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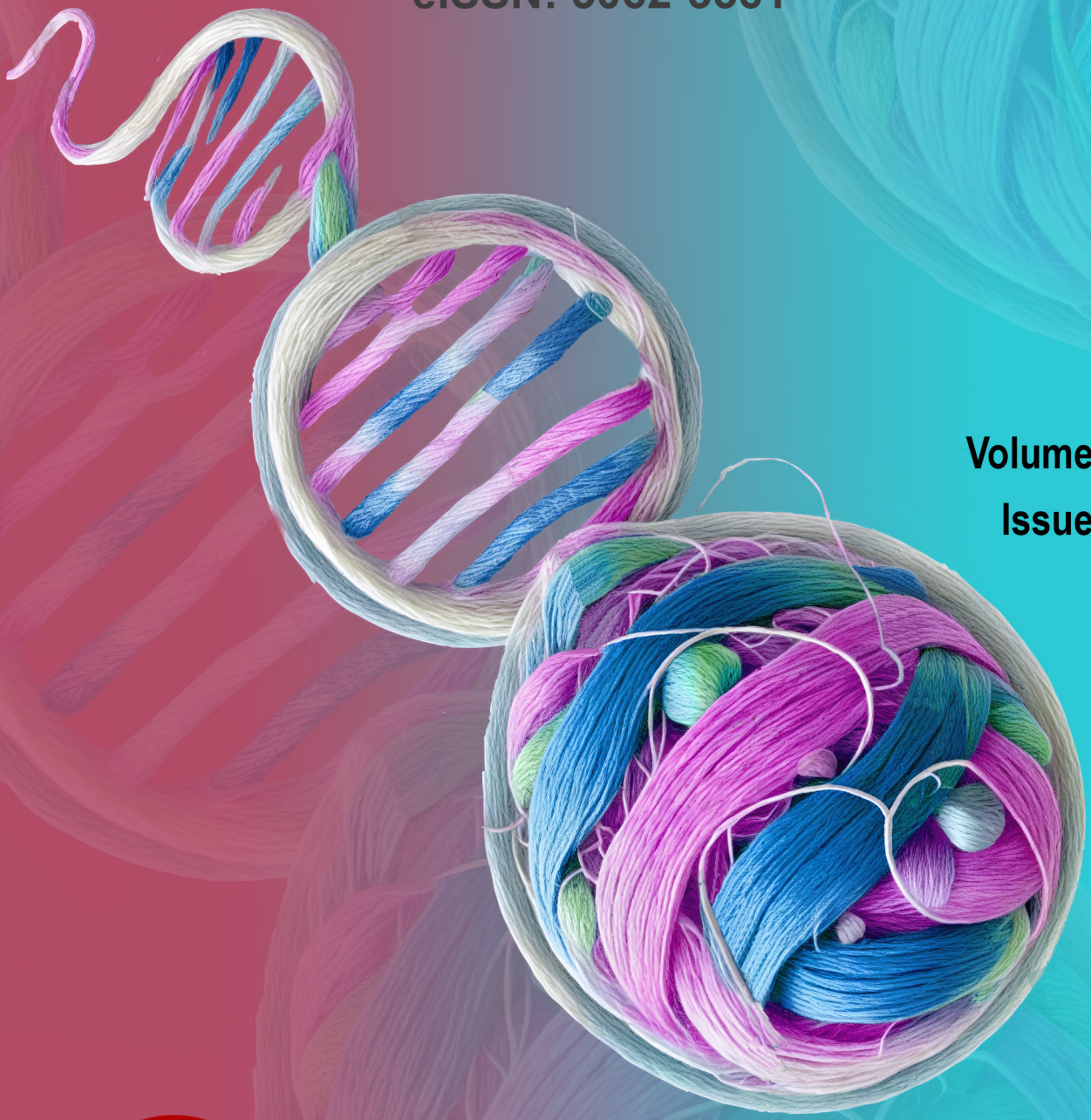

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In this first issue, "Awareness and Attitudes of Healthcare Professionals Regarding Denied Pregnancies", "Assessment of Knowledge of Patients Regarding Human Papillomavirus in A Tertiary Hospital", which evaluates the level of knowledge of patients about human papillomavirus, "Examining Abortion-Related Stigma Among International Students Studying in Northern Cyprus" and 'Effect of Reproductive Health Education on Students' Reproductive Behavior and Attitudes Towards Family Planning" which investigate the effect of reproductive health education on students' reproductive behavior and attitudes towards family planning.

In addition, "My Doctor is not Comfortable - So Maybe I Should not Talk About It? A Review on the Lack of Sexual Education in Medical Schools", 'Natural and Herbal Solutions for Managing Depression and Anxiety', and 'Sexual Life According to Personality Traits', which examines sexual life according to personality traits.

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Editor

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CONTENT

ORIGINAL ARTICLES

REVIEW ARTICLES

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ORIGINAL ARTICLE

Awareness and Attitudes of Healthcare Professionals Regarding Denied Pregnancies

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Abstract

Objective: A denied pregnancy is a condition in which the expectant mother does not recognize her pregnancy even though it is advanced. In a denied pregnancy, the expectant mother realizes her pregnancy either in the twentieth week of pregnancy or when labor begins. The fact that the expectant mother is unaware of her pregnancy carries life-threatening risks for both mother and baby. In full denial pregnancies, births often take place in environments prone to complications and without any medical assistance. In addition, there are very negative and tragic consequences such as death of the newborn, postpartum emotional distress, trauma and rejection of the newborn. The first intervention to mothers who deny their pregnancy is done by health professionals.

Material and Methods: In this study, we aimed to measure the awareness and attitudes of healthcare professionals about denied pregnancies through two clinical vignettes. Sociodemographic Form and Awareness and Attitude Screening Questionnaire consisting of 14 questions each were given to 240 healthcare professionals living in Istanbul. T test, ANOVA and Post Hoc Test were used to analyze the data.

Results: The significance level of the study was taken as p<0.05. As a result of the study, it was observed that the health workers who participated in the research had difficulty in defining and making sense of the phenomenon and their awareness was low. Participants reported feeling more anger for the clinical vignette with a high rate of neonatal neonatality. However, obstetricians, midwives and psychiatrists would be the first people these patients would encounter.

Conclusion: Increasing the awareness of healthcare professionals will provide appropriate medical care, psychological support and forensic medical assistance to these patients.

Keywords: pregnancy, denial, denial of pregnancy, health care worker, attitude

INTRODUCTION

A health worker is someone who provides care and services to the sick and disabled, either directly as a doctor or nurse, or indirectly as an assistant or assistant staff. Awareness can be defined as a person's nonjudgmental observation of internal and external stimuli and developing an understanding of what is going on in the current situation (1,2). Attitudes on the other hand can be described as evaluations, ranging from positive to negative, that effectively summarize previous life experiences and guide thought and action (3).

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A denied pregnancy is when the expectant mother does not realize that she is pregnant, even though it is advanced. If the pregnancy is recognized at the twentieth week of pregnancy or later, it is defined as a "partially denied pregnancy". If the pregnancy is recognized when labor begins, it is defined as a "fully denied pregnancy" or "complete denial of pregnancy" (4).

Denial of pregnancy is not a new phenomenon. As early as 1681, gynecologist François Mauriceau reported that expectant mothers who menstruated throughout their pregnancy could ignore the fact that they were carrying a baby because of this bleeding. Mauriceau called this phenomenon "méconnaissance de la grossesse" (unawareness of pregnancy) (5). It is not known exactly how common denied pregnancy is. The most comprehensive study on this subject was conducted by Wessel and Buscher in Berlin, Germany, between 1995 and 1996. A total of 29,462 births were examined in the screening study covering 5 institutions and 19 hospitals providing birth services throughout the city and it was observed that the rate of expectant mothers who realized their pregnancy after the twentieth week was (1/475) and the rate of expectant mothers who realized their pregnancy with the onset of premature contractions or at the time of birth was (1/2455) (6). The rate of partially denied pregnancies was found to be (1/400) in Austria (7), (1/516) in the USA and (2.3/1000) in France (8). Fully denied pregnancy rates were reported as (1/2455-2500) in Austria[7], (1/2500) in England (1/2500) (9) and (3/10.000) in France (8). In an epidemiologic study conducted by Yüce et al. in Turkey, expectant mothers who partially denied their pregnancies were reported as (1/526) (10). It is argued that denied pregnancy is not a rare phenomenon. The rate of fully denied pregnancies is 3 times higher than the rate of triplet births and the rate of partially denied pregnancies is 2 times higher than the rate of blood incompatibility (6).

Based on the idea that possible cases can be prevented by defining the characteristics of expectant mothers who deny their pregnancies in this case, which carries great risks for the mother and newborn, the researchers examined the characteristics of expectant mothers who deny their pregnancies (11,7). As a result of these studies it was underlined that it is not possible to define the characteristics of expectant mothers who deny their pregnancies with precise lines. Expectant mothers who experience this phenomenon constitute a heterogeneous group. Therefore, it has been reported that it is not possible to identify which women are at risk (7).

There are risky consequences of denied pregnancies. Not recognizing the pregnancy makes it impossible for the expectant mother to bond with her baby and prepare for her role as a mother during pregnancy, and there is a lack of prenatal care. Because these women are unaware of their pregnancy; unprepared, sudden, unexpected, rushed births often occur in an environment that is more prone to complications and the mother and newborn do not receive the necessary medical care (7). Lack of pregnancy follow-up and a lifestyle and an appropriate diet for pregnancy can negatively affect the development of the baby in the womb and reduce the chances of survival of the newborn after birth. It was also reported that the fetal and neonatal mortality rate in these babies was around 7% (4). Researchers reported significantly higher fetal risk and much poorer pregnancy outcomes in denied pregnancies compared with population perinatal statistics (12).

Neonaticide is used to describe the killing of a baby by one of its parents within the first 24 hours after birth (13). Mothers who cause the death of their newborn babies (neonatisid) are usually sent to prison or released on parole (14-16). Stotland (1998) noted in his study that denied pregnancies are sometimes a mystery to psychiatrists as well as to the rest of the world, noting that at the time he wrote his study, another young woman was on trial for the murder of her newborn baby (15). Researchers reported that the expectant mother reacted to an unexpected birth in the form of acute dissociation, so the condition should be considered within the scope of "mental disorders that temporarily affect the perception and interpretation of the person's judgment". They argued that the acute stress reaction of the mother is a short-lived transient state, that there is usually confusion during the event, and therefore the actions against the baby should not be considered as a conscious action (4).

It was thought that the awareness of health workers about denied pregnancies was very low and their attitudes towards completely denied pregnancies,

especially those resulting in neonaticide, were very negative.

When the literature was examined, no study was found to examine the knowledge, awareness and/or attitudes of healthcare professionals who will be in first contact with these patients and manage the treatment process about denied pregnancies. A study shows that 38% of expectant mothers who are not aware of their pregnancy visit doctors, yet they do not receive a pregnancy diagnosis (7). However, if these specialists are aware of the phenomenon of denied pregnancies and diagnose the symptoms, they will provide early diagnosis and intervention. In fully denied pregnancies, they will be able to manage the process by being aware of the case. In this way, the risk to the health and life of the mother and baby can be (relatively) avoided.

Denial of pregnancy can lead to negative and tragic consequences such as neonatisid, postpartum emotional disturbance, trauma or rejection of the newborn. The primary caregivers of these patients are obstetricians, midwives, psychiatrists and physicians. Increasing the awareness of these professionals on the subject will provide appropriate medical care, psychological support and forensic medical assistance to these patients. The aim of this study is to investigate the awareness and attitudes of professional group members who may encounter patients with denied pregnancies.

MATERIAL AND METHODS

In the research conducted in an online survey environment, approval was obtained from the Üsküdar University Non-interventional Research Ethics Committee (Approval Number: B.08.6.Yök.2 .Üs.0.05.0.06/2017/324). Healthcare professionals reached through social media were invited to fill out the Awareness and Attitude Screening Questionnaire. The sample of the research consists of 240 healthcare professionals living in Istanbul.

Data Analysis Techniques

T test was used to test whether the difference between the means of two unrelated samples was significant. When more than two groups were compared, one-way analysis of variance (ANOVA) was used in unrelated samples. In cases where there was a significant difference, multiple comparison tests (post hoc test) were used to understand which groups the difference was between. The significance level of the research was taken as $p<0.05$. The findings obtained as a result of the analysis were transformed into tables and interpreted in accordance with the research questions.

The data collection tools used in the research are presented below:

Sociodemographic Form: With this form prepared by the researchers, the participants' age, gender, marital status, whether they or, for male participants, their spouses had experienced pregnancy, whether they had children, and their occupations were obtained.

Awareness and Attitude Screening Questionnaire: In this questionnaire prepared by the researchers, two clinical vignettes were given and the same questions were asked for each vignette.

Vignette 1: Ms. Ayşegül is a 24-year-old young woman who has been engaged for one year, graduated from high school, does not work, has not been diagnosed with a psychiatric illness before and can lead a normal daily life. She gives birth in the toilet of the hospital where she goes to with complaints of abdominal pain and leaves the hospital after putting the baby in a plastic bag and leaving it in the toilet garbage. The baby is found hours later by hospital staff and is treated in the neonatal intensive care unit. Ms. Ayşegül was identified through security camera footage and a judicial process was initiated. In her testimony, she stated that she went to the hospital with abdominal pain, that she did not know she was pregnant, that she panicked when she saw the baby's head in the toilet, that she did not know what to do, that she wanted to get rid of the baby in a state of shock, that she threw it in the trash and returned home immediately, and that she did not say anything to her family. It is noteworthy that she repeatedly said "I was not pregnant" throughout her testimony. However, when the detailed history was taken, she stated that she had not menstruated for 6-7 months. Ms. Ayşegül's parents, with whom she lived in the same house, could not believe it and stated that their daughter was not pregnant. Her fiancé stated that there was no problem between her and Ms. Ayşegül, that they were going to get married in 2 months, and that he was not aware of the pregnancy because he had been living in another city for work for the last 3 months.

