



KNOWLEDGE, ATTITUDES, PERCEPTIONS AND BELIEFS ABOUT REPRODUCTIVE AND SEXUAL HEALTH AMONG MALE UNIVERSITY STUDENTS IN PAKISTAN

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Abstract

Background: Sexual health is an important characteristic of emotional and physical health. It is one of the cornerstones for biological reproduction and human survival. In many societies, the subject of sexuality is considered as a social taboo even today. With little to no teaching and education on sexual health, misconceptions and malpractices are inevitable.

Aims: The study was carried out to evaluate the knowledge, attitudes, perceptions and beliefs about reproductive and sexual health among male university students in Pakistan in order to analyze the various prevalent factors that are involved in misinformation regarding sexual health.

Method: A descriptive cross-sectional study was conducted among male students from various universities in Pakistan. Structured questionnaires were developed and distributed among the sample population of about 400 male students and were collected as a research instrument. Only male university students related to the medical, health and other professions were included in the study.

Results: Our study conclusion depicted that the knowledge, attitudes, perceptions and beliefs related to sexual health of male medical students are comparatively better and sound as compared to the non-medical students. However, the percentage of satisfactory knowledge was not as much higher as required. Inadequate sex education and misinformation related to sexuality are considered to be the biggest barriers.

Keywords: Knowledge, attitudes, perceptions, beliefs, reproduction, sex education, sexual health, sexuality, masturbation

Introduction

Human sexual health is an important aspect of the total well-being of any individual [1-3,7]. WHO emphasizes that the appropriate knowledge and opportunity to live a normal sexual life is the basic right of everyone [6]. This is especially significant for college students who have newly developed sexual feelings and are actively interested in intimacy and sexual interaction [2,5]. However, sexual issues are frequent among people in their twenties due to inadequate information, unsafe sexual behaviours, and reduced quality of sexual health care [3-5]. In terms of tradition, the inclusion of sexuality in the study of public health is different from earlier ideas that sexuality is primarily a moral matter [8,9]. When it comes to issues like teenage sexual abstinence, abortion, contraception, and condom usage, there can be tension between ideas about sexual health and the promotion of it with some religious beliefs [7]. The incorporation of sexuality in public health is sometimes seen as improving the behaviour of a population, which implies that health guidelines replace the moral principles yet to serve the same purpose [2-4]. Thus, the idea of sexual health has political as well as moral ramifications [6]. This definition of sexuality was therefore predicated on the notion of a *natural sexual act* whose sole purpose was the continuation of species [9]. According to this viewpoint, venereal disorders were viewed as severe threats to the population during the end of the 19th century, and the struggle against prostitution was seen as an effort to stop the decline of venereal disease [7-9]. Masturbation and all other types of spermatorrhea were viewed as possible sterility and impotence triggers. Impotence was considerably more of a medical issue than sexual dissatisfaction since it impeded conception [1-3,8].

Unsafe sexual behaviours are directly linked to contagious STDs like HIV/AIDS, Syphilis, Herpes Simplex, etc. [7-8]. Furthermore, a lack of sexual education not only encourages risky behaviours, but also directly affects the spread of STDs, HIV, and other sexually transmitted infections [4-5]. In lower-middle-income countries like Pakistan, where the burden is far more than acknowledged [6]. The study targeted both medical and non-medical students. Medical students have a higher level of sexual knowledge than other students, and their sexual attitudes and behaviours will influence their medical attitudes and behaviours toward patients when they become physicians. The competence and readiness to discuss sexual problems with patients is dependent not only on knowledge of sexual physiology and pathology but also on the ideas and attitudes towards sexuality [2,4,8]. Most developed and developing nations undertook a number of national surveys on sexual behaviour [9]. When oral contraception first became available, studies concentrated on heterosexual interactions, which were characterized as adulterous, married, or premarital connections [5,9]. As part of an epidemiological structure of sexuality, the surveys conducted in the context of HIV-AIDS placed a greater emphasis on homosexual behaviour, anal practices, and multiple partner circumstances. Only a few studies have been devoted to reproductive and sexual health among male university

students in Pakistan. So it is now critical to comprehend sexual knowledge, attitudes, perception, and beliefs (KAPB) among male university students.

