Original Article

doi: 10.31674/mjn.2024.v16isupp1.013

MJN

The Phenomenon of the Root Causes of Teenage Pregnancy in Indonesia: A Qualitative Study of the Family Functioning

Putri Eka Sejati, Kanittha Chamroonsawasdi*, Wirin Kittipichai, Korravarn Yodmai

Department of Family Health, Faculty of Public Health, Mahidol University, 10400 Bangkok, Thailand

**Corresponding Author's Email: kanittha.cha@mahidol.ac.th*

ABSTRACT

Background: Teenage pregnancy (TP) in Indonesia is still high and contributes to maternal and infant mortality. This study explores the role of family functioning (FF) in preventing TP. **Methods:** This qualitative research used in-depth interviews with three mother-daughter dyads with TP experience, three mother-daughter dyads without TP experience, and Focus Group Discussions (FGDs) with four school teachers and four HCPs (Health Care Provider) at the Puskesmas. The data were transcribed verbatim and analysed by thematic analysis. **Results:** The research results show that the root causes of TP related to poor FF practice were: 1) the mother was not involved in solving the daughter's sexual problem, 2) the mother was not confident in sexual communication, 3) poor relationships with her daughter, 4) mother's lack of involvement in the daughter's sexual behaviour, and 5) lack of control daughter's behaviour. Additional causes are 1) Weak school policies and low teacher confidence in providing CSE and 2) Lack of implementation of YFHS (Youth-friendly health services) at the Puskesmas. **Conclusion:** The themes regarding the root causes of TP start from individual factors, maternal low knowledge, and awareness about Sexual Health for her daughter; secondly, interpersonal factors, namely the mother's poor practice in implementing the six dimensions of FF, including the mother's lack of involvement in solving problems, poor communication on the prevention of daughter's sexual risk behaviour due to insufficient affective responsiveness and affective involvement, and poor monitoring and control of the daughters' sexual risk behaviour. The organizational and policy factors are inadequate implementation of CSE (Comprehensive Sexuality Education) in schools due to weak policies and lack of CSE guidelines, and a lack of implementation of YFHS in health facilities due to low family involvement and lack of HCP capacity building.

Keywords: Family-functioning; Indonesia; Qualitative Study; Teenage Pregnancy (TP)

INTRODUCTION

Teenage pregnancy (TP) is a global health issue that impacts physical, psychological, and social well-being. The World Health Organization (WHO) reports that in developing countries, around 21 million girls aged 15-19 become pregnant yearly, and 12 million give birth (WHO, 2024). This data was the same as the UNFPA reported in developing countries: 20,000 girls under 18 give birth daily (United National Population Fund, 2017). The 2019 data reported that 55% of unwanted pregnancies among teenagers ended with unsafe abortions (Leftwich & Alves, 2017). In Indonesia teenage pregnancy also included the wedding teenage (10-19 years). So, Teenagers facing pregnancy are not only affected by the rejection of pregnancy-related matters, but they are also often socially isolated, distanced from the family and friends who should offer them support (Mulyaningsih, 2023).

Indonesia had the fourth highest incidence of TP in Southeast Asia after Laos, the Philippines, and Cambodia (The World Bank, 2020). Data from the National Statistical Bureau in 2012 stated that the total number of teenage pregnancies was 48 per 1,000 reproductive women of the same age. According to Indonesian Health Demographic Survey Data (IDHS), 7% of women become mothers under 18 (BKKBN,

Received: October 2, 2024 Received in revised form: November 8, 2024 Accepted: November 27, 2024

2012). TP has negative impacts both physically and socially, physical effect on mothers, including teenage pregnant women who tend not to undergo Antenatal Care (ANC) examinations, resulting in misdiagnosis of pregnancy, which results in various risks not being detected early, including a greater risk of experiencing preeclampsia, anaemia, premature rupture of membranes, and even death (Azimirad, 2023; Panting et al., 2019). Meanwhile, the physical impact on babies is the risk of premature birth, stunting, poor development, and poor nutrition. In addition, teenage mothers tend to stop providing exclusive breastfeeding earlier than adult mothers, which impacts the baby's growth and development (Azimirad, 2023). The social impact of teenage mothers has several consequences, such as teenagers tending to drop out of school, having difficulties in economic life, and having a high risk of mental health issues (Tryphina, Doriccah & Shirley, 2020).