Vignette 2: Ms. Zehra is 36 years old, a senior nurse, working in an oncology hospital. She has been married for 10 years and has two children aged 8 and 5. She has no known psychiatric illness or psychosocial stress factors. She presented to the internal medicine outpatient clinic with complaints of abdominal pain and abdominal distension, and the doctor suspected pregnancy, and an evaluation revealed a 32-week (8-month) pregnancy. Ms. Zehra's statement that she was not aware that she was pregnant surprised all her family members. She had not had her period for 8 months and had visited the doctor several times 6 months ago with nausea, vomiting and weakness. Ms. Zehra's husband is also surprised. He stated that his wife had two previous pregnancies, knew the symptoms of pregnancy well, and could not believe that she missed this advanced pregnancy because she was a healthcare professional. When questioned about their sexual life, he said that they had a regular sexual life but did not use protection. Pregnancy follow-up was started with a delay and Ms. Zehra gave birth at term.

Both clinical vignettes are followed by 14 questions related to the vignette. The questions can be answered in five different ways as "completely disagree, partially disagree, undecided-do not know, partially agree, completely agree". While analyzing the data, the answers were evaluated in 3 groups as agree, undecided and disagree.

RESULTS

When the sociodemographic characteristics of the participants were analyzed, it was observed that 197 of them were female and 43 of them were male. While 80 participants reported being married, 160 reported being single. 2 of the participants were high school graduates, 57 were undergraduate, 129 were master's and 51 were doctoral graduates. Among the participants, 171 were psychologists, 39 were psychiatrists and 30 were members of other health professions. It was observed that 167 of the participants had a history of pregnancy for themselves or their spouses, while 73 of them did not. 177 participants were reported to have a history of childbirth in themselves or their partner. 63% said that they or their spouse did not have a history of childbirth.

Participants were presented with 2 different clinical vignettes. Although there was a case of denied pregnancy in both cases, in the first case, unlike the second case, an example is given of a woman who was younger, did not realize the pregnancy until delivery and attempted a criminal neonatology. In the second case, a nurse with a better status in the community whose pregnancy was discovered incidentally 1 month before delivery was presented. In the research, the same questions were asked about the 2 clinical vignettes. The findings of this study are given in Table 2.

According to these results, the belief that the case was a concealed pregnancy, that is, the person knew that she was pregnant but hid it from the environment, was 40.4% for the first case and 18.3% for the second case. The difference was statistically significant.

The belief that the picture was related to a mental illness was 42.9% in the first case and 30.4% in the second case. The difference was statistically significant.

The belief that the person would have accepted that she was pregnant if the pregnancy had been recognized earlier and reported to her was 36.1% for the first case and 63.3% for the second case. The difference was statistically significant.

The belief of all participants that the person was not sincere in saying "I didn't know I was pregnant" was 44.2% for the first case and 28.8% for the second case. The difference was statistically significant.

The rate of attributing the failure to recognize the pregnancy to the person's negligence and irresponsibility was 23.3% for the first clinical vignette and 27.5% for the second vignette. The difference is statistically significant.

The proportion interpreting the situation as an unwanted pregnancy and unconscious denial of it was 66.2% for the first clinical vignette and 51.2% for the second clinical vignette. The difference is statistically significant.

The rate of perceiving the picture as a physiological disorder related to the brain's perception and interpretation of changes in the body was 34.2% for the first case and 30% for the second case. The difference was statistically significant.

Table 1. Sociodemographic characteristics of the participants

		n	%
Gender	Female	197	82,1 %
	Male	43	17,9 %
Marital Status	Married	80	33,3 %
	Single	160	66,7 %
Education	High School	2	0,8 %
	Undergraduate	57	23,8 %
	Master's Degree	129	53,8 %
	PhD	51	21,2 %
Profession	Psychologist	171	71,2 %
	Psychiatrist	39	16,2 %
	Other	30	12,5 %
Experience of pregnancy in their partner or themselves	No	167	69,9 %
	Yes	73	30,4 %
Spouse's or own birth history	No	177	73,8 %
	Yes	63	26,2 %

Table 2. Differences between the respondents' interpretations of the two vignettes

			n	%	p
Concealed pregnancy, knowing that you are pregnant but hiding it from others	Case 1	Disagree	75	31,2 %	0,003
		Undecided	68	28,3 %	
		I agree	97	40,4 %	
	Case 2	Disagree	143	59,6 %	
		Undecided	53	22,1 %	
		I agree	44	18,3 %	
Psychosis, mood disorder with psychotic features, mental retardation	Case 1	Disagree	91	37,9 %	<0,001
		Undecided	46	19,2 %	
		I agree	103	42,9 %	
	Case 2	Disagree	112	46,7 %	
		Undecided	55	22,9 %	
		I agree	73	30,4 %	
If it had been recognized earlier and reported to her, she would have admitted that she was pregnant.	Case 1	Disagree	70	29,4 %	0,003
		Undecided	82	34,5 %	
		I agree	86	36,1 %	
	Case 2	Disagree	40	16,7 %	
		Undecided	48	20,0 %	
		I agree	152	63,3%	
"I didn't know I was pregnant" is not sincere, it is not a statement of fact.	Case 1	Disagree	65	27,1 %	<0,001
		Undecided	69	28,8 %	
		I agree	106	44,2 %	
	Case 2	Disagree	94	39,2 %	
		Undecided	77	32,1 %	
		I agree	69	28,8 %	

Negligence and irresponsibility	Case 1	Disagree	123	51,2 %	<0,001
		Undecided	61	25,4 %	
		I agree	56	23,3 %	
	Case 2	Disagree	116	48,3 %	
		Undecided	58	24,2 %	
		I agree	66	27,5 %	
Unwanted pregnancy and unconscious denial	Case 1	Disagree	38	15,8 %	<0,001
		Undecided	43	17,9 %	
		I agree	159	66,2 %	
	Case 2	Disagree	64	26,7 %	
		Undecided	53	22,1 %	
		I agree	123	51,2 %	
A physiological disorder associated with the brain's perception and interpretation of change in the body	Case 1	Disagree	81	33,8 %	<0,001
		Undecided	77	32,1 %	
		I agree	82	34,2 %	
		Disagree	86	35,8 %	
		Undecided	82	34,2 %	
		I agree	72	30,0 %	
Lack of awareness of their own reproductive capacity	Case 1	Disagree	79	32,9 %	<0,001
		Undecided	73	30,4 %	
		I agree	88	36,7 %	
	Case 2	Disagree	127	52,9 %	
		Undecided	58	24,2 %	
		I agree	55	22,9 %	
Resentment and anger	Case 1	Disagree	113	47,1 %	<0,001
		Undecided	57	23,8 %	
		I agree	70	29,2 %	
	Case 2	Disagree	176	73,3 %	
		Undecided	44	18,3 %	
		I agree	20	8,3 %	
Pity	Case 1	Disagree	97	40,4 %	0,001
		Undecided	62	25,8 %	
		I agree	81	33,8 %	
	Case 2	Disagree	141	58,8 %	
		Undecided	53	22,1 %	
		I agree	46	19,2 %	
Can't adapt to motherhood	Case 1	Disagree	41	17,1 %	<0,001
		Undecided	41	17,1 %	
		I agree	158	65,8 %	
	Case 2	Disagree	142	59,2 %	
		Undecided	60	25,0 %	
		I agree	38	15,8 %	
I would like to take part in the psychosocial medical support team	Case 1	Disagree	22	9,2 %	<0,001
		Undecided	52	21,7 %	
		I agree	166	69,2 %	
	Case 2	Disagree	25	10,4 %	
		Undecided	58	24,2 %	
		I agree	157	65,4 %	

The rate of those who evaluated the picture as not being aware of one's own reproductive capacity was 36.7% for the first case and 22.9% for the second case. The difference was statistically significant.

In this research, the emotions created by the vignettes presented to the participants were also questioned. Accordingly, while the feeling of anger and rage was reported as 29.2% in the first case, this situation was 8.3% for the second case. The difference is statistically significant.

While the feeling of pity for the first case was 33.8%, the feeling of pity for the second case was 19.2%. The difference is statistically significant.

The opinion that these cases would not be able to adapt to motherhood was found to be 65.8% for the first case and 15.8% for the second case. The difference is statistically significant.

Finally, participants were asked whether they would like to be included in the psychosocial medical support team of the cases in this clinical vignette. While the rate of those who wanted to take part in the follow-up of the first case was 69.2%, the rate of those who wanted to take part in the follow-up of the second case was 65.4%. The difference is statistically significant.

DISCUSSION

The phenomenon of denied pregnancy, which we define as the situation in which the expectant mother realizes the pregnancy only after the 20th week of pregnancy or at the time of delivery, draws attention as an unrecognized and overlooked medical condition although it is seen in our society.

The phenomenon of denied pregnancy, which can also be experienced by mothers who have had previous pregnancies and given birth, is not related to a condition that impairs mental functions such as psychosis, mood disorder or mental retardation. Except for their denied advanced pregnancy, these women appear normal and can go about their daily lives without any problems.

It is equally surprising that many women who deny their pregnancy do not gain weight during their pregnancy, some women even lose weight compared to their pregnancy periods, they experience bleeding perceived as menstrual bleeding, and even in their bikini photos, there is no obvious change in their bodies to suggest pregnancy. It has also been reported in studies that their spouses and close relatives do not recognize the pregnancy either.

These expectant mothers do not recognize the physiological signs of pregnancy, are unaware of the presence of the baby in their womb and are neither emotionally nor socially prepared for birth and the role of motherhood. These women, who are unable to adopt a pregnancy-appropriate lifestyle, pregnancy-specific diet, and prenatal care, may give birth unexpectedly and without any medical assistance. As a result of births in these inappropriate conditions, the newborn may die soon after birth due to drowning, blood loss or trauma, and the expectant mother may be prosecuted by the law for the murder of her newborn. Denied pregnancy can have negative and tragic consequences, such as neonatitis, postpartum emotional distress, post-traumatic stress disorder, depression or rejection of the newborn.

According to the results of this study, in the first case of attempted neonatisid in the clinical vignette, a significant proportion of the health personnel considered it as a psychotic symptom or a concealed pregnancy. This acute dissociative state, in which the expectant mother, faced with an unexpected birth, reacts with symptoms of surprise, shock and, in some cases, panic, may explain the inability of the expectant mother to provide the necessary interventions to the newborn. In this picture, there is no planned action, but rather a situation where it is not possible to provide the necessary support to a newborn baby in need of protection and care.

Jenkins et al (2011) reported that 38% of expectant mothers who did not realize their pregnancy visited their physicians for various reasons during pregnancy but did not receive a diagnosis of pregnancy. As awareness of the phenomenon of denied pregnancy increases, it is thought that the risk to the health and life of the mother and the newborn can be prevented by diagnosing the symptoms and early intervention by obstetricians, midwives, physicians and psychiatrists who come into contact with these expectant mothers in the first place.

Schauberger, Friedman et al. (2007) reported that the mother's psychiatric consultation after birth is critical, especially if the baby is to be left in the care of the mother. Researchers have reported that patients who reject pregnancy symptoms do not reject their maternal role, but rather accept their newborn. Schauberger stated that specialists should approach these patients with compassion and empathy and emphasized that pregnancy denial may be secondary to deep psychosocial and psychiatric wounds that require careful attention.

As shown in Table 2, the respondents gave statistically significantly different interpretations to the two clinical vignettes. The first case presented was a younger, inexperienced woman who committed a criminal act of labor and left the baby to die, while the second case was a more mature, experienced nurse with status in the community. It is noteworthy that the respondents did not give a dominant answer related to explaining the situation or emotions for both phenomena. None of the questions asked in the survey about the interpretations that explain the situation or the emotions generated by the clinical vignettes reached 70%. The answers given by the participants for any item did not fall below 5%. 'Strongly disagree', 'Undecided' and 'Agree' options were close to each other. This shows that two cases of denied pregnancy presented differently from each other, can be confusing for the participants and their awareness of this situation is low. Such a high rate of participation in completely different explanations between the interpretations of the two vignettes presented in Table 2 shows that the respondents had great difficulty in interpreting this picture.

The statistically significant difference in almost all items for the two clinical vignettes is a good example of how a similar situation can lead to different interpretations on the other side depending on the age, status and consequences of the action.

The mother experiences a psychological shock during labor, which starts suddenly when she least expects it, and may experience dissociation during labor and post-traumatic stress disorder after delivery. These patients should be treated with compassion and empathy and should be referred to a mental health unit. Mental health workers should be aware of the case of denied pregnancy and provide appropriate treatment and support to the mother.

CONCLUSION

The results of this study suggest that participants from psychologists, psychiatrists and other professional groups experienced ambivalence in the face of vignettes describing cases of denied pregnancy and had difficulty in recognizing and making sense of the picture.

The views that the picture could be a concealed pregnancy, could be due to psychosis or mental retardation, could be explained by ignorance of pregnancy signs and inexperience, could be due to negligence and irresponsibility, could be an unconscious denial of an unwanted pregnancy, or could be related to the woman's lack of awareness of her own reproductive capacity, were all adopted in close agreement. The fact that approximately 1/4 - 1/3 of the respondents remain undecided for each question shows the confusion created by the table.

Participants reported feeling less able to trust their judgment on other issues. Participants reported feeling more anger for clinical vignette 1, in which the birth was more likely to end in neonatisid.

However, obstetricians, physicians, midwives and psychiatrists are the first to come into contact with mothers who deny their pregnancies, to diagnose them and to provide medical and psychological assistance. It is thought that more studies on the phenomenon of denied pregnancy will increase the knowledge and awareness of healthcare professionals and social support specialists about the phenomenon.

Physicians can prevent a possible danger by ordering a pregnancy test in women who have reached childbearing age and present to them with complaints such as nausea, abdominal pain, weight gain, abdominal distension, and absence of menstruation, even if they report otherwise, taking into account the possibility of denial of pregnancy.

In our research, it was observed in clinical vignettes that healthcare professionals were unfamiliar with the concept of denied pregnancy and may be prone to characterize the picture as concealed pregnancy,

psychotic denial, lack of mental skills, and crime.

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Authors' Contributions: The authors contributed equally to the study.

Ethics Committee Approval: This study was approved by the Ethics Committee for non-Interventional Research of T.C. Üsküdar University (Approval Number: B.08.6.Yök.2.Üs.0.05.0.06 /2017/324) and adhered to the principles of the Declaration of Helsinki.

