Adolescents' and Families' Needs to Prevent Repeated Adolescent Pregnancy: A Qualitative Study

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Abstract: Repeated adolescent pregnancy affects maternal and child health and the family. This issue has become more prevalent in Thailand and requires strategies to address this. mHealth, an emerging tool in the digital era, has been highlighted to lead to better healthcare outcomes. This qualitative descriptive study explored end-users' needs in decision-making for choosing contraception via mHealth to prevent repeated adolescent pregnancy. Purposive sampling was undertaken with the snowball technique to select 31 key informants: ten adolescent mothers, ten of their family members, and 11 healthcare providers. Data were collected by conducting semi-structured, in-depth interviews at hospitals, homes and healthcare workplaces and were analyzed using content analysis, the trustworthiness of the data employed with data triangulation, member checking, and peer debriefing. Three main themes emerged from the findings: 1) The meaning of repeated pregnancy in adolescence involved being considered a trite event, a bullied girl, a burden and stress; 2) Motivating repeated pregnancy involved a lack of contraceptive knowledge, knowing methods and lack of awareness, knowing how to use but not using it, intending use and failing to use it; 3) The needs for repeated adolescents' pregnancy prevention were easily accessible knowledge, having a trusted person, social support, and adolescent-friendly healthcare services. Knowledge about adolescents and their family needs to prevent repeated pregnancy is necessary for developing mHealth and valuable guidelines to improve contraceptive services to prevent repeated adolescent pregnancy.

Keywords: Adolescent pregnancy prevention, Contraception, mHealth, Qualitative study, Repeated pregnancy

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Introduction

Adolescent pregnancy is a global and social problem affecting maternal and child health and families, such as the risk of pregnancy complications and dropping out of school to take care of their children alone.[1,2] Adolescents becoming pregnant causes problems; when repeated pregnancies occur, more problems follow, such as increasing the burden of responsibility, emotional and mental distress, role conflict, experiencing physical problems, and receiving insufficient support from repeated pregnancy.[3] Evidence shows that repeated adolescent pregnancy rates exceed the criteria set.[4] Adolescent mothers may have repeat pregnancies, which stops them from continuing school

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with effects on education, occupation, adolescents, families, communities, society, and the overall economy, including the quality of the country's population in the future.[2,3,5] Even though repeated adolescent pregnancy may permit legal abortion, this may feel safe but sinful,[6] because factors causing repeat pregnancy are divided into internal and external adolescent mother factors. The internal factors come from attitudes, intentions, and awareness of individuals regarding contraceptive use, lack of correct knowledge about contraception, and the need for family support from parents. The external factors come from healthcare providers providing care to prevent repeated pregnancies and failure to use contraception at the right time.[7,8] Although many studies address this issue, there are not many effective programs to handle it.[9] Therefore, the meaning of repeated pregnancy must be studied to help solve the problem. The knowledge from the experience of adolescent mothers, family members, and healthcare providers who had experience with contraceptives would benefit the understanding of repeated pregnancy prevention among adolescents. Combining this knowledge with existing knowledge is necessary to develop quality mHealth further. So, this study aimed to investigate end-users' needs that will be a guideline for designing an interactive mobile phone prototype to assist in decision-making for choosing contraception. This study was Phase 1 of a more extensive study on "The Development and Evaluation of Repeated Pregnancy Prevention? mHealth on Decision-making for Preventing Repeated Pregnancy in Adolescent Mothers."

