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REPRODUCTIVE HEALTH BEHAVIORS OF WOMEN MARRIED IN THE ADOLESCENT PERIOD: A MIXED METHOD STUDY

ADÖLESAN DÖNEMDE EVLENEN KADINLARIN ÜREME SAĞLIĞI DAVRANIŞLARI: BİR KARMA YÖNTEM ÇALIŞMASI

Ayşegül Dönmez*[1], Zekiye Karaçam[2]

[1]İzmir Tınaztepe University, Faculty of Health Sciences, Izmır, Turkey; [2]Adnan Menderes University Faculty of Health Sciences, Aydın, Turkey

ORCID iD: Ayşegül Dönmez: 0000-0003-4930-0760; Zekiye Karaçam: 0000-0002-0419-8961

***Sorumlu Yazar / Corresponding Author:** Ayşegül Dönmez **e-posta / e-mail:** aysegul.donmez@tinaztepe.edu.tr

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Abstract

Objective: Adolescent marriages are those that take place before the age of 18 years or before maturity and are associated with a wide range of health and psychological problems. This study was carried out to examine the reproductive health behaviour of women who got married during the adolescent period.

Methods: In this study, convergent parallel design, in which the quantitative and qualitative stages of mixed method designs can be applied simultaneously, was used. This research was carried out with 245 women included in the quantitative section and 25 women in the qualitative section. During the collection of the quantitative data, face-to-face interview and semi-structured interview techniques were used. The data were collected using the content analysis method, and descriptive statistics were used in the analysis of quantitative data.

Results: The mean age at first marriage was 16.1±0.9 (range 12–17) years. Quantitative analysis showed that, to have a healthy delivery, women adopted the practices of healthy life during pregnancy (88.7%), for the birth they maintained nutrition, ensured good hygiene and performed pain coping techniques (95.0%) and maintained personal hygiene during post-partum (69.8%). Analysis of the data collected in the in-depth interview on the women's practices on sexual life and violence against women, five themes were identified 'healthy sex life, sexual violence, legal procedures, social support and preventive practices'.

Conclusion: Women who got married at adolescent age had problems with their reproductive health characteristics and reproductive health. Midwives can take an active role in meeting the service needs for this vulnerable group, solving reproductive health problems and improving women's health during service provision.

Keywords: *Adolescents, marriage age, midwifery, reproductive health, safe sex.*

Öz

Amaç: Adölesan yaşta evlilik, fizyolojik ve psikolojik bakımdan evlilik ve çocuk doğurma sorumluluğu almaya hazır olmadan ve genellikle 18 yaşından önce gerçekleşen evliliklerdir. Bu araştırma, adölesan dönemde evlenen kadınların üreme sağlığı davranışlarını incelemek amacıyla yapılmıştır.

Yöntem: Bu çalışmada, nicel ve nitel yöntemlerin aynı anda kullanılabileceği karma yöntem desenlerinden yakınsayan paralel desen kullanılmıştır. Bu araştırma nicel bölümde yer alan 245, nitel bölümde yer alan 25 kadın ile gerçekleştirilmiştir. Nicel verilerin toplanması sırasında yüz yüze görüşme ve yarı yapılandırılmış görüşme teknikleri kullanılmıştır. Veriler içerik analizi yöntemi kullanılarak toplanmış, nicel verilerin analizinde betimsel istatistik kullanılmıştır.

Bulgular: Kadınların, ilk evlilik yaşı ortalamasının 16,1± 0,94 (Aralık: 12-17) olduğu saptanmıştır. Nicel verilerden alınan sonuçlara göre; kadınların gebelikte sağlıklı yaşam aktivitelerine uyum sağladığı (%88,7), sağlıklı doğum için hijyen/beslenmeyi sürdürdüğü / ağrı ile baş etme teknikleri uyguladığı (%95,0), doğum sonrası bakımda ise bireysel hijyeni sürdürdüğü (%69,8) belirlenmiştir. Araştırmanın nitel bölümünde ise, kadınların cinsel yaşam ve kadına yönelik şiddet ile ilgili elde edilen veriler kodlanarak "sağlıklı cinsel yaşam, cinsel şiddet, yasal prosedürler, sosyal destek ve önleyici uygulamalar" beş tema oluşturulmuştur.