Our research aims to highlight the effects that lack of sexual health knowledge has on the next generation, targeting the young adults of different educational institutes in Pakistan. The topic of sex remains a taboo in this day and age too, although we had to convince many of the students and have had to assure them that this study was anonymous. With proper provision of sexual knowledge, society can be helped out a lot as it provides awareness to those that require it the most like people belonging to the lower income class who are often the worse affected as they cannot afford to sustain their larger families. While the affording and financially fortunate class keeps to one or few children. Proper education and awareness can help by providing an in-depth knowledge about sexually transmitted infections and other disease borne infections from the practice of unsafe and unprotected sex as Pakistan also has a rise in the amount of HIV patients which is caused by many factors including lack of information. The problem of overpopulation can also be addressed as the population growth of Pakistan is exponentially greater than most countries if the growth is not restricted in near future it could lead to many problems as the country may not be able to sustain its population. Another major issue arising from the lack of knowledge related to sexual frustration are the very common cases of child abuse and rape which can be controlled by the provision of adequate information. Sexual knowledge is also essential for a happy and content married life as our country has a higher than average divorce rate.

Ethics approval: The approval of the study from ethical review board was not taken as the study had no funding source and no involvement of vulnerable participants. The ethical principles of self-determination were maintained throughout the study. The participants were treated as autonomous bodies. They were informed about the study and were free to choose whether they wanted to shell out their information.

Methodology: A descriptive non-experimental cross-sectional study was conducted by randomly enrolling a total of 400 male students from various universities of Pakistan including students from both medical and non-medical departments. Data were collected at different intervals over the period of six months. A minimum of 400 students were selected by using a convenience sampling technique. A data recording form was designed which consisted of three main sections: 1) demographics which includes age ranging from 18 to 30 years, marital status (married/unmarried), area of residence (urban/rural), education (primary/secondary/tertiary), the field of study and socioeconomic status. 2) Knowledge (a total of 13 choice-based questions regarding knowledge about pregnancy, intercourse and masturbation) and 3) Attitudes, perceptions & beliefs regarding reproductive and sexual health (a total of 22 questions regarding sex education, pre-marital sex, contraceptives, masturbation, close contacts in public, life partner, prostitution, homosexuality, virginity, birth control, and pornography).

IBM SPSS ver.26 was used for data entry and analysis. Categorical data were summarized in frequency tables which include a number of samples, questions, and percentages.

Results & Discussion:

• Demographics:

This research study offers insights into the perspectives and experiences of 400 male college students in Pakistan, encompassing a diverse range of academic backgrounds, including both medical and non-medical fields. It is imperative to first understand the demographic composition of the study participants as it sheds light on the context and potential factors influencing their sexual knowledge and behaviors.

A striking demographic observation is that a significant majority of the respondents addressed from urban areas, with 90.4% of medical students and 9.6% of non-medical students living in urban

locales. This urban-rural divide can carry implications for access to sexual education and healthcare services. Additionally, socioeconomic status played a role, with 91.8% of medical students and 8.2% of non-medical students falling within the middle-class bracket. These demographic distinctions are crucial to consider when examining the sexual attitudes and behaviors of the participants.

Furthermore, age distribution among the two groups revealed interesting disparities, with 58.9% of medical students aged 20-22 and 53.7% of non-medical students falling within the 22-24 age range. These variations in age distribution could potentially influence participants' exposure to sexual knowledge and experiences, which warrants careful consideration.

Table 1: Population demographics

Characteristics	Field of Study		p-values
	Medical, n=146 (%)	Non-Medical, n=257 (%)	
Area of Residence			0.135
Urban	132 (90.4)	219 (85.2)	
Rural	14 (9.6)	38(14.8)	
Socioeconomic Status			
Lower	5 (3.4)	6 (2.3)	0.653
Middle	134(91.8)	242(94.2)	
Upper	7 (4.8)	9(3.5)	
Age			0.000
18-20	13 (8.9)	35 (13.6)	
20-22	86 (58.9)	37 (14.4)	
22-24	33 (22.6)	138 (53.7)	
24-26	13 (8.9)	29 (11.3)	
26-28	1 (0.7)	3 (1.2)	
28-30	0 (0.0)	15 (5.8)	

• **Sources of Information:**

Understanding where the participants obtained their sexual health knowledge is pivotal to comprehend the foundations of their beliefs and attitudes. The study findings demonstrate that the primary sources of sexual health information for these college students were friends and the internet. Notably, 76.7% of medical students and 58% of non-medical students relied on friends for information, while 77.4% of medical students and 72.8% of non-medical students turned to the internet. Notably, a subset of participants, 27.4% of medical students and 27.6% of non-medical students, indicated pornography as a source of information. These statistics underscore the profound influence of peer networks and digital media in shaping sexual awareness among young adults.