Review of Literature

Repeated pregnancies among adolescents aged under 20 years occurred at a rate of 14.45% in 2021, exceeding the set criteria of less than 13.5%. Especially in Saraburi Province, located in the central region of Thailand, the repeated pregnancy rate was 15.17% in 2017 and 15.06 in 2022.[4] Despite Thai government efforts through many projects, such as free contraceptive use for adolescent females, sex education in secondary schools, and the Prevention and Solution of the Adolescent Pregnancy Problem Act B.E. 2016.[4] Sex education has been implemented, but adolescent pregnancy continues because this issue requires cooperation between the government and non-government organizations, families, schools,[10] and social media.[11] Using health software through mobile phones improves adolescent behavior outcomes and health knowledge.[12] Families, educational institutes, and public health organizations must provide sex education that can lead to natural pregnancy prevention and adolescent access to effective contraceptive services.[13] Dissemination of information that motivates and develops decision-making skills by leading a husband or lover to create motivation can cause behaviors to prevent repeat pregnancy.[14] Various features and communication for behavioral modification via mHealth have been studied abroad.[15] However, the difficulty in discussing sexuality in Thai families is due to Thai culture and the parent-child gap.[16] The burden is on Thai adolescent mothers as their husbands may be absent and never involved in family planning,[17] and a couple's cooperative decision is a more substantial factor in the use of contraceptive approaches than the decision of women only.[18] Contraceptive mobile applications might decrease the unmet need for contraception.[19] To date, the delivery of mHealth interventions for improving family planning is still controversial, and further research needs a robust fidelity program. The experience and views of end-users are essential to understanding the need to develop a contraceptive model through mHealth to prevent repeated pregnancy. In addition, studying through the mHealth model regarding contraception has been limited in Thailand; therefore, qualitative descriptive research was employed to explore end-users' needs. The research question was: What are the needs of adolescent mothers, family members, and healthcare providers, including the knowledge content required for developing the RPP mHealth program prototype?

Study Aim

This study aimed to assess adolescent mothers, family members, and health care providers' needs to utilize the findings for designing an interactive mobile phone prototype to assist in decision-making for choosing contraception among adolescent mothers.

Methods

Study Design: This study used a qualitative descriptive approach focusing on the truthfulness of participants' experiences within the context of the phenomenon.[20] This approach emphasized studying the realistic needs to create mHealth for repeated adolescent pregnancy prevention. The Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist was used for this qualitative research report.[21]

Participants and Setting: Purposive sampling was applied to select 31 key informants who were adolescent mothers, their family members, and healthcare providers with the following criteria: (1) ten adolescent mothers aged 15-19 years; postpartum; either intentional or unintentional pregnancy, or pregnancy due to cultural beliefs, (2) ten family members aged 18 years and up; living in the same house as the adolescent mothers and influencers of contraceptive decision-making of adolescent mothers. Both adolescent mothers and family members needed to speak, read and write in Thai without intellectual impairments and psychiatric disorders, had experienced the use of smartphone technology, and had access to free and paid internet services, (3) eleven healthcare providers were selected by purposive sampling and, with a snowball sampling technique, were encouraged to refer others with experience in providing contraceptive services or family planning for at least one year. There was one family doctor, three nurses who worked in the postpartum ward, three obstetrics-gynecology nurses, two nurses who worked in the primary care cluster unit, one nurse from the health promotion division, and one nurse from the sub-district health promotion hospital. This study was conducted in the community of Saraburi province between October 2021 and April 2022.

Ethical Considerations: This study received ethical approval from the Institutional Review Board, Thammasart University, Science Branch (COA No. 088/2564) and Saraburi Hospital (EC028/2564). After meeting the key informants, the researchers explained the study objectives, data collection process, and analysis. The findings were revealed without identifying the key informants, who were allowed to ask questions on topics of interest. When the key informants consented to participate in the study, the researchers asked for the cooperation of key informants in signing informed consent forms, especially adolescent mothers, who as vulnerable groups, had to sign consent and be allowed to participate in the study by their parents or guardians.

Trustworthiness: The researcher emphasized rigor about trustworthiness[22] before the interviews; the researchers familiarized themselves with the key informants to build rapport and trust before conducting face-to-face interviews. The credibility was investigated through member checking, triangulation, and peer debriefing. The researchers returned data to informants to verify that the research was conducted rigorously. Triangulated data were from a variety of sources that were documents and in-depth interviews. Peer debriefing was performed to ensure the researchers had no bias by Thai experts with experience in qualitative research to validate and verify the tentative analysis and findings until saturation had occurred for the conformability of the findings.

Data Collection: First, a research assistant recruited adolescent mothers and their family members from patients' records. The researcher, trained in qualitative research in a doctoral degree study, rechecked family residences that met the inclusion criteria, then interviewed the informants at the hospital and when discharge home was planned. The first healthcare providers were recruited from those experienced in follow-up in the postpartum and then applied with the snowball technique.