Sonuç: Bu çalışmada, adölesan yaşta evlenen kadınların üreme sağlığı özellikleri ve üreme sağlığına yönelik sorun yaşadıkları belirlenmiştir. Ebeler, hizmet sunumları sırasında bu hassas gruba yönelik hizmet gereksiniminin karşılanmasında, üreme sağlığı sorunlarının çözümünde ve kadın sağlığının geliştirilmesinde aktif rol alabilirler.

Anahtar Kelimeler: *Adölesanlar, ebelik, evlilik yaşı, güvenli cinsellik, üreme sağlığı.*

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Introduction

Adolescent marriage is defined as marriages that take place before the age of 18 years, usually before attaining enough physiological and/or psychological maturity to be able to cope with the responsibility of childbearing and marriage.[1,2] Approximately 15 million girls worldwide get married before the age of 18 every year.[1] In Turkey, the rate of married women in the age group of 15–19 is 4.8%.[3] Adolescent marriages cause many reproductive health problems, such as unwanted pregnancies, unsafe abortions, maternal–infant deaths and injuries, incompatibility with motherhood, risky pregnancy, low birth weight babies, cancers, infertility and sexually transmitted infections (STIs).[1,4–6] For these reasons, marriages in the adolescent period are an issue that needs to be studied carefully. In a study conducted in Northeast India, preeclampsia (11.5%) and preterm births (23.6%) in adolescent mothers were reported at higher rates compared to mothers in the 20–25 year-old age groups (6.0% and 15.7%, respectively).[7]

Recently, it has been suggested that approximately 38 million adolescent women in developing countries should use contraception. However, only 40% (15 million) of this adolescent group use a modern method and 60% (23 million) do not use any method.[8] Contraceptives are not easily accessible to adolescents in many places. [9] In Turkey the 15–19 year-old age group, only 2% use any method of birth control and only 1.2% use a modern method of contraception.[3] Globally, around 10.2 million unwanted pregnancies, 3.3 million unplanned births, 1.2 million abortions and 3.9 million unsafe abortions occur each year in the 15–19 year-old age group.[8,9] The abortion rate among the 15–19 age groups was 2.8% in Turkey.[3] The World Health Organisation states that 1 in 20 young people suffer from treatable STIs.[10] In a Turkish study conducted with the adolescent age group, it was reported that 29.4% of the participants did not know if they had an infection, 52.8% did not know about protection from human immunodeficiency virus (HIV) and 46.3% did not know the ways of transmission.[11] Another study conducted in Bangladesh reported that 78.9% of the women who were exposed to violence by their spouses got married at a young age.[13] In a study conducted in Turkey, it was reported that the girls who were married at a young age were subjected to physical (14.6%) and emotional (27.1%) violence/abuse by their spouse.[14]

Midwives have important responsibilities in the provision and development of sexual and reproductive health services for women of childbearing age, including adolescents, according to national and international legal regulations.[15,16] Adolescent marriages are frequently encountered, associated with many problems, and requiring a careful approach and prioritising special care and protection. Midwives serving this group need extensive information that reflects the cultural characteristics of their reproductive health behaviour during the planning and delivery of healthcare services. There are a small number of studies of this topic but they concluded that more updated information is needed[5]. Midwives frequently encounter individuals who marry at the adolescent age during service delivery. Midwives can take an active role in meeting the service needs for this vulnerable group, solving reproductive health problems and improving women's health during service provision. The aim was, therefore, to examine the reproductive health behaviour of women who got married during the adolescent period. The questions posed in the study were: What are the reproductive health characteristics of women who got married during the adolescent period? How is the reproductive health behaviour of women who got married during the adolescent period?

Methods

Study Subjects and Design

Data collection was carried out between November 2017 and June 2018. The study was conducted at a government hospital in Izmir province, Turkey. In this study, the reproductive health behaviour of women who got married during the adolescent period was examined with a parallel pattern converging from mixed-method patterns. The results of quantitative research in terms of reproductive health among vulnerable groups, such as adolescent women, may be inadequate for explaining their reproductive health behaviour. Therefore, detecting and using new results by use of qualitative research design can lead to a better perception of the problem and to produce new solutions.