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ORIGINAL ARTICLE

Assessment of Knowledge of Patients Regarding Human Papillomavirus in A Tertiary Hospital

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Abstract

Objective: Human Papillomavirus (HPV) is a risk factor for cervical, vulvar, and vaginal cancers. HPV vaccination is used for immunization against this virus. This study aims to determine the knowledge level of patients admitted to our outpatient clinic regarding HPV and the HPV vaccine.

Material and Methods: The sample of this cross-sectional study comprised 1,225 women admitted to our gynecology outpatient clinics between January 1, 2013, and June 31, 2013. We collected data on sociodemographic characteristics, level of HPV and cervical cancer knowledge, awareness of Pap smear testing, and self-reported previous Pap smear tests through a questionnaire.

Results: The mean age of participants was 37.79±13.19 (range 15–73). Of these participants, 31.8% had previously undergone a Pap smear, 62.4% had heard of cervical cancer, and 60.5% were aware of Pap smear testing. Television programs emerged as the leading source (24.7%) for HPV information. Notably, 65.7% of participants did not know that HPV can be sexually transmitted. Meanwhile, 60.5% had not heard of the HPV vaccine, and 70.5% were unaware that HPV vaccination can help prevent cervical cancer. Among participants who had received the vaccine, 63.3% stated they would encourage their daughters to get vaccinated.

Conclusion: Our findings suggest that women's knowledge about HPV infection and vaccination remains insufficient. Efforts focusing on improving awareness of HPV and the HPV vaccine among the female population, particularly via healthcare providers, are critically important to achieving healthier future generations.

Keywords: cervical cancer, human papillomavirus, HPV vaccine, women's health, pap smear

INTRODUCTION

HPV is considered the most significant risk factor for cervical cancer worldwide (1). Established risk factors for cervical carcinoma include the presence of HPV, early onset of sexual activity (<16), high parity, polygamy, smoking, and low socioeconomic status (2,3). HPV is the most common sexually transmitted infection, and half of sexually active young women are estimated to be infected by one of the 40 HPV subtypes within five years after their first sexual experience. Thirteen of these subtypes are considered primarily carcinogenic (4,5).

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More than half of sexually active women and men contract HPV at some point in their lifetime, and approximately 20 million people worldwide have an active HPV infection (6). Studies have indicated that over 70% of HPV cases involve adolescent girls aged 12–25 (6).

Recognition of the relationship between HPV and cervical cancer, along with the persistence of substantial cancer burden despite existing screening programs, has spurred major research into prophylactic HPV vaccines. These vaccines have shown promise in preventing HPV infection and potentially reducing the need for costly HPV screening programs (7).

HPV vaccines are broadly divided into prophylactic and therapeutic categories, with prophylactic vaccines being the most widely studied (7). The vaccine is often recommended for adolescents and young adults aged 9–26, and healthcare providers' advice is an important factor in families' decisions to vaccinate (8-11).

Perhaps it is expected that healthcare providers—who are typically well-informed about cancer prevention—would show a high level of awareness about HPV. In the present study, we evaluated the knowledge of HPV and the HPV vaccine among women admitted to our gynecology clinic.

MATERIAL AND METHODS

The current study was approved by Ethics Committee for Clinical Research of Bakirkoy Dr.Sadi Konuk Training and Research Hospital (Desicion No: 2012l16/10, Date: 2012/11/19). The current study has been performed in accordance with the ethical standards described in an appropriate version of the 1964 Declaration of Helsinki, as revised in 2013.

Patients

All persons gave their informed consent prior to their inclusion in the study. The sample of this study was composed of 1225 females who were admitted to our outpatient gynecology clinics at Health Science University, Bakirkoy Dr. Sadi Konuk Teaching and Research Hospital, between the dates of January 1, 2013, and June 31, 2013. We obtained data on sociodemographic characteristics, knowledge about HPV, and whether they gave a pap smear and had cervical cancer with a questionnaire.

Statistical Analysis

In descriptive statistics of data, mean, standard deviation, minimum, maximum, median, percentage, and frequency were used. The distribution of variables was controlled with the Kolmogorov Smirnov test. While Mann-Whitney u test was used for the analysis of continuous variables, the ki-square test was preferred for analysis of qualitative variable analysis. SPSS 25.0 packet program was used for all analyses.

RESULTS

At the end of the research, a series of demographic data of participants with knowledge about cervical smear or without were compared; accordingly, age, job, level of income, health insurance, smoking, marriage, marriage age, parturition, number of births, and number of people living at home have not indicated statistically difference between the groups ($p>0.05$). age of first sexual intercourse in a group that has knowledge about cervical smear was found to be statistically increased compared to a group that has no knowledge about cervical smear (Table 1).

In addition to the smear knowledge, age, job status, income level, health insurance, smoking, marriage age, the first age of sexual intercourse, and the number of people living at home were found to be increased ($p>0.05$), but this change was not statistically significant. On the other hand, it was seen that the number of births and marriage rates was found to be statistically increased in the group having knowledge about the HPV virus compared to the group who did not hear the HPV virus ($p <0.05$) (Table 2).

A statistically significant difference has not been recorded between groups having knowledge about the HPV vaccine, and those have not. The mean age, job status, income level, health insurance, smoking, marriage rate, age of first sexual intercourse, number of births, and number of people living at home were found similar between the groups ($p>0.05$). However, groups have heard cervical smear was found to have higher mean compared to groups that have not heard cervical smear ($p<0.05$) (Table 3).

DISCUSSION

Many screening program have been developed since the introduction of that smear test can be used in cervical cancer diagnosis. Thus, a significant decrease

Table 1. Demographic factors and knowledge level of the participants about cerical smear

			Have You Ever Heard Cervical Smear								p
			Yes				No				
Age		Mean±s.d.		37,9	±	12,9		37,6	±	13,6	0,492
		Med (Min-Max)	36	16	-	73	35	15	-	72	
Profession	Housewife	n-%		351		45,6%		201		41,5%	0,221
	Health care	n-%		103		13,4%		78		16,1%	
	Student	n-%		70		9,1%		36		7,4%	
	Civil servants	n-%		246		31,9%		169		34,9%	
İncome	<500	n-%		461		59,9%		279		57,6%	0,608
	500-1000	n-%		248		32,2%		169		34,9%	
	>1500	n-%		61		7,9%		36		7,4%	
Social security	No	n-%		119		15,5%		86		17,8%	0,231
	Yes	n-%		651		84,5%		398		82,2%	
Smoking	No	n-%		480		62,3%		326		67,4%	0,071
	Yes	n-%		290		37,7%		158		32,6%	
Mariage	No	n-%		38		4,9%		30		6,2%	0,336
	Yes	n-%		732		95,1%		454		93,8%	
Age at marriage		Mean±s.d.		20,4	±	2,8		20,6	±	2,6	0,064
		Med (Min-Max)	20	15	±	35	20	15	±	33	
Age at first coitus		Mean±s.d.		20,3	-	2,8		20,5	-	2,6	***0,031***
		Med (Min-Max)	20	12	±	35	20	11	±	30	
Parity	No	n-%		83		10,8%		51		10,5%	0,893
	Yes	n-%		687		89,2%		433		89,5%	
Number of Parity		Mean±s.d.		1,7	±	1,2		1,7	±	1,2	0,995
		Med (Min-Max)	1	0	-	9	1	0	-	10	
Number of people staying at home		Mean±s.d.		3,9	±	1,6		4,0	±	1,6	0,213
		Med (Min-Max)	4	0	±	11	4	0	±	11	

Ki-kare test / Mann-whitney u test

Table 2. Demographic factors and knowledge level of the participants about HPV virus

			Have You Ever Heard Hpv Virus								p
			Yes				No				
Age		Mean±s.d.		37,9	±	13,2		37,6	±	13,3	0,742
		Med(Min-Max)	36	17	-	70	35	15	-	73	
Profession	Housewife	n-%		361		43,5%		191		45,0%	0,657
	Health care	n-%		119		14,3%		62		14,6%	
	Student	n-%		76		9,2%		30		7,1%	
	Civil servants	n-%		274		33,0%		141		33,3%	
İncome	<500	n-%		489		58,9%		251		59,2%	0,984
	500-1000	n-%		276		33,3%		141		33,3%	
	>1500	n-%		65		7,8%		32		7,5%	
Social security	No	n-%		144		17,3%		61		14,4%	0,180
	Yes	n-%		686		82,7%		363		85,6%	
Smoking	No	n-%		532		64,1%		274		64,6%	0,854
	Yes	n-%		298		35,9%		150		35,4%	

Mariage	No	n-%		36		4,3%		32		7,5%	***0,018***
	Yes	n-%		794		95,7%		392		92,5%	
Age at marriage		Mean±s.d.		20,5	±	2,7		20,4	±	2,9	0,374
		Med(Min-Max)	20	15	±	30		15	±	35	
Age at first coitus		Mean±s.d.		20,4	-	2,7		20,3	-	2,8	0,417
		Med(Min-Max)	20	15	±	30		11	±	35	
Parity	No	n-%		78		9,4%		56		13,2%	***0,039***
	Yes	n-%		752		90,6%		368		86,8%	
Number of Parity		Mean±s.d.		1,7	±	1,1		1,6	±	1,3	***0,044***
		Med(Min-Max)	1	0	-	8		0	-	10	
Number of people staying at home		Mean±s.d.		3,9	±	1,6		4,0	±	1,6	0,769
		Med(Min-Max)	4	0	±	11		0	±	11	

Ki-kare test / Mann-whitney u test

Table 3. Demographic factors and knowledge level of the participants about HPV vaccine

			Do You Know Hpv Vaccine Madden For 2 Six Month Period And Total Dosage İs Four								**p**
			Yes				**No**				
Age		Mean±s.d.		38,0	±	13,0		37,7	±	13,3	0,537
		Med(Min-Max)	36	16	-	73	36	15	-	72	
Profession	Housewife	n-%		211		42,8%		341		44,8%	0,579
	Health care	n-%		78		15,8%		103		13,5%	
	Student	n-%		45		9,1%		61		8,0%	
	Civil servants	n-%		159		32,3%		256		33,6%	
İncome	<500	n-%		286		58,0%		454		59,7%	0,331
	500-1000	n-%		162		32,9%		255		33,5%	
	>1500	n-%		45		9,1%		52		6,8%	
Social security	No	n-%		83		16,8%		122		16,0%	0,707
	Yes	n-%		410		83,2%		639		84,0%	
Smoking	No	n-%		301		61,1%		505		66,4%	0,055
	Yes	n-%		192		38,9%		256		33,6%	
Mariage	No	n-%		26		5,3%		42		5,5%	0,851
	Yes	n-%		467		94,7%		719		94,5%	
Age at marriage		Mean±s.d.		20,4	±	2,8		20,5	±	2,7	0,267
		Med (Min-Max)	20	15	-	35		15	-	35	
Age at first coitus		Mean±s.d.		20,3	±	2,8		20,5	±	2,6	0,114
		Med (Min-Max)	20	11	-	35		15	-	30	
Parity	No	n-%		49		9,9%		85		11,2%	0,491
	Yes	n-%		444		90,1%		676		88,8%	
Number of Parity		Mean±s.d.		1,6	±	1,2		1,7	±	1,2	0,441
		Med (Min-Max)	1	0	-	9		0	-	10	
Number of people staying at home		Mean±s.d.		3,9	±	1,5		4,0	±	1,6	0,898
		Med (Min-Max)	4	1	-	11		0	-	11	

Ki-kare test / Mann-whitney u test

has been recorded in cervical cancer incidence, but the most critical point in this regard is that without an active screening program, cervical cancer incidence is not decreased anywhere in the world. In our country, there is no pap smear screening program. A part of women learn pap smear test randomly or from second-hand. Therefore, health care providers need to get enough knowledge about the Pap smear test and inform of women (12).

A study by Gichangi et al. in Kenya determined that 82% of women get information about pap smear from health care providers, 7% from their friends, 3% from media (13).

Our participants were asked about their knowledge of cervical cancer. According to this, age, job status, income level, presence of social security insurances, smoking rate, marriage rate, age of marriage, whether they gave birth, number of births, and the number of people living at home did not show a statistically significant difference.

Tarwireyi et al. (2003) probed that 50% of health care providers know pap smear as one of the protection ways from cervical cancer (14). Dönmez et al. reported that in their study, 67.2% of women health care providers know pap smear as a cervical cancer screening test, the rest (32.8%) do not (12). Kalyoncu et al. defined that the test rate of women heard pap smear test is 72.9% (15). Wellensiek et al. documented that the test rate of women who have knowledge about cervix cancer and pap smear is increased (16). If all women participate in the cervical cancer screening program and all lesions are followed, it is accepted that pap smear triennially performed prevents cervical cancer at a rate of 90% (12).

Tarwireyi et al. found that 81.7% of health care providers did not perform pap smear and underlined that lack of knowledge is an efficient reason for why they do not take the test (14). According to the results of Zemheri, 67.2% of health care providers did not perform smear tests (12).

Güngör et al. determined that 58% of nurses, midwife, and women health care workers did not conduct pap smear tests (17). This finding is consistent with our results.

Oran et al. reported that 71.8% of women academicians did not perform pap smear (18).

Yetimalar et al. observed that 45.1% of health care workers and 47.3% of patients did pap smear test at least once in their study. In light of these findings, it can be speculated that most of the women health workers do not have the behavior of having regular smear tests. Many studies in this field indicated that the pap smear test rate is parallelly increased with the knowledge level (19).

Akyüz et al. documented that the pap smear rate of women is statistically changed in the number of births (19). Having knowledge about cervical cancer and its risk factor will put protection methods from cervical cancer on the map and make a gain of avoiding risky behaviors for cancer (12). Health workers should be able to provide community pieces of training informing cervical cancer risks for all women, especially risky groups (20).

In the current study, whether women heard the HPV vaccine were asked. At the end of the questioning; age, job status, income level, social insurance, smoking, marriage age, age of first sexual intercourse, number of people living at home did not show a significant difference between groups have heard the HPV virus and those have not (21). On the other hand, the number of birth and marriage rate was found to be higher in the group heard HPV virus than the group has not heard the HPV virus (22).

