity	81
	No additional Physical Activity	132
Perceived Overall Physical Fitness (IFIS Score)	Low perceived fitness	1
	Below-average perceived fitness	9
	Average perceived fitness	145
	Good perceived fitness	123
	Very high perceived fitness	15

The IFIS score provides valuable insights into how participants perceive their fitness levels, reflecting their self-reported health and fitness. A very small number of participants, only one, rated their fitness as low, indicating minimal self-perception of poor fitness. Nine participants considered their fitness to be below average, representing a small portion of the group with less favorable self-assessments. The majority of participants, 145 in total, rated their perceived fitness as average, suggests that most individuals view their fitness as neither particularly poor nor outstanding. A significant portion, 123 participants, reported a good level of perceived fitness, reflecting a positive self-assessment within this group. Lastly, 15 participants rated their fitness as very high, showcasing a small but notable group who view their fitness levels as exceptional.

Discussion

This cross-sectional study provides valuable insights into the physical activity levels, perceived fitness, and related factors among medical students. The results reflect a concerning trend of low engagement in vigorous physical activity, with 227 participants reporting no vigorous activity. Similarly, the data on moderate physical activity shows that 232 participants are inactive in this domain. These findings align with previous studies that have highlighted the low levels of physical activity in university students, particularly those in demanding academic programs.[12] A significant proportion of participants (132) reported no additional physical activity, which raises concerns

about the sedentary lifestyle prevalent among medical students. This lack of physical engagement is consistent with studies in other medical schools where students tend to prioritize academics over physical well-being.[13] Furthermore, the results indicate that while walking activity is relatively higher, it is still insufficient to meet the recommended physical activity guidelines, which is a common pattern observed in various educational settings.[14]

The findings regarding daily sitting time further reinforce the sedentary lifestyle of the participants, with 139 individuals not recording their sitting time and 50 participants reporting high sitting time (9-12 hours per day). This is concerning, as excessive sitting has been linked to various health problems, including cardiovascular diseases and musculoskeletal disorders.[15] These trends are consistent with global studies, which show that prolonged sitting is a growing health concern among students, especially those in academic settings that require long hours of study.[16]

Regarding physical fitness, the majority of participants rated their fitness as average, with 176 participants reporting average general physical fitness, cardiorespiratory fitness, and muscular strength. A relatively small proportion of participants perceived their fitness as very good (5 for general fitness and 8 for cardiorespiratory fitness). These findings are comparable to studies that report moderate levels of self-perceived fitness among medical students.[17] However, it is notable that a substantial number of students reported poor or very poor physical fitness, indicating potential concerns about their overall health and well-being. While academic pressure is known to negatively affect physical activity levels, the lack of time for exercise and high stress levels contribute to these unfavorable fitness perceptions.[18]

In contrast to the low levels of physical activity, a significant portion of participants reported satisfaction with their medical education (178 out of 286), suggesting that while academic pressures may contribute to physical inactivity, students still derive a sense of accomplishment from their studies. This contrasts with some findings where academic dissatisfaction has been linked to higher levels of stress and lower levels of physical activity.[17–19] Interestingly, very few participants reported very low perceived fitness, suggesting that despite the lack of physical activity, students maintain a reasonably positive view of their fitness, which might reflect a normalization of stress-related lifestyle patterns.

Finally, the results of the IFIS score indicate that the majority of participants perceive their fitness as average, with 145 reporting average perceived fitness and 123 perceiving themselves as having good fitness. These results emphasize the gap between actual and perceived fitness levels, a phenomenon that is often seen in populations where physical activity is not prioritized.[20] The discrepancy between actual fitness levels and self-perception highlights the need for targeted interventions that not only promote physical activity but also encourage students to realistically assess and improve their fitness.

Conflict of Interest: The authors declare no conflict of interest.

Conclusion

This study highlights significant concerns about the low levels of physical activity, high sitting time, and average or poor fitness perceptions among medical students. The results underscore the need for university programs to prioritize student well-being by promoting physical activity, addressing sedentary behaviors, and fostering healthier academic environments. Future research should explore interventions that integrate physical activity into the academic curriculum to improve both physical and mental health outcomes for medical students.

