

## Science Student Teachers' Views and Conceptions of the Interdisciplinary Sexual Health Education

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### ABSTRACT

This research aims to determine science student teachers' views and conceptions of the interdisciplinary sexual health education course. Also, the current study inferiorly purposes to eliminate their misconceptions after the course. Data were obtained from in-class student products, course evaluation forms and course field notes. Within a qualitative methodology, they were descriptively evaluated and analyzed. The science student teachers under investigation stated that the interdisciplinary sexual health education course was very effective at freely talking about sexuality. Further, they depicted that they were able to easily get more accurate, reliable and memorable information from primary sources by asking the specialists/experts during the course. Overall, it can be concluded that the course remedied their misconceptions of the sexuality.

**Keywords:** Interdisciplinary approach, qualitative study, sexual health education, science student teachers.

### INTRODUCTION

Despite the fact that sexuality literature is very old, it hardly finds a place in public conversations. Hence, the sexual education does not have enough attention in Turkish society. However, sexuality, which holds an important place at every stage of our lives, provides positive contributions to our social lives and individual development. As a matter of fact, recently such observances as puberty at earlier ages and proliferation of sexual abuse precede the sexual education and its importance.

Sexuality, which is an important part of individuals' development, makes the whole life more important when the body acquires reproductive ability and adult characteristics (Çok and Kutlu, 2010). Because sexuality-related issues have still been avoided and disgusting in Turkey, there has been no nationwide policy for sexual education. Due to many individual and social benefits of sexual education, there is a special need for sexual education in Turkey (Çalışandemir, Bencik, Artan, 2008).



Even though Western countries mostly address sexual education as a separate course, Turkish sexual education is not given enough attention (Yücesan, Ayaz Alkaya, 2017). In the United States, the implementation of sexual health education reveals regional differences. For example; some states do not provide sexual health education, while others suggest handing it within 7<sup>th</sup> and 9<sup>th</sup> grades. Sexual health education focuses on preventing HIV / AIDS virus, unwanted contraception, sexuality, gender roles in society. In Germany, sexual education is not taught as a separate course. Teachers determine and prepare their instructional materials and lesson plans according to their needs. If necessary, they can cooperate with community-based organizations/foundations and invite experts to the school for seminars. In France, sexual education has begun to protect society from the AIDS. A nationally defined curriculum for 9-13 years covers sexuality- related topics, e.g., STD and AIDS. The content of sexual education is determined by the curriculum and subjects proposed by the parents (Uzan, Onbir, Girgin, Tekşen, Kaygısız, Kürükoğlu, 2017).

Sexual health is one of the most critical issues concerning general health because sexual problems make people mostly unhappy. Impairment of sexual health does not only affect physical health of a person, but also cause impairment of mental health, family health and social health (Bozdemir and Özcan, 2011). Sexual health is defined as follows: "...a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled." (WHO, 2006). It is impossible to ignore sexuality when talking about an individual's health. The fact that individual and cultural values and its multidimensional features (e.g., privacy) may easily influence sexuality makes sexuality difficult to understand. However, sexuality takes place in human life from birth to death (Kumcagız, 2016).

Sexual health education, which is not limited to the issue of reproduction, aims to prevent pregnancies at early ages, spontaneous abortions, sexually transmitted infections (STIs) and HIV/AIDS, and to enable young people to distinguish right from wrong, healthy from unhealthy and to teach responsible sexual behaviors and relationships. Sexual health education, as a training program, intends to make the sexuality a part of personality and provide privacy contentment in the family and community life (Bulut, 2006). Sexual health education increases individual self-esteem and individual respect as well as providing conscious decisions on reproduction. The sexual health education positively establishes non-exploitative sexual relations and human relations (Çayır and Beji 2004). Given physical, emotional and social development, social roles, and educational opportunities, sexual education develops mutual acceptance, love, confidence and responsibility, as well as appropriate human sexuality in a balanced family. Sexual education controls sexual drive and instincts in human reproduction and acquires the required behaviors for sexual intercourse. Finally, sexual education, which is a multi-dimensional concept, covers biological, anatomical and physiological knowledge about organs and their functional properties of growth, development and reproduction. It play a crucial role at correctly transferring psychological and social knowledge such as love, respectability, social norms, social role, anticipation (Aral, Baran, Bulut, Çimen, 1981).

