

ORIGINAL ARTICLE

Reproductive Health Education Using Interactive Learning Approach among the University Students

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ABSTRACT

Introduction: This study objectives were to evaluate the youth's knowledge and awareness of reproductive health issues among the Hashemite University students and to measure the effectiveness of the interactive teaching approach in delivering the reproductive health knowledge course. **Methods:** Quantitative and qualitative research designs were used. The sample was 160 (two cohorts) undergraduate students who enrolled in the reproductive health course during two semesters at the Hashemite University. Quantitative data was collected from the students before and after receiving a reproductive health course. Qualitative data was collected through focus group discussions. **Results:** The study results showed an improvement in the reproductive health awareness level of students. There was a statistically significant increase in the total score of knowledge between the pretest ($M = 19.97$, $SD = 3.89$) and posttest ($M = 21.65$, $SD = 4.03$) for the first cohort at $p = .00$. There was a statistically significant increase in the total score of knowledge between pretest ($M = 19.33$, $SD = 2.89$) and posttest ($M = 20.66$, $SD = 5.78$) for the 2nd cohort at $p = .00$. Qualitative data revealed that the students were very interested in the reproductive health course and found it very useful for themselves, their families, friends, and society. **Conclusion:** The interactive learning approach was useful in teaching reproductive health course and increased university students' awareness regarding reproductive health topics, which were important for students. It was recommended by students to teach reproductive health course to other students in all universities using interactive learning.

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INTRODUCTION

Jordanian youths are considered the largest segment of society; individuals under 30 years of age account for 63 % of the population (1, 2). Most Jordanian youths are enrolling in universities. The number of enrolled students in both public and private universities is estimated at nearly two hundred and eighty-two thousand (282,000) (3). Thus, the sector of higher education in Jordan is one of the country's national priorities as it plays a critical role in promoting the Jordanian citizen's economic, social, and knowledge levels.

Globally, there is an international consensus, which confirms that young people have a right to sexual and reproductive health information and services to help them protect their health (4). Sustainable development

goal 3.7 assures universal access to Sexual and Reproductive Health (SRH) care services (5). In Jordan, limited national programs address the SRH of youth, and they rarely include such topics in the educational curricula (6). Jordanian youths lack basic information on SRH topics and gender-specific information about reproductive health, transmitted diseases, and family planning (7, 8). Further, they often get information from sources that may be inaccurate, or from their parents or the internet (9).

The Faculty of Nursing at the Hashemite University (HU), with the cooperation of the Royal Health Awareness Society (RHAS), has implemented the Shababna project at the Hashemite University during the academic year of 2017/2018. The Shababna project targeted HU students between the ages of 18 and 24. A total of 38 students completed the online assessment using a web link sent to them via email. The students who took the course then participated in a focus group discussion. In this project, university peer educators were created, and students were empowered with skills and awareness

about ten health issues, with a particular focus on five topics related to reproductive health and gender-based violence (GBV), using an interactive teaching approach as a method of teaching the selected health topics (10). Interactive training was described by Khanin (2013) as a “technology of collaboration of students and teachers, which consists of close cooperation of all participants in the discussion, exchange of views and ideas on the discussed problem and which fosters the acquiring of necessary skills (practical, communicative, social, analytical, and reflective ones)” as cited by Kutbiddinova et al. (2016) (11).

Therefore, based on the results of the Shababna project, this study aimed first to evaluate the youth’s knowledge and awareness of reproductive health issues among the Hashemite University students. Secondly, to measure the effectiveness of the interactive teaching approach in delivering reproductive health knowledge and skills among the Hashemite University students.

MATERIALS AND METHODS

Mixed methodology was used in this study, which composed of quantitative (pre and post-assessments) and qualitative (focus group discussion) research designs, to achieve the aims of the study. The sample size was 155 undergraduate students who were enrolled in the reproductive health course during the summer semester of the academic year (2017/2018) and the 1st semester at the Hashemite University in the academic year (2018/2019). This study was approved by the Institutional Review Board (IRB) of the Hashemite University with NO. (4/6/2017/2018).

