

Married adolescents and access to reproductive health services in Iran : A descriptive survey

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ABSTRACT

Child marriage is associated with adverse reproductive health outcomes. Together with efforts to end child marriage, providing adequate health care to married adolescents is essential. However, there has been limited research on reproductive health outcomes among married adolescents. Implement comprehensive sexual education programs in schools and communities to provide young girls with accurate and age-appropriate information about their bodies, reproductive health, contraception, and sexually transmitted infections. This study investigated the factors affecting access to reproductive health services among young married adolescents in Shiraz City. This is a cross-sectional descriptive-analytical study conducted among married adolescents below the age of 18 who were referred to health centers affiliated with Shiraz University of Medical Sciences. Ten health centers were randomly selected, then 140 married adolescents who met the inclusion criteria were investigated with a purposive sampling method. Analysis was conducted using both parametric tests and their non-parametric equivalents. The demographic findings of the married adolescents referred to the centers for reproductive health services indicated that 97% were married, while 3% were divorced. Among the participants, 69.5% had a high school education, and 19% had a middle school education. The university-educated participants represented the lowest percentage of the examined samples. Regarding occupation, 91% of the participants were homemakers, while 82.4% of their spouses were self-employed. Most participants [80.9%] reported their economic status as average. 68.3% had two children. The mean age of the participants was 18.47 ± 1.15 years. The demographic findings of the teenage referred to the healthcenters to receive reproductive health services in this study. The findings underscore the importance of creating the necessary conditions to improve married adolescents's access to reproductive health services. By evaluating standard programs in the management field, planners and managers can create the conditions required to enhance the access of teenage mothers to these services. This highlights the need for targeted interventions that address the unique needs of this vulnerable population and ensure equitable access to quality reproductive healthcare services. It concludes the need for policy interventions to address these barriers and improve access to reproductive health services for married adolescents.

Keywords: Access, Married Adolescent, Reproductive Health Services.

Introduction

Statement of significance(SOS)

Problem or issue

Child marriage is a widespread issue that has adverse consequences on the reproductive health outcomes of young girls. Providing adequate healthcare to married adolescents is essential, but there has been limited research on reproductive health outcomes among this population.

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What is already known

According to the WHO guidelines, health services must be accessible, acceptable, available, appropriate, and affordable and serve as a channel for access to reproductive health.

What this paper adds

This paper summarizes current findings on barriers access to reproductive health services for married adolescents. It concludes the need for policy interventions to address.

Introduction

Almost a quarter of girls aged 15–19 are married to an estimated 16 million adolescents each year worldwide, 95% of whom are from low- and middle-income countries[1]. The World Health Organization [WHO] stated, “reproductive health is a state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity in all matters relating to the reproductive system and its functions and process.” Ensuring universal access to sexual and reproductive health care services and reproductive rights is also a significant agenda for achieving Sustainable Development Goals [SDGs] 3 and 5 [2]. Many adolescents married before the age of 20 have difficulties attaining reproductive health care. They are confronted with severe threats to their health and well-being. They are vulnerable to too-early pregnancy and childbearing, unsafe abortion, malnutrition, anemia, and reproductive tract infections [3]. Generally, the outcomes of early child marriage can include domestic violence, physical and emotional health issues, financial difficulties, loss of life during pregnancy and childbirth at a premature age, and suicide[4]. Young girls under 19 who get pregnant face a 50% increased risk of stillbirths and neonatal deaths and an increased risk of preterm birth, low birth weight, and asphyxia [5]. They are also typically poorly informed about how to protect themselves from pregnancy and sexually transmitted diseases. Married adolescent need basic knowledge about how their bodies work and their reproductive health concerns, which can be provided through family life education [6].

Adolescents face numerous challenges in accessing SRH services globally. Some of these challenges include inadequate SRH information due to a lack of access to SRH education [7,8] and poor quality SRH services, where concerns are related to healthcare providers and health facility infrastructure [9]. They should know about specific health services [treatment for sexually transmitted diseases, contraception, and post-abortion care] and how to obtain resources [condoms and other contraceptives, drugs for treatment, and educational materials]. They should be aware that today's choices could help or harm them [10].

Studies have highlighted that married adolescents in developing countries face challenges in accessing reproductive health services. Existing health services have ignored the health needs of youth as a group, and few studies have looked at the factors determining the extent to which youth access these services. Access to reproductive health services is important in preventing adolescents from developing reproductive health problems [11].