Nowadays, increases in the age of the first sexual experience and teenage pregnancies are remarkable. Informing young people about physical changes in their bodies, their sexual identities and sexually transmitted diseases are important for healthy sexual life and transition to the adulthood,. Sexuality is regarded as a taboo in a large part of Turkish society. However, young people, who seek information and/or answers about healthy and unhealthy ways, are very curious about sexuality (Kumcagız, Çelik, Barut, Koçyiğit 2013). In view of

Milton (2003), young people often receive relevant messages from a variety of sources, including parents and other family members, peers, media and teachers. Teachers are the most credible and reliable ones as compared with other sources in terms of sexual health education. Within the context of emerging holistic educational approach, the sexual education positively contributes to individual development and social life. One of the main responsibilities of the teachers is to equip their students with basic knowledge and skills of sexual education. For this reason, university education should afford them to acquire the teaching skills and knowledge of healthy sexual education (Öksüz, 2016).

Interdisciplinary teaching is seen as an effective strategy to combine varied disciplinary knowledge and skills within a meaningful way. The interdisciplinary approach is defined as "understanding a program that consciously works on the methods and knowledge is more effective and valuable than one discipline to examine a concept, an issue, a problem, or an experience" (Yıldırım, 1996, p. 89). Although teachers are considered as specialists in education and instructional activities, they may need to cooperate with other specialists for some courses, topics or practices (e.g. a seismologist for the topic 'earthquake' and a space scientist for the topic 'space') (Bektaş, & Horzum, 2010). Since there are many interdisciplinary topics that students have to learn in the classroom, learning can be ineffective at addressing these topics only within one discipline or course. If students bring different disciplines together, they can learn these topics more effectively (Yıldırım, 1996). Sexual education, which includes such disciplines as medicine, psychology and education (Dejong et al., 2007, Şahin, Şimşek & Seyisoğlu 2006), will affect their future lives and play an important role in bringing up healthy individuals. So, enhancing their knowledge levels and improving positive attitudes towards sexual education programs call for inviting the specialists in the classrooms. In this respect, providing an interdisciplinary sexual education from different specialists to student teachers is necessary for curriculum-based-sexual education.

This research aims to determine science student teachers' views and conceptions of the '*interdisciplinary sexual health education*' course.

## **METHODS**

The current study employed a qualitative research, which used qualitative data collection techniques such as observation, interviews and document analysis for revealing realistically and holistically the facts/events in their natural environments (Yıldırım and Şimşek, 2005). Such a process was followed in the present study to present descriptive data analysis from the study group.

### **a) The Study Group**

The study group of the research consisted of 52 senior science student teachers (39 girls, and 13 boys) attending a 'sexual health education' course at the department of science teacher education in a state university. None of the science student teachers had taken any lesson or seminar on sexual health. Furthermore, they also stated that they voluntarily selected the sexual health education as an elective course to learn this subject.

### **b) Data Collection and Analysis**

The data were obtained from in-class student products, course evaluation forms and field notes during the 'sexual health education' course. The data were exposed to descriptive analysis; is more superficial method than content analysis, and often deploys direct citations reflecting the views of interviewees or observed individuals (Yıldırım, Şimşek, 2005). Their files and data from the course evaluation form were analyzed by a document analysis method

and combined with the researcher's field notes. Because of ethical issues, the participants names we displayed with codes, e.g. K1, K2, K3.