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Original Article

Early versus Late Initiation of Oral Feeding after Cesarean Section

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Abstract

Background: *In cesarean delivery patients there has been an ongoing debate about the optimal timing for introducing oral intake. Few recent studies have demonstrated that, after cesarean delivery early oral feeding of patients is well-tolerated and is associated with a more rapid return to a normal diet. The aim of the study was to evaluate the safety of early oral feeding after uncomplicated cesarean delivery.* ***Materials and Methods:*** *It is a Randomized controlled trial (RCT) conducted in Department of Obstetrics and Gynecology, ICMH, Matuail, Dhaka from December 2011 to November 2012 over 172 pregnant women aged 20-40 years old. Pregnant women with term singleton pregnancy, uncomplicated cesarean section (CS) and cesarean section under spinal anesthesia were purposively selected as study population. Data were collected from face to face interview of the patient and recorded in a data collection sheet. Statistical analysis performed with SPSS (version 12) software for windows.* ***Results:*** *Among 172 study subjects, in group A 7(8.9%) and in group B 5(5.4%) developed mild ileus symptoms, which was not statistically significant ($p > 0.1$). Mean(±SD) of time interval of recovery of bowel sound after CS in group A was 7.86(±1.18) hours and in group B was 18.04(±2.84) hours which was statistically highly significant ($p < 0.001$). The mean(±SD) time interval between passing of stool and CS in group A was 20.25(±6.25) hours and in group B was 57.67(±4.21) hours which was statistically highly significant ($p < 0.001$).* ***Conclusion:*** *Early initiation of oral feeding after uncomplicated CS under spinal anesthesia did not increase the risk of gastrointestinal symptoms or paralytic ileus. In fact, it led to better outcomes and better patient satisfaction.*

Keywords: Caesarean section, Early oral feeding, Delayed oral feeding, Post-operative ileus, Bowel function.

Received: 24.03.2025, **Accepted:** 02.04.2025.

Ad-din Sakina Women's Medical College Journal. 2025; 6 (2) : 23-29

Introduction

Cesarean section (CS) is the most common major surgical procedure performed in gynecology and obstetrics department. In the industrialized world, it accounts for more than one-fourth of all deliveries in the USA in 2003 and 21% of all deliveries in England.[1] Post-cesarean section patient feeding practices vary considerably between institutions and individual practitioners, ranging from early oral fluids or food to delayed introduction of oral fluids and food which may be after 24 hours or more. The practice of allowing early oral fluids or food after cesarean section is often based on the assumption that the bowels are not usually exposed or handled during CS and therefore bowel function may not get disturbed. It has been suggested that, even following bowel surgery, bowel sounds change in character but bowel function continues uninterrupted. Studies have suggested that perioperative nutritional status is of more important to wound healing than overall nutritional status. In spite of these reports, the tradition of withholding or delaying the intake of fluids immediately postoperatively has been practiced without supportive evidence.[2] Traditionally, women who had a cesarean section had solid food withheld for the first 24 hours in the belief that this would prevent gastrointestinal complications.[1] Patients are usually given a graduated dietary regimen after cesarean delivery to decrease the likelihood of developing postoperative ileus.[3] Postoperative ileus (POI) is a common and clinically important problem occurring after surgical procedures that may contribute to significant postoperative morbidity, including delaying enteral nutrition, patient discomfort, prolonging hospitalization, increased postoperative pain, poor wound healing, increased risk of other postopera-

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tive complications such as pneumonia, pulmonary embolism, atelectasis, other nosocomial infections and increased health care cost.[4] A number of factors may influence the decision regarding early or delayed initiation of fluids and food. These include the type of abdominal incision, whether the peritoneum is closed, the extent of bowel irritation, and the use of additional operative procedures during CS. Low midline skin incision, swab packing during operation or cleaning amniotic fluid or blood in the abdominal cavity and closure of the peritoneum may also reflect the return of bowel function. All these factors need to be considered when determining the applicability of the findings of the trials on 'early' versus 'delayed' initiation of fluids and solid food .[2] Therefore, few recent studies have demonstrated that, after cesarean delivery early oral feeding of patients is well-tolerated and is associated with a more rapid return to a normal diet. Despite studies showing the feasibility of early oral feeding, many institutions still remain reluctant to modify their own practice. Patients are allowed to drink clear liquids only after return of bowel sounds and eat semisolids if flatus has passed.[3] Moreover, food and fluids be withheld on the day of the operation. Clear fluids can be offered the next day, thereafter full fluids and then a regular diet can be commenced. Alternatively, clear hot liquids can be given to women as early as one and a half hours after general anesthesia or immediately after cesarean section if a regional block was used. If these fluids are tolerated without difficulty, a regular diet may be offered at the next feeding if the patient desires it. Evidence shows patients who were fed 6-8 hours after cesarean deliveries had a shorter time interval from surgery to bowel movement, a short duration of intravenous fluid infusion and short hospital stays. Most of these studies had many confounding factors such as emergency cases, adhesions, blood losses, operative findings, and extended operative time.[5]