The quantitative section was carried out with 245 women who were married before the age of 18 and are currently between the aged from 18 to 35 years old and selected by a purposeful sampling method. Of these, five women were excluded because they refused to participate and one woman did not answer open-ended questions. This study group required for the collection of qualitative data was determined by the purposeful sampling method and was conducted with 25 women.

In the collection of research data, a questionnaire for quantitative data and a semi-structured interview form for qualitative data were used. During the collection of the quantitative data, face-to-face interview and semi-structured interview techniques were used. To ensure the scope and validity of these forms, they were modified in line with the suggestions made five experts who are experienced in qualitative and quantitative research. A plot study was conducted with 10 women to evaluate the intelligibility of the questions.

In qualitative research, validity and reliability are the most important criteria in terms of credibility or quality of the results collected.[17–19] In the present study, the 'Checklist for Examining the Characteristics of a Mixed Method Study' was used to collect data and for preparing the research report to improve reliability.[17] To improve the construct validity of the research, data diversification (quantitative and qualitative data) was carried out. The internal reliability of the research was provided by 'consistency review'. In the confirmation examination conducted by three experts, the coherence conditions of the coding were evaluated, and external reliability was provided by calculating the percentage of agreement (94.5%). It has previously been reported that having a compliance rate of 80% for the reliability calculation is sufficient.[17]

In this research, where and how the data was gathered, owing to the importance of external validity, we were explained. The analysis process and how the results are collected by the researcher and all the processes performed were explained in detail. In the study, providing internal validity was done by long-term interaction, expert review, and participant confirmation. Based on this information, the research results looked to be reliable. Besides, the raw data of the research was stored for sharing if other researchers requested it.

Statistical Analysis

The data related to the quantitative part of the study were analysed with descriptive statistics using SPSS, version 11.5 (IBM Inc., Armonk, NY, USA). Descriptive and content analysis were used in the analysis of qualitative data. Descriptive analysis is summarising the findings in line with the research questions.[19] The data collected from the applications of women's reproductive health behaviours for content analysis are given in the order of theme, sub-theme and code. An inductive analysis approach, one of the contents analysis types, was used to analyse the data collected within the scope of the research. Inductive analysis is carried out to reveal the underlying concepts and the relationships between these concepts by coding.[19] In this research, codes, sub-themes and themes are associated and combined in line with the analysis of the data.

Results

The mean±standard deviation (SD) age of the women engaging in the study was 26.6±5.5 years (range 18-35 years) and 34.3% were in the 30–35 age group. Furthermore, 77.1% of the participants were elementary school graduates and 80.0% were stay-at-home parents, 22.9% had no social security, 23.3% were smokers, 14.3% consumed alcohol and 1.6% stated that they had been forced to smoke and/or consume alcohol. The mean±SD age of first marriage was 16.1±0.9 years (range 12-17 years). Women who reported to be related to their spouses constitute 19.2% of the participants and 72.2% of them made the decision to get married with their spouses while 20.0% of them married owing to bride price. Of the participants, 70.2% lived in a nuclear family but 52.2% stated that they perceived their income to be less than their outgoings (Table 1).

The median (range) age of first pregnancy was 18.0 (13-29) years and 49.4% of them had a first pregnancy between 13 and 17 years of age. There was a mean of 2.2±1.0 (range 0-8) births per participant at the time of the study. Moreover, 6.7% of the women had caesarean section at the age of 19 and below (Table 1). During pregnancy, 11.2% had high blood pressure, 5.0% had diabetes, 5.8% had bleeding and 9.2% had infection.

In qualitative research, 14 women experienced their first pregnancy between the ages of 13 and 17. Some reported high blood pressure (n=1; 7.1%), diabetes (n=1; 7.1%) and infection (n=5; 35.7%) during pregnancy. Five main categories were identified based on the qualitative analysis. These were: 1) healthy sex life; 2) sexual violence; 3) legal procedures; 4) social support; and 5) preventive practices.

In the quantitative data of the practices that women carried out for pregnancy, birth and postpartum period, it was determined that women had adopted healthy living activities in pregnancy (88.7%), had practised good hygiene, maintained nutrition and applied pain coping techniques for a healthy birth (95.0%) and maintained individual hygiene in postpartum care (69.8%) (Table 2).