### c) **Instructional Method**

To carry out "Interdisciplinary Group Work," the science student teachers were divided into small groups, who were responsible for one of the topics (i.e., sexual identity, sexual abuse, changes and problems in adolescence, reproductive organs, pregnancy, sexually transmitted diseases and protection, gender and sex roles in society) in the sexual health education course. Apart from the course syllabus, the topic 'religion and sexuality' was assigned to a group, whose members were volunteer to discuss this topic. Each group was asked to conduct semi-structured interviews with two different specialists from different disciplines and asked their questions on their group topics. Science student teachers carried out group discussions by interviewing with specialists from different disciplines and shared their group discussions with classmates. Thus, such a learning environment created a group discussion continuum in the class. The lecturer asked them to create a file containing their group works, specialist interviews and presentations. Then, they submitted their assignments at the end of the semester.

In addition, at the end of the semester, two specialists from **medicine and education** were invited to answer the science student teachers' specific questions. The specialists initially made a presentation and then answered the questions drawn from an anonymous question pool previously written by the science student teachers.

At the end of the term, a "study evaluation form" with open-ended questions developed by the researcher was administered to examine their views of the 'interdisciplinary sexual health education' course.

#### ***Interdisciplinary Group Studies***

All Groups conducted interviews with the specialists from different fields such as gynecologist, infectious disease specialist, urologist, nurse, psychiatrist, psychologist, family counselor, lawyer, psychological counselor working in a university, psychologist working in child protection institution and orphanage, imam and science and technology teacher.

While developing an interdisciplinary program, involving experts from different fields as possible as it is necessary to ensure the participation of the (Yıldırım, 1996). Because the topics in the sexual health education include many different disciplines, the interdisciplinary group studies investigated the topics in terms of medicine, education, law, moral and so forth. For example; discussing sexual abuse with lawyers highlights legal and criminal proceedings. Similarly, interviewing with imam enables them to argue Islamic approaches in terms of sexuality.

#### ***Specialist Invitation for the Course***

After the group studies in the sexual health education course, two specialists from medicine and education (a gynecologist and a sexual health trainer) were invited to two different lessons for reviewing the course topics and answering their questions. The specialists firstly made a presentation about fundamental concepts to stimulate their awareness of sexual health and sexual health education. The gynecologist also answered all anonymous questions written by the science student teachers. The science student teachers asked many questions on what they were curious: marriage, birth control pills, masturbation, protection methods from pregnancy, sexual intercourse, prevention from sexually transmitted diseases, menstruation, importance of sexual education, how to teach sexual education to secondary school students, how to answer their questions of sexuality".

## FINDINGS

This section includes the findings and interpretations on the science student teachers' views of the interdisciplinary sexual health education.

### a) Science student teachers' Incorrect Knowledge and False Beliefs of Sexual Health

*The interdisciplinary sexual health education course gave an opportunity for them to be aware of their own misconceptions and misknowledge on the sexuality.*

The following quotations illustrate their responses/views:

*"We have corrected our false, infallible knowledge that we already had in our minds through talking with the specialists" (K44).*

*"Specialist's opinion enabled us to obtain more knowledge and to prove our incorrect knowledge" (K17).*

*"I had false beliefs about sexually transmitted diseases. I learned how they transmitted" (K4).*

*"I learned that circumcision was a very necessary operation for boys. Before that, I thought it was unnecessary" (K19).*

*"I thought that the sexual health education should have been given to children after puberty. However, I learned that it had to be started before" (K25).*

*"I thought a woman's sexual life would be over when she entered menopause, now I learned that it was not so" (K22).*

The science student teachers stated that they had deficiencies in many respects of sexuality and misconceptions. However, their common misconceptions were on the topics like birth control methods, prevention from sexually transmitted diseases, cleaning the reproductive organs, birth control pills, male and female specific contraceptive devices, etc. For example; the science student teachers mostly possessed misconceptions about sexual abuse and paid attention to the topic. It was found that some science student teachers had the idea 'sexual education shall be given only to adolescents.' Some examples are as follows:

*"I cannot give a clear example, but when I listen to each new topic or my friends in the lessons, I am surprised and I have experienced this in the form of "then, this is the way it is" or "so, the truth was like that" (K31).*

*"I thought that the sexual diseases were generally fatal" (K41).*

*"I realized that I had a lot of incorrect knowledge about the protection methods" (K3).*