Opponents of early oral food or fluids argue that cesarean section is a major operation with a risk of complications arising from giving oral fluids or food soon after surgery. Abdominal surgery abolishes normal bowel motility immediately post operatively and the onset of bowel function is influenced by the type of surgery performed and that there may be many factors contributing to paralytic ileus (decreased or absence of intestinal peristalsis following abdominal surgery characterized by abdominal tenderness and distension, absence of bowel sounds, lack of flatus and by nausea and vomiting) other than early feeding, such as neural and hormonal factors, involvement of the sympathetic and the parasympathetic nervous system, use of narcotics and the type of anesthetic agents used.[2] After gastrointestinal surgery, traditional care regimens have usually included restricted oral intake to prevent signs of postoperative ileus and to protect the surgical anastomoses. When postoperative ileus develops, it is usually of short duration. Therefore, feeding within 24 hours after laparotomy is tolerated, and the feed is absorbed. The other rationale for withholding food or feeding orally is to allow anastomoses time to heal before being stressed by food. In addition, starvation changes the body's metabolism within 24 hours by increasing insulin resistance and reducing muscle function. Several studies suggested that after surgery, optimal nutritional status and maintenance of bowel function contribute significantly to wound healing. Early oral intake has also been suggested to reduce sepsis risk because of decreased bacterial colonization and decreased translocation through defects on the bowel mucosa into the blood circulation.[6] Some researchers stated that, food after cesarean section must not be allowed until bowel sounds are heard, as the woman is at risk of developing paralytic ileus due to handling of the bowel and fluids should be gradually introduced followed by light diet. So, the first 12 to 24 hours, food and fluids should be withheld. After this period, graded oral fluids can be given until full fluids are tolerated at about the second day postoperatively. It is only when bowel sounds are heard and flatus

is passed that regular diet can be allowed on about the third postoperative day.[2] Recently, the practice of delayed postoperative oral intake has been challenged by evidence from several gastrointestinal physiologic studies that examine contractile activity of the intestine. Gastric emptying and small intestinal absorptive capacity resume on the first postoperative day although colonic activity normally return within 48 hours after surgery. These data have suggested that the concept of postoperative ileus as paralysis of the entire bowel with complete absence of any functional contractile activity is misleading.[7] If postoperative ileus takes place, it is usually transient and not significant clinically. Also, it is known that typically the stomach and pancreas secrete one to two liters of fluid daily which is readily absorbed in the small intestine. Therefore, postoperative patients without a nasogastric tube are in fact tolerating high volumes of fluid even nothing is given orally. There are studies demonstrating that physical signs suggestive of resolution of postoperative ileus are not well correlated with the incidence of nausea and vomiting. Based on these findings, the concept of withholding oral intake until resolution of postoperative ileus does not seem to be reasonable. Cost saving, which appears to be an important issue in many countries or health care systems, is another potential advantage of early feeding scheme as the patients in this group tend to have a shorter length of hospital stay. Currently, there is an ongoing Cochrane systematic review on early enteral nutrition after colorectal surgery to determine whether there is evidence that early enteral nutrition following colorectal surgery is of clinical benefit.[7] A systematic review in patients undergoing cesarean delivery have shown that early oral intake is safe without any significant increase in complications.[2] Early initiation of oral feeding after CS is well tolerated by patients and cost effective, but is not yet practiced in most institutions. There is some evidence that early oral feeding after CS under spinal anesthesia has got several advantages. So, the aim of this study was to evaluate the safety of early postoperative oral feeding versus conventional delayed feeding for patients undergoing uncomplicated CS.

Materials and Methods

It is a Randomized controlled trial (RCT) conducted in Department of Obstetrics and Gynecology, ICMH, Matuail, Dhaka from December 2011 to November 2012 over 172 pregnant women aged 20-40 years old. Pregnant women with term singleton pregnancy, uncomplicated CS and CS under spinal anesthesia were purposively selected as study population. Pregnant women having hypertension, diabetes mellitus, complicated pregnancy were excluded from the study. After CS study population were divided into two groups as early feeding group (Group A; n = 79) and late feeding group (Group B; n = 93) by random sampling. All subjects had more than 6 hours of nothing per oral (NPO) time before surgery and underwent CS under spinal anesthesia. Women assigned to the early feeding started sips of water immediately after operation, followed by liquid at 2 hours, semi-solid at 4 hours and solid (rice, dal and fish) at 6 hours. Patients assigned in the delayed feeding started sips of water orally only after return of bowel sounds, approximately 24 hours after surgery, received a liquid diet for the next meal, followed by a soft diet for three subsequent meals and then solid food. Intravenous (i.v) fluids stopped when semisolid food tolerated well. In this study, it was acceptable if the patients ingested more than 75% of all offered food for one meal. The patients were examined thrice to observe nausea, vomiting, temperature, return of bowel sounds, and passage of flatus or stools. The following parameters were assessed and statistically compared between the two groups: patient profile, postoperative findings, symptoms and signs of mild to severe ileus, time to recovery of bowel sounds, passage of flatus, bowel movements, and febrile morbidity. The patients were allowed to be discharged from the hospital when they were able to tolerate a regular diet without