Factors that influence TP include teenagers' low sexual health knowledge (SHK) and problem-solving skills to abstain from having sex; besides that, interpersonal factors from family were the fundamental factor affecting TP; the family was the first social environment to create a climate conducive to an open discussion between a mother-daughter dyad about SHK (Murray, 2018; Samari & Seltzer, 2016). However, mothers have not given their daughters enough information about how to abstain from having sex, which was consistently found to be a factor related to TP (Silva *et al*., 2016). Cultural factors where mothers still consider it taboo to talk about sex with their daughters. Gender norms in society also influence sexual life, where teenage boys must make full responses to sexual decisions. In contrast, teenage girls tend to be more passive in this matter. Apart from that, gender norms also influence decisions to use contraception, including condoms, to be determined by the decisions of teenage boys (Ncube *et al*., 2024; Xiao *et al*., 2023). Organizational factors that caused TP were the absence of sexual education following the Comprehensive Sexuality Education (CSE) Curriculum (Stacey, 2016) implemented by schools and the difficulty for teenagers to access Youth-friendly health services (YFHS) in communities (Setyarini, Triningsih & Aryani, 2022).

McMaster's Family Functioning theory (FF) by Miller was a comprehensive family assessment and treatment model. It defines FF as a family system, and its function is to maintain family balance through reciprocal relationships between family members (Miller *et al*., 2000). One aspect of family values that influences teenage sexual risk behaviours is the poor quality of mother-daughter conflict management by problem-solving (Álvaro *et al*., 2019). Proper sexual communication in the family, especially on refusal to have sex or negotiation on safe sex practices by condom use, can protect against unwanted pregnancy; parents talking about sex at home can prevent teenage sexual risk behaviours (SRB) (Abboud *et al*., 2022). Previous studies also indicated the implementation of FF to prevent TP by monitoring teenage SRB (Mutta & Angerame Yela, 2017).

Kediri, East Java, was the district with the highest rate of child marriage due to TP in Kediri Karisidenan (Berjaringan, 2022). The issue of sexuality is still culturally taboo in Indonesia and Kediri in particular, so it was essential to explore in depth the root causes of sexual risk behaviours that result in TP from the perspective of female teenagers and their mothers as well as access to CSE in schools and YFHS at healthcare services. This study explores the current situation for preventing TP and the central situation of the existing services of CSE and YFHS in Kediri, East Java, Indonesia. The findings from this study will help schools and healthcare services in the local area to effectively tailor their implementation strategies to prevent TP.

METHODOLOGY

Research Design

This research uses a thematic qualitative method with open-ended questions, producing main themes substantially to sub-themes generated from the key informant's viewpoint viewpoint (Allen, Kelly & Hatala, 2024 ; *et al*., 2024). This study looked for the essential and universal structure of maternal sexual health knowledge and their practices on six dimensions of FF comprising communication, problem-solving, affective responsiveness, affective involvement, family role, and behavioural control to prevent TP among daughters.

Population and Samples

This was in line with the previous research, which states that qualitative research uses non-probability

sampling to choose key informants relevant to the research question (Jowsey, Deng & Weller, 2021).

Table 1: Sample Selection and Number of Samples Enrolled in Each Group

Key Informants	Number	Inclusion Criteria	Themes To Explore
Mother-daughter dyads with TP experience	3	Daughter aged 15-19 years who had TP experience. Daughter who lives together with her mother	Sexual Health Knowledge (SHK) Family Functioning Practices (FFP)
Mother-daughter dyads without TP experience	3	Daughter aged 15-19 years without TP experience. Daughter who lives together with her mother	Sexual Health Knowledge (SHK) Family Functioning Practices (FFP)
School teachers	4	Teachers who have experience in providing sexual education at school	CSE Implementation at school. Obstacles to the implementation of CSE
Health Care Provider (HCP)	4	Healthcare providers who work in the field of teenage health	YFHS implementation Obstacles to implementation of YFHS

Table 1 shows the key informants were selected based on the inclusion and exclusion criteria. The daughter's criteria were age 15-19 years.

Data Collection

To understand people's experiences, ideas, and perceptions (Jowsey, Deng & Weller, 2021). In-depth interviews were used with mother-daughter dyads, while Focus Group Discussions (FGDs) were used with school teachers and HCPs.

In-depth Interviews

Face-to-face meetings between researchers and the key informants to obtain the information using a semi-structured interview, and flexible follow-ups on key informants' responses. Before performing the interview, the researcher explained the research objectives, benefits, and confidentiality of the study were deliberated.

Saturation data was collected by examining the answers from 12 informants. Jowsey, Deng and Weller (2021) argued that data saturation usually occurs between 12 and 17 in homogeneous groups.

Focus Group Discussions (FGDs)

FGDs were conducted with four school teachers and four HCPs from community health centres using a semi-structured interview in a meeting room equipped with presentation media for more discussion (Gernert, Schuber & Schaller, 2023).

Data Analysis

Thematic analysis was used to analyse the transcript data from audio recorded independently by two researchers to find main themes and sub-themes (Heriyanto, 2018; Jowsey, Deng & Weller, 2021); compiling codes was done between the two researchers to share their different viewpoints on key findings before concluding by coding to the words of key informants (Heriyanto, 2018; Jowsey *et al*., 2021). Then, themes and sub-themes are examined by observing similar or different groups of meanings to ensure the written data is consistent (Heriyanto, 2018).