Esposito et al. investigated the HPV knowledge level of the community and found that the knowledge level is low (23). Güner and Taşkıran reviewed the studies in this field and concluded that cervical cancer remains up to date in underdeveloped or developing countries (24).

Much as there are promising developments in the HPV vaccine, it should be noted that based on the current studies, there are shortcomings and limitations in our vaccination information.

39.3% (n=493) of our participants have reported knowing the HPV vaccine, while 60.7% have reported not to know it. Therefore, while most of the participants are aware of the vaccine, some health workers are not

aware of the vaccine. Having knowledge of the HPV vaccine is investigated in variables of gender, marital status, job, and clinic time.

When we investigated knowing the status of HPV vaccine according to the job groups, it was found as 42.8% in housewives, 15.8% in health care providers, 9.1% in students, and 32.3% in civil servants and the difference between the groups (knowing status of HPV) was found to be insignificant.

69.9% of participants in the study of Zemheri stated that they know how to protect from cervical cancer and HPV vaccine. This finding is higher than the knowledge level of our participants in this study (12). Kurtipek et al. stated that 24.8% of their 1808 participants know HPV infection and 24.3% know HPV vaccine (25). Esposito et al. reported that only 16.7% of medical doctors know how much vaccine types are used in Europe (23). Daley et al. remarked that 43% of doctors stated do not know the HPV vaccine developed (26).

According to the study of Yetimalar et al., 8.8% of health care providers stated not to know the HPV vaccine (27). After starting vaccine applications, intense discussions about the HPV vaccine has been started in the medical world, and written and visual media (28).

In our study, 181 workers, who stated to hear the HPV vaccine, were asked whether they know the HPV vaccine, and 103 health care providers were found that they do not have knowledge about the vaccine.

In a survey study performed with 433 women and 262 medical doctors from Adana, Ankara, Istanbul, and Izmir and aged 16-50 years, sexual health, HPV, and protection way from cervical cancer were discussed. 57.0% of the survey participants have stated that they learned HPV from television and newspapers (29). Raley et al. ark. reported that 79.0% of gynecologists suggested the vaccine. The doctors noted that the reasons for the suggestion of the vaccine are institution approval, vaccine type, and its benefits (30).

Esposito et al. investigated the vaccine suggestion rate of doctors and found that the suggestion rate is 84.8%. 70.7% of the participants suggest that the vaccine is beneficial for cervical cancer, and 73.3% suggest that the vaccine should be done before sexual intercourse. Doctors think that 90.0% of practicians are insufficient for giving detailed enough information (31).

Multiple test results indicated that the age of the proposer (especially over 45), becoming a pediatrician, and thinking the vaccine is beneficial for cervical cancer statistically significant difference (23).

CONCLUSION

In conclusion, although many women attending our clinic had some awareness of cervical cancer or Pap smear testing, most did not fully understand the link between HPV and cervical cancer or the protective role of HPV vaccination. Improving access to and knowledge about HPV vaccination via both public campaigns and one-on-one clinical education could meaningfully reduce the burden of cervical cancer.

We recommend that HPV education during routine gynecological and primary care visits, especially when counseling pregnant or postpartum women. Encouraging healthcare professionals to refresh their HPV and cervical cancer knowledge, so they can effectively inform patients. Advocating for policy-level support of organized screening programs and accessible HPV vaccination, particularly targeting younger age groups before sexual debut.

By implementing educational interventions and strengthening vaccination initiatives, we can potentially lower cervical cancer rates and foster healthier future generations.

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ORIGINAL ARTICLE

Examining Abortion-Related Stigma Among International Students Studying in Northern Cyprus

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This study is based on the master's thesis of Akudo Divine Amadi. This study was presented as an oral presentation at the 9th World Conference on Health Sciences (online) in 2022.

Abstract

Objective: The aim of this study is to examine the abortion-related stigma among international students studying in Northern Cyprus.

Material and Methods: This study is a descriptive and cross-sectional type of research. The population of the research consisted of international university students studying in Northern Cyprus between 30.08.2021 and 13.04.2022. The Sample size of this study consisted of 272 university students. The Data of the research were collected using a web-based online and face-to face survey that was prepared the student information form, and the Stigmatizing Attitudes, Beliefs, and Actions Scale (SABAS). In this study data was used the descriptive statistics tests and Kolmogorov-Smirnov test, Kruskal-Wallis H test, and Mann-Whitney U test.

Results: It was determined that 28% of international students are 18-20 years old, 50% of them are female, 87.5% of them are from Africa, and 56% of them are Christian. In this study, it was found that the students used condoms the most and 13.0% of the them had abortion. They take average 34,98±14,16 points from total score of SABAS. In the study, there are a statistically significant difference between department, gender, and the total points of SABAS.

Conclusion: The abortion stigma of international students was found low. In this direction, it is recommended to improve sexual and reproductive health services in universities.

Keywords*:* abortion, stigma, women, abortion, student

INTRODUCTION

In developing and underdeveloped countries, unsafe abortion is a major reproductive health and public health problem that can lead to maternal mortality and disability (WHO, 2024). The World Health Organization (WHO) has reported that 45% of abortions are unsafe, and the quality of life and health status of women exposed to unsafe abortion are negatively affected (1). Stigmatization is an important factor that can lead to unsafe abortion (2). *'A mark of shame, humiliation, or disparagement that sets a person apart from others'* is called a stigma (3). Abortion stigma is divided into five levels: 'legal and policy, media, institutional, community and individual' (4,5) and can lead to anxiety, fear, grief and depression. Woman who have had an abortion performed one or become involved

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in abortion controversy are vulnerable to the abortion stigmatization (6). Since abortion rates are common among university students, this group is also at risk for abortion stigmatization. The students who experience this stigmatization may resort to unsafe abortion methods (7). There are many international students in Universities of Northern Cyprus (NC), are at risk for unintented pregnancies and unsafe abortions. There no units providing sexual health services to young people at these universities. Assessing students' individual and community stigma against abortion can also guide actions to identify unmet need for contraception and prevent adolescent pregnancies (8).

There is a lack of information in research on the level of abortion stigma in various countries and how abortion stigma affects these societies (9). In systematic review studies on abortion stigma, it has been stated that more research is needed to improve the understanding of abortion stigma using validated measures (5), and that studies conducted among university students on the subject are quite few (7). This study may contribute to inform national and local strategies to reduce community abortion stigma, which has direct effects for improved access to abortion and contraceptive services. Also, it is significant that this is the first research conducted on this subject in NC.

The aim of this study is to examine the abortion-related stigma among international students studying in NC. For this purpose, the questions of research were 'What is the level of abortion stigmatization among international students? and 'Are there relationships between the scoring of abortion stigma and socio-demographic characteristics?'

MATERIAL AND METHODS

Research Design

This study is a descriptive and cross-sectional type of research.

Population and Sample

The population of the study consists of the international students in NC between 30.08.2021 and 13.04.2022, and the sample of 272 students who meet the sampling criteria (speak and understand English, being an undergraduate or graduate student in NC) and accept the research. The sample size was calculated as 384 and 71% of the targeted sample was reached (sampling error 5.9%) as using self-selection sampling of non-probability sampling technique. Many students did not want to participate because the topic was a private one.

Data Collection Tools/Materials

The Data of the research were collected using a web-based online and face-to face survey that was prepared the student information form, and the Stigmatizing Attitudes, Beliefs, and Actions Scale (SABAS). To collect the data, the online survey link was shared in the university student WhatsApp groups. The association of international students studying in NC and the student representatives at the universities helped in this regard.

The students' introductory characteristics were collected through a student information form consisting of 15 questions in total, including age, gender, nationality, religion, university, department, semester, marital status, having children, using method of contraceptive method, experiencing of abortion, number of abortions, types of abortion, and source of sex education. The personal information form was developed by the researcher by taking two expert opinion. The SABAS was designed to assess abortion stigma in individuals and communities. The scale developed by Shellenberg et al. in 2013, is a 5-point Likert-type scale ranging from '*Strongly Disagree*' to '*Strongly Agree*'. The scale consists of a total of 3 subscales (negative stereotyping, exclusion and discrimination, fear of contagion) made up of 18 questions. Those with a higher scale total score indicate having a higher abortion stigmatizing attitude. The Cronbach's alpha value of the total scale is 0.90. The summed scores of SABAS scale was was categorised as either high (summed score ≥46) or low (summed score<46) (10).

Data Analysis Plan

Data were analysed using SPSS 26 program. Frequency, percentage and mean analyses were used in the analysis of descriptive data of this study. Nonparametric tests (Kruskal-Wallis H test, Mann-Whitney U test) showing normal distribution according to Kolmogorov-Smirnov test results were used in the evaluation of the scale and comparison of the data.

Ethical Aspect

The study was approved by the Ethics Committee of Near East University on 26.08.2021 (Approval No. NEU/2021/94-1395). Permission to use the scale was obtained. Participants were informed about the purpose of the study in the survey form and then their written consent was obtained through the survey.

Limitations

Students may not have been objective in giving correct answers to the issue because they did not want their abortion status to be known. Another limitation of the study; the research sample group was limited to the students that the researcher could reach.

RESULT

It was found that 28,31% of the students are 18-20 years old and 29,04% of them are in 27 years and older age group, 50,74% are female, 87,50% are from Africa, %56,25% are Christian. 37,13% of the students are in their 1-2 semester and 18,38% of the students are post graduating. When we evaluate the marital status of the participants, we see that 90,81% of them are single. And 86,40% of students have not children.

Table 1. Abortion Status and Sex Education of the Students (n=272)

	Freq.	Percent
Taking Sex Education		
Yes	232	85,29
No	40	14,71
Sources of Sex Education		
Secondary education	96	41,38
Primary education	55	23,71
Family/Fiends	65	28,02
Internet	60	25,86
Bachelors education	18	7,76
Masters/Phd. education	3	1,29
Other	2	0,86
Using Contraceptive Method		
Abstinence	22	8,09
Condom	98	36,03
Contraceptive pill	22	8,09
Calendar	9	3,31
I am not sexually active	71	26,10
I am not using a contraceptive method	50	18,38
Abortion Experiences (n=138)		
Yes	18	13,04
No	120	86,96
Number of Abortion (n=18)		
1	14	77,78
2	4	22,22
Type of Abortion (n=18)		
Surgical Abortion	12	66,67
Medical Abortion	5	27,78
Self-induced abortion	1	5,56
Support during the Abortion (n=18)		
No	12	66,67
Yes	6	33,33

In Table 1, the abortion status and sex education of the students is given. It is seen that 85,29% of the students received taking sex education, 28,02% of the students' educational resource is family/friends, and 41,38% of them studied having sex education in secondary education. It was found that 36,03% of the students using condom, 18,38% of the students stated that they are not using contraceptive method. 13.04% of the students had an abortion before and it was found that 77.78% of the students who had an abortion before had an abortion at their own request, 5.56% of them had an abortion at their own request. It was seen that 66.67% did not receive any support during the abortion.

Table 2. The Descriptive Statistics Students' Scores on the Stigmatizing Attitudes, Beliefs and Actions Scale (SABAS)

	n		s	Min	Max
Negative Stereotyping Subscale	272	18,97	8,55	8	40
Exclusion and discrimination Subscale	272	11,43	5,46	7	35
Fear of Contagion Subscale	272	4,57	2,66	3	15
The Total SABAS Points	272	34,98	14,16	18	88

In Table 2, the descriptive statistics students' scores on the SABAS is given. It is seen that students take average 18,97±8,55 points, minimum 8, maximum 40 points from Negative stereotyping, students take average 11,43±5,46 points, minimum 5, maximum 35 points from exclusion and discrimination, students take average 4,57±2,66 points, minimum 3, maximum 15 points from Fear of contagion and students take average 34,98±14,16 points, minimum 18, maximum 88 points from SABAS.

In this study, there are not statistically significant difference between age groups, nationality, religion, semester, marital status, having children situation, having sex education and the total score of SABAS ($p>0.05$). Otherwise, there are a statistically significant difference between gender, department and the total points of SABAS in this study ($p<0.05$).

There is no statistically significant difference between students' Gender and the points of Exclusion and discrimination ($p>0.05$); that is, male and female students get similar points from exclusion and discrimination. Students' from Health Sci. department has been taken statistically significantly higher points from the SABAS then students' from tourism department.

DISCUSSION

The Prevalence of Abortion, Using of Contraceptive and Discussion

According to the WHO, more than 1.2 million abortions were performed worldwide in 2020 (1). Although statistics on the frequency of abortion in NC are scant, there is evidence that induced abortions are high (11). In this study, it is understood that approximately one out of every four female international students have experienced abortion (Table 1). There may be students who do not disclose due to shame and fear. In this study, it was determined that one of the students had self-induced abortion. Also, it is found that majority of the students had not get any support during the abortion and 18% of the students don't use a contraceptive method despite being sexually active (Table 2). Social support for family planning may increase the shame of incidence of abortion and increases its stigma. In a study by Hoggart et al. (12), they tried to alleviate the feeling of stigma by emphasizing that the majority of women became pregnant while using contraceptive methods. While access safe abortion services are considered a basic human right, about half of all abortion services are unsafe in the World (7). There are not these services in public health center or hospital in NC. Private health services are very expensive for students.

The Mean of Abortion Stigma and Discussion

Community abortion stigma is import public health matter. People cannot access abortion care and this can lead to health inequity and disparity. It is important to determine the beliefs, attitudes and actions of the community in reducing abortion stigma. In this study, examining the SABAS, it was seen that international students take average low point (34.98±14.16; summed score <46) (Table 3). Unlike this result of the study, in a study, found that abortion stigma is high levels (46 points) by students among secondary school students in Kenya (13). This difference may be due to the awareness of sociodemographic factors among students. Holcombe et al.'s study, it is seen that midwives have low level (28 points) of abortion stigma (14). A study measured community level of abortion stigma three scales in U.S. and found midrange scores (15). In a qualitative study reported that women's reactions to antiabortion attitudes may maintain abortion stigma (16).

The majority of studies in the literature are related to individual abortion stigma (3,17-19). The level of community abortion stigmatization and women's abortion experiences need further research (15-16). The level of community abortion stigmatization is reflected in a community's attitudes that can be effect people who seek a safe abortion care (15). In addition, level of community abortion stigma is thought to be important in the creation of support system services.