emesis, passed flatus or had a bowel movement, and demonstrated no febrile morbidity for at least 24 hours. In this study the time of onset of surgery was designated as 0 hour, the day of surgery was considered being the first 24 hours, second POD encompass hours 24-48 hours, third POD consisted of hours 48-72 , the operative time was defined as the time from the onset of the surgery to the completion of skin closure, the length of hospital stay was defined as the time interval between the onset of surgery to hospital discharge, mild ileus symptoms was included symptoms of anorexia, abdominal cramping, or non-persistent nausea and/or vomiting, severe ileus was defined as abdominal distention, greater than three episodes of vomiting in a 24-hour period, patients who required a nasogastric tube or abdominal radiographs and the inability to tolerate oral liquids and postoperative febrile morbidity was considered to be oral temperatures equal to or exceeding 100.4°F on two or more occasions, at least 6 hours apart, occurring greater than 24 hours after the surgery.

Data were collected from face to face interview of the patient and recorded in a data collection sheet. Statistical analysis performed with SPSS (version 12) software for windows. Comparison between both groups performed using the two-tailed student t-test for continuous variables, and the chi square test for categorical variables. Normally distributed data were reported by mean and standard deviation (SD), and means were compared by independent t-test. Throughout all analyses, $p < .05$ was considered statistically significant. The ethical committee of the Institute of Child and Mother Health (ICMH), Matuail, Dhaka, approved the study. Written informed consent was obtained from all participants.

Results

Among 172 women most (79.9% and 63.4%) were in 21-30 years age group where group A (79.7%) had mean(±SD) age 23.8(±3.34) years and group B (63.4%) had mean(±SD) 24.05(±4.59); exhibits in Table I. Table II shows previous cesarean section was the most common indication (32.9% and 37.6% in Group A & B respectively) followed by fetal distress (24.1% and 18.3%).

Table III shows that early initiation of oral feeding after cesarean section in group A developed mild ileus symptoms in 7(8.9%) patients and late initiation of oral feeding developed mild ileus symptoms in 5(5.4%) patients which was not significant statistically ($p > 0.10$).

Table IV shows the time interval between recoveries of bowel sound after cesarean section. Mean(±SD) time interval of recovery of bowel sound after cesarean section in group A was 7.86(±1.18) hours and in group B was 18.04(±2.84) hours which was statistically highly significant ($p < 0.001$).

Table V shows that the mean(±SD) time interval between passing of stool and cesarean section in group A was 20.25(±6.25) hours and in group B was 57.67(±4.21) hours which was also statistically highly significant ($p < 0.001$).

Table I: Distribution of study population by age group (*n*=172)

Age group (years)	Group A(*n*=79)	Group B(*n*=93)	*p*
	n (%)		
<20	16 (20.3)	26 (28.0)	
21-30	63 (79.7)	59 (63.4)	
31-40	0	8 (8.6)	
Mean(±SD) years	23.80(±3.38)	24.05(±4.59)	>0.50
Range (years)	18.0-30.0	18.0-36.0	

p, sig. 2-tailed; $p < 0.05$ = statistically significant

Table II: Indications for cesarean section (*n*=172)

Indications	Group A (*n* = 79)	Group B (*n*= 93)
	n (%)	
Previous cesarean section	26 (32.9)	35 (37.6)
Failure to progress	18 (22.8)	6 (6.5)
Fetal distress	19 (24.1)	17 (18.3)
Cephalopelvic disproportion	7 (8.9)	3 (3.2)
Malpresentation	4 (5.1)	11 (11.8)
Unfavorable cervix	1 (1.3)	0 (0)
Others	4 (5.1)	21 (22.6)

Table III: Distribution of study population by appearance of postoperative ileus symptom (*n* =172)			
Variables	**Group A(*n* =79)**	**Group B(*n* =93)**	***p***
	***n* (%)**		
Ileus symptom absent	72 (91.1)	88 (94.6)	> 0.10
Mild Ileus symptom	7 (8.9)	5 (5.4)	
p, sig. 2-tailed; $p < 0.05$ = statistically significant			