Ethical Consideration

The researchers obtained ethical clearance from the Research Ethics Board of Public Health, Mahidol University, Thailand with reference number IRB number: MUPH 2024-019 on 10th January, 2024 and Health Researcher Ethics Committee of Strada University, Indonesia with reference number 001886/EC/KEPK/I/II/2024 on 29th November, 2021.

RESULTS

Sociodemographic Characteristics

Demographic data includes maternal age, marital status, occupation, and highest level of education.

Table 2: Sociodemographic Data of Mothers (Both Who Have Daughters with Teenage Pregnancy Experience and Those Who Have Daughters Without Teenage Pregnancy Experience)

Key informant	Daughter	Age	Marital status	Occupation	Education
M1	Pregnancy experience	44 years old	Married	Self-employed	Senior high school
M2	Pregnancy experience	44 years old	Married	Housewife	Elementary school
M3	Pregnancy experience	42 years old	Married	Self-employed	Elementary school
M4	Without pregnancy experience	52 years old	Married	Housewife	Elementary school
M5	Without pregnancy experience	40 years old	Married	Self-employed	Senior high school
M6	Without pregnancy experience	39 years old	Married	Housewife	Elementary school

M = Mother

Table 2 shows that three mothers with TP daughters and three without TP daughters were married. Two of the first group were self-employed, and one mother was a housewife. In contrast, two of the second group were housewives, and one mother was self-employed.

Table 3: Socio-demographic Data of Daughters with TP Experience and Without TP Experience

Key Informant	Pregnancy Experience	Age	Marital Status	Number of Children	Education
D1	With pregnancy experience	Current age: 19 years old Age at pregnant: 16 years old	Married	1	Junior high school
D2	With pregnancy experience	Current age: 17 years old Age at pregnant: 15 years old	Married	1	Junior high school
D3	With out pregnancy experience	Current age: 18 years old Age at pregnancy: 16 years old	Divorce	1	Junior high school
D4	Without pregnancy experience	Current age: 18 years old	Single	-	Senior high school
D5	Without pregnancy experience	Current age: 15 years old	Single	-	Junior high school
D6	Without pregnancy experience	Current age: 17 years old	Single	-	Senior high school

D = Daughter

Table 3 shows the regarding educational status in both groups, a majority (four out of six mothers) have an elementary school education, and the rest were in senior high school. Three TP daughters were pregnant at the age of 15-16 while still studying in junior high school, and two of them were married, while one daughter was divorced. Three daughters without TP experience are currently 15-18 years old.

Most school teachers have bachelor's degrees in guidance and counselling, and most HCPs graduated with Diploma III in midwifery.

Maternal Sexual Health Knowledge (SHK)

Maternal SHK was defined as the mother's knowledge and understanding of TP prevention and how to explain it to her daughter. Similar and different viewpoints of mothers in both groups were examined to identify their understanding of sexual health in TP prevention in three aspects: 1) Not staying together with a boyfriend in a private place. 2) No alcohol consumption, and 3) Preventing TP by sexual abstinent, always using a condom when having sex, and regularly taking oral contraceptive pills. The summary of congruent and incongruent findings from mothers in both groups was as follows:

TP prevention can be achieved by not staying privately with a boyfriend

The mothers of TP daughters never explained to their daughters not to stay in a private place with their

boyfriends, and the other mother often scolded her daughter for not staying in a private place with her boyfriend.

"I did not expect my daughter to date, so I never explained about pregnancy prevention, including not staying together with the opposite sex in a private place"(M1, mother from D1)

Meanwhile, among three mothers without TP daughters, two mothers never explained not to stay in a private place to prevent TP to their daughters because they believed in their daughters' behaviour well. One mother realized that it was essential to explain this but was reluctant to start the communication.

"I knew everything about my daughter, including I knew that my daughter is not in a relationship, so I do not think there was a need to explain about not staying in a private place to prevent TP" (M4 mother from D4)

Maternal Experiences in Explaining to Their Daughters Not to Consume Alcohol

Three mothers of TP daughters never told their daughters not to drink alcohol because they never thought their daughters would do that.

"I never explained about alcohol consumption because I believed my daughter could not possibly do that" (M3 mother from D3)

Two daughters with TP said they never consumed alcohol because their parents were stringent, while one daughter often consumed alcohol because her mother never forbade her.

"I often consume alcohol with friends and my boyfriend when I have problems at home. I always see my father and mother fighting, so it makes me angry and sad. I take it out by drinking alcohol and often have sex under the influence of alcohol. " (D3)

Two mothers without TP daughters always explain to be careful in choosing peers, and to stay away from peers who have alcohol consumption because this will later influence their behaviour. One mother never explained because she believed her daughter could not consume alcohol.