*"I thought that families should have been silent and indifferent against the questions of their children about sexuality. I also thought that the children's sexual behavior was not normal and that the family should have had an obstructive attitude. They were incorrect" (K49).*

*"I thought men or women should have been treated alone. I learned that the treatment of sexually transmitted infections should have been done in pairs" (K6).*

*"I thought that sexual education could only be given to the adolescents" (K32).*

*"I learned that sexual harassment also targeted the boys. I thought it would be targeted mostly the girls" (K20).*

The science student teachers had the greatest deficiencies on the topics ‘sexually transmitted diseases and protection methods.’ Some excerpts are in the following:

*"I realized how little I knew" (K27).*

*"I did not know that sexually transmitted diseases would be so dangerous, and so frequent in our country" (K35).*

*"I did not know anything about prevention from sexual diseases" (K50).*

*"I learned a lot of new things about the women reproductive system that I thought I already knew" (K13).*

*"I realized that there were more unknown things than my incorrect beliefs" (K15).*

*"I realized how the protection was important for sexual intercourse. I learned many diseases I did not know" (K22).*

The field notes from group discussions and the products in the portfolios also supported incorrect knowledge and false beliefs mentioned above.

Their greatest deficiency fell into the topic ‘sexually transmitted diseases.’ The group discussion with the science student teachers, who were responsible for this topic, showed that they possessed false beliefs "sexually transmitted diseases cannot be cured" and lacked knowledge on the importance of protection from these diseases.

#### **b) Impact of the Course on the Science Student Teachers’ Daily Life Experiences**

*The sexual health education course positively contributed to their daily life experiences such as talking easily up about sexuality, going to a specialist without hesitation and sharing their knowledge.*

The results pointed that the science student teachers tended to emphasize the importance of knowledge from the specialists rather than the internet or peers. Also, they stressed that they would not believe everything they had heard. They expressed that they talked up on the sexuality and freely learned what they wondered. The following quotations illustrate their views/responses:

*"When we suspect that an issue is incorrect or we wonder it, we ask the friends or check the knowledge from the internet. We now have learned that they are mostly incorrect and the specialists can explain them differently. I learned that we should not believe everything we had heard in daily life" (K3).*

*"I will no longer avoid inquiring about anything that I wonder" (K22).*

*"The most important contribution to me is that I can talk up on sexuality with my friends easily now" (K24).*

*"We were able to speak on these things easily during the course, we could easily tell our ideas. So I can now easily tell my opinion in public" (K2).*

*"Through this course I found the opportunity to tell easily to the people around me what I had learned in a proper way" (K28).*

*"I shared what I had learned with my family" (K12).*

*"I have had the opportunity to interview with an urologist for the first time. In this way, I can go to a doctor and get information about sexuality easily" (K13).*

They also stated that they were informed about how to treat their male and female students properly and how to teach sexual education when they become teachers:

*"I thought I had problems with my own reproductive system, but I found out that these were normal. I was a little blind on this. In my professional life I will pay more attention to my students on this" (K18).*

*"I learned how to treat girls and boys when I become a teacher" (K45).*

*"I learned how to treat my students about sexuality and how to teach them these topics" (K3).*

*"I was worried about how to lecture about sexual health. The attitude and perspective of our teacher was correct, and I decided to act like him" (K20).*

*"Confronting our own reality, we specialized about how to accurately teach this topic to our students" (K17).*

The science student teachers pointed out that they would be more vulnerable for such issues as sexually transmitted diseases and sexual abuse:

*"I learned what I can do when I suspect child abuse. My sensitivity has increased for some cases " (K16).*

*"It was very influential to me that people should have done medical tests at regular intervals without confronting the disease indications" (K42).*

*"I learned not to be desperate about sexual abuse, and it made me very relieved" (K25).*

*"I did not accurately know the characteristics of the male reproductive system since our society sexuality is open to speak such a topic. It helped me to know about what the sexually transmitted diseases were and how to avoid them from our sexual life" (K30).*

The science student teachers stated that they would use their acquired knowledge in their own lives and share it with their own circles (friends, family members, etc.) since sexuality is a part of everyday life. They also implied that they learned how to treat girls and boys in a class and how to instruct sexual education to them.