Table IV: Time interval between recovery of bowel sound and cesarean section (*n* =172)			
Time interval (hours)	**Group A(*n* =79)**	**Group B(*n* =93)**	***p***
	n (%)		
≤6	6 (7.6)	0	< 0.001
7-12	73(92.4)	0	
13-18	0	74(79.6)	
19-24	0	19(20.4)	
Mean (±SD) hours	7.86±1.18	18.04±2.84	
Range (hours)	3.0-12.0	14.0-24.0	
p, sig. 2-tailed; $p < 0.05$ = statistically significant			

Table V: Time interval between passing of stool and cesarean section (*n* =172)			
Time interval (Hours)	**Group A (*n* =79)**	**Group B (*n* =93)**	***p***
	***n* (%)**		
<20	43(54.4)	0	< 0.001
21-40	36(45.6)	1	
41-60	0	84(90.3)	
60-80	0	8(8.6)	
Mean(±SD)	20.25±6.25	57.67±4.21	
Range	8.0-36.0	28.0-68.0	
p, sig. 2-tailed; $p < 0.05$ = statistically significant			

Discussion

Following cesarean section (CS), the traditional practice is to withhold oral feeding until resolution of postoperative ileus (POI), often defined by passage of flatus and/or a bowel movement, with a physician-dictated regimen of gradual expansion of enteral feeding. This has been based upon concern about the possibility that early enteral feeding could exaggerate postoperative ileus, a pervasive problematic condition that might to be minimized because of its possible serious consequences including significant postoperative morbidity, prolonged hospitalization and increase healthcare costs. The exact etiology of ileus is unknown, but it is believed to be more common after laparotomy and major abdominal surgical procedures that enter the peritoneal cavity, notably those involving the bowel. In fact many factors are believed to contribute to the perpetuation of postoperative ileus, including intraoperative bowel manipulation, anesthetic agents, perioperative narcotics and postoperative sympathetic hyperactivity.[8]

This study found that early initiation of oral feeding after cesarean section in group A developed mild ileus symptoms in 7 (8.9%) patients and late initiation of oral feeding (group B) developed mild ileus symptoms in 5 (5.4%) patients, which was not statistically significant. This study is consistent with the findings of Ali et al.[4]

There is widespread belief that intestinal stasis or paralytic ileus follows all abdominal surgery. The exact cause of this clinical phenomenon is unknown, but it has been proposed that stimulation of pain fibers, excessive sympathetic tone, and the release of inhibitory neurotransmitters from the gut wall are involved mechanisms.[9]

This study found that the mean(±SD) recovery time of bowel sounds in early oral feeding group was shorter: 7.86(±1.18) hours then delayed oral feeding group: 18.04(±2.84) hours which was statistically highly significant ($p < 0.001$). Similar result was found by Abd and Mehta et al. where patients experienced rapid return of propulsive bowel movements during early oral hydration after elective cesarean section. It also effectively maintained fluid balance, successful breast feeding, less side effects and shorter hospital stay than the conventional intravenous hydration.[10,3]

In this study, authors found short time interval between passing of stool and cesarean section in group A 20.25±6.25 hours (mean±SD) than group B 57.67±4.21 hours, which was statistically highly significant ($p < 0.001$). Yaghmaei et al. also found

similar result where the early feeding group had a shorter mean time to first flatus and higher satisfaction compared to the late postoperative feeding.[11] Kramer et al. also reported that early consumption of solid food in women was well tolerated, with no significantly increased gastrointestinal complications.[12] Moreover, Reissman et al. concluded that, the safety of early postoperative oral intake, evidence from general surgical studies and a systematic review in patients undergoing cesarean delivery is safe without any significant increase in complications.[13] Additionally, Maeboud KAE examined the effects of gum chewing after cesarean section where they found that, gum chewing stimulates early return of bowel motility and it might be associated with decreased tolerance to the first postoperative diet. As with early enteral feeding the authors found no difference in mild ileus symptoms, yet abdominal distension was less in gum chewing group. So, they conclude that gum chewing after cesarean section is safe, well tolerated, and associated with rapid resumption of intestinal motility and shorter hospital stay; This has a potential impact on reducing the overall healthcare costs in case of routine implementation.[8] On the contrary, Watters et al. reported that early feeding was associated with a high rate of intolerance and might even lead complications.[14]

Benhamou et al. 2002 showed that early feeding after cesarean delivery reduced the severity and incidence of distressing symptoms of hunger and thirst, thus improving overall satisfaction score, with no increased side-effects.[15] Kramer et al. conclude that routine early feeding of subjects undergoing cesarean delivery can be implemented without an increase in gastrointestinal symptoms or paralytic ileus.[12]

Several clinical trials and a systematic review have shown that early feeding is as safe as the traditional progressive approach. Moreover, some additional benefits have been reported such as a more rapid return of bowel sounds and regular oral diet.[14] It is suggested that the early feeding regimen be considered as it offers benefits to the patients such as less suffering from thirst, hunger, shorter hospital stay and save cost. However, the management of postoperative feeding is dependent on the patients' desire after they have been counseled about the detail of both regimens.[5]

Conflicts of interest: The authors declare no conflict of interest.