The Relationships Between the Scoring of Abortion Stigma and Socio-Demographic Characteristics and Discussion

Determining the factors that may affect high abortion stigma is seen as important in determining the importance of women's abortion decision and perceived abortion stigma. In this study, there are a statistically significant difference between gender, department and the total points of SABAS. Male students get higher negative stereotyping, fear of contagion and SABAS points than female students and it is seen that this point difference is statistically significant. Male students had a higher total mean score for both abortion stigma and contraceptive use stigma compared to female students. In the similar to Rehnström Loi et al.'s study, male students had a higher total mean score of SABAS compared to female students (13). Male student can be negative affect his partner about serving safe abortion care. In a study, it is founded that higher levels of partner support about contraception using were associated with increased abortion stigma (20).

In Cutler et al.'s study, it was found that high stigma in Catholic compared to those with religion and Blacks compared to Whites among U.S. adults (15). In Bommaraju et al.'s study, it was determined that white women were more likely to experience abortion stigma (21). In general students that are muslim have been taken higher points from Negative stereotyping, Exclusion and discrimination, Fear of contagion and SABAS than Christian students and students of other religion but this point difference is not statistically significant in this study.

In Rehnström Loi et al.'s study, higher scores of Adolescent SABAS were displayed by younger rather than older age groups (13). In a study done in Turkey, it is found that as the age group increases, the level of individual abortion stigma increases (17). And, in a study by Cetinkaya et al., as the level of education of participation increases, the level of individual stigma decreases (17). In this study, there isn't a relationship between the age, education level and the SABAS score of international students. It is thought that the level of individual stigma of the students may be high as the number of students in the 18-20 age group was high in this study (Table 1).

In Grindlay et al.'s study, it has been determined that women who have experienced abortion generally have these procedures done in secret in order not to be stigmatized when they have abortion because of the fear of having problems in their career and not being unemployed (22). According the results, it is thought that international students who have experienced abortion can make these procedures in order not to be stigmatized because of fear to not continue their education. In addition, experiencing abortion in the unmarried students may be fear from embarrassing for their family. In this study, the majority of students are single (Table 1). And there is not statistically significant difference between marital status and the total score of SABAS in this study.

CONCLUSION

In this study is determined that most of the international students have had sex education before and most of the students took sex education at the secondary level. Condoms are the most commonly used method of contraception among international students. It was found that approximately one out of every four female international students have experienced abortion. This score demonstrated not low level of abortion stigma among students.

It is suggested that healthcare abortion service providers can plan awareness educations about abortion stigma and consequences of unsafe and it is to develop reproductive/sexual health services for especially international students in Universities in NC. Particularly, the participation of these groups should be ensured in order to reduce the stigma levels of groups that are found to be at risk in terms of stigma (male students, those studying in the health department).

Further research on the community stigma surrounding abortion in North Cyprus with larger sample groups is recommended, and qualitative descriptive studies are needed to determine the society's attitudes and views towards abortion.

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This study is based on the master's thesis of Akudo Divine Amadi. This study was presented as an oral presentation at the 9th World Conference on Health Sciences (online) in 2022.

Conflict of Interest: The authors declared no conflicts of interest.

Informed Consent: Informed consent was obtained from all participants involved in the study.

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Ethical Approval: The study was approved by the Ethics Committee of Near East University on 26.08.2021 (Approval No. NEU/2021/94-1395) and adhered to the principles of the Declaration of Helsinki.

Author Contributions:

- **Concept and Design:** D.S.G.
- **Supervision:** D.S.G.
- **Data Collection and/or Processing:** A.D.A.
- **Materials:** A.D.A., D.S.G.
- **Analysis and/or Interpretation:** A.D.A.

- **Literature Search:** A.D.A., D.S.G.
- **Writing and Critical Review:** A.D.A., D.S.G.

Availability of Data and Materials: The authors confirm that the data supporting the finding of this study are available within the study.

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Effect of Reproductive Health Education on Students' Reproductive Behavior and Attitudes Towards Family Planning

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Abstract

Objective: This study aims to investigate how reproductive health education influences students' reproductive behaviors and their perspectives on family planning.

Material and Methods: A total of 300 university students who voluntarily took the reproductive health and family planning course were included in the study. Data collection was done using a "socio-demographic information form", "Reproductive Health Scale for Turkish Adolescents" and "Attitude Scale towards Family Planning". The data was analyzed using IBM SPSS23 program.

Results: There was a statistically significant difference in the average scores of pre-test and post-test of RHS according to the read section (p=0.007). A statistically significant difference was obtained in the median values of the APFTS post-test subscale and total scores according to the read section (p=0.021).

Conclusion: It was determined that the reproductive health education given to students had a positive impact on their attitudes towards reproductive health and family planning.

Keywords: midwifery, student, family planning, reproductive health

INTRODUCTION

The concepts of sexual and reproductive health gained international attention during the United Nations International Conference on Population and Development (ICPD), held in Cairo, Egypt, between September 5 and 13, 1994 (1). The World Health Organization (WHO) defines sexual health not just as the absence of illness or dysfunction, but as a state of overall physical, emotional, mental, and social well-being concerning sexuality. Similarly, reproductive health encompasses complete well-being in all aspects related to the reproductive system, including its functions and processes. It also involves the right to a safe and satisfying sexual life, as well as the autonomy to decide freely and responsibly about reproduction—whether, when, and how often to have children (2).

Adolescents face significant risks in accessing sexual and reproductive health services and acquiring relevant knowledge. Early sexual initiation, unintended pregnancies, and difficulties in accessing contraceptive methods are among the key issues faced by this group (3,4,5). For instance, in 2022, the majority of the 2.5 million reported STI cases in the United States were among individuals aged 15-24 (6). Additionally, a study among high school students showed that many sexually active adolescents did not use condoms and lacked adequate knowledge about contraceptive methods (7).

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Comprehensive Sexuality Education (CSE) aims to provide individuals with the knowledge and skills needed to prevent HIV, sexually transmitted infections (STIs) and unintended pregnancies continue to pose significant public health concerns. According to the Centers for Disease Control and Prevention (CDC), comprehensive sexuality education (CSE) programs should be grounded in scientific evidence, tailored to the developmental stages of learners, respectful of cultural diversity, and contain medically accurate information (8). These programs not only help prevent risky sexual behaviors while also fostering essential life skills in youth, such as analytical thinking, effective problem-solving, and informed decision-making (9).

Studies show that many adolescents lack adequate knowledge about sexual health and find it difficult to discuss these topics with their parents (10). According to Turkey Demographic and Health Survey (TDHS) 2018, the adolescent birth rate was reported as 4% (11). Another study among university students found that only 31.3% were knowledgeable about family planning, usually receiving this information from teachers or healthcare providers (10).

The importance of sexual health education extends beyond improving individual health outcomes; it also helps break societal taboos and empowers individuals to assert their rights more consciously. In line with Sustainable Development Goals in health, the aim is to achieve universal access to sexual and reproductive health services and integrate these topics into national strategies and programs by 2030 (12).

Successful implementation of CSE programs requires supportive policies, inclusion of culturally sensitive and evidence-based content in the curriculum, well-trained educators, collaborative parents, and the involvement of civil society organizations (8).

In this context, an elective course on sexual, reproductive health and family planning was offered to university students, and its effectiveness was evaluated. This study aims to assess the course's role in improving students' knowledge, attitudes, and promotion of healthy sexual behaviors. The course is expected to contribute to both personal and societal awareness and long-term health benefits.

MATERIAL AND METHODS

Study Design

This study was designed as a descriptive research. The study was conducted at Ankara Medipol University Ethics Committee (Date: 06/04/2021; Approval Number: 74791132-604.01.01-986). Data were collected through an online form from students attending the course via Microsoft Teams. The population consisted of 210 students enrolled in the elective "Reproductive Health and Family Planning" course during the Spring semester of 2020-2021. Students who completed the course and voluntarily agreed to participate were included in the study.

Data Collection Tools

Data were collected using the Demographic Information Form (DIF), Attitude Scale Toward Family Planning (ASTFP), and Reproductive Health Scale for Turkish Adolescents (RHSTA).

1. Demographic Information Form (DIF)

Developed by researchers, this form includes six questions to identify students' sociodemographic characteristics.

2. Reproductive Health Scale for Turkish Adolescents (RHSTA)

This measurement tool, originally developed by Karaca Saydam et al. in 2010 (13), comprises 34 items and evaluates six specific domains: partner selection, values supporting protective behaviors, communication with sexual partners, consultation, trust, and prevention of sexually transmitted infections. The total scoring range lies between 34 and 170, with higher scores reflecting more favorable attitudes toward reproductive health. The internal consistency of the scale, as measured by Cronbach's alpha, is reported as 0.88.

3. Attitude Scale Toward Family Planning (ASTFP)

Developed by Örsal and Kubilay in 2006 (14), this 5-point Likert-type scale includes 34 items, designed to assess individuals' attitudes toward family planning. The scoring range also spans 34 to 170, where higher scores indicate more positive perceptions. The instrument consists of three sub-dimensions: societal attitudes toward family planning, views on contraceptive methods, and attitudes toward childbirth. The scale demonstrates strong internal reliability with a Cronbach's alpha coefficient of 0.90.

4. Data Collection

Pre-test data were collected at the beginning of the course. The 14-week elective course included topics such as reproductive and sexual rights, gender, reproductive physiology, the status of family planning in Turkey and worldwide, classification and details of family planning methods, emergency contraception, STIs, and infertility. Each week included 2 hours of education. Post-test data were collected using the same scales.

5. Data Analysis

The statistical analyses were conducted using SPSS version 23.0. To determine whether the data followed a normal distribution, both the Kolmogorov-Smirnov and Shapiro-Wilk tests were applied. Since the data did not conform to normal distribution assumptions, non-parametric tests were used: the Mann-Whitney U test for comparisons between independent groups and the Wilcoxon signed-rank test for paired samples. A significance level of $p < 0.05$ was considered statistically significant.

RESULTS

In this section, the findings of the study are presented based on the analysis of the data collected before and after the reproductive and sexual health education. The results include descriptive statistics of the participants and comparative analyses of pre-test and post-test scores related to family planning attitudes and reproductive health. The tables below summarize the statistical outcomes across various subscales and total scores, with comparisons made based on academic department as well.

In the study, 78.1% of the participants were female and 21.9% were male. A total of 78.1% were enrolled in a health-related department. 96.2% were single, and 99% did not have children. 56.7% had spent most of their lives in a metropolitan area. The families of 69.5% of the participants lived in the Central Anatolia region. 89.5% reported having a medium-level economic status. 40% of the participants' mothers and 40% of their fathers were high school graduates. Additionally, 78.6% were living with their families. The average age was 20 years. All descriptive statistics are presented in Table 1.

The findings regarding the comparison of participants' pre-test and post-test scores on the Attitude Scale Toward Family Planning (ASTFP) are presented in Table 2. In the sub-dimension of attitude toward societal view on family planning, the mean pre-test score was 59.98±9.16, while the post-test mean was 62.82±6.41. This difference was not statistically significant (p=0.097). In the attitude toward family planning methods sub-dimension, the pre-test mean score was 38.57±7.02, and the post-test mean was 40.68±7.28. This difference was also not statistically significant (p=0.065). However, in the attitude toward childbirth sub-dimension, the pre-test mean score was 30.04±5.06, while the post-test mean was 31.61±4.07. This difference was found to be statistically significant (p=0.032). Regarding the overall scale score, the pre-test mean was 128.59±18.22, and the post-test mean was 135.1±15.2. This difference was also statistically significant (p=0.027).

Table 3 summarizes the comparative results of participants' scores on the Reproductive Health Scale for Turkish Adolescents (RHSTA) before and after the intervention. In the domain of partner selection, the mean pre-test score was 6.39 ± 3.34, while the post-test mean slightly increased to 6.60 ± 3.34; however, this change was not statistically significant (p = 0.182). For the dimension values in developing protective behaviors, the pre-test mean of 18.10 ± 6.65 rose to 19.27 ± 6.82 post-intervention, showing a statistically significant improvement (p = 0.006). In the domain communication with sexual partner, although there was a slight decrease from a pre-test mean of 26.44 ± 4.46 to a post-test mean of 26.09 ± 3.80, the difference was not statistically meaningful (p = 0.097). Regarding consultation, the mean score decreased from 22.37 ± 3.11 to 21.95 ± 3.03, and this change was statistically significant (p = 0.034). In the trust subscale, the scores slightly decreased from 22.54 ± 2.83 to 22.28 ± 2.80, with no significant difference observed (p = 0.096). For protection from sexually transmitted infections, the post-test mean (8.60 ± 1.56) was significantly higher than the pre-test mean (8.32 ± 1.61), indicating a meaningful improvement (p = 0.032). Finally, the total RHSTA score remained nearly unchanged (pre-test: 104.44 ± 8.15; post-test: 104.52 ± 8.06), with no statistically significant difference (p = 0.387).

Table 4 presents the comparison of RHSTA subscale and total score medians based on participants' academic departments. The analysis indicated no statistically significant differences in the pre-test median scores

across any subscales or the total score according to department (p > 0.050). In contrast, the post-test results revealed several significant differences. Specifically, the partner selection subscale showed a significant departmental difference (p = 0.021), with a median score of 5 among health-related students and 6 among students from other departments. Similarly, a statistically significant difference emerged in the values in developing protective behaviors subscale (p = 0.001), where health students had a lower median (15) compared to their peers in other fields (21). In the communication with sexual partner subscale, the median score was 29 for health students and 25 for others, indicating a significant difference (p = 0.011). The consultation subscale also showed a statistically significant variation (p = 0.006), with health students scoring a median of 24, compared to 21 for others. A notable difference was also observed in the post-test total RHSTA scores between the two groups (p = 0.007), again in favor of health-related students. No significant differences were detected in the remaining subscales or in overall pre-test scores (p > 0.050).