The field notes from the group discussions also advocated the positive effects of the sexual education on their daily lives. These notes showed that the science student teachers shared some of their knowledge with their relatives to support every topic under investigation.

### **c) Effect of the Interdisciplinary Group Works to the Sexual Health Education Course**

*The enriched group works (i.e., interviewing with the specialists from different fields) positive influenced their teaching and learning of the sexual health education.*

The results indicated that all science student teachers believed positive contributions of the interviews with various specialists from different fields on the 'interdisciplinary sexual health education' course. The following quotations exhibits their views/responses:

*"They can explain a situation that is difficult to understand an incorrect statement on the Internet. They provide resources that we do not have access" (K32).*

*"Firstly, having knowledge from the primary sources allows us to be more confident for the topic" (K16).*

*"If we got this course with classical methods, I would have nothing left in my mind and could not get a lot of extra information" (K22).*

In addition, the science student teachers stated that their undergraduate studies provided several experiences for them and made the course enjoyable and funny. That is, they could get accurate, memorable and detailed first-hand knowledge, as well as associating their theoretical topics to everyday life. They also pointed out that the specialists informed them about the knowledge they personally needed. Some examples are as follows:

*"It was an experience we did not have during our four-year undergraduate education, it was a distinctive experience. Interesting and motivating. Lessons are more engaging and enjoyable with this method" (K5).*

*"It is more memorable because specialists talk about their own experiences. What is learned is more memorable because it is reinforced by examples. The specialists' knowledge helped me to combine lessons with my daily life" (K30).*

*"We learned what we wondered by asking them to the specialists, and we learned that the knowledge we obtained was more memorable. We have got reliable, accurate and first-hand knowledge" (K18).*

*"We were able to associate the knowledge with the daily life" (K35).*

The science student teachers stated that interviews with the specialists helped them speak more easily about sexuality without hesitation. Interviews not only contributed to their socialization but also helped them understand better the point of societal view about sexuality. These interviews developed their self-confidence levels.

*"This study made me more social. It was exciting me to talk with the specialists for exchanging views. Meeting with the specialists led me to think more like them, to see the events more broadly" (K22).*

*"I thought I would be embarrassed and uneasy. But during the interview, I overcame my fears" (K33).*

*"I had reserves about talking on sexual issues with the doctors. But I can say that they have gone away with the course" (K43).*

*"We felt comfort at talking to a specialist on a subject that was difficult to ask, such as sexuality" (K24).*

*"Apart from the theoretical knowledge in the books, it was a good practice to learn from the specialists, who know what is going on outside, what the people experience. Because we have noticed similar things and seen what happens in life" (K51).*

The results revealed that the science student teachers could easily ask to the specialists about the topics that could not be talked easily. They also stated that they had the opportunity to ask the questions on the group topics and what they personally wondered. They emphasized that the knowledge/information obtained from the specialists was correct, reliable, relevant and memorable. As a result, they positively evaluated the group works and presentations as well as the specialist interviews as a whole.

The field notes also supported the effects of the sexual education on their daily lives. They had difficulties in speaking about sexuality at the first lessons, but their successive lessons facilitated their participation to progressively discuss, talk easily and support their friends/peers.

#### **d) Contribution of the Guests Specialists from Medicine and Education to the Course**

*Inviting the specialists from different disciplines positively influenced their learning processes and remedied their concerns.*

The results showed that the science student teachers had positive views on inviting the two specialists from medicine and education. The following quotations illustrate their views/responses.