Quantitative data was collected from the students before and after receiving the reproductive health course. The instrument for the quantitative part was a questionnaire that had been prepared for the purposes of this study by researchers from the faculty of nursing and RHAS. This questionnaire is composed of 30 multiple-choice questions that evaluate the level of knowledge of SRH issues that were taught in the reproductive health course. This questionnaire was piloted and tested by RHAS previously. The methodology of teaching the reproductive health course is based on an interactive learning approach (i.e., brainstorming, group discussion, reflection on videos and pictures, and teamwork).

Quantitative data was analyzed using SPSS version 25. Descriptive statistics were obtained to describe the sample characteristics. A paired t-test was used to determine the differences between pretest and posttest in order to test the effectiveness of the new methodology of teaching (interactive teaching) in enhancing the knowledge and perception levels of reproductive health issues among the Hashemite University students ($p < 0.05$). However, the qualitative data was collected through focus groups discussion, which presented participants’ experiences

and opinions about the reproductive health education that has been taught in the Hashemite University.

The focus group interviews were conducted using the Arabic language and were audio-taped. Individual participants were assured of their right to participate in the study and to withdraw at any time without consequence. The participants were asked to sign consent forms before the beginning of the focused group discussion and audio recording. The data was then transcribed, coded, divided into categories, and thematically analyzed using verbatim quotes.

RESULTS

The sample of the study was composed of two cohorts of students. The total sample size was 155 undergraduate students who enrolled in the reproductive health course during the summer semester of the academic year 2017/2018 (83 students) and during the first semester of the academic year 2018/2019 (72 students). The majority of the students were females in both groups (90%). Students were from all academic levels (1st year to 4th year).

A paired samples t-test was conducted for each cohort separately to find the impact of the reproductive health course on students’ total scores on the questionnaire (pre and post-test). There was a statistically significant increase in the total score of the questionnaire between pretest ($M = 19.97$, $SD = 3.89$) and posttest ($M = 21.65$, $SD = 4.03$) for the 1st cohort at $p = .00$. The total score of the questionnaire increased statistically significantly between pretest ($M = 19.33$, $SD = 2.89$) and posttest ($M = 20.66$, $SD = 5.78$) for the second cohort ($p = .001$). (table I).

Table (1)

Further descriptive analysis was done on the questions of the questionnaire to find where there was the greatest improvement in the student’s knowledge, which reflected the student’s needs in the reproductive health course.

The pretest results revealed that the students in the first cohort had limited knowledge of some topics, such as cancer treatment, postpartum period, genderism, and breast self-examination (table II), whereas the students in the second cohort had a lack of knowledge of family planning, postpartum period, genderism, and breast self-examination (table III), before receiving the SRH course.

The qualitative findings

The second part of the findings that were collected via focus group discussions presented participants’ experiences and opinions about the reproductive health topics and teaching methods that have been used to teach students at the Hashemite University.

Table I: Student's performance in the pre-test and post-test

First Cohort (Summer semester 2017/2018)	N	Min	Max	Mean	SD	Sig
Pretest total score	83	1	26	19.97	3.89	0.00
Posttest total score	83	0	28	21.65	4.03	0.00
Second Cohort (1 st sem 2018/2019)	N	Min	Max	Mean	SD	Sig
Pretest total score	72	13	25	19.33	2.89	0.00
Posttest total score	72	0	28	20.66	5.78	0.00

Table II: The descriptive analysis of the questions that showed the greatest improvement for the first cohort summer semester of 2017/2018.