• **Knowledge about Reproductive & Sexual Health:**

A critical aspect of this study was to assess the level of knowledge among participants regarding reproductive and sexual health. The results unveiled significant disparities and misconceptions in various areas:

- Concerning the belief that "Women should take a shower during the menstrual cycle," it is noteworthy that 53.4% of medical students considered it correct, whereas 57.6% of non-medical students deemed it incorrect (p=0.033).
- When confronted with the statement "Possibility of a teenager getting pregnant after a single instance of intercourse," responses revealed that 76.7% of medical students and 66.5% of non-medical students regarded it as incorrect (p=0.032).
- Similarly, in the context of the likelihood of a teenager contracting a sexually transmitted infection after a solitary instance of intercourse, the majority of both medical (76.7%) and non-medical (66.5%) students rejected this notion as incorrect (p=0.032).

These findings underscore the pressing need for comprehensive, accurate, and accessible sexual education programs aimed at rectifying these misconceptions and promoting safer sexual behaviors among young adults.

Table 2: Sources of Information

Sources	Field of Study		p-values
	Medical, n=146 (%)	Non-Medical, n=257 (%)	
Friends			0.000
No	34 (23.3)	108 (42.0)	
Yes	112 (76.7)	149 (58.0)	
Internet			
No	33 (22.6)	70 (27.2)	0.305
Yes	113 (77.4)	187 (72.8)	
Books, CDs			
No	120 (82.2)	216 (84.0)	0.631
Yes	26 (17.8)	41 (16.0)	
Magazines, Newspapers			
No	130 (89)	216 (84.0)	0.167
Yes	16 (11.0)	41(14.0)	
Relatives			
No	130 (89)	238 (92.6)	0.222
Yes	16 (11.0)	19 (7.4)	
TV			
No	122 (83.6)	215 (83.7)	0.980
Yes	24 (16.4)	42 (16.3)	
Siblings			
No	144 (98.6)	253 (98.4)	0.882
Yes	2 (1.4)	4 (1.6)	
Mother			0.639
No	145 (99.3)	254 (98.8)	
Yes	1 (0.7)	3 (1.2)	
Father			0.519
No	141 (96.6)	251 (97.7)	
Yes	5 (3.4)	6 (2.3)	
Porn Movies			0.961
No	106 (72.4)	186 (72.4)	
Yes	40 (27.4)	71 (27.6)	

• **Attitudes, Perceptions, and Beliefs about Sexual Health:**

Understanding the attitudes and beliefs of participants towards sexual health is equally vital. The research uncovered a spectrum of attitudes and beliefs:

- Approximately 71.2% of participants, regardless of their academic background, disapproved of individuals having more than two sexual partners concurrently (p=0.000).
- Pertaining to the influence of explicit content, notably, 46.6% of medical students and 44.4% of non-medical students concurred that "Pornography, X-rated movies, and erotic literature contribute to promiscuity" (p=0.000).
- Conversely, concerning the statement that "Those who masturbate are mentally disturbed," medical students predominantly disagreed (28.8%), while non-medical students exhibited a more balanced response (p=0.000).

These statistics reflect the intricate tapestry of attitudes and beliefs pervading the realm of sexual health among the study participants.