"I always explain that my daughter should be careful in choosing friends and not to be friends with people who like to drink alcohol" (M6 mother from D6)

Preventing TP by being sexually abstinent, always using a condom when having sex, and regularly taking oral contraceptive pills.

All mothers with TP daughters never explained about preventing TP by abstaining from sex before marriage or safe sex practices by using contraception, condoms, or pills because these things were inappropriate and taboo to talk about.

"I never talked about premarital sex condoms and pill contraception at all because it was not common here." (M2 mother from D3)

Moreover, all mothers in this group never explained about using condoms because (a) they felt their daughters did not need them, (b) their daughters were still very young, and (c) they believed their daughters were too young to get any information.

"I never explained anything about condoms because I felt my daughter was too young" (M5)

Family-Functioning Practices (FFP)

Maternal family-functioning practices (FFP) were presented from mother-daughter dyads' viewpoints in both groups in six dimensions as follows:

Problem Solving

Mothers with TP daughters tend not to solve their daughters' problems related to sexual or dating behaviour because their daughters are closed and never talk about their problems. However, some mothers tend

to solve their daughters' problems by trying hard so that their daughters can openly talk about their problems. In contrast, mothers without TP daughters were always involved in solving their daughters' problems, including issues related to sexual behaviour or dating.

"I only provide solutions related to my daughter's academic problems; she is close to me" (M1 mother with TP daughter)

"I will provide solutions through advice when she experiences difficulties. If she can handle her problem, I let her do it herself" (M6 mother without TP daughter).

Regarding perceived FF practice by the daughter, those with TP experience feel their mother did not solve problems related to their sexual risk behaviours, even though one daughter thinks that it does not match her mother's opinion about resolving her problem. Meanwhile, daughters without TP experience believe their mother always helps them solve their problems.

"My mother only helps me solve problems related to my basic needs on food, clothing, and school because if I talk about other things like my personal problems, my mother always judges and scolds me" (D1 with TP experience).

"When I have problems, I always ask my mother's opinion. She usually advises me on how to solve the problem." (D6 without TP experience).

Communication

The mother of TP's daughter felt uncomfortable and not confident discussing SHK with her daughter. One mother was worried about her daughter's sexual risk behaviour and was awkward giving SHK by conveying it using body language or code. Meanwhile, mothers without TP daughters feel comfortable discussing anything with their daughters, including SHK due to close relationships.

"I used a code to explain SHK; I never explained not kissing, hugging, and having sex I only said to be careful when going out with boyfriend because I felt uncomfortable explaining her directly" (M3 with TP daughter).

"My daughter and I are very close. I feel comfortable and confident discussing anything, even sensitive issues though I lack knowledge about sex education." (M4 without TP daughter).

Affective Responsiveness

There were two types of mothers with TP daughters. The first type is strict with their daughters, has low affection, and implements family rules forbidding them from dating boyfriends. The second type is liberating and never restraining their daughters, allowing them to stay overnight outside. Meanwhile, mothers without TP daughters have a close relationship with their daughters and are not embarrassed to express affection. They allow their daughters to date after knowing their boyfriends.

"I would be furious if I found out my daughter was dating" (M2 with TP's daughter).

"I was not angry when my daughter was dating, but I asked her daughter to introduce her boyfriend to me" (M6 without TP daughter).

Regarding the daughter's perception of FFP, those with TP's experience choose to hide their relationships because they fear their mothers will be angry. Meanwhile, the other group feels her mother always provides enough affection and allows her to date, but they should introduce a boyfriend to her mother.

"I chose to hide my relationship until the end because I knew my mother would be angry if I dated" (D1 with TP experience).

Affective Involvement

Mothers with TP daughters were never involved in their daughters' sexual behaviour because if they did not get involved, it would be the same as supporting their daughters in dating, so they chose not to care about it.

Meanwhile, mothers without TP daughters always care about their daughters' interests, including sexual or dating behaviour which puts their daughters at risk.

"I am not involved at all because I believe my daughter is not dating" (M1 with TP's daughter).

"I have a habit of routinely asking about my daughter's daily activities with anyone, including her activities with the opposite sex, though she is not currently in a relationship" (M5 without TP daughter).

Regarding perceived FFP among daughters with TP experience, they feel their mother was never involved with their interests even their sexual behaviour. While the other group is involved in all activities both inside and outside the home, even related to their sexual behaviour.

"My mother does not know that I often spend time alone with my boyfriend at his house; as far as she knows, I have been going to school all this time."(D2 with TP experience).