The semi-structured interviews were used when the participants consented to face-to-face interviews and when the parents consented to their daughter's participation. The researcher observed each participant's facial expressions and gestures during interviews, which lasted approximately 60 minutes. Audio recorders, cameras for recording images of activities, pens, notebooks, and computers were used during the interview. The interview guide provided by the researchers and tested for understanding by the three experts included the following questions: 1) Please describe your experience and intentions in using contraception to prevent repeated pregnancy; 2) Please describe your knowledge of contraception from healthcare service facilities; 3) What forms of contraception information sources do you need? 4) If sources are mobile phone applications similar to LINE, how would you want such mobile phone applications to be? 5) Please describe your contraception service experience; 6) Describe ideal contraceptive services for expectant adolescents. The interviews ended when data were rich and saturated, and no new data were generated.

Data Analysis: This study applied the process of Creswell[23] for content analysis as follows: 1) reading the data from verbatim transcriptions of audio recordings before reducing data by selecting, targeting, simplifying, removing, editing, reorganizing, and checking data from the analysis; 2) after reducing data, the researchers used data to specify indices and coded the data by categorizing groups of similar or different data; 3) data indexing and categorization by organizing data categories to match the same data codes and organizing smaller groups; 4) interpreting content and considering the main themes and sub-themes; and 5) drawing conclusions based on the research objectives.

Findings

This study explored the needs of 31 participants from a wide range of backgrounds. All participants were Buddhist. Their demographic data are shown in **Table 1**. The three main themes emerged, described below and are displayed in **Table 2**.

Table 1. Demographic characteristics of participants

Characteristics	N	%
Adolescent mother (N = 10)		
Age (years)		
(Min-Max = 15-18, M = 16.80)		
15	2	20.00
16	-	-
17	6	60.00
18	2	20.00
Education		
Primary school	1	10.00
Secondary school	6	60.00
Technical and Vocational College	3	30.00
Family member (N = 10)		
Age (years)		
(Min-Max = 19-44, M = 31.0)		
< 20	1	10.00
21-30	4	40.00
31-40	4	40.00
41-50	1	10.00

Table 1. Demographic characteristics of participants (Cont.)

Characteristics	N	%
Education		
Primary school	-	
Secondary school	8	80.00
Technical and vocational college	2	20.00
Relation to adolescent mothers		
Mother	3	30.00
Husband	5	50.00
Husband's mother	1	10.00
Uncle	1	10.00
Occupation		
Trade	1	10.00
Laborer	5	50.00
Non-government	1	10.00
Non	3	30.00
Family income (Baht)		
0-10,000 (0.00-292.24 USD)	3	30.00
10,001-20,000 (292.25-584.49 USD)	6	60.00
20,001-30,000 (584.50-876.73 USD)	1	10.00
Healthcare team (N = 11)		
Age (years)		
(Min-Max = 27-59, M = 50.27)		
21-30	1	9.10
31-40	2	18.18
41-50	2	18.18
51-60	6	54.54
Experience in contraceptive service (years)		
1-10	5	45.46
11-20	2	18.18
21-30	2	18.18
31-40	2	18.18
Occupation		
Professional nurse	10	90.90
Medical doctor	1	9.10
Department		
Postpartum Unit	3	27.27
Gynecology and Obstetrics Unit	3	27.27
Primary Care Cluster	2	18.19
Sub-district Health Promoting Hospital	1	9.09
Health Promotion	1	9.09
Family Medicine	1	9.09

Table 2. Themes, sub-themes, and categories of adolescent and family experiences to prevent repeated adolescent pregnancies

Category	Sub-theme	Theme
Unexpected event No interest in contraception	A trite event	The meaning of repeated pregnancy in adolescent
Individual and family effects Isolation from peers Fear of not being accepted	Bullied girl	
Problems in daily life Development in teenagers Difficulty Requiring help from peers Harder than friends Cumbersome	Burden and stress	
Need for contraceptive knowledge Need for education Need for coaching	Lack of contraception knowledge	The motivating repeated pregnancy
Fashion among teenagers Lack of awareness I know how to do, but I am failed	Knowing methods and lack awareness	
Behavior in daily life Individual personalities	Knowing how to use it but not using it	
Incorrect contraceptive use Missed uses of contraception	Intending use and failing to use it	
Easier to understand VDO clips with attractive learning Find out in mobile phone is easily The mobile phone has everything	Easily accessible knowledge	The needs for repeated adolescent pregnancy prevention
Need for a mentor Help with decision-making	Trusted person	
Family involvement SMS via smartphone My mom helped me make a decision I ask my uncle when I confuse	Social support	
Two-way communication Questions and answers The place where I can walk in easily	Adolescent-friendly healthcare services	

Theme 1: The meaning of repeated adolescent pregnancy emerged in three sub-themes: a trite event, a bullied girl, a burden and stress.

