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RESEARCH ARTICLE

Based on the perceptions of community stakeholders, how can adolescent pregnancies be prevented? A qualitative study [version 1; peer review: 2 approved with reservations]

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Abstract

Background: Adolescent pregnancy an important problem in adolescent health and government agencies need to focus on solving problem. The purpose of this research was to survey the perceptions of community stakeholders concerning the prevention of adolescent pregnancies in rural communities.

Methods: Data collection was performed using group meetings with 103 stakeholders involved in adolescent pregnancy prevention. They were nurses, public health officials, parents or guardians, students, teachers, public health volunteers and community leaders. Thematic analysis indicated work on adolescent pregnancy prevention problems in rural areas was carried out by only some agencies such as district and sub-district health promoting hospitals, providing youth-friendly health service clinics and educating student leaders in schools on sex education.

Results: Collectively, these results draw attention to the need for an appropriate program to strengthen adolescent, family and practitioner skills for the prevention of teenage pregnancies. Schools provide sex education as part of a health education curriculum, and some schools provide additional instruction in guidance classes. Problems from inconsistent work when networks fail were encountered. Stakeholders believe adolescent pregnancy prevention should focus on the following: (1) adolescents should receive training for skill development with content related to knowledge about sex, negotiation, refusal, morality and ethics, (2) teachers should receive training on comprehensive sexual education, and, (3) families should work to improve their communication on sexual health and development

Conclusions: There is a strong need for families to develop the ability to communicate with each other about sexuality and reproductive health. Developing parenting skills on how and when to talk about sex with their adolescents and open parental communication on sexuality issues at home is necessary. Activities need to also be developed for

Open Peer Review

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1. **Roger Ingham** , University of Southampton, Southampton, UK
2. **Kenda Crozier** , University of East Anglia, Norwich, UK

Any reports and responses or comments on the article can be found at the end of the article.

adolescents who are more inclined to engage in risky sexual behaviors.

Keywords

Adolescent , Pregnancy , Stakeholder , Community Participation , Planning

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Introduction

Approximately, two million adolescent females aged under 15 years become pregnant in developing regions every year, according to World Health Organization (WHO) figures from 2018. Almost four million adolescent females in this age group undergo unsafe abortions with complications (See [WHO fact sheet on Adolescent pregnancy](#)). According to data from the WHO, the adolescent birth rates in the various countries worldwide ranges from 1–200 per thousand girls. Adolescent pregnancy remains a major cause of death among mothers and children while contributing to the cycle of ill-health and poverty ([WHO, 2018](#)). In the three years from 2012 – 2014, Thailand had adolescent pregnancy rates of 53.4, 51.2 and 47.9 per thousand among adolescent women aged 15–19 years, respectively ([Tantisewas et al., 2014](#)).

Regarding guidelines for solving the aforementioned problem, the WHO and the United Nations Population Fund (UNFPA) published guidelines in 2011. They recommended that political leaders, planners and community leaders build understanding and support for reducing pregnancies among women under 20 years of age ([United Nations Population Fund \(UNFPA\) & Roger I, 2016](#); [WHO, 2014](#)). Thailand recognized the seriousness of its adolescent pregnancy problems. Its government set policies to address this problem, in addition to promoting social measures that attempt to curb adolescent pregnancies. These include more comprehensive sex education, allowing students who have become pregnant to finish their studies, control of the dissemination of pornography, and greater parental involvement in their children's lives. Consequently, each ministry is required to have working guidelines to reduce the incidence of teenage pregnancies. ([Tantisewas et al., 2014](#)).

Based on performance evaluation, no clear and integrative problem management approach has been found effective. Policies are inconsistent and efforts are both wasteful and complicated ([Chamrunsawat, 2014](#); [UNICEF, 2016](#)). Adolescents have little participation in these programs. Each ministry functions slightly differently and there is little communication between them ([Health Assembly, 2016](#); [Poonkhum et al., 2010](#)). Comprehensive sex education and adolescent-friendly activities are not being conducted in every educational facility. Activities in the areas of physical and social relations are not being presented to adolescents at risk. Furthermore, there is a general lack of involvement among the relevant government agencies ([Chamrunsawat, 2014](#)) in improving adolescent health. Addressing these issues must begin from the early adolescent period (ages 10–14) ([Chandra-Mouli et al., 2015](#)). Many factors are related about adolescent pregnancy preventions. For example, at a personal level, knowledge, skills and empowerment must be developed. Furthermore, safe places must be created where young people may go and be free of sexual pressures imposed by their peers. Family and friends need closer relationships and a high degree of communication. Communities and local organizations need to provide convenient services and opportunities for adolescents in places such as schools ([Svanemyr et al., 2015](#); [WHO, 2014](#)). Additionally, youth-friendly guidelines need to be developed based on community needs ([Cassell et al., 2005](#)).