*"Inviting the specialist doctor to the class made this course a good choice for me. In brief, discussing our questions with the specialist made us retain the course in our mind" (K14).*

*"Frankly, I did not expect such a casual environment that we could talk about everything" (K22).*

*"It was important for us to be well-informed through the doctor's lecture on what were not discussed in public but we needed to know" (K 34).*

*"I was very impressed with the social examples" (K47).*

*"The specialist did definitely answer all of the questions that we asked. I think it should be applied to other lessons" (K7).*

*"It was so good that each group interviewed a specialist for completing their own homeworks. However, when a specialist participated in the class, the whole class had the opportunity to ask questions. We had an interesting experience" (K9).*

*"We could not go and ask somebody these questions. But it was very enlightening for us that a physician answered these questions" (K 35).*

*"I think it is a very good feeling to be able to ask what we wondered by writing anonymous questions to the physician" (K34).*

*"We asked all the topics we studied from the beginning to the end of the course. The specialist's answers enabled us to: (a) reinforce the topics we learned, (b) learn what we did not know, and (c) correct what we misunderstood" (K22).*

In addition, the science student teachers stated that the gynecologist's presentation included the fundamental knowledge they needed. Thereby, such an activity reinforced the course content. The following excerpts exemplify their views:

*"We had already asked the questions we wondered in our interviews. But, at the end of our study, they certainly remained unanswered in our own topic or other friends' topics in general. We were also informed about these issues because it was a seminar speech. For this reason, such an opportunity was very good" (K20).*

*"It was a good contribution for reviewing the knowledge in the 'sexual health education' course at the end of the term. It was much more memorable than the Internet or the books" (K8).*

They asked their unexplored questions in the course, especially to the gynecologist. They stated that the specialist meticulously answered their questions. They addressed that they were able to freely ask their questions since they had anonymously written them before the specialists participated in the class. They implied that their answers to the questions about sexuality could not be asked to anyone because of a lack of the courage or chance. Some quotations exemplifies their views:

*"It was favorable that we wrote down the question on a paper without our names, instead of verbally expressing them. So, we asked questions that we wanted to ask more easily" (K39).*

*"I had curious questions but I hesitated to ask in the classroom, it was very good in this respect" (K6).*

*"Their specialized answers to the questions especially clarified any unclear issue in my mind" (K3).*

When the science student teachers asked their anonymous questions to the gynecologist, they realized their problem in expressing the question. Also, they perceived that they could not even share their own health problems with the physician in that they were shameful or sinful. After the course, they understood that talking about sexuality was not a shameful thing.

*"I see how many problems we have and we cannot express them. We cannot share a health problem with the physician because of the society attached the shames and sins to them" (K11).*

*"The physician showed us that there was no shame in science" (K42).*

*"Some people feel that they do not go to the physician to ask anything related to their sexual health that will affect their lives. Given the physician's attendance to the class, I think most people were able to ask their questions that were kept inwardly and they could not have asked to anyone before" (K13).*

*"One thing surprised me. We realized that talking about sexuality was not a shameful thing" (K5).*

The science student teachers stated that they felt themselves more valuable when the specialists came to the class. They implied that they could easily ask every question to the specialists because the specialists scientifically answered each question and clarified the science student teachers' views/beliefs by referring their professional experiences life and daily examples. The specialists' professional approaches enhanced the science student teachers' self-confidence levels and resulted in feel better or more comfortable themselves. They depicted that they had just been aware of people's similar problems. They also noticed that these problems could be solved by easily going to a physician.

*"The physician answered all problems we had lived" (K16).*

*"It was good to realize that the problems could be solved by asking specialists who had been educated on these problems. They would answer our questions" (K37).*

*"It was very nice to hear their everyday life examples. Their examples have still been stuck in my mind. We were wondering so many things. If they had more time, it would not be enough" (K22).*

Thus, the science student teachers addressed that before they met with the specialists at the class they could not have reached the needed information/knowledge. They depicted that they could not have gone to a physician in case this was a shy or ashamed behavior in their daily life. The specialists informed them in detail on topics that were not included in the syllabus of the course. The science student teachers stated that being able to ask anonymous questions seemed to diminish their hesitation to ask.

The field notes and the products including the student portfolios supported that inviting the specialists from different fields made a positive contribution to the science student

teachers' views/conceptions. The guest specialists stated that the science student teachers were very willing to carefully attend the lesson and ask relevant questions. Especially the gynecologist stressed that the science student teachers listened to the answers and actively participated in the class as compared with the other (medicine) students."