Adolescence is a period of hormonal changes that differs from the past due to social adaptation in terms of Thai education, daily life, and relations with friends from the opposite gender, and such changes may influence multiple dimensions. The meaning of repeated pregnancy in adolescents is described in these sub-themes:

Sub-theme 1.1: A trite event

Pregnancy is a natural change when children grow into adolescence when fertilization occurs. Adolescents in this era may view pregnancy as a trite event. Although adolescents are physically ready, they lack psychological and emotional readiness,

discretion, awareness, attention, and recognition of the importance of personal protection:

> *"...I think adolescents these days don't pay attention unless they get pregnant or something happens to them, because they already don't pay attention to me. It's like, if they don't get pregnant or something happens to them, I think they won't pay attention..."* (F7)

> *"...I was a bad girl, so I wasn't very interested in these issues. I wasn't very interested. I thought pregnancy wouldn't happen this easily, so I didn't pay attention...I thought pregnancy was a joke, so I didn't pay attention to contraception, and I didn't pay attention to how it would affect me, so I was negligent..."* (M1)

Sub-theme 1.2: A bullied girl

Another meaning of pregnancy is a fear of bullying, which leads to concealment because adolescent pregnancy leads to various criticisms, persecution, bias, stigma, intolerance, and pressure from family members, friends, and society, which prevents access to facts:

> *"...Right now, adolescent mothers don't really dare to give staffers information because patients don't dare to provide information and may conceal part of the information..."* (T7)

Sub-theme 1.3: Burden and stress

Adolescent pregnancy may lead to stress caused by adolescents' personal and external factors with potential effects on other areas. One of the unavoidable effects is psychological effects due to a lack of readiness for motherhood, which usually causes adolescents to have stress:

> *"...I was overthinking about where I could go to study when I was pregnant. I wondered if people would scold me. I was stressed about a lot of topics. I was afraid that my parents wouldn't be able to accept this. I was stressed about whether or not I could raise my baby because I wasn't ready. I wondered if I'd be able to keep my baby alive because I was still young. I still couldn't look for work. I was afraid that it'd be difficult if he had to work alone. I was even more stressed about money..."* (M1)

Adolescent pregnancy leads to burdens and responsibilities such as higher expenses and time lost due to suspension from education, which may affect educational achievements. After returning to school, pregnant adolescents might be unable to keep up with friends academically, or some adolescents might discontinue education and use the opportunity to stop studying and leave school to have a family and find work to support the family:

> *"...When I was a teenager, I was still studying. I didn't want to be pregnant. I wasn't ready..."* (M4)

> *"...I'm not in school anymore. I left school to take care of my child..."* (F4)

Theme 2: The motivating repeated pregnancy

Adolescence is the turning point of growth in a complicated age; adolescents are impetuous, curious, and want to experiment. It is also a time of transition from immature childhood to adulthood without restraint in seeking new experiences. Therefore, adolescence may influence and cause adolescents' attitudes to have unique characteristics and identities. The motivation for repeat pregnancy was a lack of contraceptive knowledge, knowing methods and lack of awareness, knowing how to use but not using these methods, intending use, and failing to use, as follows.

Sub-theme 2.1: Lack of contraceptive knowledge

Although access to knowledge by adolescents in the digital era is simple with a touch on mobile phones, pregnant adolescents had some knowledge

from conversations and word-of-mouth, including imitations of other people close to adolescents who used contraception without accurate knowledge:

> *"...Because I don't know, I don't use contraception at all. Because I don't know how to take it and my family members don't have time to teach me because all of them are working. I'm not sure, and I don't know how to use it"...* (M6)

Sub-theme 2.2: Knowing methods and lack of awareness

Pregnant adolescents with confidence are leaders over adolescents who lack awareness of changes in attitude, as well as the cognitive dimension and social behaviors:

> *"...I took contraceptives for a period of time, but I saw that I wasn't pregnant, so I stopped. It's like I took it sometimes and not at other times, and I forgot sometimes. At first, when I had sex with my boyfriend, I told him to use a condom. Later, though, I thought that it was alright, so we didn't use condoms..."* (M4)

Sub-theme 2.3: Knowing how to use but not using it

When adolescents want to try new experiences, particularly with the opposite gender, it attracts their interest and causes them to be curious without restraint or caution regarding the consequences:

> *"...I always warned her, but she didn't listen to me. I told her to be careful, protect herself, and not rush into having a child. I told her every day to not have a child early. She should finish studying first, but she already made the mistake..."* (F10)

Sub-theme 2.4: Intending use and failing to use it

Contraception is viewed as simple, with many options to select from based on the user's preference, convenience, and satisfaction. However, without accurate knowledge, contraception may be ineffective:

> *"...I used condoms and took emergency contraceptives. I took the pill immediately, but I made a mistake when I was in the ninth grade. I didn't take it in time. It was in me, and my boyfriend told me to hurry and take the emergency contraceptive pill. I didn't take it in time..."* (M3)

Theme 3: Need for repeated adolescent pregnancy prevention

Rapid technological developments caused participants who grew up in a digital environment to have different behaviors, ideas, and beliefs from previous generations, allowing adolescents to see, learn, and acknowledge events while having fast access to information and similarly rapid changes. Their needs regarding contraception and pregnancy were gaining easily accessible knowledge, having a trusted person, social support, and adolescent-friendly healthcare services.

Sub-theme 3.1: Easily accessible knowledge

Knowledge of various forms of contraception was the first need. However, early pregnancy forces adolescents to perform maternal duties at a young age. The knowledge that is easily accessible will significantly support adolescents in gaining access to healthcare services and enable adolescents to use contraception more effectively:

> *"...about contraception and safety, so we can decide what to choose. There should be explanations about each method of contraception and how long-term contraception affects us, about whether there will be negative effects if we want to get pregnant in the future..."* (F5)

Sub-theme 3.2: Trusted person

Having trusted advisors who are ready to provide consultation for adolescents and family members, particularly from healthcare teams, regarding

contraception methods will help adolescents gain more knowledge of contraception, an accurate understanding of instructions for using contraception, and more access to services:

> *"...Some might use contraception and have abnormal side effects. This way, they can consult a doctor before deciding to go to a hospital. What if they get an implant and have side effects or symptoms that cause concern? This way, it can relieve some of their concerns. If they have knowledge of this or consult with a doctor, they might not decide to remove the implant. They might try to consult with a doctor to see why the side effects happened."* (F9)

Sub-theme 3.3: Social support

This sub-theme emphasized the need for support in multiple dimensions, such as the need for love and attachment, advice, acceptance, value, news, information, experience, and opinions to help and benefit others through diverse views. It involved family support and advice with love, acceptance, and attention. Parents who listen to problems in the family, are a good source of social support for adolescents who feel they can turn to parents without concealing information:

> *"...Advice and support. Ask them first because they need to do this because they are young. Part of this should also be parents. It's still got to be the family. Families have to talk to their children more and pay more attention..."* (F8)

> *"...families come to help service users make a decision. They will have more opinions and dare to express more because families are part of care for patients..."* (T7)

> *"...I taught her. I said she should have her boyfriend use a condom if she's not going to take contraceptives. I told her. I've always tried to stress this point to her. But, for teenagers, because part of it will let me help her..."* (F5)

Social support online was also emphasized as online with easy access to information, which attracts the interest of the online world via mobile phone or smartphone Internet, causes adolescents to want to learn and search for information and knowledge willingly and efficiently via social media.

> *"...The Internet is the easiest. It's easiest for adolescents to access. We don't have to consult a doctor directly because some teenagers don't really talk to doctors. However, in this way, they can learn and see. It might be better and help us spread knowledge more than before because teenagers might not dare to see or consult a doctor..."* (F9)

Sub-theme 3.4: Friendly healthcare services

Adolescent-friendly health services need to be developed to reach target groups and meet service needs to help adolescents and youths understand problems and provide accurate and appropriate solutions for problems.

This sub-theme involved conversations, dialogue, credibility and planning. The need for communication to exchange information with an understanding of emotions, feelings, and thoughts beneath communication and information was important. Two-way communication with fast responses to message recipients enables effective replies, consultation, follow-up of plans, and exchanges of ideas, which helps knowledge gain credibility:

> *"...if it's like this, they can go to the app where there are instructions. It should be easier and faster to access services. It's better than going to the hospital because you can at least find basic information. If there's something more, then you can go to the hospital..."* (F5)

> *"...We should plan. When letting patients return home, we should add health literacy to allow them to prepare from the beginning, so they can make family plans after returning home and decide what contraception method to use..."* (T1)

It was the view of the key informants who wanted new healthcare service models to change in the digital era that access to information should be easy, fast, modern, and not dull.