There are teenagers who do not see school as important. Among some adolescent females, there is a positive attitude about becoming pregnant, even outside of marriage. If a girl becomes pregnant, it is unlikely that she will continue with her studies. Focus must be placed on changing negative social values and norms along with developing adolescent sexual and reproductive health. This can be done by raising awareness, acceptance and support for youth-friendly sexual and reproductive health education services. Gender inequality, in terms of beliefs, attitudes and norms, needs to be addressed ([Chandra-Mouli et al., 2015](#)) in addition to creating connections that link services in various settings, such as schools, to promote utilization of these services ([Denno et al., 2015](#)). At the broadest societal level, efforts to concurrently build awareness of adolescent sexual and reproductive health must be made through mass media approaches.

Therefore, efforts to improve adolescent health must be made by recognizing and using a variety of driving mechanisms ([Kuruvilla et al., 2016](#)). From the aforementioned principles, participation is an excellent method for planning projects and policies because it helps ensure the strategies developed are appropriate for the targeted age group in culturally and geographically diverse communities. Support for stakeholder participation in the target groups creates more effective results and combines democratic principles in the decision-making process as well as maintaining strong partnerships ([Tevendale et al., 2017](#)). For example, a study of community participation in a campaign for prevention of teenage pregnancies found that parents in communities changed their attitudes about sex, had more positive thoughts, communicated with and understood adolescents to a greater degree than before the project ([Phoochaemchot & Chomnirat, 2012](#)). Additionally, a study that implemented community-based empowerment interventions found that the project could be improved with earlier active participation by unmarried pregnant adolescents and increased support by parents ([Leerlooijer et al., 2013](#)).

Although we have a good understanding of adolescent needs and problems, there are still many gaps in our knowledge and understanding ([UNICEF, 2016](#)). Based on evaluations and interventions related to prevention of adolescent pregnancies, evidence-based practices remain important for outlining a national policy framework ([Lavin & Cox, 2012](#)). Thus, the purpose of this research was to study stakeholders' perceptions about prevention of adolescent pregnancies and planning for teenage pregnancy prevention with community participation.

Methods

This study on the perceptions of participants included public health officers, nurses from health promoting sub-district hospitals, district hospitals, public health officers, public health volunteers, key persons in the communities, teachers, representative students and parents. There were 103 persons purposively selected. The participants were involved in adolescent pregnancy problems or part of adolescent pregnancy reduction operations from hospitals, schools and communities. The researcher had issued self-introduction letter from Khon Kaen University in

order to meet with Director of Public Health Officer, Director of hospitals and Director of the secondary schools of each province and to explain purposes of the research. They also included; for hospitals, invitations for personnel relating to teenage pregnancy reduction operations in hospitals and the community, for schools, invitations to teachers, students and parents or guardians involved in teenage pregnancy reduction operations to participate in the conference and group discussion. People from these communities all volunteered to participate in the study

The communities under study were Kalasin, Khon Kaen, Mahasarakham and Roi-et provinces. The adolescent birthrate of these areas during 2011–2013 was 35–54 per 1,000 women aged 15–19 years old. (Bureau of Reproductive Health, 2014) All 4 provinces are located within central area of Thailand's northeastern region. Volunteered participants taking parts in the research in Kalasin were from district region and sub-district region for Khon Kaen, Mahasarakham, and Roi Et. Data used in the research were collected from September–November 2014.

The research instruments consisted of conferences, documents, field notes and stakeholder responses captured using audio recorders. Documents used were summary results of the survey on sexual behaviors in students Grade 7 and 8, which was collected 3 months prior to the group discussion, and reports on operation results of youth friendly health service clinic from district hospital in Kalasin province.

This initial study was conducted in June–July 2014 in district of Kalasin and sub-district of Khon Kaen, Mahasarakham, and Roi Et Province, central northeastern Thailand. Participants were students in grade 7 and 8. 624 students were included in the study. The study was explained to the students and parental consent forms were given. After both students and their parents give written informed consent the student were given a self-administered questionnaire to fill out. Exclusion criterion was failure to give consent. The study was approved by the Ethics Committee of Khon Kaen: code 571119. The questionnaire asked about demographics characteristics and sexual risk behavior (Questionnaire is available as [Supplementary File 1](#)). Students who had sexual intercourse were asked about their first sex age, contraception, STI, pregnancy and abortion. Questionnaire data were entered into Microsoft Excel 2008 in duplicate. The data were frequencies and percentage.