Behaviour Control

Mothers with TP daughters control their daughters' sexual risk behaviours by the family rules without explaining the reasons to them. The other group set clear boundaries and rules for their daughters' behaviour by restricting them from staying in a private place with a boyfriend or staying overnight away from home without a parent.

"My mother restricted me from coming home to a maximum of 9 pm. My mother was once furious and kicked me out of the house when I came home late" (D2 with TP daughter).

Daughters with TP experience feel their mother does not provide behavioural control using family rules on their sexual behaviour. The other group thinks that their mother makes clear rules about their sexual behaviour, such as not allowing them to stay in a private place with a boyfriend and always asking for explicit permission when they are late coming home.

"My mother never limits the maximum time I can go home. I often spend the night at my friend's house, and my mother allows me." (D3 with TP experience).

Comprehensive Sexuality Education (CSE) Services in Schools

Comprehensive Sexuality Education (CSE) is a curriculum-based process of teaching and learning about the cognitive, emotional, physical, and social aspects of sexuality. FGDs were conducted with four school teachers on CSE implementation. They mentioned the school only provides sex education on physiological changes during puberty and religious practice not to stay in privacy with a different sex. They felt they were not confident to offer CSE and it is taboo to talk about TP prevention.

Perceived obstacles in implementing CSE include cultural taboos on sexual education, no standard guidelines for CSE material, and weak policies.

"Our school policy applies sexual education in physiology and religious subjects. It focuses on character education, not specifically on preventing pregnancy. During MPLS (admission of new students), we continuously collaborate with the community health centre, providing sexual and reproductive health (SRH) and early marriage prevention." (School 2).

Youth-Friendly Health Services (YFHS) in Health Facilities

YFHS is an SRH service for teenagers to build skills to prevent TP. Data was collected through FGDs with four HCPs from community health centres (Puskesmas). The obstacles were difficulty involving parents in youth-friendly programs and insufficient skilled HCPs on YFHS and sexuality education.

"Our Puskesmas has a reproductive health screening program for teenagers in schools once a year. It is not specifically for pregnancy prevention. We merge with other health screenings such as nutrition and dental health. We have never provided sex education on condoms and contraceptive pills. We do not yet have a separate room for health services among teenagers."(HCP 1).

Table 4: Root causes of TP

Three Elements of the Root Cause of TP	Categories of Themes	Sub-theme Categories
Mother SHK	Poor maternal knowledge to give information about sexual risk behavior	Poor maternal knowledge to give information about not staying in private places to prevent TP Low awareness of mothers to educate their daughters not to consume alcohol Low awareness of mothers to educate their daughters about contraception
Mother FF	Poor mother FFP	The mother is not involved in resolving problems related to sexual behaviour. The mother is not confident in sexual communication. Mother is strict and never shows affection. Mothers who were involved in their daughter's sexual behaviour The mothers did not control their daughter's behaviour.
CSE	Weak CSE implementation in school	Sexual education is not comprehensive There was no specific guidance on CSE Taboo provides education about sexual health Weak policy
YFHS	Weak YFHS implementation at a health service facility	Lack of parental involvement Lack of professional HCP

Table 4 explains the root cause of teenage pregnancy can be concluded as poor maternal knowledge of information about SHK, poor mother practices of FF, weak policy in the implementation of CSE in schools, and YFHS services in healthcare facilities.

DISCUSSION

This study explored the maternal experiences in providing SRH knowledge and FF to prevent TP in their daughter. The first maternal experience in TP prevention was controlling the daughter not staying in private places and not staying overnight with a boyfriend. Neither the mother with a TP daughter nor the mother without a TP daughter felt the need to provide education regarding pregnancy prevention because she thinks that it is enough to give her daughter a strict prohibition against dating. The mother without a TP daughter thought her daughter did not have a boyfriend yet but constantly monitored her daughter to keep her distance from the opposite sex is suitable. Moreover, the maternal experiences in providing sex education on contraceptive use such as condoms and contraceptive pills, mothers with TP daughters and without TP daughters felt taboo to provide this information to their daughters. This is similar to previous research (Tryphina, Doriccah & Shirley, 2020) which found parents felt they did not have sufficient knowledge and ability to convey information on TP prevention to their daughters. Likewise Xiao *et al*., (2023) is also stated that lack of parental support for contraceptive use is one of the factors in the occurrence of TP.

The mother only gave warnings and prohibitions to prevent behaviour towards the opposite sex from being too close but did not explain clearly the limits of this behaviour, such as not staying together in a private place or staying overnight without parents. All mothers in this study never provided information on the use of contraception in preventing pregnancy; this is due to cultural pressure, which considers it taboo to talk about this issue; this is in line with a previous study (Tryphina, Doriccah & Shirley, 2020). Only a few mothers have the awareness to remind their daughters to stay away from alcohol and illegal drugs. However, it does not explicitly explain its effect on preventing pregnancy same as previous studies, which state that having sex in teenagers is caused by alcohol consumption (Mengistu *et al*., 2022).