Some statements of the women regarding the subject are as follows:

'*My grandma would start walking me. Okay, you can't go anywhere else, but you can walk inside the home. We walked a lot. Then when the pain gets intense, I crouch down and hold onto a sofa or whatever I could find at that moment, and I would start pushing. She said push like you are pooping. I hold onto the sofa in our room and pushed…*'. (W7, first pregnancy age was 16, vaginal birth at home)

'*When my nipple hurt, I sliced some onions and put them on my nipple. I waited not much, but half an hour. Then I washed before breastfeeding the baby. Because I thought that its smell would give a discomfort to the baby*'. (W5, first pregnancy age was 17, vaginal birth at a hospital)

Table 1. Characteristics of study group

Characteristics	*n (%)*
Age (yrs.)	
18-19	32 (13.1)
20-24	68 (27.8)
25-29	61 (24.9)
30-35	84 (34.2)
Education	
Literate	32 (13.1)
Primary	189 (77.1)
High School*	24 (9.8)
Addictive behaviors**	
Never used	138 (56.3)
Alcohol	35 (14.3)
Tobacco	57 (23.3)
Forced used (Alcohol and tobacco)	4 (1.6)
Stopped using	11 (4.5)
Age of first marriage	
12	2 (0.8)
14	12 (4.9)
15	41 (16.7)
16	89 (36.3)
17	101 (41.2)
The marriage decision	
Deciding with his wife	177 (72.2)
Families decide, receive approval	37 (15.1)
Families decide, not to receive approval	31 (12.7)
Perceive level of income	
Income is less than expenditure	128 (52.2)
Income is equal with expenditure	106 (43.3)
Income is much than expenditure	11 (4.5)
Age of menarch	
10-11	41 (16.7)
12-13	178 (72.7)
14-16	26 (10.6)
Age of first pregnancy, n=239	
13-17	118 (49.4)
18-19	78 (32.6)
20-29	43 (18.0)
Number of pregnancies, n=239	
1	52 (21.8)
2-3	162 (67.8)
4-8	25 (10.4)
Number of births, n=222	
1-2	201 (90.5)
3-5	21 (9.5)
Type of birth, n=222	
Vaginal	150 (67.5)
Cesarean section	55 (24.8)
A history of home birth	17 (7.7)
Types of violence faced by women, n=145**	
Psychological violence	84 (57.9)
Economic violence	63 (43.4)
Physical violence	26 (17.9)
Sexual violence	18 (12.4)
Physical violence in pregnancy	21 (14.4)

* One woman is a graduate ** More than are answers have received.

Table 2. Quantitative data on women's reproductive health practices

Reproductive health practices		*n (%**)*
Pregnancy (n=239)*	Healthy living activities	212 (88.7)
	Regular following/follow the health worker recommendations	144 (60.2)
	Medical help if discomfort	53 (22.1)
	Forbidden of sexual intercourse	48 (20.0)
	To not alcohol/cigarette	3 (1.2)
	Not pregnancy-specific regulation	25 (10.4)
Birth (n=222)*	Hygiene/nutrition/performed pain coping techniques	166 (74.7)
	Communication with healthcare professionals	136 (61.2)
	Protecting baby health	31 (13.9)
Postpartum (n=222)*	Individual hygiene	155 (69.8)
	Applying to health professionals/follow the health worker recommendations	120 (54.0)
	Healthy and balanced nutrition, rest/exercise	151 (67.9)
	The forbidden of sexual intercourse	53 (23.8)
	Traditional practices in breast care	23 (10.3)
	Traditional practices in perineum care	21 (9.4)
	Wrapping around the abdomen	12 (5.4)
Post abortion/ miscarriage (n=61)*	Consulted health professionals/follow the health worker recommendations	60 (98.3)
	Rest/hygiene/modern method use	9 (14.7)
	Not go for a health control/did not take suggested medications/tried to have a miscarriage themselves/had a miscarriage at home	6 (9.8)
To prevent unwanted/ unplanned pregnancy (n=178)	Modern safe method use	91 (51.1)
	Unsafe method use	87 (48.8)
Sexual transmitted infections (n=115)*	General hygiene	103 (89.5)
	Harmful/traditional practices to perineum	33 (28.6)
	Monogamy, the forbidden of coitus, condom use	32 (27.7)
	When signs of disease consult their doctor	18 (15.6)
Infertility (n=245)*	Not specific practices	207 (84.4)
	Consulted to a physician/medical treated	14 (5.7)
	Others (not sitting on the stone/heating the feet/not to lift heavy/disease prevention)	14 (5.7)
	Not using contraceptive pill/intrauterine device	13 (5.3)
	Not using substance	3 (1.2)
	Traditional practices for be pregnant	2 (0.8)
Sexual life (n=204)*	Fulfilling her spouse's wishes	113 (55.3)
	General hygiene and individual care	97 (47.5)
	Communication with her spouse	54 (26.4)
	Monogamy and masturbation	12 (5.8)
	Information, family planning method use, medical help	18 (8.7)
Violence against women (n=145)*	Acting as desired/accepting/to tolerate/ compulsory	83 (57.2)
	Communication with her spouse	73 (50.3)
	Starting work/implying that you don't need a partner/ make joint investments	54 (37.2)
	Health center/healthcare professional consult/physical violence report	37 (25.5)
	Experience-based suggestions/be conscious/ self-defense	31 (21.3)
	Applying to the court/divorce	19 (13.1)