#### e) The Science Student Teachers' Views of the Content of the Sexual Health Education Course

The science student teachers found the topics in the 'sexual health education' course as satisfactory.

When they were asked about extra topics they wanted to include in the sexual education course, most of them considered the existing topics as satisfactory. The following quotations illustrate their views:

*"Frankly, I did not expect such a casual environment that we could talk about everything. I do not have anything that strains my mind" (K7).*

*"It was the well-rounded course that I learned what I wondered. I do not have any knowledge to learn or wonder." (K12).*

However, some of them suggested some extra topics such as "early diagnosis in diseases, sexuality in marriage, male and female psychology in sexuality, moral dimension of sexuality, sexually explicit videos, sexuality and religion". The following excerpts exemplify their views:

*"How sexuality should be in marriage? What kind of psychological situations may we encounter? How should we behave in these situations? We are getting closer to marriage and if these issues are not known well, divorces can be experienced" (K51).*

*"Social media and sexuality, videos with sexually explicit content" (K17).*

*"Early diagnosis and treatment should be focused on. I think it should be emphasized that every male and female student should go to the gynecologist and urologist for examination and hormone test" (K26).*

*"Most people think that İslam seclude these issues. Thus, they cannot be asked and be paid attention to them. I would like to add a topic that shows from what point our religion looks at these issues" (K2).*

Some of them asked for more details on sexual abuse, privacy, and privacy education for children. The following quotations exemplifies their views:

*"More comprehensive research can be done on sexual abuse, harassment and how the children should be protected from and informed about these issues" (K34).*

*"Children's privacy education should be elaborated" (K50).*

They suggested that sexual health education should be a compulsory course for previous classes in all departments rather than an elective one in the fourth grade:

*"This course should be compulsory for all departments in the university" (K14).*

*"There are shy friends who cannot select the course because of its name. We all need to be educated in this regard" (K36).*

*"This course should be at the second grade of the university" (K51).*

The field notes and the products in the student portfolios also supported their views of the content of the sexual health education course. Their group discussions at the beginning of the first week showed that they would like to see the sexual education as a compulsory course. Furthermore, they recommended to add the topic 'sexuality and religion' into the syllabus of the course.

## **DISCUSSION and CONCLUSION**

The aim of this study is to determine the science student teachers' views and conceptions of the interdisciplinary sexual health education course. However, it was found that the course eliminated their conceptual errors/misconceptions.

The participation of the specialists from different fields and group studies positively affected their learning processes. They provided an opportunity for the science student teachers to eliminate their false conceptions and misconceptions about sexual health as well as their worries. The interdisciplinary sexual health education course positively contributed to their daily experiences on talking about sexuality more easily, consulting a specialist without hesitation and sharing their learned information/knowledge. They stated that their lack of knowledge about sexual health was much more than their misconceptions and misinformation. They implied that they would use their gained knowledge in their own lives, and help others by sharing them (friends, family members, etc.). They also depicted that they, as the science student teachers, learned how to treat girls and boys in a class and how to teach sexual education to them.

The science student teachers shared their positive views of the interdisciplinary group studies and inviting the specialists to the class. They stated that they had not done such a study before. Further, they illuminated that they had an interesting, enjoyable, distinctive experience by balancing the internet researches and theoretical content with real life experiences. As a matter of fact, Çayır and Beji (2004) reported that the sexual health education would be more effective when it was cooperatively conducted with teachers, peers, social service and health care professionals. Other researches (Ersay, Tortumluoğlu, Şenyüz, Pamukçu, 2006; Kaya, Serin, Genç, 2007) emphasized the health care professionals' positive roles.

They pointed out that they got correct and practical knowledge about sexuality as well as their difficulties in speaking insufficient information out. In addition, they stated that they went beyond the course topics because of their interviews with the specialists and their needed/wondered information. They addressed that they understood better the structural characteristics and views of the society about sexuality, and realized their incorrect and inadequate information on sexuality. Üstündağ (2017) suggested that young people, who had a qualified education, could get information about STIs to reduce their false beliefs. As a matter of fact, the science student teachers stated that the interdisciplinary sexual health education course enabled them remedy their misinformation and false beliefs about sexuality.