Table 5 illustrates the comparison of median scores on the ASTFP subscales and total scores according to students' academic departments. No statistically significant differences were observed in the pre-test scores across any subscales or the total scale based on department (p > 0.050). However, several significant differences emerged in the post-test results. In the subscale measuring attitudes toward societal views on family planning, a statistically significant difference was detected (p = 0.040), with a median score of 69 for students in health-related departments and 62.5 for those in other departments. Additionally, the attitude toward childbirth subscale showed a significant difference (p = 0.011); health students had a median score of 41, while their counterparts from other departments scored a median of 31. A significant difference was also found in the overall post-test total scores (p = 0.021), with health students achieving a higher median score (155) compared to 145.5 for students from non-health-related fields.

Table1. Descriptive Statistics of Participants

Variable	**Frequency**	**Percentage (%)**
Gender		
Female	164	78,1
Male	46	21,9
Marital Status		
Single	206	98,1
Married	4	1,9
Economic Status		
Low	8	3,8
Medium	188	89,5
High	14	6,7
Mother's Education		
Illiterate	1	0,5
Literate	7	3,3
Primary School	48	22,9
Middle School	24	11,4
High School	84	40
University	46	21,9
Father's Education		
Illiterate	1	0,5
Literate	3	1,4
Primary School	27	12,9
Middle School	35	16,7
High School	84	40
	Mean ± SD	**Median (Min-Max)**
Age	20 ± 2,75	20 (18 - 41)

Table 2. Comparison of Participants' Pre-Test and Post-Test Scores on the Attitude Scale Toward Family Planning (ASTFP)

Variable	ASTFP Pre-Test	ASTFP Post-Test Mean ± SD (Median; Min-Max)	Test Statistic	p*
	Mean ± SD (Median; Min-Max)	Mean ± SD (Median; Min-Max)		
Attitude toward societal view on family planning	59,98 ± 9,16 (61; 36-75)	62,82 ± 6,41 (63; 47-75)	3167,5	0,097
Attitude toward family planning methods	38,57 ± 7,02 (36; 29-55)	40,68 ± 7,28 (39; 28-55)	3101	0,065
Attitude toward childbirth	30,04 ± 5,06 (30; 22-40)	31,61 ± 4,07 (32; 22-40)	2993,5	**0,032**
ASTFP Total Score	128,59 ± 18,22 (130; 92-170)	135,1 ± 15,2 (133; 105-168)	2964,5	**0,027**

* Wilcoxon test

Table 3. Comparison of Participants' Pre-Test and Post-Test Scores on the Reproductive Health Scale for Turkish Adolescents (RHSTA)

Variable	RHSTA Pre-Test	RHSTA Post-Test	Test Statistic	p*
	Mean ± SD (Median; Min-Max)	Mean ± SD (Median; Min-Max)		
Partner Selection	6,39 ± 3,34 (5; 4-20)	6,6 ± 3,34 (5; 4-20)	-1,336	0,182
Values in Developing Protective Behaviors	18,1 ± 6,65 (16; 12-58)	19,27 ± 6,82 (18; 12-60)	-2,727	**0,006**
Communication with Sexual Partner	26,44 ± 4,46 (28; 6-30)	26,09 ± 3,8 (26; 6-30)	-1,659	0,097
Consultation	22,37 ± 3,11 (23,5; 5-25)	21,95 ± 3,03 (22; 5-25)	-2,118	**0,034**
Trust	22,54 ± 2,83 (24; 13-25)	22,28 ± 2,8 (23; 5-25)	-1,664	0,096
Protection from Sexually Transmitted Infections	8,32 ± 1,61 (8; 2-10)	8,6 ± 1,56 (9; 2-10)	-2,144	**0,032**
Total Score	104,44 ± 8,15 (106; 60-125)	104,52 ± 8,06 (105; 76-146)	-0,864	0,387

* Wilcoxon test

Table 4. Comparison of Pre-Test and Post-Test Subscale and Total Scores on the Reproductive Health Scale for Turkish Adolescents (RHSTA) by Academic Department

Subscale	Health Field.	Other Fields	Test Statistic	p*
	Mean ± SD (Median; Min-Max)	Mean ± SD (Median; Min-Max)		
Partner Selection – Pre-Test	6,45 ± 3,27;5 (4 - 20)	7,15 ± 3,55;6 (4 - 16)	3383	0,271
Values in Developing Protective Behaviors – Pre-Test	18,88 ±7,08;17 (12 - 60)	20,67 ± 5,68;21,5(12 - 33)	2908	0,545
Communication with Sexual Partner – Pre	26,3 ± 3,88;27 (6 - 30)	25,37 ± 3,47;24,5 (13 - 30)	3034,5	0,185
Consultation – Pre	22,2 ± 3,01;23 (5 - 25)	21,09 ± 2,97;20 (12 - 25)	2894,5	0,634
Trust – Pre	22,41 ± 2,76;23 (5 - 25)	21,8 ± 2,94;21,5 (14 - 25)	3348	0,233
Protection from STIs – Pre	8,23 ± 1,7; 8 (2 - 10)	8,67 ± 1,19;8,5 (6 - 10)	3291,5	0,172
RHSTA Total Score – Pre	104,46 ± 8,39;105 (76 - 146)	104,76 ± 6,83; 105 (78 - 118)	3600,5	0,637
Partner Selection – Post-Test	6,15 ± 3,27;5 (4 - 20)	7,24 ± 3,49;6 (4 - 16)	2972,5	**0,021**
Values in Developing Protective Behaviors – Post	17,4 ± 6,6;15 (12 - 58)	20,57 ± 6,27;21 (12 - 36)	2529	**0,001**
Communication with Sexual Partner – Post	26,71 ± 4,62;29 (6 - 30)	25,5 ± 3,76;25 (13 - 30)	2877	**0,011**

Consultation – Post	22,65 ± 3,04;24 (5 - 25)	21,37 ± 3,2;21 (12 - 25)	2818	**0,006**
Trust – Post	22,73 ± 2,73;24 (13 - 25)	21,87 ± 3,11;22 (14 - 25)	3219	0,111
Protection from STIs – Post	8,59 ± 1,65;9 (2 - 10)	8,67 ± 1,23;9 (6 - 10)	3701	0,837
RHSTA Total Score – Post	122,22 ± 8,56;122 (80 - 146)	112,22 ±6,49;112 (78 - 124)	3603,5	**0,007**

* Wilcoxon test

Table 5. Comparison of Pre-Test and Post-Test Subscale and Total Scores on the Attitude Scale Toward Family Planning (ASTFP) by Academic Department

Subscale	**Health Field.**	**Other Fields**	**Test Statistic**	**p***
	Mean ± SD (Median; Min-Max)	**Mean ± SD (Median; Min-Max)**		
Attitude toward societal view on FP – Pre	62,38 ± 7,2;62,5 (43 - 75)	61,54 ± 7,11;62 (36 - 75)	3568	0,575
Attitude toward FP methods – Pre	40,6 ± 7,56;39 (28 - 55)	38,83 ± 5,92;37 (29 - 55)	3383	0,285
Attitude toward childbirth – Pre	31,23 ± 4,53;32 (22 - 40)	31,39 ± 3,61;31 (22 - 38)	3696	0,834
ASTFP Total Score – Pre Test	134,21 ± 16,78;133 (103 - 170)	131,76 ± 13,35;131 (92 - 166)	3561	0,562
Attitude toward societal view on FP – Post	69,32 ± 5,2; 69 (55 - 75)	62,54 ± 3,31;62,5 (45 - 75)	3044	0,040
Attitude toward FP methods – Post	41,6 ± 7,68;39 (28 - 55)	39,83 ± 5,22;37 (33 - 55)	3383	0,285
Attitude toward childbirth – Post	41,23 ± 7,53;41 (35- 50)	31,6± 3,61;31 (22 - 38)	2988	0,011
ASTFP Total Score – Post Test	155,21±14,68;155 (125- 170)	145,76 ± 13,21;145,5(130 - 166)	2455	0,021

* Mann-Whitney U test

FP: Family Planning

DISCUSSION

Sexual health is understood not solely as the absence of illness or dysfunction related to sexuality, but as a holistic state in which physical, emotional, cognitive, and social dimensions of sexuality are positively integrated. In a similar vein, reproductive health encompasses more than just the lack of disease or disorders affecting the reproductive system and its associated functions; it refers to a complete state of physical, psychological, and social well-being. This perspective highlights that reproductive health includes individuals' autonomy to experience a safe and fulfilling sexual life, along with the right to make informed and voluntary decisions about if, when, and how often to reproduce (12).

In our study, which aimed to evaluate the impact of reproductive health education on students' reproductive behaviors and attitudes toward family planning, the average age was found to be 20 ± 2.75. Similar studies reported average ages of 20.71 ± 1.83, 20.60 ± 2.12, and 27.4 ± 5.35, respectively (15,16,17). In our sample, 78% of participants were students in health-related departments, while the participation rate from other departments was lower. This is consistent with previous studies in which most participants were students in health fields (15,18). This similarity may be due to the course on reproductive health being primarily offered to departments within the health sciences, while it is offered as a social elective in other disciplines at our university.

The literature emphasizes that university students need education on reproductive and sexual health (19,20). Studies on the topic have shown that students exhibit more positive attitudes after receiving education on sexual and reproductive health (21-24). In our study, when analyzed according to department, there was no significant difference in pre-test scores on the Reproductive Health Scale for Turkish Adolescents (RHSTA). However, after 14 weeks of reproductive health education, post-test scores showed statistically significant improvements in the subscales of partner

selection, values in developing protective behaviors, communication with sexual partner, and consultation (Table 4). Similarly, a study by Aşçı et al. (25), which evaluated a two-hour peer-led educational program covering sexual and reproductive health, reproductive rights, physiology, family planning, safe sex, and STIs, found significant results when measured six weeks later—supporting our findings.

In another study where reproductive health education was delivered in two 40-minute interactive sessions involving quizzes, videos, and group discussions on STIs, sexual violence, sexual communication, and gender, results showed increases in knowledge, attitudes, and self-efficacy, with the interactive format proving more effective than traditional lectures (22). In a study assessing the effectiveness of sexual and reproductive health education in university curricula, results indicated a statistically significant decrease in risky sexual behaviors and improved attitudes toward family planning among students who received the training (30). Similarly, other studies have reported improved attitudes among students following interventions related to sexual and reproductive health, along with decreases in adolescent pregnancies, STI rates, and average age of sexual debut (22,23,27,28). These findings emphasize the importance and effectiveness of education in improving students' knowledge, attitudes, and behaviors. The literature also supports that students with prior knowledge about sexual and reproductive health exhibit more positive attitudes than those without such knowledge (16,21,25).

Moreover, the literature indicates that university students' knowledge and attitudes toward family planning are generally inadequate, and that students express a desire for education on this topic (29–37). In our study, no significant differences were observed in the pre-test ASTFP scores across departments. However, following the 14-week reproductive health course, significant improvements were observed in the subscales of societal attitudes toward family planning, attitudes toward childbirth, and overall ASTFP scores (Table 3). In a study by Özer and Yaman Sözbir (38), students in the intervention group received the same family planning education as the control group, with the addition of humor, resulting in significantly higher ASTFP scores. Another intervention involving two 90-minute sessions on family planning showed significant improvements in both knowledge and attitudes toward contraceptive methods (39). Similar studies reported statistically significant improvements in students' attitudes toward family planning following education (38-40), supporting our findings that reproductive health education improves students' attitudes toward family planning.

CONCLUSION

Considering that sexual and reproductive health education can lead to behavior change, it is crucial to implement such interventions for the benefit of both individual students and public health. To enhance the effectiveness and sustainability of educational impact, we recommend repeating the training sessions, incorporating interactive teaching methods, organizing practical activities such as simulations or case discussions, and offering students guidance and counseling services.

We believe that making sexual and reproductive health courses a mandatory part of university curricula would be beneficial for both students and broader public health. Given that the age of exposure to sexually transmitted infections like HIV is decreasing globally and that infection rates are increasing, it is essential to integrate these topics into the education process at an earlier stage. In Türkiye, reports show HIV exposure at ages as young as 15. Therefore, these topics should not be confined to university-level education but also included in earlier educational stages. It is important to revise curricula accordingly and strengthen collaborations with relevant authorities.

Contribution to the Field

The literature acknowledges that students need knowledge and guidance on sexual and reproductive health; however, there are only a limited number of studies that report on intervention-based educational programs. For this reason, we believe that our study will serve as a guiding resource for future researchers.

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- **Manuscript Preparation:** S.C., T.T., Seniha Balcı
- **Critical Revision for Content:** S.C.
- **Statistical Analysis:** S.C., G.G.
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REVIEW ARTICLE

My Doctor is not Comfortable – So Maybe I Should not Talk About It? A Review on the Lack of Sexual Education in Medical Schools

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This study has been accepted as an oral presentation at the 5th World Academy of Sexual Health (WASHE) Congress to be held in Bafra between 20-23 February 2025.

Abstract

Sexual health and well-being is an integral part of human health. In medical faculties, which train physicians who are the foundation of the health system, sexual education is either not included in the curriculum at all or is offered as an elective course, except for some subjects related to sexually transmitted infections and reproductive health. Contrary to the common belief among physicians, "Would I embarrass the patient?", people expect physicians to ask them questions about sexuality and provide sexual education. However, when physicians do not graduate from medical school with well-informed knowledge on sexuality, they feel insecure and uncomfortable even taking sexual history from their patients. There are many studies showing that sexuality courses to be given in medical facilities increase the self-confidence and comfort of physicians and enable them to add sexual history to their routine practices. Standardization and making sex education compulsory in medical faculties will be a useful step for public health by enabling the public to discuss sexual problems and obtain the right information from the appropriate source.

Keywords: curriculum, medical school, sexual education, sexual history, sexual health

INTRODUCTION

Today, there is a consensus on the importance of sexual health and well-being in human health and its necessity for physical and mental health. The World Health Organization defines sexual health not only as the absence of disease, dysfunction or disability, but also as a state of physical, mental, emotional and social well-being related to sexuality. The right to information and education on sexuality is emphasized among sexual rights (1).

Individuals want to consult physicians to obtain information about sexuality and to express their sexual problems. However, since they themselves are reluctant to open up about sexuality, they wait for physicians to ask them questions and open up the subject (2,3). However, research shows that physicians also have reservations about discussing sexuality because they have not received adequate training [4-7]. This vicious circle will end when physicians are able to talk freely about sexuality, approach their patients with a reassuring attitude, free from prejudices and provide the right guidance, which is only possible through more comprehensive and compulsory sexuality education in medical schools (8-11).