Reproductive Health Service includes access to information and services on prevention, diagnosis, counseling, treatment, and care. It requires all individuals to safely reach services without traveling long distances or wasting time, meaning services and treatments must be affordable based on the principle of equity [12].

According to the WHO guidelines, health services must be accessible, acceptable, available, appropriate, and affordable and serve as a channel for access to reproductive health [13]. Access to healthcare services can be the biggest obstacle to receiving reproductive health services among married adolescents [14,15]. This study investigated the factors affecting access to reproductive health services, emphasizing the five dimensions of affordability, accessibility, availability, acceptability, and appropriateness. Policymakers can use the adequacy of services for married adolescents to prioritize interventions, formulate a comprehensive plan, allocate necessary resources, control budgets, reduce adverse effects, and promote health.

Materials and Methods

This study is a cross-sectional descriptive-analytical study. The research population consisted of married adolescents before the age of 18 who were referred to health centers affiliated with Shiraz University of Medical Sciences. The sample selection method was multi-stage random cluster sampling from two health centers in Shiraz City. Ten health centers were randomly selected from each center, and then 140 married adolescents who met the inclusion criteria were investigated with a purposive sampling method.

The data collection tool used in this study was a questionnaire designed by the researcher. The married adolescents who visited the health centers were given the questionnaire, which consisted of questions about their demographic characteristics, such as age, occupation, education, religion, income, etc. In addition, the questionnaire included questions about access to reproductive health services. It should be noted that all items in the questionnaire were extracted by reviewing previous studies.

The validity and reliability of the questionnaire were confirmed in a pilot study. To assess the reliability of the questionnaire on access to reproductive health services among married adolescents, the researchers prepared the questionnaire with input from experts and then administered it to 30 individuals from the study population. Cronbach's alpha coefficient was calculated using SPSS software. In addition to Cronbach's alpha coefficient, the researchers used test-retest and ICC [intra-class correlation] to assess the reliability of the questionnaire on access to reproductive health services from the perspective of married adolescents. The questionnaire's Cronbach's alpha coefficient was estimated at 0.89, indicating high internal consistency. The intragroup correlation coefficient for this questionnaire was 0.977, indicating a high level of test-retest reliability. The Kappa coefficient for the first test ranged from 0.6 to 0.88, and for the test-retest, it ranged from 0.45 to 0.74.

In this study, face and content validity using CVI and CVR indices were employed to validate the questionnaires. To accomplish this, the questionnaires were presented to several university professors and faculty members to identify items with inconsistent understanding and ambiguities. In addition, it was important to evaluate the comprehensiveness and completeness of the questionnaire content and its relevance to the test objectives. Thus, the opinions of university professors and faculty members were sought, and their feedback was used to modify the questionnaire. The questionnaire aimed to assess access to reproductive health services among married adolescents, and the calculated CVI and CVR were 0.83 and 0.8, respectively.

Once the necessary permits were obtained from the research management of Shiraz University of Medical Sciences, the researcher collected and completed the research questionnaire by visiting health centers affiliated with Shiraz University of Medical Sciences and contacting the referrers to those centers in person and online until the desired sample size was achieved.

Following data collection, SPSS 22 software was utilized to perform data analysis. The mean [standard deviation] was used to describe quantitative data, while frequency [percentage] was used to describe qualitative data. Consequently, to describe the scores of accessibility to reproductive health services, affordability to reproductive health services, acceptability to reproductive health services, appropriateness [adequacy], and availability of reproductive health services, mean and standard deviation were employed by the research objectives. Parametric tests and their non-parametric equivalents were used after checking the normality of the data.

Results and Discussion

Findings indicate that among married teenage women, 97% were married, and 3% were divorced. Of the participants, 69.5% had completed high school education, and 19% had completed middle school education.

The study also revealed that the lowest percentage of participants had a university level of education. The highest frequency of occupation (91%) was housewife, and the highest frequency of the spouse's occupation (82.4%) was self-employment. The majority of participants (80.9%) reported an income between 3-10 million, and 71.8% reported living in rented housing. Additionally, 95.4% of the participants resided in urban areas. Furthermore, the average age of the participants was 18.47 ± 1.15 , while the average age of marriage was 16.29 ± 1.17 . Regarding the services survey, the most commonly received services among the participants were healthy childbearing counseling (21.4%), prenatal care (12.2%), and sexual counseling (8.4%).