Topics	Pretest	Post test
Cancer treatment		
• Procedures are used to treat breast cancer	N= 61 (73.5 %)	N= 75 (90.4 %)
Postpartum period		
• Changes are considered normal for the mother during the first three days after birth	N= 47 (56.6 %)	N= 65 (78.3 %)
• Definition of the postpartum period	N= 40 (48.2 %)	N= 72 (86.7 %)
Genderism		
• Gender discrepancy	N= 50 (60.2 %)	N= 66 (79.5 %)
• Understanding of some societal assumptions about men and women	N= 54 (65%)	N= 68 (82 %)
Breast self-examination		
• Women's breast self-examination schedule	N= 25 (30.1 %)	N= 40 (48.2%)
Violence		
• The consequences of violence against women	N= 70 (84.3 %)	N= 72 (86.7 %)

Table III: The descriptive analysis of the questions has shown the greatest improvement for the second cohort summer semester of 2017/2018

Topics	Pretest	Post test
Family planning		
• The hormonal family planning methods that a breastfed mother can use	N= 42 (58.3 %)	N= 57 (79.2 %)
• Type of family planning methods that gives protection against HIV and sexually transmitted infections	N= 43 (59 %)	N= 65 (90.3 %)
• Accountability for family planning decision-making	N= 6 (94.4 %)	N= 68 (94.4 %)
Postpartum period		
• Changes are considered normal for the mother during the first three days after birth	N= 47 (65.3 %)	N= 58 (80.6%)
• Definition of the postpartum period	N= 2 (30.6 %)	N= 54 (75 %)
Genderism		
• Gender discrepancy	N= 15 (20.8 %)	N= 52 (72.2 %)
• Understanding of some societal assumptions about men and women	N= 3 (52.8 %)	N= 51 (70.8 %)
Breast self-examination		
• Women's breast self-examination schedule	N= 22 (30.6 %)	N= 60 (83.3 %)
Violence		
• The consequences of violence against women	N= 61 (84.7 %)	N= 61 (84.7 %)

Theme 1: Students' opinion in reproductive health course and its contents as topics

Students were highly interested in the reproductive health course and found it extremely useful for themselves, their families, friends, and society. One of the students said:

HUS7: *'The course is very important. All the different topics in the course are important and useful, especially because they increase the awareness marvelously of topics that have been described as embarrassing. We, as youths, cannot talk or hear about them'.*

HUS11: *'This course is one of the most important courses I have ever studied. I think it has to be a compulsory course for all students'.*

When asked to choose the most important topic, students stated that all of the course topics are very important in their lives. They insisted further that this course should be taught as a compulsory course.

HUS2: *'All the topics of this course are very important. The information in this course has to be delivered to all people because the content of the course is mainly about human life'.*

The findings also revealed that students were inviting their colleagues and friends to study this course not for grades but for the benefit of their lives. Students have been recommending this course to be offered to all students at the university.

HUS1: *'Surely, I advise my friends to study this course because it is the most beneficial course they can ever study. It is not difficult; it can be studied for its benefits, not to get a high grade easily.'*

HUS2: *'Yes, I encourage my colleagues to enroll in this course because it corrects a lot of wrong information that we have already known. It is very beneficial for our daily lives.'*

Students suggested some topics related to self-development, family issues (such as how to select a partner, management, and divorce), and personal ethics.

HUS2: *'Divorce because it is widely present in the community. So students will be educated about the causes of divorce and how to solve family problems. This course is the only one that can discuss such an issue.'*

HUS5: *'I think it is important to add a topic for youths about how to select their partner and about the differences between male and female in their thinking and their view of points in life.'*

Theme 2: Teaching methodology of the reproductive health course (interactive learning from students' perspectives)

The reproductive health course has been taught and presented to students using a new teaching methodology, which is interactive learning. Students' reflections on this teaching methodology supported the incorporation of such innovative teaching methodologies in teaching university students.