Conclusion

Early initiation of oral food, following uncomplicated cesarean section under regional anesthesia, is safe, beneficial, well tolerated and does not cause significant increase in postoperative ileus; produces a better outcome, compared to delayed initiation of feeding.

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Original Article

Demography, Methods and Associated Factors of Self-Harm: A Cross-sectional Study

***Khan ST[1], Kibria MG[2], Arafat SMY[3]**

Abstract

Background: *Self-harm is a complex behavior with multifaceted causes, including psychological, social, and demographic factors. Understanding the patterns and motivations behind self-harm is essential for developing targeted prevention and intervention strategies. We aimed to see the demography, methods, and associated factors of self-harm in a tertiary care hospital of Bangladesh.* ***Materials and Methods:*** *A cross-sectional study was conducted on 47 patients who presented with self-harm attempet at Enam Medical College and Hospital. Data were collected using a semi-structured questionnaire assessing sociodemographic profiles, psychiatric history, methods used, and underlying reasons. Descriptive statistics were used for data analysis.* ***Results:*** *The majority of self-harm attempters were female (66%) with a mean age of 22.3 years. Most were in the 19-35 years age group (55.3%), with students (46.8%) and housewives and unemployed (40.4%) being the most affected occupational groups. Hanging (38.3%) and overdose (27.7%) were the most common methods. Intent to die was reported by 51.1% of participants, while 21.3% described the act as impulsive. Psychiatric disorders were present in 61.7% of individuals, and 48.9% had a history of previous attempts. Family conflict (37%) was the leading reason for self-harm.* ***Conclusion:*** *Young females with psychiatric comorbidities and exposure to familial and interpersonal stressors are at higher risk of self-harm. Interventions must focus on mental health awareness, early psychiatric support, and family-based counseling to effectively address this public health concern.*

Keywords: Self-harm, Suicide attempt, Psychiatric disorder, Life-event, Non-fatal attempt.

Received: 09.05.2025, **Accepted:** 17.05.2025 .

Ad-din Sakina Women's Medical College Journal. 2025; 6 (2) : 30-34

Introduction

Self-harm has emerged as a silent but growing crisis in Bangladesh. The patterns and factors influencing self-harm differ greatly across the globe, but research on this topic remains limited, especially beyond a few high-income western nations. In recent years, low and middle-income countries (LMICs), such as Bangladesh, have witnessed a surge in academic attention. Despite its enduring presence, self-harm remains largely hidden behind stigma, cultural taboos, and a lack of mental health awareness.[1] Various terms like non-suicidal self-injury (NSSI), attempted suicide, deliberate self-poisoning, deliberate self-injury, and 'para-suicide' etc., have been used interchangeably to mean self-harm. It is commonly used to describe a wide range of behaviors and intentions, including attempted hanging, impulsive self-poisoning, and superficial cutting in response to intolerable tension. As a concept, NSSI is replacing self-harm, where suicidal intent has been considered as a demarcation. However, sometimes it is difficult to separate NSSI from self-harm, as some attempts without suicidal intent may cause death, whereas some attempts with suicidal intent may be aborted. NSSI is not confined to any one culture or community; it affects millions of people worldwide, particularly adolescents and young adults. One latest meta-analysis found that 17.7% of individuals aged 10 to 19 had engaged in non-suicidal self-injury(NSSI).[2] Another study found that prevalence rates varied between 11.5% and 33.8%.[3] Among nonclinical adolescents, those who had not sought medical care-the lifetime prevalence of NSSI was estimated at 22%.[4] In South Asia, lifetime prevalence among nonclinical samples ranged from 21% to 33%, while annual prevalence ranged from 3.2% to 44.8%. For clinical samples, the lifetime prevalence ranged from 2% to 27%, and the annual prevalence ranged from 5% to

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16.4% .[5]

Bangladesh, a densely populated low and middle-income country in South Asia with a population of approximately 170 million, has limited and low-quality data on suicidal behavior, suicide and self-harm. The country does not have a self-harm surveillance system or a nationwide study assessing the prevalence of self-harming behaviors.[6] Understanding the demographic characteristics, methods and risk factors of individuals who engage in self-harm is essential to designing prevention strategy.