It was observed that there were differences in the affordability of reproductive health services among the participants. Of those surveyed, 72.5% were covered by insurance, and financial ability did not pose an obstacle to accessing services. However, 22% of the teenage participants reported that they did not have the

financial ability to pay for future expenses, while 16% stated that any insurance did not cover them.

Furthermore, 23.7% of the participants reported that they could not afford the cost of a suitable vehicle or agency to visit health centers. The study also found that the majority of participants preferred to seek professional services to resolve their health problems rather than resorting to self-treatment or relying on the opinions of others.

Regarding attitudes towards reproductive health services, the item "Prevention or treatment of sexually transmitted diseases requires counseling" had the highest rate of agreement among the participants, with 42.1% agreeing with the statement. Additionally, the item "I go to health services to solve my problems and do not use methods such as self-treatment or the opinions of others" had the highest agreement rate, with 52.7% of the participants agreeing with the statement. However, from the perspective of the clients, the study found that 50.4% of the participants reported that they required the permission of their husband or mother-in-law to go to health centers, which can limit their access to reproductive health services.

Regarding attitudes towards gender preferences in reproductive health services, the study found that the majority of the participants (35.9%) were against the idea of only seeking services from female midwives or doctors. In comparison, 19.1% chose the opposite option and were against seeking services from male doctors or staff.

Based on the opinions of married adolescents who participated in the study, 85.5% of them agreed that the environment of the reproductive health service centers was clean and hygienic and that the staff behaved appropriately and showed respect towards the clients (82.5%). They also reported that the staff respected confidentiality (81.7%), provided compassionate advice (77.9%), and paid attention to the client's privacy (55.7%). Additionally, 66.5% of the participants expressed satisfaction with the service quality.

Regarding access to reproductive health services, the study found that 45.8% of the participants agreed and 14.5% strongly agreed with the statement, "Whenever I went to health centers, necessary medical facilities and equipment were available." In terms of accessibility, 23.7% of the participants strongly agreed, and 42.7% agreed with the statement, "I have access to all reproductive health services and do not have to go to another center or city to receive services." However, 8.4% of the participants mentioned that there is no easy access to health information, and 11.5% pointed to the absence of staff in health centers.

The study also found that 25.2% of the participants reported that they couldn't choose a doctor or a midwife in the reproductive health centers they visited. Regarding waiting times, most service recipients [45%] reported waiting between 15-30 minutes from admission to meeting with a doctor or midwife. 25.2% waited less than 15 minutes, 16% waited between 30-45 minutes, 5.3% waited between 45 minutes and one hour, and 8.4% waited more than one hour. In terms of distance and travel time to reproductive health service centers, the study found that

22.9% of the participants lived less than one kilometer away from the service provider center, 24.4% lived between 1-2 km, 15.3% lived between 2-3 km, 8.4% lived between 3-4 km, and 29% lived more than 4 km away. Additionally, 32.8% of the participants reported that the time it takes to travel to reproductive health service centers by car was less than 15 minutes, 44.3% took between 15-30 minutes, 11.5% took between 30-45 minutes, 2.3% took between 45 minutes and an hour, and 9.2% took more than an hour.

Table 1. Description of access to services from the point of view of the clients [married teenage women]

Access to a range of options	very well [percentage]	Good	Average	bad	very bad
How do you evaluate your access to reproductive health services?	47 [35/9]	[39/7] 52	[19/1] 25	[5/3] 7	-

Table 2. The average of the indicators measured in the examined sample of married adolescent women

The average of the indicators measured	Mean	standard deviation	maximum	minimum
accessibility score to reproductive health services	2/5	0/98	1	5
availability score for reproductive health services	2/31	0/82	1	3/71
affordability score to reproductive health services	2/76	0/67	1/67	4/33
acceptability score for reproductive health services	2/65	1	1/13	4/13
adequacy score for reproductive health services	2/14	0/74	1	3/7

According to the study, the average score for acceptability in accessing reproductive health services is 2.65, with a standard deviation of 1. The average affordability of reproductive health services is 2.76 with a standard deviation of 0.67, and the average score for adequacy in access to reproductive health services is 2.14 with a standard deviation of 0.74. These scores suggest that while the affordability of reproductive health services appears to be relatively high, there may be room for improvement regarding the acceptability and adequacy of these services.

The average score for availability compared to reproductive health services is 2.31, with a standard deviation of 0.82. Additionally, the average score for accessibility compared to reproductive health services is 2.5, with a standard deviation of 0.98.