Data were collected from group discussions (conducted by a public health officer) using participatory activities on four occasions in the four communities mentioned above. The number of participants in each group was 25–28 persons. Each session was conducted for 6–7 hours in which the participants shared their opinions about prevention of adolescent pregnancies. The participatory activities consisted of introduction, adolescent pregnancy problem analysis, plan of problem solving and presentation of plans.

Data was collected as part of empowerment evaluation of the program to reduce teenage pregnancy in central northeastern Thailand. Instruments used in data collection were adapted

from Empowerment Evaluation Principles in Practice. The researcher utilized and adapted the concept of Empowerment Evaluation from David M. Fetterman (Fetterman DM, 2001, Fetterman DM, Abraham Wandersman A, 2005) to determine activities and activity planning conferences for teenage pregnancy reduction project. Activities and contents were adapted to suit issues within the study areas, with activity details as follows:

1. Mission review process included identifying/determining things that needed to be done together and the common mission.
2. Activity review and prioritizing process was to analyze weaknesses and strengths of the project (Taking Stock)
3. Planning for the future.

For Kalasin, the conference location was the district hospital's conference hall. For Khon Kaen, Mahasarakham, and Roi Et, the conferences were held at the sub-district secondary school conference rooms. The conference took 6–7 hours, with a team of 1 lecturer and 4 facilitators consisting of 1 university professors with expertise in evaluation, a public health officer with over 10 years of experiences as a facilitator who conducted the group discussion, 1 professional nurse, and 2 doctoral students (1 doctoral student was a researcher SP). Activities during the conference consisted of 4 stages as follows:

Part 1: Introduction; The activity began with introduction of each researcher, research purposes, lecturer team members, participants, and survey results regarding sexual behaviors in secondary schools within each province's area for the participants to acknowledge the current situation.

Part 2: Adolescent pregnancy problem analysis was conducted by each participant voicing their opinions regarding pregnancy issues within the region, causes, circumstances (as established by survey results) or emotions towards the issue. The second activity was stopped when no more new opinions were being provided. The duration was approximately 1 hour.

Part 3: Plan of problem solving was an activity where the participants determined necessary things that needed to be done together and prioritized activities. The participants were divided into 3 subgroups: One group consisted of persons relating to public health and hospital operation. One group consisted of persons relating to school operation. One group consisted of persons relating to community operation. Activity duration was approximately 4 hours.

Part 4: Presentation of plans was the presentation of the result gained from subgroup meeting and then gathered similar activities into one single project, and determined the person in-charge, which later on will be made into the adolescent pregnancy reduction plan for each area.

Group discussion were recorded and transcribed *verbatim*. Data was read and re-read. Theme form data were initially

identify by the first author, and subsequently verified by both authors for coding consistency, emergence of main themes, and extraction of statements to support the themes.

Ethics and consent

All of the participants voluntarily agreed to share their opinions and had the right to ask questions before giving their written informed consent. The subjects were assured that their information would be kept confidential during data collection and analysis. This study was approved by the Khon Kaen University Ethics Committee in Human Research (HE 571119).

After group discussion, the researcher sent the data summary back to all participants to check for data accuracy. The experienced researcher and agenda were the same in all four sessions. For audio recording, the tape was destroyed by the researcher after completion of the transcription and the data were summarized with no personal reference.

Results

This study obtained results in the following three areas: (1) adolescent pregnancy prevention programs in hospitals and schools, (2) attitudes and perceptions of the adolescent pregnancy problem, and, (3) adolescent pregnancy prevention guidelines in the community.

Adolescent pregnancy prevention in hospitals and schools

The work to reduce pregnancies in communities is carried out by two agencies: (1) the district and sub-district health promoting hospitals and (2) the district and sub-district secondary schools.

District hospitals have the role of providing in-clinic teen services with youth-friendly health activities. These include counseling on reproductive health, promotion of condom use, sexual behavior risk assessment, pre-post HIV blood test counseling, nutrition, stress and general issues. Furthermore, services are provided in schools in the form of training sessions for student leaders to give them knowledge about helping adolescents delay sexual intercourse, sexual health education and community service programs to help parents and children have open communication about sexual health.

The sub-district health promoting hospitals provide consultation services on issues related to adolescents, distribution of condoms and referral services for emergency contraception, antenatal services and pregnancy termination in the cases where this is an option.