Usually, self -harm results from psychological pain, which is an outcome of complex interaction among multiple factors like mental illness, negative life-events, and various social factors.[7] Likewise, the suicidal behavior, various aspects of self-harm like methods, socio-demographic variations, psychiatric morbidity, and previous attempts need to be explored to consider the preventive measures. We aimed to see the demography, methods, and associated factors of self-harm in a tertiary care hospital.

Materials and Methods

This was a cross-sectional study. Data were collected from August 2021 to November 2023 by face-to-face interviews among the patients of Psychiatry department of Enam Medical College and Hospital with a semi-structured instrument. Patients who attended for mental health services after a self-harm attempt were interviewed. Both indoor and outdoor patients were approached. Data were analyzed using Stata version 17.0 (Stata Corp, Texas, USA). Frequencies and percentages were used to describe the socio-demographic characteristics, psychiatric disorders, methods of self-harm, and intent of attempt. We used the chi-square test of independence to determine bivariate associations between categorical independent variables. If any of the categorical variables showed expected frequency less than 5 observations in any of the cells, Fisher's exact test was performed. All statistics were tested using a two-sided 't' test, and a p-value of <0.05 was considered statistically significant. The current study was reviewed and approved by the ethical review committee of Enam Medical College and Hospital. We collected informed written consent from the patients and their legal guardians in case of adolescents before conducting the interview for data collection.

Results

The mean(±SD) age of participants was 22.3(±7.3) years, the age ranged from 10-50 years. The majority (55.3%) of the participants was aged between 19 and 35 years, studied up to secondary school (59.6%), were married (51.1%), and student (46.8%) (Table I). Among the patients, 61.7% had psychiatric disorders, and about 49% had past self-harm attempts (Table I).

Among the methods, hanging was found in 38.3%, followed by medication overdose (27.7%), poisoning (8.5%), and jumping from a height (Table II). More than half of the participants (51.1%) had suicidal intent, followed by impulsivity (21.3%), getting out of the situation, controlling others' behaviors, and demand fulfillment (Table II; Figure 1). Among the vulnerable factors, family conflict was the leading reason (37%), followed by mental illness (19.6%), marital problems (15.2%), financial problems, premarital affair issues, and sexual harassment (Table II).

This cross-sectional study examined the demographic profile, methods, intent, and associated factors of self-harm among 47 individuals. The findings provide the complex interplay of socio-demographic, psychological, and contextual elements influencing self-harming behaviors in a vulnerable population.

The study found a higher prevalence of self-harm among females (66%) compared to males (34%). This gender disparity is consistent with global trends, where females are more likely to engage in

Table I: Basic characteristics of suicide attempters (n=47)

Variable	Category	*n*	%
Sex	Male	16	34.0
	Female	31	66.0
Age Mean (±SD), Range	22.3 (±7.29), 10 to 50 years		
Age group	≤18 years	19	40.4
	19 to 35 years	26	55.3
	>35 years	2	4.3
Level of education	Illiterate/Primary	10	21.3
	Secondary	28	59.6
	Higher secondary and above	9	19.1
Marital status	Ever married	24	51.1
	Single	23	48.9
Occupation	Student	22	46.8
	Housewife	19	40.4
	Employed	6	12.8
Smoking status	Smoker	12	25.5
	Non-smoker	35	74.5
Length of hospital stay Mean (±SD), Range	3 (1.9), 1 to 7 days		
Length of hospital stay	1 to 2 days	27	57.4
	≥3 days	20	42.6
Psychiatric disorder	Present	29	61.7
	Absent	18	38.3
Previous attempt	Yes	23	48.9
	No	24	51.1
Previous hospitalization	Yes	10	21.3
	No	37	78.7

Discussion

non-fatal self-harm.[8] Other studies from Bangladesh also revealed the female dominance.[7,9,11]

The mean age of participants was 22.3 years, with the majority (55.3%) falling in the 19-35-year age group, highlighting young adults as the most at-risk. Similar age distribution was noted in other studies of self-harm and suicide in Bangladesh.[1,6,7,12] Notably, 40.4% of participants were aged 18 or younger, emphasizing the need

Table II: Methods, intent, and reasons/purpose of self-harm among suicide attempters (n=47)