* Number of women responding. ** Some women reported that the frequency of multiple practices, the number of women has been more responsive. However, the percentage calculation is based on the number of women responding.

Table 3. Women's practices on sexual life and violence against women

Themes	*Subthemes*	*Codes*	*n*
Practices related to sex life			
Healthy sex life	**Sexual compatibility**	Fulfilling mutual requests (n=10), telling their partners about the behaviours that they like to (n=7), to say disagreeable behavior to her spouse (n=6), foreplay (n=4), respect for her spouse when he doesn't want sex (n=3), take care of health (n=3), a suitable environment is always important for love (n=1), being happy (n=1), anal/oral sex (n=1), contraception (n=1), single spouse (n=1)	38
	Hygiene	Showering before/after intercourse (n=4), attention to hygiene (n=3), using condoms on bleeding days (n=1), vaginal shower (n=1)	9
	Rejection of disturbing behaviours	Anal sex rejection (spouse does not insist) (n=2), learning not to say yes to spouse in everything (n=1), ban on intercourse during menstruation (n=1), oral sex rejection (spouse does not insist) (n=1),	5
Sexual violence	**Feeling a sexual responsibility/an obligation towards the spouse**	Continue with the wishes of the spouse (n=9), pretend as if they want due to obligation (n=5), fulfilling their duties and responsibilities (n=5), not to feel happiness (n=2)	21
	Forced to have inconvenient sexual intercourse	Encounter with coercion (n=3), being ignored by her spouse (n=2), to be afraid of the spouse's tattoo when she rejects the sexy (n=2), having a feeling of vaginal dryness due to long-term sexual intercourse (n=1), dyspareunia (n=1), does not foreplay (n=1), not asking what he likes (n=1)	11
	Not being able to communicate	Not talking anything (n=1), inability to say what you want (n=2)	3
Practices on violence against women			
Legal procedures	**Health center/healthcare professional consult**	Physical violence report (n=1), record at the health center (n=1), midwife (n=1), nurse (n=1)	4
	Judicial institution consults	Applying to the court (n=1), divorce (n=1)	2
Social support	**Getting support from relatives**	To say her father-in-law (n=1)	1
	Lack of support	Suicide (n=2)	2
	Acting as desired	Adapting (n=6), keep quiet (n=4), accepting (n=2), not causing a scene (n=2), to think that she is wrong (n=2), acquiesce (n=2), put up with (n=1), to tolerate (n=1), not to insist (n=1), to postpone requests (n=1), compulsory (n=1), to accept whatever he wants (n=1), listen to advice (n=1), ignore (n=1), he is not altruistic (n=1), keep on the right side of (n=1), don't say confusing words (n=1), pretend to love (n=1), not joking (n=1), not to bore her partner (n=1), to do something she does not want (n=1), cry (n=1), not to crush herself (n=1)	35
Preventive practices	**Trying to strengthen yourself**	Starting work (n=2), solve problems (n=2), implying that you don't need a partner (n=1), make joint investments (n=1), not to accumulate problems (n=1), take a decision common (n=1), with logic behaviour (n=1)	9
	Communication with the spouse	Talk (n=4), to agree with spouse (n=3), take away (n=2), talk with beauty (n=1), trying to compromise after calming down (n=1), to express her rights (n=1), learning to say no to spouse (n=1)	13
	Experience-based suggestions	Men should be educated (n=2), women should not remain silent (n=2), be conscious (n=2), women should work (n=1), women should be educated (n=1), victim women should be given jobs (n=1),	9
	Self-preservation	Self-defence (n=2), shouldn't do anything they don't want (n=2), push (n=1), use pepper spray (n=1), threaten (n=1)	7