This study also explored the maternal experience by providing six dimensions of FF to prevent TP. The six dimensions of FF consist of communication, problem-solving, affective responses, affective involvement, family roles, and behaviour control. It was found that mothers were inadequate in problem-solving, did not help their daughters in solving problems and making sexual decisions, and even tended to avoid communicating sexual knowledge. It is supported by a study by Trypina, which concluded parents play an essential role in the sexual socialization of their daughters. Not being involved in a daughter's sexual life has the potential to influence the sexual decision-making of the daughter (Tryphina, Doriccah & Shirley, 2020). Meanwhile, the development of cognitive abilities has an impact on teenagers' weak ability to make sexual decisions without the help and guidance of their mothers. This is in line with previous research, which found the differences between teenage and adult decision-making, so it is necessary to develop decision-making

interventions in the teenage population (Lange-McPherson & Halpern-Felsher, 2023). The present study showed mothers felt uncomfortable, not confident, and lacked sexual communication. This is supported by previous research, which states that mothers should educate their daughters on sexuality as early as possible; in reality, cultural pressure makes mothers give up their intention to provide sexual knowledge to their daughters because society considers it taboo to do so (Shams *et al*., 2017; Tryphina, Doriccah & Shirley, 2020). Similar research also states that mother-daughter communication on sexual maturation can prevent TP (Crichton, Ibisomi & Gyimah, 2012).

The following dimensions explored are affective responsiveness and affective involvement. The results found daughters with TP experience tend to have poor relationships with their mothers, which makes them look for other ties outside the home by dating; apart from that, relationships that are not close also make them feel awkward about opening up to their mother about their dating behaviour. This is also related to the experience of being involved in their daughter's sexual life. The results show that mothers with daughters who are TP are not involved in their daughters' sexual behaviour but are concerned only with their basic needs. This is different from the other group who have a close relationship with their daughters so that they are involved in their daughter's sexual behaviour. This is supported by previous research (Samari & Seltzer, 2016), which said daughters who have a good relationship with their mothers have less sexual risk behaviour. The quality of mother-daughter relationships can prevent sexual risk behaviours suggesting SRH interventions should enhance mother-daughter relationships.

This study also explored mothers' experiences in controlling their daughters' sexual behaviour. There are two types of mothers with TP daughters: restrictive of their daughters and liberating of their daughters. Both mothers who are too restricted and liberated of their daughters do not control or make special rules on their daughter's sexual behaviour. This is different from previous studies, which found mothers who have free-style personalities tended to have daughters who were sexually active compared to mothers who were more careful and controlled over their daughters' sexual behaviour (Allen & Laborde, 2022). Implications from findings suggest developing an intervention to improve family function in preventing teenage pregnancy by campaigning for the importance of SHK mothers to change the taboo view of SHK in preventing TP as well as holding training programs on the application of the six dimensions of FF for mothers with teenage daughters.

This study also indicated some barriers to implementing CSE in schools. Almost all schools had not implemented CSE in preventing teenagers' sexual risk behavior or preventing TP. The obstacles are cultural taboos awkwardness in providing sexual education and a lack of teachers who can deliver CSE. This aligns with a previous study (Pinandari *et al.*, 2023). Although the country has made progress in reducing rates of TP, current data shows the sexual health situation of teenagers has not improved. The school-based CSE curriculum and modules should be developed to assist teachers in providing CSE to prevent TP in school. Findings found that HCPs collaborate with schools in providing sexual health promotion activities. The obstacles they experienced were a lack of parental involvement in sexual education to prevent teenagers' SRB and TP prevention. A previous study found poor accessibility of teenagers to YFHS from community health centres (Pinandari *et al*., 2023). Capacity building of HCPS should be conducted to promote a positive attitude in dealing with teenagers' sexual risk behaviours.

Limitation

This study was conducted in a small group, so it cannot be generalized to other communities. This study can provide some information for developing TP prevention programs in Indonesia.

CONCLUSION

The root causes of TP start from the mother's low awareness and ability to provide SRH knowledge to her daughter. Additionally with poor maternal ability to implement the six dimensions of FF. Inadequate ability of the mother to solve her daughter's sexual problem and ineffective SRH communication. The poor relationships, poor affective responsiveness, and affective involvement of the mother with her daughter, as well as a lack of control to regulate her daughter's SRB. This was inadequate sexual health services both in school and health facilities, which remains a high incidence of TP in Indonesia. Development of an intervention model to strengthen maternal FF practices to prevent TP should be done soon.

Recommendation

Based on the findings, some recommendations are as follows:

Increase maternal SRH knowledge and awareness to prevent TP by enhancing specific contents regarding pregnancy prevention and sexual risk behavior prevention. Furthermore, the manual book for mothers and daughters should be developed using the six-dimension FF.