The science student teachers held some missing or incorrect information/knowledge about sexual health, birth control methods, protection from sexually transmitted diseases, cleaning reproductive organs, circumcision, sexual abuse, pregnancy, etc. The information about the sexually transmitted diseases seems to be the most incomplete one. Similarly, researchers (Sete, Dağdeviren, Aktürk 2006; Pınar, 2008; Özcebe, 2011; Algan, 2011; Ersay and Tortumoğlu, 2006) stated that an important part of the Turkish adolescent population had some incomplete or incorrect knowledge/information on sexually transmitted diseases. Siyez and Siyez (2009) depicted that university students had moderate

knowledge on sexually transmitted diseases while their unknown knowledge was more than their incorrect information.

The science student teachers perceived that it was not a shame to talk about the sexuality. Also, they could easily speak about the sexuality and ask what they wondered about the specialists. They also emphasized that they would share their knowledge with their families and students by relating this knowledge with everyday life. They, as the science student teachers, learned how to behave to girls and boys and how to teach sexual education to them. The individuals attending the sexual health education increase their sexual knowledge levels and self-confidence about speaking sexuality issues in conversations (Hedgepeth, 1998; Kirby, 1985; Pinar, 2008; Pinar and Taşkın, 2011; Rabieipoor, 2011). In addition, , Isaiah (2009) stated that the Nigerian teachers felt uncomfortable about covering the topics of sexual education. However, they emphasized in-service training to provide as a solution for this situation and accepted school-based sexual education for appropriate subjects deemed by teachers. Similarly, Ninomiya (2010), who investigated the Canadian teachers' comfort levels and views of teaching sexual health education, found that teachers dissatisfied with the curriculum and curricular resources of sensitive topics and sexual diversity. . This showed that teachers tended to abstain about addressing every subject about sexuality to students. How to handle these sensitive topics within the classes should regularly be explained to the teachers via in-service education and teacher preparation programs.

Since they considered the topics the 'sexual health education' course as adequate, they emphasized that the course should have been compulsory rather than elective. Kumcağız et al. (2013) reported that over half of the students, who took the 'sexual health education' course, requested to see the course as compulsory. The current study is also in a parallel with earlier studies (Pinar, Doğan, Ökdem, Algier, Öksüz, 2009; Pinar and Taşkın, 2011; Artan and Baykan, 2010, Özcan, Beji, Karadağ, Emlik, 2016) addressing that university students should be educated on sexual health.

Because sexual education gives a chance for an individual to know its importance in a happy and healthy life relation, the sexual education will keep individuals away from many problems that they may especially experience at adolescence and adulthood periods (Öksüz, 2016). The current study recommends the following issues: (a) integrating the sexual health education course into earlier years of teacher preparation programmes instead of the last year of the undergraduate education, (b) using curriculum-based different methods, (c) inviting the specialists to the class from different fields (health professionals, sexual trainer, etc), and (d) providing an interdisciplinary approach by associating them with daily life. Skelly et al. (2018) revealed that peer-peer educational activity was of great interest and beneficial. From this point of view, the sexual education should be handled with active participation instead of classical/traditional methods. Because sexuality should no longer be a taboo, the sexual education should be gradually taught at early age by taking their developmental characteristics into consideration. By doing so, it may be possible to prevent child abuse.

Roudsari, Javadnoori, Hasanpour, Hazavehei and Taghipour (2013), who investigated socio-cultural challenges to the sexual health education for the Iranian female adolescents, identified that the taboos surrounding sexuality affected their main socio-cultural challenges for sexual health education. In a similar vein, Isirabahenda (2017) stated that the culture and religious beliefs strongly influenced the concepts of the sexual health and sexuality in Rwanda.

The Turkish researches related to the sexual education have revealed that Turkey has the same taboos, which should be broken to get accurate knowledge from the correct

sources. Such sources as social media, peers, websites etc. may mislead them for incomplete or incorrect information/knowledge.

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