District and sub-district level secondary schools offer pregnancy prevention activities consisting of reproductive health education for one hour per week over four months, i.e., 16 unique lessons. Furthermore, student leaders received training on helping their peers delay sexual relations by providing instructions about refusal skills, negotiation and instructions on condom use, among other skills. Special activities are sometimes held on Valentine's Day, since some students are more likely to have sex on this day.

Attitudes and perception of adolescent pregnancy problem

All stakeholders recognized adolescent pregnancy as a significant problem. They consider adolescents difficult to understand and do not know how to communicate with them. This is evident from the following reports from parents:

The problem is caused by adolescents. Adolescents do not listen to what parents tell them. They only trust their friends.

“My child is young. They doesn't listen to anything I say. I (the parent) think premature pregnancies aren't good but I haven't dared to forbid him/her. I was afraid they will be upset with me. By the time I knew there was a problem, they was already 4–5 months pregnant. This makes it difficult to solve the problem.”

Furthermore, according to the study, 30% of students in the community are being reared by their grandparents because their parents work in other provinces. Additionally, teenagers copied the risky sexual behaviors from peers. They also had access to pornography. From stakeholders' opinion, these were important causes of early sexual encounters, leading to unplanned pregnancies.

Adolescents also did not dare to communicate with parents. Students reported the following:

“We don't usually dare to speak to our parents about menstruation or pubic hair. I mostly studied independently from school and the Internet. But, I probably wouldn't dare to go and ask my parents directly.”

“I wanted to ask about lumps in my breasts and why they were there, but I was embarrassed. But, I don't know what I'd ask for.”

Key persons in communities had the opinion that people should observe adolescent behaviors, watching to see who adolescents relate with, especially friends from the opposite gender. The idea is that “it takes a village to raise a child, so the community will advise parents when their children engage in risky sexual behaviors”. However, these same key persons saw that community members took no role in the aforementioned activity.

With regard to views about prevention of adolescent pregnancies, stakeholders recognized the goal of ensuring that adolescents have good physical and psychological health, life skills, understanding of sexual health, healthy behaviors, and the support of parents. They agreed that communities should develop networks fostering adolescent sexual health.

Adolescent pregnancy prevention guidelines in the community

Problem-solving can be carried out by three groups, adolescents, families and networks.

Adolescents – Activities to foster good morality and ethics in adolescents can be organized for adolescents to gain knowledge and understanding, form healthy attitudes and values about sex and avoid undesirable pregnancies through birth control measures. Adolescents should receive comprehensive sex education in school, and have increased access to condoms through mechanisms such as condom vending machines and public health volunteers. Furthermore, adolescents should engage in positive youth activities at schools. Annual sporting events should be organized in the community/between communities in the sub-district and at schools. These activities can be organized in combination with substance abuse education and mobile sex education for adolescents that are delivered outside of educational facilities.

Families – Family-strengthening activities should emphasize communication between parents and adolescents. They can promote activities in which parents and adolescents jointly participate with the goal of strengthening community values.

Adolescent Pregnancy Prevention Networks – Networks can be developed for strengthening community participation acting as special centers for addressing adolescents' problems. They can also promote projects to develop adolescents' understanding of the unplanned pregnancies. There should be participation from community agencies including school teachers/health instructors, public health officials, community leaders, student leaders and sub-district administrative organizations.

Discussion

This study is an expression of the stakeholder opinions regarding how pregnancy prevention should be carried out simultaneously among adolescents, families and networks.

According to our findings, adolescents do not communicate with their parents. Knowledge, understanding, attitudes and value adjustment of stakeholders on sex and undesirable pregnancies should be created along with pregnancy prevention skill development. Teenagers should receive sex education in schools in addition to cultivation of morality and ethics consistent with principles of adolescent development. Furthermore, they should be supported to gain knowledge, skills and empowerment (Svanemyr *et al.*, 2015; WHO, 2014).

Families – The main problem is lack of communication on sexual topics within the family. According to studies in Thailand, parents are not likely to speak openly about sexual intercourse with their adolescents. (Nitirat, 2007; Sridawruang *et al.*, 2010a) Studies also showed that parents experience difficulty in talking about sex and contraception with their children, or view sexual health as a topic that should not be discussed because of cultural traditions and beliefs (Sridawruang *et al.*, 2010b) while other parents believed that their teens were still too young to learn and engage in sexual activity (Meechamnan *et al.*, 2014). This study shows that adolescents also did not dare to communicate with parents. This idea is congruent to the study of Aroenthaweesub M. which found that the most difficult topics

for adolescents in communicating with their parents were their personal issues such as opposite sex relationships and sexuality. (Aroenthaweesub & Hale, 2011) They feared the misunderstanding of the parents knowing that they were having sex and of being judged or rejected by their parents. (Meechamnan *et al.*, 2014) Stakeholders had the opinion that emphasis should be placed on activities to strengthen families, enabling them to develop communications regarding sex, community values and morality. Families can participate in traditional activities in the community to build closer relationships (WHO, 2014).