Table 3. Knowledge Questions about Sexual Health & Reproduction

Knowledge Questions	Field of Study		p-values
	Medical, n=146 (%)	Non-Medical, n=257 (%)	
Women should take a shower during menstruation period			0.772
Incorrect	106 (72.6)	190 (73.9)	
Correct	40 (27.4)	67 (26.1)	
Possibility of a teenager getting pregnant after having intercourse once			0.033
Incorrect	68 (46.6)	148 (57.6)	
Correct	78 (53.4)	109(42.4)	
Possibility of a teenager getting infected STI after having intercourse once			0.032
Incorrect	112 (76.7)	171(66.5)	
Correct	34 (23.3)	86(33.5)	
Fetal gender is decided by the sperm			0.172
Incorrect	79 (54.1)	157 (61.1)	
Correct	67 (45.9)	100 (39.9)	
Men less than 16 years old still have reproductive capabilities			0.054
Incorrect	69 (47.3)	147 (57.2)	
Correct	77(52.7)	110 (42.8)	
Sperm can survive in the vagina about 2-3 days			0.526
Incorrect	92 (63)	170 (66.1)	
Correct	54 (37)	87 (33.9)	
Masturbation is not harmful			
Incorrect	94 (64.4)	184 (71.6)	0.132
Correct	52 (35.6)	73 (28.4)	
Sperm cannot be transformed into blood and is not a source of power			
Incorrect	122 (83.6)	226 (87.9)	0.219
Correct	84 (16.4)	31 (12.1)	
Nocturnal emissions will affect health and sexual ability			
Incorrect	130 (89)	222 (86.4)	0.440
Correct	16 (11)	35 (13.6)	
Consanguineous will lead to high possibility of a defective fetus			
Incorrect	107(73.3)	205(79.8)	0.135
Correct	39 (26.7)	52 (20.2)	
The probability of pregnancy for women with normal sexual intercourse decreases with age, especially after 35 years old			
Incorrect	103 (70.5)	172 (66.9)	0.453
Correct	43 (29.5)	85(33.1)	
Pregnancy is possible if the female a has irregular menstrual cycle			
Incorrect	119(81.5)	225 (87.5)	0.099
Correct	27 (18.5)	32 (12.5)	
Pregnancy is possible if intercourse occurs only once			
Incorrect	100(68.5)	192(75.9)	0.108
Correct	46 (31.5)	62(24.1)	

Table 4. Attitudes, Perceptions and Beliefs.

Perceptions and Belief Questions	Field of Study		p-values
	Medical, n=146 (%)	Non-Medical, n=257 (%)	
Sex education in school will not cause excessive sexuality			
Totally Disagree	14 (9.6)	28 (10.9)	
Disagree	38 (26.0)	61 (23.7)	0.453
Neutral	41(28.1)	82(31.9)	
Agree	38 (26.0)	50 (19.5)	
Totally Agree	15 (10.3)	36 (14.0)	
Pre-marital sex is permitted if young couples are very close			
Totally Disagree	84 (57.5)	124 (48.2)	0.392
Disagree	30 (20.5)	60 (23.3)	
Neutral	15(10.3)	39(15.2)	
Agree	10(6.8)	23 (8.9)	
Totally Agree	7 (4.8)	11 (4.3)	
Contraceptive knowledge will not result in the pre-marital sexual behavior of youth			
Totally Disagree	34(23.3)	46 (17.9)	0.095
Disagree	18 (12.3)	60 (23.3)	
Neutral	53(36.3)	88(34.2)	
Agree	30 (20.5)	48 (18.7)	
Totally Agree	11 (7.5)	15(5.8)	
Parents should not prevent their children from masturbating			0.000
Totally Disagree	60(41.1)	92(35.8)	
Disagree	43(29.5)	65(25.3)	
Neutral	18(29.5)	54(21.0)	
Agree	18(12.3)	28(10.9)	
I can accept one having more than two sexual partners at the same time			0.000
Totally Disagree	104(71.2)	91(35.4)	
Disagree	21(14.4)	55(21.4)	
Neutral	6(4.1)	47(18.3)	
Agree	11(7.5)	47(18.3)	
Totally Agree	4(2.7)	17(6.6)	
If the price is fair, I can accept prostitution			0.000
Totally Disagree	77(52.7)	190(72.9)	
Disagree	29(19.9)	16(6.2)	
Neutral	24(16.4)	19(7.4)	
Agree	7(4.8)	26(10.1)	
Totally Agree	9(6.2)	6(2.3)	
Sex education can cultivate sexual attitudes of respect and responsibility			0.000
Totally disagree	8(5.5)	22(8.6)	
Disagree	27(18.5)	24(9.3)	
Neutral	68(46.6)	15(5.8)	
Agree	35(24)	162(63)	
Totally agree	8(5.5)	34(13.2)	
Pre-marital sex is helpful in adapting to future marriage life			0.000