In the first item, "the structure of health centers should be such that married adolescents can come every day of the week and at any hour to receive reproductive health services, and the services

are available." 29.8% of people strongly agreed, and 38.9% agreed.

In the second item, "In health centers, the privacy of married adolescents is given full attention," 48.18% of people strongly disagreed.

For the item "Employees of health centers have necessary confidentiality during the process of providing services," 13.7% of the respondents did not have an opinion and 4.6% disagreed. Additionally, 20.6% of the married teenage women referred to the centers were not satisfied with the services' quality.

Regarding access to health information, 8.4% of married adolescents mentioned that there is no easy access to it. Additionally, 11.5% mentioned the absence of staff in health centers, including reproductive health service providers and other staff.

Furthermore, 25.2% of married adolescents reported that they could not choose a doctor or a midwife in health centers.

Analytical findings revealed that variables such as spouse's age and education, individual's occupation, partner's occupation, type of housing, and family income were related to access to reproductive health services from the perspective of married adolescent women.

Among the married adolescents who participated in the study, there is a relationship between structural, attitudinal, financial, and geographical factors and their access to reproductive health services. Regarding these dimensions, it was found that 83% of attitudinal factors, 74% of financial aspects, 81% of structural factors 1, 81% of structural factors 2, and 60% of geographic factors were related to access to reproductive health services among married adolescents.

The study found a significant difference in age, education level, occupation, and household income for the individual and their partner among married adolescents. The results showed that the higher the age, education level, and household income of both partners, the better their access to reproductive l

According to the results of Zare *et al.*'s study, the average age of the mothers who participated in the study was 16.41 ± 0.85 , while their spouses had an average age of 24.18 ± 2.29 . The average duration of their marriage was 15.06 ± 1.15 years [16]. The study also revealed that teenage mothers had an average reproductive health score of 63.78 ± 11.06 .

Based on the perspectives of married adolescents, the average score for geographic access to reproductive health services was 2.5, with a standard deviation of 0.98. It's worth noting that the study by Mohammad Shariati *et al.* did not identify geographic access as a significant obstacle. A study identified social and structural barriers as the main obstacles to accessing reproductive health services [17]. Additionally, Ali Moazzam *et al.*'s study revealed that women face various factors limiting their access to services, including geographical distance and a lack of ambulances. These factors can cause delays in transferring sick patients to centers, putting them at risk [18]. According to Sekin and Carter's study, women's limited access to financial resources, restricted decision-making authority, and social

isolation played a more significant role than accessibility in accessing maternal health services. Therefore, examining women's social vulnerability factors, which can impede access to healthcare, is crucial to improving access to maternal health services. These findings are consistent with the results of the present study [19]. Improving the accessibility of health centers is crucial to ensuring that people have easy and equitable access to healthcare services. This can be achieved by locating health centers in suitable areas where the majority of people in the region can access them conveniently. Additionally, measures such as improving the transportation system and reducing physical barriers should be implemented to enhance people's access to health centers.

The study findings indicate an average availability score of 2.31 with a standard deviation of 0.82 among service recipients regarding reproductive health services. These results align with Rita Moss Mbaba and her colleagues' study, which showed that many health centers lacked staff who could provide specialized services related to reproductive and sexual health rights [20]. This finding is consistent with the perspective of service providers in the present study. In this study, participants required services such as education, counseling, and testing. Still, they were unavailable due to a lack of privacy, staff confidentiality, suitable equipment, and negative attitudes from service providers. These findings are inconsistent with the results of the present study.

Ramzanzadeh *et al.*'s study revealed several defects and deficiencies in the quality of services provided by health centers. These included inadequate quality and number of seats (25%), a lack of entertainment facilities in the waiting area (47.5%), a lack of cleanliness in the restrooms (65%), and insufficient examination room equipment (60%) [21]. These findings contrast with the results of the present study, which showed different results. The difference in findings could be due to the different policies of medical sciences universities in allocating resources to health centers. In the health centers studied by Ramzanzadeh *et al.*, 35 people (39%) reported being completely satisfied, 48 people (54%) reported being partially satisfied, and seven people (8%) reported being dissatisfied [21]. These results align with the findings of the present study. The scarcity of skilled non-medical personnel, such as senior midwives and nutrition experts, was observed in many healthcare centers. This finding is consistent with the results of the present study. While a high percentage of married adolescents rated the availability of reproductive health services favorably, a small proportion reported having to visit private clinics to receive additional services. Furthermore, they lacked the option to choose their preferred doctor or midwife in service provider centers, which could lead to a decrease in trust in the services received and discourage them from seeking follow-up care. These factors are considered obstacles to improving access to reproductive health services.