Conflict of Interest

There was no conflict of interest at all in this research.

ACKNOWLEDGEMENT

The authors express their gratitude to the Kediri District Health Office, located in Kabupaten Kediri, Jawa, Indonesia, for granting permission to conduct research within their jurisdiction. They also extend their appreciation to the health office staff who served as key informants and to the school institutions that actively participated in the focus group discussion (FGD) activities.

REFERENCES

Abboud, S., Flores, D. D., Bond, K., Chebli, P., Brawner, B. M., & Sommers, M. S. (2022). Family sex communication among Arab American young adults: A mixed-methods study. *Journal of Family Nursing, 28*(2), 115-128. https://doi.org/10.1177/10748407211053931

Allen, L. P., Kelly, C., & Hatala, A. R. (2024). Answering tough questions: Why is qualitative research essential for public health? *Australian and New Zealand Journal of Public Health, 48*(3), https://doi.org/10.1016/j.anzjph.2024.100157.

Allen, M. S., & Laborde, S. (2022). Parent personality traits and adolescent sexual behaviour: Cross-sectional findings from the Longitudinal Study of Australian Children. *Personality and Individual Differences, 195*. https://doi.org/10.1016/j.paid.2022.111682.

Álvaro, M.-C., Liezel, U.-C., Fernanda, M.-L. M., & Teresa, B.-B. (2019). Adolescent pregnancy: Assessing familism with bardis scale. *International Journal of Contemporary Medical Research [IJCMR], 6*(3), 7–15. https://doi.org/10.21276/ijcmr.2019.6.3.25.

Azimirad, A. (2023). Pregnancy in adolescence: It is time to get ready for generations Z and Alpha. *Gynecology and Obstetrics Clinical Medicine, 3*(2), 71–75. https://doi.org/10.1016/j.gocm.2023.04.004.

Badan Kependudukan dan Keluarga Berencana Nasional (BKKBN). (2012). *Guidelines for Managing Youth Family Development*. Retrieved from: https://archive.org/details/BUKUPEDOMANPENGELOLAANBKR, Accessed on 10th January, 2023.

Berjaringan, M. J. T. (2022). Teenage pregnancy in East Java Indonesia. Media East Java Berjaringan. Retrieved from: https://kominfo.jatimprov.go.id/berita/80-diskan-di-sebabkan-hamil-duluan, Accessed on 10th February, 2023.

Crichton, J., Ibisomi, L., & Gyimah, S. O. (2012). Mother–daughter communication about sexual maturation, abstinence and unintended pregnancy: Experiences from an informal settlement in Nairobi, Kenya. *Journal of Adolescence, 35*(1), 21–30. https://doi.org/10.1016/j.adolescence.2011.06.008.

Mutta, D. D. S., & Angerame Yela, D. (2017). Sociodemographic characteristics of women in a public hospital in Campinas who underwent legal abortion due to sexual violence: Cross-sectional study. *Sao Paulo Medical Journal, 135*(4), 363–368. https://doi.org/10.1590/1516-3180.2017.0048150317.

Gernert, M., Schuber, A. A., & Schaller, A. (2023). Experiences in the application of logic models in the context of workplace health promotion – A focus group discussion. *Evaluation and Program Planning*, *100*.

https://doi.org/10.1016/j.evalprogplan.2023.102347.

Heriyanto, H. (2018). Thematic analysis as a method for analyzing data for qualitative research. *Anuva, 2*(3), 317-324. https://doi.org/10.14710/anuva.2.3.317-324.

Jowsey, T., Deng, C., & Weller, J. (2021). General-purpose thematic analysis: A useful qualitative method for anaesthesia research. *BJA Education, 21*(12), 472–478. https://doi.org/10.1016/j.bjae.2021.07.006.

Lange-McPherson, C., & Halpern-Felsher, B. (2023). Adolescent development and its impacts on health-related decision-making. *In Encyclopedia of Child and Adolescent Health*, *2*, 186–194. https://doi.org/10.1016/B978-0-12-818872-9.00177-1

Leftwich, H. K., & Alves, M. V. O. (2017). Adolescent pregnancy. *Pediatric Clinics of North America, 64*(2), 381–388. https://doi.org/10.1016/j.pcl.2016.11.007.

Mathis, W. S., Zhao, S., Pratt, N., Weleff, J., & De Paoli, S. (2024). Inductive thematic analysis of healthcare qualitative interviews using open-source large language models: How does it compare to traditional methods? *Computer Methods and Programs in Biomedicine*, *255*. https://doi.org/10.1016/j.cmpb.2024.108356.