Totally disagree	94(64.4)	63(24.5)	
Disagree	19(13)	73(28.4)	
Neutral	9(6.2)	33(12.8)	
Agree	15(10.30)	62(24.1)	
Totally agree	9(6.2)	26(10.1)	
Homosexuality is disease and should be treated			0.000
Totally disagree	7(4.8)	20(7.8)	
Disagree	43(29.5)	26(10.1)	
Neutral	49(33.6)	28(10.9)	
Agree	22(15.1)	77(30)	
Totally agree	25(17.1)	106(41.2)	
Homosexuality is a personal choice			0.000
Totally disagree	19(13)	36(14)	
Disagree	71(48.6)	20(7.8)	
Neutral	7(4.8)	76(29.6)	
Agree	45(30.8)	102(39.7)	
Totally agree	4(2.7)	23(8.9)	
Virginity should be preserved until marriage			0.000
Totally disagree	5(3.4)	12(4.7)	
Disagree	6(4.1)	25(9.7)	
Neutral	50(34.2)	16(6.2)	
Agree	44(30.1)	82(31.9)	
Totally agree	41(28.1)	122(47.5)	
Pre-marital sex is acceptable if the couple is engaged			0.000
Totally disagree	98(67.1)	68(26.5)	
Disagree	23(15.8)	106(41.2)	
Neutral	4(2.7)	32(12.5)	
Agree	10(6.8)	37(14.4)	
Totally agree	11(7.5)	14(5.4)	
A man loses respect for a woman who has had premarital sex			0.000
Totally disagree	6(4.1)	19(7.4)	
Disagree	26(17.8)	24(9.3)	
Neutral	61(41.8)	9(3.5)	
Agree	34(23.3)	117(45.5)	
Totally agree	19(13)	88(34.2)	
Sex education in secondary schools will cause a rise in pre-marital intercourse			0.000
Totally disagree	6(4.1)	26(10.1)	
Disagree	55(37.7)	18(7)	
Neutral	41(28.1)	82(31.9)	
Agree	27(18.5)	91(35.4)	
Totally agree	17(11.6)	40(15.6)	
Easy access to birth control and devices encourages promiscuity			0.000
Totally disagree	5(3.4)	7(27.7)	
Disagree	14(9.6)	49(19.1)	
Neutral	30(20.5)	91(35.4)	
Agree	68(46.6)	84(32.7)	
Totally agree	29(19.9)	26(10.1)	
Pornography, X-rated movies and erotic literature contribute to promiscuity			0.000
Totally disagree	0(0)	1(0.4)	
Disagree	0(0)	15(5.8)	
Neutral	55(37.70)	33(12.8)	
Agree	68(46.6)	114(44.4)	
Totally agree	23(15.8)	94(36.6)	

It is dangerous to fantasize about sex			
Totally disagree	8(5.5)	32(12.5)	0.000
Disagree	13(8.9)	53(20.6)	
Neutral	23(15.8)	73(28.4)	
Agree	74(50.7)	64(24.9)	
Totally agree	28(19.2)	35(13.6)	
Those who masturbate are emotionally disturbed			
Totally disagree	5(3.4)	31(12.1)	0.000
Disagree	42(28.8)	14(5.4)	
Neutral	47(32.2)	42(16.3)	
Agree	34(23.3)	109(42.4)	
Totally agree	18(12.3)	61(23.7)	
Masturbation causes weakness			
Totally disagree	3(2.1)	13(5.1)	0.000
Disagree	27(18.5)	35(13.6)	
Neutral	56(38.4)	13(5.1)	
Agree	41(28.1)	116(45.1)	
Totally agree	19(13)	80(31.1)	

Conclusion:

This study investigates an in-depth analysis of the **sexual knowledge, attitudes, and beliefs** held by male college students in Pakistan, shedding light on critical areas that warrant attention and intervention. **Demographically**, the research underscores the prevalence of urban residence and middle-class backgrounds among participants, signifying the need for tailored sexual education initiatives considering these socio-economic aspects. Notably, the study reveals that friends and the internet serve as the **primary sources of sexual knowledge**, with a noteworthy fraction of students turning to pornography for information. Furthermore, the findings uncover prevalent misconceptions surrounding menstruation, pregnancy, and sexually transmitted infections, underscoring the pressing imperative for comprehensive sexual education programs.

In the realm of **attitudes and beliefs concerning sexual health**, this study unveils a diverse landscape of perspectives. It underscores the significance of fostering open dialogues within educational institutions and society at large, emphasizing the role of informed discussions in equipping young adults to make prudent choices regarding their sexual well-being. In essence, this research impels the **implementation of evidence-based sexual education programs and proactive discourse to dispel misconceptions**, ultimately empowering the youth of Pakistan to make informed, responsible, and health-conscious decisions pertaining to their sexual lives.

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