HUS5: *'The method of teaching was fantastic and useful too. It is the best method. It helps students to remember the information and to deliver the information.'*

HUS8: *'The course was delivered in a friendly way. It was more about presenting general information rather than giving a main lecture.'*

Some students suggested changing the way of using activities. They preferred conducting activities outside the classroom, for example in the university or the community at the end of the semester. Another idea was to conduct a campaign to raise health awareness among university students.

HUS11: *'This course is one of the most important elective courses, so the mark of participation has to be on activities of students regarding topics of the course such as group work, campaign, conducting students' research or article.'*

DISCUSSION

The majority of participants in this study were females.

To overcome issues that they might experience with their reproductive health, both sexes—and particularly females—need to be aware of SRH from an early age. In addition, it has been found that adolescent girls have been at risk for poor reproductive health outcomes, such as sexually transmitted infections, limited access to contraceptives, early marriage, and unwanted pregnancy (12). Furthermore, a study conducted in Iran found that female participants had difficulty discussing sexual health issues with their mothers and believed that female sexual health services were insufficient (13). Thus, SRH education should be integrated into educational curricula to overcome the barriers of patriarchal societies' social norms and traditions (14).

Our study found that participants' knowledge and awareness of SRH issues increased, with a statistically significant difference between pre-test and post-test. Similarly, studies using pre-test and post-test research designs revealed improving of knowledge and behavior among adolescents when they evaluated a reproductive health awareness program designed to improve reproductive health (15, 16).

Awareness on breast self-exam, postpartum period and genderism

Despite significant efforts in Jordan to raise awareness about breast cancer and early detection, nearly half of both groups of students had limited knowledge about breast self-exam and cancer treatment prior to the study intervention, despite the fact that the majority of them (more than 90%) knew the definition of cancer. These findings were consistent with Suleiman's (17) and Jaradeen's (18) findings that Jordanian females had low levels of knowledge and awareness of breast cancer and breast self-examination. Furthermore, breast cancer information was obtained from friends and family (17). However, because breast health is a key concept in reproductive health, and is especially important for females during their reproductive years, there is a need to raise awareness and knowledge levels among youth early in their lives through reliable resources such as educational curricula.

Given that almost all of the study participants were single, pregnancy and postpartum periods were socially considered issues only associated with married women, which may explain the participants' lack of postpartum knowledge before receiving the SRH course. However, Alomair et al. (19) found in their systematic review that unmarried Muslim girls face objections from their families when they inquire about certain reproductive issues, and single women feel shamed if they discuss SRH issues. Furthermore, Jordanian women rely on cultural health beliefs and knowledge more than available health care services when providing postpartum care (20). Moreover, Jordan's current maternal health services are still not at an optimal level to meet the individual needs of postpartum women, potentially increasing

the risk of postpartum complications (21). For these reasons, early efforts should be made to improve youths' knowledge and perception of such critical periods of their reproductive lives.

Improving youth gender and rights understanding will improve their reproductive health (22) and a recent literature review revealed that improving gender equality and women's empowerment play an important role in achieving effective reproductive/family planning practices (23). However, in this study, nearly half of the participants were unaware of the definition of genderism and the stereotypes of men's and women's roles in society before the study intervention, and some of them (less than 15%) remained unaware even after receiving the designed study course. According to Jordan Communication, Advocacy, and Policy (JCAP), the dominance of customarily assigned gender roles derived from traditional customs and religious teaching may affect decision-making dynamics within the family, which may affect the individual's health choices such as those related to family planning (24). Thus, youth need to learn more about gender and rights, as challenging traditions and empowering women will help them make reproductive health and social decisions (25)

Awareness on family planning and violence

Surprisingly, the vast majority of participants (more than 90%) were familiar with family planning's definition, benefits, and decision-making dynamics. This could be the result of a massive effort by national and international family planning awareness-raising programs in the country, which are available through various media channels and target people of all ages. However, about a quarter of the participants (25%) were unaware of some modern family planning methods. Similarly, Gausman et al. found that Jordanian, Syrian, and Iraqi youth living in Jordan had limited knowledge of modern family planning methods in their review of research, programs, and national policies on "Sexual and Reproductive Health and Rights Among Youth in Jordan" (26). However, enhancing the younger generation's knowledge of family planning not only meets some of their SRH-needs but also has a positive impact on women's health. Furthermore, Clark et al. (2017) indicated that family planning use should be encouraged, and empowering girls at risk of early marriage and gender-based violence should be a priority for the intersection of gender-based violence and the use of family planning among married adolescents, as cited by Gausman et al. (2019) (26).