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Patients' Expectation

Contrary to the reservations that physicians often experience, "Will I offend the patient? "Will I embarrass him/her?", studies have shown that patients expect physicians to ask them questions about sexuality when they consult a physician. Moreover, they expect that questions should not be superficial, should not be answered with yes-no answers, and that the physician should create a comfortable environment in which they can ask questions (2-3)

Young individuals, who have many questions about sexuality with adolescence, expect more information and sexual education from physicians (3). In a study of young adults and adolescents using open-ended questions, participants reported that during adolescence, physicians only asked them about physical changes (e.g., deepening of the voice, first menstruation) (3). However, they stated that physicians did not ask them about the effects of these changes, and when they were asked whether they were sexually active or not, physicians closed the subject when the participant answered no (3). Participants stated that their expectations from physicians were to receive information and education on sexuality before becoming sexually active (3). This is a perfectly understandable and reasonable request. In the same study, participants stated that when they could not receive the education they needed from physicians, they used the internet as a way of obtaining information (3). However, they stated that they were not sure which of the information they encountered on the internet was true and which was false (3). In another study conducted with medical students, unfortunately, it was observed that one out of three students indicated pornography as a source of information about sexuality (12).

As young people expect, physicians being prepared to provide accurate information in an unbiased and supportive manner, being conversation starters, encouraging questions and even having short but meaningful conversations about sexuality can make a difference to the sexual knowledge and sexual health of the community (3-13).

Physicians' Sense of Insecurity

Every physician who graduates from medical school has the possibility to work in primary care. Patients also seek help on sexuality from primary care physicians (2-3). Considering these facts, it is thought that sexuality education should be a compulsory rather than an elective course in medical faculties (4-5). In addition, studies have shown that, except for certain topics related to sexually transmitted infections and reproductive health, topics related to sexuality are either not included in the curricula of faculties or are offered as elective courses (14-15). In studies conducted on medical students, it is seen that the majority of students want sexual health courses to be compulsory, find their current curriculum inadequate and feel insecure even in the most basic issues such as taking sexual history (6-7,16-17).

Curriculum Development Studies

In the literature, it has been observed that this issue has been increasingly brought to the agenda with curriculum studies conducted in different countries, an awareness has started to be raised and a standardization on sexual health is being tried to be achieved in medical school curricula. It is noteworthy that in addition to reproductive health and sexually transmitted diseases; topics such as taking sexual history, sexual well-being, sexual dysfunctions, sexual violence and approach to sexual minority groups were also determined in the curriculum studies (18-23).

Studies on sexual history taking, which is one of the most basic professional skills that every physician should acquire, show that big differences can be made with small changes (8-11). In a study conducted in the USA, a compulsory sexual health course in the curriculum of a medical school was evaluated (8). At the end of the compulsory courses, which included theoretical lectures as well as practical sexual history taking sessions, almost every item in the areas of communication skills and knowledge was reported to have improved significantly (8). In another study conducted in the USA, a series of non-compulsory lectures on sexuality were organized for medical students and the change in the participants was observed (9). At the end of the lesson series, it was observed that participating students' comfort levels with talking about sexuality-related issues increased compared to before the lesson (9). In another study, a program was planned for medical school students to teach secondary school students, and within the scope of this program, medical school students were also trained (10). As a result, adolescents' knowledge of sexual health issues has been shown to increase, as well as the comfort and confidence of future clinicians

to discuss sexual health issues with adolescents and patients of all ages (10). Another similar study showed a statistically significant increase ($p < 0.05$) in the number of students who reported feeling more comfortable in handling many aspects of a patient's sexual history and discussing sexuality-related issues with patients over the age of 60, even after only a 2-hour course.[11] The same study also reported a statistically significant increase in the number of students who reported feeling ready to meet the sexual and reproductive health needs of their patients (11).

A study on routine screening for sexual dysfunction found that medical students who felt that their schools provided them with adequate training to screen for sexual problems were more likely to routinely screen patients for sexual dysfunction (24).

CONCLUSION

Looking at all these data, we can say that small adjustments in the curricula of medical faculties can make a big difference in order for physicians to be able to talk about sexuality comfortably with their patients, to provide sexual education to them before they ask, to include questions about sexuality in their routine practices, to listen to and elaborate on sexual problems without panic and insecurity.

Every physician who graduates from medical school will, at some point in his or her professional life, may be confronted with a patient who asks for help on sexuality. It is obvious that physicians, whom people see as the first point of reference on sexuality, should be able to comfortably discuss sexuality within the framework of a bio-psycho-social approach in their routine practice, regardless of their specialty. It is of great importance that the physician is open, unprejudiced and self-confident. Cause the patient hardly opens up about sexuality, which is already taboo in society. The way to do this is to make sure that every physician starts their professional life equipped with sexual health knowledge through changes to be made in medical school curricula. More research should be done on this subject, the topics that need to be included in the curriculum of medical faculties should be clarified, standardized and added to the compulsory courses.

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REVIEW ARTICLE

Natural and Herbal Solutions for Managing Depression and Anxiety

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Abstract
Depression and anxiety are prevalent mental health disorders that affect millions of people worldwide. This article explores the impacts, causes, and symptoms of these conditions while focusing on various natural and herbal remedies available for management. The benefits of herbal remedies, lifestyle changes, and dietary adjustments are examined, supported by scientific research. By understanding these natural treatments, individuals can discover effective strategies to enhance their mental well-being and overall quality of life.

Keywords: depression, anxiety, natural remedies, herbal treatment, mental health

INTRODUCTION

In today's fast-paced world, mental health issues are on the rise, with depression and anxiety being among the most common. The World Health Organization estimates that over 264 million people suffer from depression, while anxiety disorders affect approximately 284 million individuals globally (1). These conditions can significantly impair daily functioning, social relationships, and overall quality of life (2).

Conventional treatment options for managing depression and anxiety often include psychotherapy and pharmacological interventions (3). However, there is a growing trend towards exploring natural and herbal remedies. Many individuals prefer these alternatives due to concerns about the side effects of medications and a desire for more holistic approaches to mental health (4).

This article will explore a variety of natural remedies that can aid in managing depression and anxiety. We will discuss their potential benefits, mechanisms of action, and practical applications, all while emphasizing the importance of a comprehensive approach to mental health.

Understanding Depression and Anxiety

1. What is Depression?

Depression is a complex mental health disorder that goes beyond a temporary case of the blues. It is characterized by persistent feelings of sadness, hopelessness, and a lack of interest in activities that were once enjoyable. According to the American Psychiatric Association (5), major depressive disorder includes symptoms such as:

- Persistent sadness or low mood
- Loss of interest or pleasure in most activities
- Changes in appetite leading to weight gain or loss
- Sleeping problems, such as insomnia or hypersomnia
- Fatigue or decreased energy
- Difficulty concentrating or making decisions
- Feelings of worthlessness or excessive guilt
- Recurrent thoughts of death or suicide

The causes of depression are multifaceted and often include a combination of genetic, biological,

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environmental, and psychological factors. Research has shown that individuals with a family history of depression may be more susceptible to experiencing it themselves (6).

Depression can significantly impact one's ability to function in daily life affecting work, relationships, and overall enjoyment of life. Moreover, untreated depression can lead to physical health problems, as the mind and body are inherently connected. It can result in a higher risk of chronic diseases, including heart disease and diabetes (7).

2. What is Anxiety?

Anxiety is characterized by excessive worry, fear, and apprehension. It can manifest in various forms, including generalized anxiety disorder (GAD), panic disorder, social anxiety disorder, and specific phobias (5). Individuals with anxiety often experience physical symptoms that can be debilitating, such as:

- Increased heart rate
- Sweating
- Trembling or shaking
- Shortness of breath
- Muscle tension
- Fatigue
- Difficulty sleeping

Anxiety can be triggered by various stressors, including work pressures, personal relationships, and major life changes. Many individuals experience both anxiety and depression simultaneously, creating a challenging cycle of mental distress (8).

3. Natural and Herbal Remedies

Natural and herbal remedies have been utilized for centuries to alleviate symptoms of depression and anxiety. These remedies often consist of plants and natural substances that provide therapeutic benefits and may have fewer side effects compared to conventional medications (4). Here, we explore several prominent natural remedies that have gained traction in recent years.

3.1. St. John's Wort

St. John's Wort (Hypericum perforatum) is one of the most researched herbal treatments for depression. Numerous studies have demonstrated its effectiveness for mild to moderate depression, with findings suggesting that it may be as effective as standard antidepressants (9).

Mechanism of Action:

The active compounds in St. John's Wort, particularly hypericin and hyperforin, are believed to work by increasing the levels of neurotransmitters such as serotonin, dopamine, and norepinephrine in the brain (10). This mechanism is similar to that of many prescription antidepressants, allowing it to elevate mood effectively.

Usage:

St. John's Wort is commonly available in various forms, including capsules, tablets, and teas. It is essential to consult with a healthcare provider before starting this remedy, as it can interact with numerous medications, including blood thinners and other antidepressants (11).

3.2. Ashwagandha

Ashwagandha (Withania somnifera) is an adaptogenic herb that has gained popularity for its ability to reduce stress and anxiety. Research has indicated that ashwagandha can lower cortisol levels and improve overall well-being, making it a beneficial option for individuals experiencing anxiety and stress-related disorders (12).

Mechanism of Action:

As an adaptogen, ashwagandha helps the body adapt to stressors and promotes a sense of calm. It may also enhance the production of serotonin and other neurotransmitters that play a role in regulating mood and anxiety.

Usage:

Ashwagandha is typically available in powder, capsule, or tincture form. It can be consumed alone or mixed into smoothies or teas. Many people enjoy adding it to warm milk or herbal beverages to reap its calming benefits.

3.3. Lavender

Lavender (Lavandula angustifolia) is widely known for its calming effects and is frequently used in aromatherapy. Studies have shown that lavender essential oil can help reduce anxiety levels and improve sleep quality (13).

Mechanism of Action:
Lavender is thought to interact with the limbic system the part of the brain involved in emotions and memory. Its soothing aroma may help modulate mood and mitigate feelings of stress, thereby providing a calming effect.

Usage:
Lavender can be utilized in various forms, such as essential oil diffusers, topical applications, or herbal teas. For instance, adding a few drops of lavender essential oil to a warm bath can create a relaxing environment conducive to stress relief.

3.4. Omega-3 Fatty Acids
Omega-3 fatty acids, found in fatty fish like salmon, flaxseeds, and walnuts, have been linked to improved mental health. Research suggests that omega-3 supplementation may help reduce symptoms of depression and anxiety by promoting brain health and reducing inflammation (14).

Mechanism of Action:
Omega-3 fatty acids are believed to enhance the fluidity of brain cell membranes and improve neurotransmitter function, contributing to better mood stabilization.

Usage:
Individuals can increase their omega-3 intake through dietary sources or take high-quality supplements in capsule form. It is advisable to consult with a healthcare provider to determine the appropriate dosage.

3.5. Magnesium
Magnesium is an essential mineral critical for numerous bodily functions, including mood regulation. Studies have indicated that magnesium deficiency is associated with an increased risk of depression and anxiety (15).

Mechanism of Action:
Magnesium is involved in the regulation of neurotransmitters, which are crucial for mood stabilization. It also helps to reduce the body's stress response, making it a key nutrient for mental health.

Usage:
Magnesium can be obtained from various dietary sources, including leafy greens, nuts, seeds, and whole grains. For those who may not get enough magnesium through their diet, supplements are available.

4. Lifestyle Changes
In addition to herbal remedies, making certain lifestyle changes can significantly impact how one manages depression and anxiety.

4.1. Exercise
Engaging in regular physical activity is one of the most effective ways to improve mood and reduce anxiety. Exercise increases the release of endorphins known as the body's natural mood lifters which can lead to enhanced feelings of well-being (16).

Recommendation:
Activities like running, walking, swimming, or practicing yoga can be beneficial for mental health. Finding a form of exercise that is enjoyable can make it easier to maintain a consistent routine.

4.2. Nutrition
A balanced diet is essential for supporting mental health. Consuming foods rich in omega-3 fatty acids, vitamins, and minerals can positively influence mood and reduce symptoms of depression and anxiety (17).

Recommendation:
Incorporating a variety of fresh fruits, vegetables, whole grains, and healthy fats into daily meals can provide essential nutrients that support mental health. Additionally, limiting the intake of processed foods and sugars can also be beneficial for overall well-being.

4.3. Sleep
Adequate sleep is crucial for maintaining mental health. Sleep deprivation can lead to increased feelings of anxiety and depression. Establishing a regular sleep routine can significantly improve mood and overall well-being (18).

Recommendation:
Aiming for 7 to 9 hours of sleep per night and maintaining a consistent sleep schedule can help improve sleep quality. Creating a restful environment by limiting screen time before bed, keeping the bedroom dark and cool, and practicing relaxation techniques can also promote better sleep.

5. Support Networks for Mental Health

Support groups can be invaluable resources for individuals dealing with depression and anxiety. They provide a platform for sharing experiences and receiving emotional support from others who understand what they are going through.

5.1. Online Support Groups

In today's digital age, online support groups allow individuals to connect with others facing similar challenges. These platforms often provide anonymity, enabling people to express their feelings and experiences more freely.

Seeking Professional Help

While natural and herbal remedies can be beneficial, seeking professional assistance is also essential. Therapy and counseling can help individuals work through their emotional challenges. Collaborating with a mental health professional allows individuals to better understand their personal situations and develop effective coping strategies.

The Importance of Holistic Approaches

When managing depression and anxiety, it is vital to adopt a holistic approach that considers all aspects of an individual's life. This includes not only physical health through nutrition and exercise but also emotional and social well-being. A holistic approach encourages individuals to focus on building resilience and finding balance in their lives.

Combining Remedies and Treatments

Combining various natural remedies with standard treatment options can yield positive results. For instance, individuals may find that using St. John's Wort alongside therapy enhances their overall treatment experience. However, it is crucial to consult with healthcare professionals before combining treatments to ensure safety and efficacy.

Community Resources and Programs

Many communities offer resources and programs aimed at supporting mental health. These may include workshops, seminars, and support groups that focus on stress management, mindfulness, and emotional resilience. Engaging in community programs can provide individuals with valuable tools and support systems to help manage their mental health.