Variable	Category	*n*	%
Methods	Hanging	18	38.3
	Overdose	13	27.7
	Benzodiazepines	5	10.6
	Cutting	5	10.6
	Poisoning	4	8.5
	Jumping from a height	2	4.3
Intent	To die	24	51.1
	Impulsive act	10	21.3
	To get out of the situation	7	14.9
	To control others' behavior	3	6.4
	To control anger	2	4.3
	To fulfill the demand	1	2.1
Reason	Family conflict	17	37.0
	Psychiatric illness	9	19.6
	Marital problems	7	15.2
	Financial issue	5	10.9
	Problems with a boyfriend or girlfriend	5	10.9
	Premarital affair	3	6.5
	Sexual threat	1	2.2

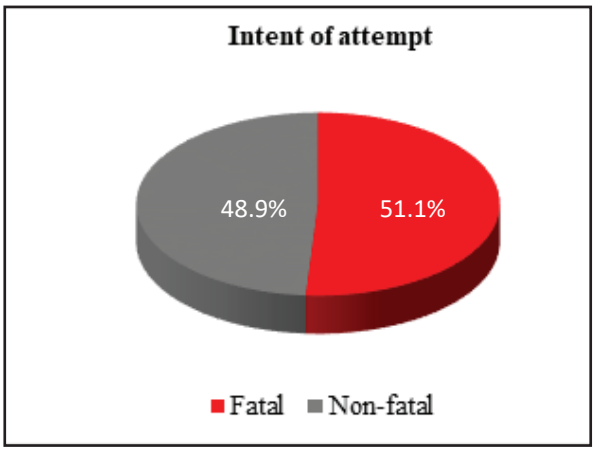

Figure 1: Intent of suicide among suicide attempters

for targeted mental health interventions in adolescents and young adults.

Educational background also showed notable patterns, with most individuals (59.6%) having secondary education and 21.3% being illiterate or

only educated up to the primary level. Usually, suicidal and self-harm behavior is more common among low socio-economic status and among persons with low educational attainment.[7,12] This suggests that limited education may be linked to poor coping mechanisms and a lack of awareness about mental health resources. Regarding marital status, the sample was nearly evenly split between ever-married (51.1%) and single individuals (48.9%), suggesting that marital status alone does not serve as a significant protective or risk factor.

Occupational status revealed that students (46.8%) and housewives or unemployed individuals (40.4%) were the most affected groups. Similar findings were noted among participants of previous studies in Bangladesh.[1,7,12] Students may experience stress due to academic pressure or relationship issues, while housewives and unemployed individuals may be burdened by isolation, financial dependence, or domestic problems. Smoking was also prevalent among 25.5% of participants, which could indicate an association with risky behaviors and psychological distress.

Psychiatric disorders were present in 61.7% of the participants, underscoring the critical role of mental illness in self-harm. However, only 21.3% had prior hospitalization, indicating a treatment gap and suggesting that many individuals may remain undiagnosed or untreated. Nearly half of the participants (48.9%) had previously attempted self-harm, further highlighting the importance of long-term follow-up and continuous psychological support. Previous studies conducted in Bangladesh revealed similar psychiatric morbidity among suicides and self-harm (61% and 71%).[7,13]

In terms of methods, hanging (38.3%) and overdose (27.7%) were the most frequently used, followed by benzodiazepine ingestion and cutting (each 10.6%). The choice of method often reflects accessibility and intent. Repeated studies in Bangladesh revealed hanging and poisoning as the dominant methods of suicide and self-harm.[7,12] The fact that 51.1% of individuals reported a genuine intent to die indicates the seriousness of these acts, whereas 21.3% were impulsive, reflecting a lack of emotional regulation and coping skills.

The most commonly reported reason for self-harm was family conflict (37%), followed by psychiatric illness (19.6%) and marital problems (15.2%). Other reasons included financial stress and issues with romantic relationships. These findings emphasize the significance of interpersonal and environmental stressors in triggering self-harm. Family conflict, relationship problems are revealed as risk factors in repeated studies in Bangladesh.[7,12,13]

Conclusion

This cross-sectional study reveals that self-harm is a critical socio-cultural and mental health issue, predominantly affecting young females, particularly students and unemployed individuals. Family conflict, psychiatric illness, and interpersonal problems emerged as the most common contributing factors. The use of lethal methods such as hanging and overdose, along with a high proportion of individuals expressing a genuine intent to die, highlights the seriousness of these attempts. These findings emphasize the urgent need for early screening, community awareness, and accessible mental health care. School-based counseling, family interventions, and destigmatization efforts should be prioritized. Strengthening these preventive strategies may reduce the incidence and recurrence of self-harming behaviors in high-risk populations.

Conflicts of interest: The authors declare no conflict of interest.

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