On the other hand, the vast majority of participants (84%) were aware of the impact of gender-based violence on women's health, despite published data from the Jordanian Department of Statistics indicating that (87%) of Jordanian women justified wife beating under specific circumstances, indicating acceptance of gender-based violence (27). For younger generations,

acceptance of gender-based violence appears to be reinforced at a younger age (26). Thus, a balanced understanding of traditional customs, gender rights, and religious teaching is a must early in their lives.

Importance of reproductive health course

The study students were interested in the reproductive health course and found it useful for themselves, their families, friends, and society, according to our qualitative findings. They agreed that all topics in the given course are critical to their lives and should be taught as a required course, supporting Gausman et al. review (26). However, our findings highlighted several key points that might explain why young people seek SRH education. Firstly, Jordan has a small number of health centers that provide "youth-friendly" SRH services. There are no clear criteria for determining whether such services are "youth-friendly" (Organization for Economic Cooperation and Development (OECD) Development Center) (28). Secondly, youth underutilize available SRH services as a result of health care providers' attitudes toward youth SRH services, which reflect deeply rooted cultural norms. Furthermore, youth believe that healthcare providers are not meeting their needs (29). Moreover, the limited use of reproductive health services was found to be the result of a lack of knowledge about reproductive health issues among Jordanian youth aged 12 to 18 years (8). Thirdly, youth, particularly unmarried women, face barriers to SRH services due to cultural and traditional norms that prevent them from obtaining SRH information and services (19). Finally, in a study conducted in Jordan by Othman et al. (30) on parent-child communication of SRH issues, the majority of participating parents were not confident and uncomfortable discussing such issues with their children, owing to what they called "the culture of shame." However, youth require trustworthy and accurate sources to provide them with age-appropriate and culturally relevant essential information about their SRH, to keep them healthy, and to reduce sexual risk behaviors as they enter adulthood.

The impact of interactive learning in the teaching of a reproductive health course

Many positive aspects of interactive education methods were mentioned in the literature, such as their ability to arouse student interest, motivate and encourage all students to participate in the learning process, achieve efficient acceptance of the materials being studied, improve personal skills, and enhance behaviour change (11). However, the interactive learning approach was used in teaching the reproductive health course of this study, and our data showed that students were supportive of incorporating such innovative teaching methodologies in teaching university students. This was consistent with the findings of a Jordanian study by Ali et al. (16), who found that incorporating reproductive health issues into a university's curriculum, using an interactive learning approach, is an effective way to

raise reproductive health awareness among young people. Furthermore, the Connecticut State Department of Education (CSDE) (31) published its sexual health education guidelines and recommended the use of various engaging and active teaching methodologies in teaching sexual health issues, which supports our study findings.

There are some limitation in this study including the results may not be generalizable to all Jordanian university students because only Hashemite University students participated, preventing generalization. Second, the majority of participants were female, which may limit the finding of gender differences in knowledge of various SRH aspects.

CONCLUSION

Based on the findings, we concluded that the students were not fully aware of many aspects of SRH, but they were aware of the importance of introducing SRH topics as a mandatory course and recommended the course for all university students in all universities to raise the reproductive health awareness level among Jordanians, regardless of conservative cultural and social norms about various SRH aspects. Furthermore, using an interactive teaching approach with the Hashemite University students improved their reproductive health awareness level.

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