In the quantitative data of women, 29.2% reported consulting healthcare professionals after miscarriage/abortion and following professional advice, but 6 women reported not going for health checks/not taking suggested medications/trying to induce miscarriage by themselves/having a miscarriage at home (2.5%). Some statements of the women regarding the subject are:

'*For the first miscarriage, I did it by doing some hard work. I forced myself to miscarry. In the second one, I did the same things, but I couldn't miscarry. Then they said, 'if you sit in a washbowl filled with tar, it will fall through.' I put a little warm water and sat on it. Yet it didn't work right away. I thought it wouldn't work. Then it did, the first ones were like dark brown, following to those was like menstrual bleeding. We had a horse there; I rode a horse. I jumped from high places, I carried heavy baskets for putting pressure on my belly, and then I sat on the back of a tractor...*' (W8, first pregnancy age was 16, and had two miscarriages)

In the study, analysis of the quantitative showed that 52.6% of the women used modern safe methods to prevent unwanted and unplanned pregnancies (Table 2). A statement is given below regarding the subject:

'*...I was just about to tell that I fear pills would hurt me somehow, people say so too. But I couldn't tell. Then I asked using a contraception method from my husband. He uses the withdrawal method usually and we use condoms rarely, not always just once in a month. At first, while I was receiving a treatment, I feared that pills are harmful to the treatment...*' (W19, marriage age was 17, literate)

In the quantitative data of the research on the practices of women regarding sexual life and violence against women, in this cohort 14.4% of the women were exposed to physical violence during pregnancy, 12.4% of the women were exposed to sexual violence (Table 1), 55.3% of the women fulfilled their spouse's wishes (Table 2). From the qualitative data, five themes were identified: '*healthy sex life, sexual violence, legal*

action, social support and *preventive practices*'. The sub-themes of '*sexual compatibility, hygiene and rejection of disturbing behaviours*' with the theme of '*healthy sex life*' were also identified. Among them, '*sexual compatibility with the partner*' (n = 38) was emphasized more. The codes of '*fulfilling mutual requests*' (n = 10) and '*telling their partners about the behaviours that they like to*' (n = 7) for this sub-theme were also prominent. On the theme of sexual violence, sub-themes of '*feeling a sexual responsibility/an obligation towards the spouse, forced to have inconvenient sexual intercourse and not being able to communicate*' were identified. The codes that stand out in the sub-theme were '*feeling a sexual responsibility/an obligation towards the spouse*', '*continue with the wishes of the spouse*' (n = 9), '*fulfilling their duties and responsibilities*' (n = 5) and '*pretend as if they want due to obligation*' (n = 5). In the '*social support*' theme, the sub-theme of '*lack of support*' and code of '*suicide*' were dominant. In the study, women's practices for protection against violence against women were mostly gathered under the theme of '*preventive practices*' (n = 74), and sub-themes of '*acting as desired*' (n = 35). The codes of '*adapting*' (n = 6), '*accepting*' (n = 2) and '*not causing a scene*' (n = 2) were emphasised for '*acting as desired*' (Table 3). Some statements of women regarding their practices regarding sexual life and violence against women were:

'*... I didn't know. When my husband says 'this will happen' it was happening. One can't say no to him. He might hit and beat; I couldn't say anything. He was consuming alcohol too; I was putting up with him. I couldn't speak a word with my husband...*' (W11, marriage age was 17)

'*... I get married at 14, I have been having menstruation for 2 months I couldn't have kids until I was 17. My mother-in-law was constantly pressurising my husband saying, 'she is infertile, send her away, she can't get pregnant, get divorced.' however, I became a mother at the age of 17 ...*' (W12, marriage age was 14, first pregnancy age was 17)

Discussion

The quantitative part of this study, which was carried out as a mixed method to examine the reproductive health behaviours of women who got married during the adolescent period, was carried out with 245 women and the qualitative part with 25 women. This study has shown that women married in the adolescent period had trouble developing a behaviour devoted to protecting their reproductive health.