> *"...They can chat by LINE or anything. They can ask questions and hold conversations. I mean, if they want to know anything, they don't have to go out for information directly. Asking questions by LINE would be more convenient..."* (F2)

Discussion

The explored needs from various experiences regarding contraception had been reported with adolescent pregnancy is a matter unaccepted by the society that creates burdens and causes stress. This finding aligns with adolescent mothers as a social problem and lack of awareness about contraception causes adolescent pregnancy.[24] A previous study showed that barriers to contraceptive implants among adolescents was a lack of knowledge about the benefits of contraceptive implants over other contraception methods, which would cause adolescents to turn to using contraceptive implants immediately in the postpartum period.[25] Therefore, contraceptive knowledge that is easily accessible was the first choice of needs on various forms of contraception for designing the mHealth model in decision-making for choosing contraception. This finding is congruent with the recommendation for improving health literacy by using technology as a role of social determinants.[26] Whereas, mHealth interventions on contraception trials in the existing literature, such as a one-way SMS,[27] interactive SMS,[28,29] and an interactive mobile application,[30] the knowledge guide regarding contraception or related to other postpartum issues for adolescent mothers. In addition, using mobile phone reminders as part of postpartum service increases the frequency of women who attend family planning clinics and initiate contraception and the proportion of women who continue long-acting reversible contraception (LARC) use through the first six months postpartum.[31] However, effective mHealth intervention requires a robust methodology to address.[26] Therefore, contraception knowledge models that are easily accessible in various forms via mHealth with knowledge for adolescent target groups to keep up with situations and events in this digital era should be implemented. In addition, consultants, who can be trusted in congruence with contraception counseling among adolescents, must facilitate decision-making about the appropriate contraceptive method. One dimension of contraception counseling on shared decision-making is the patient-provider relationship.[32]

In this study, participants described a lack of contraceptive knowledge, knowing methods but lacking awareness, knowing how to use but not using it, intending to use and failing to use it, end-users need a counselor in decision-making for choosing contraception to prevent repeated pregnancy. It has been consistently found that repeated pregnancy prevention programs involve the concept of building motivation, providing information, self-care and social support. Previous results found the experimental group to have more health knowledge and understanding, access to health information and services, media and information literacy, correct decisions, and premature pregnancy prevention behaviors than the control group with statistical significance.[33] As mentioned, mHealth is helpful in health services.[29] Therefore, nurses and midwives should be role models for counseling who can be trusted to promote continuing contraceptive use to adolescent mothers and help in the development and implementation of mHealth.

Moreover, the requirement to develop adolescent-friendly healthcare services via mHealth with social and family support was an actual service need of end-users in this study. Because becoming a mother at a young age creates burdens and stress, friendly service patterns via mHealth should be easy to access, fast, modern and not dull. It has been found that youth-friendly

services should be provided, and parents should be actively involved in communicating with their teenagers on sex education[34,35] because adolescents require support to have family members involved in care.[36] Since adolescents still need to be cared for by their parents. In addition, friendly mHealth services need to have planned contraception with effective communication with the healthcare team, who are counselors. App-based intervention is more effective in improving contraceptive use in reproductive-age women, and mobile phone message interventions for contraceptive choice and use were reported.[37] Health care services, health education, and community participation should be concerned with the needs of service recipients. Therefore, awareness about the consequences of repeated adolescent pregnancy and information about the dangers of adolescent pregnancy should be distributed. This will encourage family members to participate; mHealth could improve knowledge-perceived attitudes, norms, and intention to use effective contraception among adolescents.[38,39] Also, problem-solving for adolescent pregnancy in this era should be consistent with global changes. Many methods have been engaged and approached to prevent repeated adolescent pregnancy,[39,40] but the most effective ones have not yet been confirmed.[9]

Therefore, future study needs to understand social determinants and innovative development on the content of education programs using technology thoughtfully to improve health literacy. In addition, the adolescent mindset must be concerned with the consequences of pregnancy; in contrast, adolescents should be armed with health literacy and skills lateral to contraceptive knowledge and independent decision-making via mHealth.

Limitations

The limitation of this study was that it was studied in the Buddhist context, and the difference in other religion-influenced adolescent pregnancy was not explored.