The average financial access to reproductive health services score was 2.76, with a standard deviation of 0.67. The study found that most respondents had financial access to reproductive health

services, with 72.5% of participants covered by insurance. However, 22% of adolescents reported insufficient financial resources to cover future expenses related to reproductive health services and 16% stated that their insurance does not cover them. 23.7% stated that they could not afford the cost of a suitable vehicle or agency to visit health centers. The study of Yanui Zhou *et al.* showed that people with low incomes had a lower chance of receiving reproductive health services, which is in line with the present study [22]. The results of the study conducted by Najafi Sharajabad *et al.* indicated that socio-cultural and structural barriers pose the greatest challenges for Asian youth to access healthcare services. Surprisingly, financial issues were not found to be an obstacle to receiving and accessing services, which contradicts the present study's findings [23]. In the study conducted by Mohammad Shariati *et al.*, the financial dimension was not identified as the primary obstacle, which is not consistent with the findings of the present study [17]. The findings of the study conducted by Sekin and Carter also revealed that restricted access to financial resources among women, limited decision-making authority, social isolation, and the dominant power of the husband and mother-in-law negatively impact access to reproductive healthcare services. This is consistent with the results of the present study [19]. The study's findings indicated that married adolescents encounter difficulties in paying for reproductive health services after their initial visit, leading some to refuse services due to financial constraints. Furthermore, some of these adolescents are not covered by any insurance. Policymakers should address these challenges and devise solutions to ensure financial constraints do not hinder married adolescents' access to reproductive health services. The findings showed that among recipients of the reproductive health services, the average score for acceptability in accessing these services was 2.65, with a standard deviation of 1. Moreover, given the higher prevalence of sexually transmitted diseases among younger individuals and the issues that arise for adolescents. As a result, it is crucial to promote awareness and educate teenagers married on the importance of seeking counseling and increasing health service utilization. This can facilitate access to these services and help overcome barriers such as lack of knowledge, shame, and lack of discretion and independence that may otherwise prevent women from accessing healthcare. The findings of Moazzam *et al.*'s study revealed that several factors limit women's access to healthcare services, and many health centers do not offer these services. Factors such as the absence of employees, geographical distance, and a lack of ambulances resulted in delays in transferring critically ill patients to higher-level centers, putting them at risk. Furthermore, health centers did not provide essential and basic services 24/7, depriving and ending many people's lives. According to cultural norms, women are expected to be examined by female doctors. However, with a shortage of female doctors, these services may become unavailable, which is consistent with the current study's findings [18]. The findings of Sekin and Carter's study indicate that women's limited financial resources, decision-making authority, social networks, and the dominance of husbands and

mothers-in-law have detrimental effects on their access to reproductive health services. These results are consistent with the present study's findings [19]. The study found that among the recipients of reproductive health services, the average score for appropriateness of access was 2.14, with a standard deviation of 0.74. According to the study's findings, 85.5% of married adolescents reported that the health centers' environment was clean and hygienic, and 82.5% reported that the staff behaved appropriately and respectfully towards clients. Moreover, 81.7% reported that the staff maintained confidentiality, 77.9% stated that compassionate advice was provided, and 55.7% reported that attention was given to ensuring clients' privacy. Furthermore, 66.5% of married adolescents were satisfied with the services provided. Ramzanzadeh *et al.* found that the highest level of satisfaction among adolescents and young people was with the psychologist, doctor, and midwife's scientific mastery of the study subject and individualized training. As a result, 95% of them recommended such centers to other peers [21]. The present is consistent with these findings, as it also revealed a lack of skilled non-medical personnel in many centers, such as senior midwives and nutrition experts. Rita Moss Mbaba and colleagues' study found that participants required services such as education, counseling, and testing. Still, these services were not readily available due to a lack of privacy, staff confidentiality, appropriate equipment, and negative attitudes from service providers. These findings are inconsistent with the results of the present study, which may be due to differences in a societal context [Mbeba, 2012]. The study found that among married adolescents, there is a relationship between access to reproductive health services and various factors such as structural, attitudinal, financial, and geographical factors. Specifically, 83% of attitudinal factors, 74% of financial factors, 81% of structural factors 1, 81% of structural factors 2, and 60% of geographic factors were found to be related to access to reproductive health services.