CONCLUSION

In conclusion, depression and anxiety are significant mental health issues that affect countless individuals worldwide. Natural and herbal remedies can serve as effective tools in managing these conditions. Furthermore, implementing lifestyle changes, including regular exercise, nutritious eating, and sufficient sleep, can contribute to improved mental well-being. Each individual's experience is unique, and finding the most effective approach may require exploration and personal adjustments.

By embracing natural solutions, lifestyle changes, and seeking support, individuals can take proactive steps towards enhancing their mental health and overall quality of life.

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REVIEW ARTICLE

Sexual Life According to Personality Traits

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Abstract

Personality traits play a crucial role in shaping an individual's general behavior, emotional responses, and cognitive processes, including sexual life. This article examines the relationship between various personality structures and sexual behaviors, exploring how different personality traits influence sexual attitudes, preferences, and dysfunctions. The study focuses on specific personality patterns, including borderline, narcissistic, dependent, obsessive-compulsive, schizoid, histrionic, paranoid, and antisocial personalities, analyzing their effects on sexual life. As a result, individuals with borderline personality disorder tend to engage in impulsive and risky sexual behaviors, while narcissistic individuals prioritize personal pleasure over emotional intimacy. Those with dependent personality traits adopt a submissive approach to sexuality, whereas obsessive-compulsive individuals often struggle with sexual satisfaction and exhibit avoidant behaviors. Schizoid personalities show a lack of interest in sexual relationships, whereas histrionic individuals tend to seek attention through sexual behavior. Paranoid personalities struggle with trust issues that hinder their sexual experiences, and antisocial personalities often display manipulative and exploitative sexual tendencies.

Keywords: personality traits, sexuality, sexual behavior, personality disorders, sexual dysfunction.

INTRODUCTION

Personality is a set of characteristics that affect the behavior of individuals as well as their emotions and thoughts, distinguish them from other individuals, and show stability despite place, space, and time diversity (1).

With this characteristic individual shape their own spesific cognitve and sensory pattern. With these characteristics, individuals shape their inner and outer worlds and create their own unique cognitive and emotional patterns in their social lives. These patterns form the behaviors, defenses, and mechanisms called action-reaction that will be displayed in the events that it encounters. Character and temperament are complementary components of personality, which is formed by the combination of physical and mental conditions, learning and social environment that begin with birth. Character is defined as the individual's way of social survival as an individual in the outside world, which develops together with individuals social environment and learning ability. Temperament, on the other hand, is a behavioral style that is innate due to biological factors. Identity and personality are similar concepts

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that are often confused. Identity is the recognition of the individual's place in society and in social life, whereas personality is the unique description of an individual with his/her own, unchanging characteristics.

Personality type or personality style should not be confused with personality disorder. For example, although the term obsessive describes the personality type of the individual, this does not mean that the person has obsessive personality disorder. Personality disorder, on the other hand, refers to a dysfunction that is more extreme.

Personality organization refers to the level of sense-making along with defense mechanisms, self and object representations, emotional states, automatic thoughts, based on the cognitive and emotional levels of the individual (2). Personality organization levels are categorized into four groups as healthy, neurotic, borderline, and psychotic (3).

Personality traits play an important role in the individual's entire life, as well as being critical in defining sexuality and being at the center of sexual life and sexual dysfunctions (4). It is stated that depending on the types of personality disorders, a wide variety of sexual behaviors are observed, such as less or more sexual self-esteem, sexual reluctance, different excitement searches and sexual intercourse with random people.

In this study, differences in sexual life were discussed based on various personality traits.

BORDERLINE PERSONALITY

Borderline Personality Organization (5), first described by Adolph Stern, was developed by Otto Kernberg. This level of organization, which differs in terms of defense mechanisms, identity integrity, reality assessment ability, aggression, superego level and object relations levels and contents, is distinguished from neurotic and psychotic personality organizations (6).

The basic defense of individuals with borderline personality organization, who lack identity integrity, have inconsistent self and object designs, and use more primitive defense mechanisms, is the splitting mechanism. Short- or long-term impairments in their ability to evaluate reality, frequent and excessive anger towards themselves and other individuals are observed. There is an inconsistent and unstable superego appearance and fluctuating object relations (6).

The basic clinical characteristics of individuals with borderline personality disorder are fear of abandonment, inconsistent interpersonal relationships and self-perception, chronic feelings of emptiness, angry outbursts, self-harming behaviors and repeated suicide attempts, promiscuous sexual relationships, fast driving, alcohol or substance abuse, etc. İmpulsive behaviors (7).

Individuals with borderline personality organization cannot stay in a relationship with certain boundaries, they prefer random partners in sexuality. Their preferences are determined by the dilemma between intense affection, which is love, and sexuality at the level of need. They do not have long-lasting love relationships and their sexual partners are mostly new individuals. In sexual relationships where they are committed, they have sexual thoughts and attempts at a level that can reach perversion due to the gradual decrease in their sexual interest (8).

Studies have shown that individuals with borderline personality disorder frequently have promiscuous sexual intercourse, sexual intercourse under the influence of alcohol and substances, homosexual experiences, having a sexually transmitted disease, a history of being raped or forced into sexual intercourse, early sexual experiences, sexual dissatisfaction, unprotected high-risk sexual intercourse, having multiple sexual partners at the same time, and cheating on their partners (9).

Individuals with borderline personality disorder may tend to be reliant on others as a result of not being able to go through the "separation-individuation" period defined by M. Mahler in a healthy way. As a result, they make excessive efforts to engage in impulsive sexual behavior because they have a fear of being alone and cannot tolerate loneliness (10).

NARCISSISTIC PERSONALITY

The concept of narcissism is based on various mythological stories, in which Narcissus was described as falling in love with himself after seeing his own reflection in the water while drinking water from a riverbank, and melting away day by day and dying while

looking at himself (11). The main theme of this story, which has various types, forms the basis of narcissism and shows that this concept is a subject that human beings have been interested in and researched for a very long time (12).

Narcissism is the state in which an individual has a high level of self-confidence and self-worth, and is not overly affected by criticism and negative comments from the external environment. The individual focuses more on his/her own internal processes and takes his/her own opinions into consideration rather than external comments (13). Every person has narcissistic needs that need to be satisfied, such as approval, love, admiration, etc. A person can make a great effort to satisfy these needs and spend a lot of time on this path. As a result, they can experience narcissistic injuries in situations where they do not receive the response they believe they deserve, or even in very simple daily events (14).

It can be said that narcissism has evolved into a pathological situation when a person displays the appearance of not caring about the opinions of others, but feels the opposite in her/his inner world, completely focusing on the opinions of other people, feeding on comments coming from outside, and even needing them (15).

In narcissistic personality disorder, individuals are in a structure that constantly admires themselves, especially physically and mentally, has the idea that they have unique and admirable characteristics, and is very hungry for appreciation and admiration from those around them. There is a structure that is prone to manipulation and abuse, lacking empathy and avoiding responding with the same reaction to those who show this appreciation and admiration (16).

It is thought that the narcissistic personality pattern can create a negative picture in sexual life and close relationships, especially in terms of romantic relationships (17). Their main goal in romantic relationships is to feel good about themselves. Since they usually exalt their partners too much at the beginning of the relationship, they quickly lose interest in their partners as the effect of the exaltation quickly disappear, and therefore they can easily start other relationships and change partners frequently. They usually do not feel commitment and closeness in these relationships (18).

The sole reason why narcissistic people's primary motivations in their sexual lives are focused on pleasure and relaxation is that they cannot feel closeness and attachment (19). On the other hand, it is thought that they may be prone to a risky behavior repertoire because they are more selfish in sexuality and far from attachment. Likewise, studies have shown that there is a positive relationship between anger, anxiety, a large number of partners, and the use of pornographic content and narcissism (20,21).

For some narcissistic individuals, masturbation may be more pleasurable than sexual intercourse with a partner because the body of another creates alienation and discomfort (22).

DEPENDENT PERSONALITY

Individuals with Dependent Personality Pattern, one of the frequently seen samples among those applying to clinics, draw a picture in which they trust others more than themselves due to their low self-confidence, their sense of independence is underdeveloped, and they exhibit more clingy behaviors towards other individuals due to their low sense of self-efficacy (23). Dependent personality disorder is characterized by behavioral patterns that require a level of dependency on the presence of another in order to sustain one's own life, which are more common in adolescence and early adulthood (24). While the person's self-image is positioned as defenseless, weak, and inadequate, the object image is positioned as self-sufficient, able to guide another, always knowing what to do, able to guide another, and even take care of them. As a result, individuals with dependent personality disorder exhibit an appearance in which they have extreme fears of abandonment, an inability to be alone and an extreme fear of being alone, constantly seek advice from someone else even in simple and daily matters to escape this, and undertake even degrading and unpleasant tasks because they are overly giving as a result of their fear of losing the support of another (25).

Since their main purpose in their sexual lives is to feel safe, to be close, and to be desired, they meet these basic needs through sexuality rather than pleasure. Therefore, the pleasure they get from sexuality is not a physical satisfaction but rather the satisfaction of

these needs. Because of their fear of being abandoned and disliked, they accept their partners' wishes unconditionally and do not draw boundaries even in situations they do not want to happen. Their partners' wishes are at the forefront rather than their own. As a result, they make love in line with their partners' wishes in order to provide them with pleasure (26).

OBSESSIVE-COMPULSIVE PERSONALITY

The main difference between obsessive-compulsive disorder and obsessive-compulsive personality disorder is that in obsessive-compulsive disorder there are symptoms in certain areas, while in obsessive-compulsive personality disorder there are features that are embedded in the entire character (27). Obsessive-compulsive disorder is defined as "a psychiatric disorder defined by repetitive and distressing thoughts (obsessions) and repetitive behaviors or mental actions (compulsions) that lead to significant impairment in one's social and professional functions (28). Obsessive-compulsive personality is characterized by perfectionism, having rigid rules and not being able to show flexibility in this regard, being overly controlling, and having cognitive errors representing rigid and unchangeable rules and ideas such as "should, must" (29). Obsessive-compulsive personality disorder is extremely disorganized and rich in terms of symptoms. In clinical studies, it has been found that more than 75% of people with obsessive-compulsive personality disorder have both obsessions and compulsions together. In epidemiologic studies, it was found that 40% had only obsessions, 30% had only compulsions and 30% had both (30).

In the research conducted with people with obsessive-compulsive disorder, it has been reported that they have less sexual experience, marry less frequently (31,32) and experience lower levels of sexual satisfaction (33). Obsessive-compulsive disorder patients are reported to have sexual arousal difficulties, orgasm problems and avoid sexual intimacy (34-35). It is said that there is a relationship between fear of contamination caused by sexual intercourse and symptoms of obsessive-compulsive disorder (36).

SCHIZOID PERSONALITY

Schizoid personalities are defined as people who do not want to establish intimacy and contact, who are introverted, who do not like to be together with other people and spend time together, who want to be alone more, who are distant from marriage, who are defined as indifferent and uninterested by other people, who prefer to engage in activities on their own, and who have professional preferences where more individual work is possible (37).

People with schizoid personality disorder are reluctant and halfhearted in their sexual life. They may not need sexual intercourse at all and may even continue their lives without having sexual intercourse at all. They can establish a sexual relationship mostly with the demands of their partners, and during sexual intercourse, they are not only careless about their own and their partners' feelings but also do not care about it. They do not feel any difference between the satisfaction they get from sexual intercourse and masturbation (38).

HISTRIONIC PERSONALITY

As a result of feelings of helplessness and worthlessness in individuals with histrionic personality disorder, they care too much about other people's opinions about them and their behavior towards them. Consequently, they put others at the focal point of their lives and define themselves entirely by external comments. Since they do not have a sense of identity of their own, they adapt to the environment they are in (39-40). They are artificial and superficial in their human relationships and make a lot of effort to establish closeness. Their basic schema is to gain appreciation and approval and to be the center of attention (41). Individuals with this personality disorder hide their fears by using all their acting skills with a magnificent mask, and they may have an extremely exhibitionist appearance. They can easily manipulated others by portraying a victimized appearance (42).

In their sexual lives, they can put sexuality into action without any criteria or time (43). While it is more common in women to have sexual intercourse without categorization, it is more common in men to establish bisexual relationships (44).

PARANOID PERSONALITY

The main characteristic of paranoid personalities is that they tend to interpret even non-harmful behaviors of other people as humiliating, belittling, threatening or malicious. For this reason, they tend to be distrustful and suspicious. Since they have a way of thinking that

people are evil and abusive, their basic schema is that they will be exposed to evil and harmed by other people. They can easily get angry and engage in aggressive behavior towards others (45).

As a result of their intense suspicion and trust problems with other people, they cannot easily find partners in their sexual life. However, because they live in constant suspicion of their partners, they always think that they can be deceived. As a result, they are constantly looking for evidence that they have been deceived and impute their partners in this sense. They always show jealousy by interpreting even unrelated events as signs of infidelity, and they draw a very aggressive picture by being oppressive and tormenting towards their partners. Due to their assumptions that they will always be exposed to evil and will be harmed, they are always on the alert in this sense and cannot give themselves to the other party sexually and get pleasure (46).

ANTISOCIAL PERSONALITY

According to the International Classification of Diseases (ICD-11) published by the World Health Organization in 2021, the characteristics of antisocial personality disorder are: although not always seen in all individuals, it is seen as self-centered and lack of empathy in a way that disrespects the rights and feelings of other individuals. These individuals often see their good and bad behaviors in society as a right, but their usual behavior is to expect to be admired and to ignore others by taking care only of their own needs. They may also be completely indifferent to events in which other individuals are harmed or upset, so they can be ruthless for others in achieving their goals (47).

Individuals with antisocial personality disorder do not show commitment in their relationships and have no sense of loyalty. Since their impulse control problems are at an extreme level, they may have indiscriminate sexual partnerships. They act completely selfishly in their sexual relationships and act only for their own desires. For this reason, they put pressure on their partners to do what they want with a coercive attitude. They easily have sexual intercourse with children, relatives, the elderly, etc. and do not feel any discomfort or guilt because they act in sadistic ways and do not feel any guilt, conscience and empathy (48).

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