Themes were created from the data collected from women's reproductive health stories. These themes are '*healthy sex life, sexual violence, legal action, social support* and *preventive practices*'. These results are important in terms of displaying considerable information about the reproductive health status of women getting married in the adolescent period in Turkey and may benefit the development of reproductive health services offered for this group and may even be the stimulus for development of such services.

Most of the women in this study (77.1%) had elementary school education. Similar results have been reported in other previous studies.[1,20] It was reported that delaying the marriage for a year increases the time spent in school (0.2 years) and thus increases the literacy rate (5.6%).[5] Low education level is important as it is associated with obtaining less benefit from health services and being a situation that negatively affects mother and child health indicators.

Many of the participants had got married at a very young age. This result is similar to previous findings of studies conducted to examine the effect of adolescent marriages on women's health.[2,6,18,21] These results show that it is likely that there may be important health problems related to this situation during healthcare delivery for individuals with adolescent marriage at a young age.

A significant number of participants (82.0%) experienced their first pregnancy between the ages of 13 and 19 years. This was similar to the results of Güneş et al.[21], who examined women who had child marriages (86%) and adolescent maternity rates were, respectively, 22.9% and 23.7% by the studies conducted regardless of the age of marriage.[18,22] Thus, it can be said that pregnancies at an early age are common in women who got married in the adolescent period. Pregnancies faced at an early age are significant as they can increase maternal and paediatric health problems.

Most participants stated that they had 'regular follow-up and followed the extended recommendations' to have a healthy pregnancy. Some women also stated that they 'could not receive antenatal care'. According to the data of TDHS (2019), which is the most comprehensive health study conducted in Turkey, health services such as prenatal care (94.1%), tetanus vaccine (67.9%), blood test (93.5%), urinalysis (87.3%) and blood pressure measurement (92.4%) were reported at lower rates in adolescent gaed respondents than other age groups of women.[3] In other studies, it has been reported that the rates of receiving antenatal care in adolescent pregnancies are quite low (respectively: 10.8%; 3.0%).[23,24] These results show that there are differences between regions and countries in terms of benefiting from the prenatal care services of adolescent pregnant women, not just in Turkey, but around the world. There should be sufficient prenatal care to promote maternal and newborn health and reducing mortality in adolescent pregnancies.

In the study, women who gave birth in the adolescent age preferred hospital for a healthy delivery and some of them gave birth by caesarean (6.7%). Also, some of these women stated carrying out 'pre-labour individual practices' such as 'waiting for the labour pain to become more frequent, perceive labour pain as a regular tummy ache and waiting for it to stop'. In previous studies, caesarean delivery rates were reported to be higher in the adolescent age group.[23] Thus, it is important to be informed about birth pain and the time of application to the health institution to prevent obstetric complications and elective caesarean delivery that may occur in adolescent pregnancies.

Some participants reported performing 'traditional practices' to protect their health during puerperium. Previous studies conducted in Turkey have reported similar findings, and it has been reported that cultural practices are carried out for hygiene, nutrition, to increase breast milk and manage the puerperal bleeding (respectively: 100.0%; 84.5%).[25,26] In an earlier systematic review, which included 44 postpartum studies, it was reported that cultural practices were widely used in social support, rest, hygiene, diet and breastfeeding.[27] We suggest that it is important to provide detailed information to puerperal adolescents about the use of cultural practices whose benefits have not been proven as yet in the post-partum period in terms of protecting adolescent puerperal and newborn health.

Some women reported that they had performed negative practices, such as 'trying to have a miscarriage on their own, trying to have a miscarriage by doing hard work, jumping from high places and sitting on the tractor's chassis' to end unwanted pregnancies. Another study involving adolescents reported that abortion occurred in 3.9 million unsafe conditions every year in girls aged 15–19 years.[8,9] In a

previous review, women undertook risky practices to induce a miscarriage that was a potential threat to their own health, such as drinking substances that may be harmful or applying a solid body onto the uterus and applying physical force.[28] These unsafe practices in an attempt to end unwanted pregnancies should be a major concern for health care professionals in the field. Healthcare professionals should provide adolescent health counselling to adolescent women in this regard.