The study revealed that variables such as age and education of the spouse, the individual's occupation, the spouse's occupation, type of housing, and family income are related to access to reproductive health services. However, the correlation coefficient indicates that the relationship is weak and cannot be strongly supported. In a study conducted by Zare *et al.*, teenage mothers had an average score of 63.78 ± 11.06 for reproductive health. The study found a significant relationship between reproductive health status and variables such as age, education, spouse's age and education, and contraceptive methods among married adolescent mothers. The socio-demographic characteristics, including age, education, pregnancy, and contraception, were associated with reproductive health scores, consistent with the present study's findings [16]. According to Spearman's correlation coefficient, the study conducted by Zanjani also found an inverse and weak correlation between reproductive health status and the age of the first pregnancy [24]. The results showed that women who got married between the ages of 15 and 29 had better reproductive health compared to

those who got married under the age of 15 or over the age of 30 [Najaf Sharjabd, 2019; 25].

The study found a weak and insignificant correlation between reproductive health and child gender preference. Additionally, the study found that women living in urban areas had significantly higher reproductive health scores than those living in rural areas [24]. The study also found that their partners influenced teenage women's access to reproductive health services. Factors such as the spouse's age, education level, occupation, and household income were all found to impact access. Notably, women whose partners had higher education levels, older generations, and higher incomes reported better access to reproductive health services. However, employment status was found to have a less significant effect, possibly because most of the participants' spouses had non-paid employment. A study conducted by Yanui Zhou *et al.* found that individuals with low incomes had a lower chance of receiving reproductive health services. The study also found that age may impact access to education and reproductive health services, which is consistent with the present study's findings [22].

The results of this research underscore the importance of creating the necessary conditions to improve access of teenage women to pregnancy health services. Planners and managers at Shiraz University of Medical Sciences can evaluate existing programs and develop new ones to enhance the access of adolescent mothers to health services related to pregnancy. Improving access to pregnancy health is an ongoing effort that requires concerted action. Continuous education and increasing awareness among teenage mothers regarding fertility, sexual health, and prenatal care, as well as improving their marital skills, can help improve the mother's and child's health. Ultimately, this can lead to an improvement in overall societal health.

Authors' contributions

ZR, MG, FR conceptualized and designed the project, and obtained research funding. ZR will be responsible for interview with participants, description and data analysis. ZR, MG, FR led analysis of the transcripts, and with developed the manuscript. All authors reviewed and approved the final version.

Paper context

The World Health Organization emphasizes the importance of ensuring universal access to sexual and reproductive healthcare services and reproductive rights as a crucial agenda towards achieving Sustainable Development Goals. Providing adequate healthcare for married adolescents is particularly essential. However, with limited information available on the accessibility of reproductive services for this population in Iran, data collection was necessary. We therefore collected data and found that there is an urgent need for interventions that address the unique needs of this vulnerable population.