Mengistu, G. T., Terefe, A. B., Gudeta, T. G., Mengistu, B. K., & Mekonnen, B. G. (2022). Premarital sexual practice and associated factors among social science stream university students in Ethiopia. *International Journal of Africa Nursing Sciences, 17*. https://doi.org/10.1016/j.ijans.2022.100452.

Mulyaningsih, E. A., Juwita, S., Argaheni, N. B., & Ningtyas, S. F. (2023). The impact of reproductive health on female victims of violence by partners. *Malaysian Journal of Medical Research (MJMR), 7*(3), 21-26. https://doi.org/10.31674/mjmr.2023.v07i03.004.

Murray, K. S. F. (2018). *Family of origin dynamics and youth sexual development: A qualitative study of parenting practices, gender, and race* (Electronic Theses, Treatises, and Dissertations). Florida State University. Retrieved from: https://repository.lib.fsu.edu/islandora/object/fsu:653478/datastream/PDF/view, Accessed on 8th January, 2023.

Ncube, J., Adom, T., Aventin, Á., Skeen, S., & Nkonki, L. (2024). A systematic review of economic evaluations conducted on gender-transformative interventions aimed at preventing unintended pregnancy and promoting sexual health in adolescents. *Social Science & Medicine* (1982),*355*,https://doi.org/10.1016/j.socscimed.2024.117130.

Panting, A. J., Abdullah, H., Roslan, S., & Ismail, I. A. (2019). Potential social risk factors for teenage pregnancy in sarawak. *Pertanika Journal of Social Sciences and Humanities, 27*(1), 425–441. Retrieved from: http://www.pertanika.upm.edu.my/resources/files/Pertanika%20PAPERS/JSSH%20Vol.%2027%20(1)%20Mar.%202019/27%20JSSH-2305-2017.pdf , Accessed on 8th January, 2023.

Pinandari, A. W., Kågesten, A. E., Li, M., Moreau, C., van Reeuwijk, M., & Wilopo, S. A. (2023). Short-Term effects of a school-based comprehensive sexuality education intervention among very young adolescents in three Urban Indonesian Settings: A Quasi-Experimental Study. *Journal of Adolescent Health, 73*, S21–S32. https://doi.org/10.1016/j.jadohealth.2023.01.030.

Samari, G., & Seltzer, J. A. (2016). Risky sexual behavior of foreign and native-born women in emerging adulthood: The long reach of mother-daughter relationships in adolescence. *Social Science Research, 60*, 222–235. https://doi.org/10.1016/j.ssresearch.2016.06.003.

Setyarini, D. I., Triningsih, R. W., & Aryani, H. R. (2022). Teenage pregnancy in Malang: The analysis on stunting incidence in toddler aged 24-59 months. *Journal of Maternal and Child Health, 7*(5), 550–558. https://doi.org/10.26911/thejmch.2022.07.05.06

Shams, M., Parhizkar, S., Mousavizadeh, A., & Majdpour, M. (2017). Mothers' views about sexual health education for their adolescent daughters: A qualitative study. *Reproductive Health, 14*. https://doi.org/10.1186/s12978-

017-0291-8

Silva, A. E R. N., Bongardt, V. D. D., Van De Looij-Jansen, P., Wijtzes, A., & Raat, H. (2016). Mother- and father-adolescent relationships and early sexual intercourse. *Pediatrics, 138*(6). https://doi.org/10.1542/peds.2016-0782.

Stacey, J. H. (2016). Comprehensive sexuality education. *Obstetrics and Gynecology, 128*(5), E227–E230. https://doi.org/10.1097/AOG.0000000000001769

The World-bank. (2020). Adolescent fertility rate is the number of births per 1,000 women ages 15-19. United Nations Population Division, World Population Prospects. Retrieved from: https://data.worldbank.org/indicator/SP.ADO.TFRT?end=2020&start=2016, Accessed on 8th January, 2023.

Tryphina Skosana, M., Doriccah Peu, M., & Shirley Mogale, R. (2020). Disconnections and exclusions of parents in the prevention of teenage pregnancy: A phenomenological approach. *International Journal of Africa Nursing Sciences, 13*. https://doi.org/10.1016/j.ijans.2020.100251.

United Nations Population Fund (UNFPA). (2017). Adolescent Pregnancy. United nations population fund. Retrieved from: https://www.unfpa.org/adolescent-pregnancy, Accessed on 24th January, 2023

World Health Organisation (WHO). (2024). Adolescent Pregnancies. WHO. Retrieved from: https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy, Accessed on 24th January, 2023.

Xiao, H., Chang, M., Torres, A., Flores, G., & Lau, M. (2023). Preventing Teen Pregnancy: A Qualitative study of the perspectives of parenting and expecting Latino adolescents. *Journal of Paediatric and Adolescent Gynaecology, 36*(6), 532–540. https://doi.org/10.1016/j.jpag.2023.07.004.