Conclusion and Implications for Nursing Practice

These findings, as new knowledge from participants, would be applied to guide the development of an interactive mobile phone prototype to assist in decision-making for choosing contraception among Thai adolescent mothers. The development of an education model benefit for nursing practice consists of many ways to enable searches for information via health websites and mobile phone applications to help adolescent mothers have contraceptive literacy. At the same time, healthcare teams provide consultation recommendations and respond to questions via the application according to the needs and expectations, including the interest of those who ask questions. It will facilitate access to healthcare services and participation by family members, who are a source of social support as a direct distinct solution for adolescent mothers and family members in a different way from other mHealth to prevent repeated pregnancy in this era.

Conflicts of Interest

There are no conflicts of interest either directly or indirectly influencing this study.

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ความปรารถนาของวัยรุ่นและครอบครัวเพื่อป้องกันวัยรุ่นตั้งครรภ์ซ้ำ: การศึกษาเชิงคุณภาพ

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บทคัดย่อ: การตั้งครรภ์ซ้ำในวัยรุ่นมีผลกระทบต่อสุขภาพ มารดา ทารก และครอบครัว และมีความชุกมากขึ้นในสังคมไทยและต้องการกลยุทธเพื่อแก้ไขปัญหา แอพพลิเคชันสุขภาพในโทรศัพท์เคลื่อนที่เป็นอุปกรณ์ที่เกิดขึ้นใหม่ในยุคดิจิทัลที่สอดรับกับยุคปัจจุบันและให้ผลลัพธ์ที่ดีด้านการรักษาพยาบาล การศึกษาเชิงคุณภาพนี้ศึกษาเกี่ยวกับความปรารถนาของผู้ใช้แอพพลิเคชันสุขภาพในโทรศัพท์เคลื่อนที่สำหรับตัดสินใจเลือกการคุมกำเนิด เพื่อป้องกันวัยรุ่นตั้งครรภ์ซ้ำ โดยเลือกผู้ให้ข้อมูลแบบเจาะจงและการบอกต่อ จำนวน 31 คน เป็นมารดาวัยรุ่น 10 คน สมาชิกในครอบครัว 10 คน และผู้ให้บริการสุขภาพ 11 คน เก็บข้อมูลด้วยวิธีการสัมภาษณ์เชิงลึก ในโรงพยาบาล บ้าน และสถานบริการสุขภาพในชุมชน วิเคราะห์ข้อมูลด้วยการวิเคราะห์เชิงเนื้อหา และใช้การตรวจสอบแบบสามเส้าจากการเก็บข้อมูลหลายแหล่ง การให้ข้อมูลย้อนกลับ และการสะท้อนข้อคิดเห็นจากผู้ทรงคุณวุฒิแสดงความน่าเชื่อถือของข้อมูล ได้ข้อค้นพบ 3 ประเด็นหลัก คือ 1) ความหมายของการตั้งครรภ์ซ้ำ คือ เหตุการณ์ซ้ำซาก เด็กหญิงถูกข่มเหงรังแก เป็นภาระและความเครียด 2) แรงจูงใจให้ตั้งครรภ์ซ้ำ คือ ขาดความรู้เรื่องการคุมกำเนิด รู้วิธีใช้การคุมกำเนิดแต่ขาดความตระหนัก รู้ว่าใช้วิธีคุมกำเนิดอย่างไรแต่ไม่ใช้ ตั้งใจใช้วิธีคุมกำเนิดแต่ใช้แล้วล้มเหลว 3) ความต้องการในการป้องกันการตั้งครรภ์ซ้ำในวัยรุ่น คือ ความรู้ที่เข้าถึงได้ง่าย มีบุคคลที่ไว้วางใจ แรงสนับสนุนทางสังคม และบริการสุขภาพที่เป็นมิตรกับวัยรุ่น ความปรารถนาของวัยรุ่นและครอบครัวเพื่อป้องกันการตั้งครรภ์ซ้ำที่ค้นพบมีความสำคัญและจำเป็นต่อการนำไปพัฒนาแอพพลิเคชันสุขภาพในโทรศัพท์เคลื่อนที่ที่มีประสิทธิภาพและพัฒนาแนวปฏิบัติที่ดีมีประโยชน์ในการปรับปรุงบริการสุขภาพด้านการคุมกำเนิดเพื่อป้องกันวัยรุ่นตั้งครรภ์ซ้ำได้

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