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References

- Sogarwal R, Chandra M, Mehra S. Youth friendly health services and role of outreach activities to improve access to services. 2013.
- Action plan for sexual and reproductive health: towards achieving the 2030 Agenda for Sustainable Development in Europe – leaving no one behind. Copenhagen: WHO Regional Office for Europe; 2016 [<http://www.euro.who.int/en/health-topics/Lifestages/sexual-and-reproductive-health/publications/2016/action-plan-for-sexual-and-reproductive-health-towards-achieving-the2030-agenda-for-sustainable-development-in-europe-leaving-no-one-behind-2016>, accessed 15 August 2017.
- Mardi A, Ebadi A, Moghadam ZB, Shahbazi S. Perceptions of teenage women about marriage in adolescence in an Iranian setting: A qualitative study. *Electronic physician*. 2018;10[2]:6292.
- Cunha F, Heckman JJ, Schennach SM. Estimating the technology of cognitive and noncognitive skill formation. *Econometrica*. 2010;78[3]:883-931.
- Binu W, Marama T, Gerbaba M, Sinaga M. Sexual and reproductive health services utilization and associated factors among secondary school students in Nekemte town, Ethiopia. *Reproductive health*. 2018;15[1]:1-10.
- Organization WHO, Fund UNP, Society KCFWShi. Mental health aspects of women's reproductive health: a global review of the literature. 2009.
- Akinyi OP. Determinants of utilization of youth friendly reproductive health services among school and college youth in Thika West District. Kiambu county, Kenya. 2009.
- Motuma A, Syre T, Egata G, Kenay A. Utilization of youth friendly services and associated factors among youth in Harar town, east Ethiopia: a mixed method study. *BMC health services research*. 2016;16[1]:1-10.
- Ajike SO, Mbegbu VC. Adolescent/youth utilization of reproductive health services: knowledge still a barrier. *Journal of Family Medicine and Health Care*. 2016;2[3]:17-22.
- Godia PM, Olenja JM, Lavussa JA, Quinney D, Hofman JJ, Van Den Broek N. Sexual reproductive health service provision to young people in Kenya; health service providers' experiences. *BMC health services research*. 2013;13[1]:1-13.
- Federation IPP. Provide: strengthening youth friendly services: International Planned Parenthood Federation; 2008.
- Tlaye, K.G., Belete, M.A., Demelew, T.M. et al. Reproductive health services utilization and its associated factors among adolescents in Debre Berhan town, Central Ethiopia: a community-based cross-sectional study. *Reprod Health* 15, 217 [2018]. <https://doi.org/10.1186/s12978-018-0659-4>
- Adan FI, Githae M. Factors Influencing Access to Reproductive Health Information Services among Young Aged 15-24 in Garissa Municipality, Kenya. *International Journal of Contemporary Research and Review*. 2018;9[08]:20537-74.
- Dehne KL, Riedner G. Sexually transmitted infections among adolescents: the need for adequate health services. *Reproductive Health Matters*. 2001;9[17]:170-83.
- Gausman J, Othman A, Al-Qotob R, Shaheen A, Abu Sabbah E, Aldiqs M, et al. Health care professionals' attitudes towards youth-friendly sexual and reproductive health services in Jordan: a cross-sectional study of physicians, midwives and nurses. *Reproductive Health*. 2021;18[1]:1-12.
- Zare M, Mardi A, Gaffari-Moggadam M, Nezhad-Dadgar N, Abazari M, Shadman A, et al. Reproductive health status of adolescent mothers in an Iranian setting: a cross-sectional study. *Reproductive health*. 2022;19[1]:1-7.
- Shariati M, Babazadeh R, Mousavi SA, Najmabadi KM. Iranian adolescent girls' barriers in accessing sexual and reproductive health information and services: a qualitative study. *Journal of Family Planning and Reproductive Health Care*. 2014;40[4]:270-5.
- Moazzami Ali, Bhatti MA, Kuroiwa C. Challenges in access to and utilization of reproductive health care in Pakistan. *J Ayub Med Coll Abbottabad*. 2008;20[4]:3-7.
- Sekine K, Carter DJ. The effect of child marriage on the utilization of maternal health care in Nepal: A cross-sectional analysis of Demographic and Health Survey 2016. *PloS one*. 2019;14[9]:e0222643.
- Mbeba RM, Mkuye MS, Magembe GE, Yotham WL, obeidy Mellah A, Mkuwa SB. Barriers to sexual reproductive health services and rights among young people in Mtwara district, Tanzania: a qualitative study. *The Pan African Medical Journal*. 2012;13[Suppl 1].
- Ramezanzadeh F, Haghollahi F, Shariat M, Arabi MM, Hosseini H, Abadi MJ, et al. Reproductive health service centers for youth in Iran. *Journal of School of Public Health & Institute of Public Health Research*. 2010;7[4].
- Zhou Y, Wang T, Fu J, Chen M, Meng Y, Luo Y. Access to reproductive health services among the female floating

population of childbearing age: a cross-sectional study in Changsha, China. *BMC health services research*. 2019;19[1]:1-10.

23.Najafi_Sharjabad F, Haghighatjoo S. Barriers of Asian youth to access sexual reproductive health information and services: a literature review. *International Journal of Pediatrics*. 2019;7[12]:10541-51.

24.Khayatan M, Nasiripour A A, Amini M, Mohammad Nejad S M. Factors affecting people's access to services from the point of view of employees in selected urban health care centers of Sari city. *Journal of Faculty of Medicine, Tehran University of Medical Sciences [Pyavard Salamat]*, 2018 ;27[3].

25.Zanjani H. A comparative study of Effective Factors on Women's Reproductive Health among Dorood and Koohdasht Residents. *Journal of Ilam University of Medical Sciences*. 2015;22[6]:103-14.