Some of the respondents reported using 'unsafe methods (breastfeeding and withdrawal method)' to prevent unwanted and unplanned pregnancies. Similarly, some studies report that women commonly use withdrawal and/or calendar methods.[3,6,9] These methods of avoiding conception are known to be unreliable and will result in unwanted pregnancy in many cases. We suggest that women should be informed firstly and promptly about modern and effective methods.

In terms of the use of safer methods of contraception, some respondents still reported problems, such as 'ectopic pregnancy while using combine oral contraception, IUD dislocation, cannot access the method and are not obliged to use a contraception method by family members'. It has been reported that the most common causes of giving up or stopping a contraception method, other than a wanted pregnancy, are accidental pregnancy or the complications of the contraceptive methods.[3,29] Other research has shown that some women are not obliged to use or do not have access to reliable and high-quality family planning services, information and materials, and/or their spouse decides.[18,22] It appears that insufficient women in the study population were able to use modern contraceptive methods, mainly because they could not access the method or that they had problems with the method when it was available.

Significant number of women stated that they experienced violence. Previous studies on adolescent marriage have reported that children who are married in the adolescent age group have a higher risk of encountering all kinds of violence.[12,32] In a study conducted in Bangladesh, it was reported that most women (78.9%) who got married at a young age were subjected to violence by their husbands.[13] According to these results, it can be said that child marriages are one of the important social problems that can be encountered not only in Turkey but also in different countries. Besides, because of child marriage they cannot complete their education, and live in exploitation, violence, abuse at home and poverty.

A proportion of respondents were subjected to 'physical violence during pregnancy (such as being hit/battered etc.)' and they performed practices such as 'acting as desired, trying to strengthen herself, communicate with the spouse' as preventive measures. Earlier studies have shown that girls who were married in the adolescent period reported twice as much physical violence and three times as much sexual violence than women in the older age group.[12,13] In another study from Turkey, it was reported that the girls who were married at a young age were subjected to physical violence/abuse (14.6%) and emotional (27.1%) violence/abuse by their spouse.[14] Once again, women who are married in the adolescent period appear to be at risk of increased violence compared to women marrying later and as such the social problem of adolescent marriage has yet again been shown to be serious.

One woman in our cohort stated that she had attempted suicide (she took drugs) because of the violence that she was exposed to by her partner and another woman stated that she was threatened to being sent back to her family's home by her mother-in-law and her father-in-law, because she had not given birth quickly enough after the marriage. In the qualitative study, a woman married at the age of 13 attempted suicide.[33] According to these results, marriages that happen in the adolescent age should be taken seriously in the case of suicidal tendencies and precautions must be taken.

Conclusion

Women in this cohort who were married in the adolescent period experienced important problems regarding reproductive health, especially unwanted pregnancies, unsafe abortions, maternal incompatibility, risky pregnancy, infertility and sexually transmitted infections. A proportion of the respondents were constantly exposed to violence by their spouse or family, and they were prevented from using reproductive health services, such as prenatal care and contraception provision. It is hoped that this information can contribute to the planning and development of services for the solution of the reproductive health problems of women who have an adolescent marriage. We believe that it is important for midwives to question the background of the pregnant adolescents in detail during service delivery, keep in mind the possibility of abuse while taking their marriage and/or pregnancy stories and make a comprehensive assessment and be prepared for what should be done. Adolescent health counselling training of midwives should include course elements about the impact of adolescent marriages.

Limitations

Since women are determined by criterion sampling, the results cannot be generalised and can only represent the specific women engaging in this study. It should be remembered that research results may vary depending on cultural background of the respondents. The research data were collected by face-to-face interview method and the reliability of the data is limited to the statements of the participants.

Conflict of Interest

The authors declare that they have no conflicts of interest.

Compliance with Ethical Statement

Ethics committee approval was obtained from X University Faculty of Health Sciences Non-Interventional Clinical Research Ethics Committee regarding the research protocol (Date:29.11.2017; Protocol no:7). All procedures performed on the reported patients were conducted in accordance with good clinical practice respectful of any human rights.

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Author Contributions

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