Community Work Problems – The findings indicated there is insufficient cooperation between government agencies, such as hospitals and schools with parents, guardians and community members. According to Chamroonsawadi K., the weaknesses of work to solve teen pregnancy problems are unclear policies, lack of clarification to create mutual understanding between government agencies, lack of integration of thought, inefficient use of budget from duplication of activities among the same target groups, lack of a meeting between the central administrators and local operators to create mutual understanding and sense of belonging in the same work (Chamrunawat, 2014) UNFPA found that in Thailand the implementation of the problem of pregnancy in adolescents is a complex issue. Some agencies may not be familiar with the problem, and each agency had a different perspective on the nature of “problems” and “solutions” and maybe lack of sense “ownership”. Work to solve teen pregnancy problems has found the problem of discontinuity in driving policy. Each agency does not see it as only their work and therefore not their direct duty to solve teen pregnancy problems often meaning they fail to continue to work on the issue. The plan to solve problems did not involve teenager or family participation (United Nations Population Fund (UNFPA) & Roger I, 2016; UNICEF, 2016). This is prudent as communities have an important role in improving adolescent health (Svanemyr *et al.*, 2015; WHO, 2014). Additionally, friendly and guideline based communities should be formed (Cassell *et al.*, 2005). Stakeholders thought that networks should be developed and strengthened, and that participation in the community should be through adolescent-friendly activities. Some examples include special centers for solving adolescent problems and projects to encourage adolescent pregnancy prevention with the participating community agencies engaging in self-assessment of their effectiveness. Some of the findings indicated that pregnancy prevention activities are comprised of promoting quality and access to youth-friendly reproductive health services, providing education on pregnancy prevention to stakeholders, and working with adolescents who engage in risky sexual behaviors. The community should analyze their problems and mobilize to develop solutions to their problems (Mueller *et al.*, 2017). Additionally, other findings support the concept that community partners should support and organize community resources in the form of comprehensive, effective and sustainable programs (Cassell *et al.*, 2005).

However, the problem of access to pornography is difficult to control. Therefore, the government must work to find

measures for controlling and preventing these media from being disseminated to adolescents. Youth can be educated so that they become aware of the dangers of pornography.

Conclusions

According to stakeholders' perceptions regarding adolescent pregnancies, the problems originate from adolescents, families, friends and the media. There are many organizations that work for prevention of adolescent pregnancies in rural communities. The results of this study suggest the need for participatory action by all agencies responsible for addressing the problem. There is a strong need for families to develop the ability to communicate with each other about sexuality and reproductive health such as develop the parenting skills on how and when to talk about sex with their adolescents, open parental communication on sexuality issue at home (communication skill of the parents) Activities need to be developed for adolescents who are more inclined to engage in risky sexual behaviors.

Data availability

Raw datasets have not been made available at the request of the ethics committee in order to maintain participant confidentiality. Using Thai language as the national language of

Thailand during the process of data gathering, all data including quotes are available in Thai translation and access to the complete raw data can be obtained upon request and with the permission of Ethics Committee of Khon Kaen University (www.ekku.ac.th). Anyone wishing to access the data should first contact the corresponding author who will facilitate contact with the ethical review board (Contact email:sampinit@hotmail.com)

Competing interests

No competing interests were disclosed.

Grant information

The author(s) declared that no grants were involved in supporting this work.

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Supplementary material

Supplementary File 1 – Questionnaire used of in Grade 7 to 8 student survey.

[Click here to access the data.](#)

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Kenda Crozier

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This is an interesting study and seeks to answer a very complex question which has occupied researchers in the region for some time.

There is a general background literature which is used to support the views of the authors which are strongly expressed in terms of the need for participation of adolescents in all stages of the planning and development of interventions. If the evidence is so strong then it would seem to indicate that this research study itself is not needed and that the development of parental and family training in communication about sexuality should be developed.

The methods used appear to me to be a form of realist evaluation. The paper would benefit from revisions to strengthen the methodological section and clarify the method with some recourse to the methodological literature.

Participants: there are a large number of participants and there is a lack of detail about the backgrounds. A table of information about the participant which groups them into health professionals, educational professionals, parents, volunteers etc would be helpful.

The social status of individuals within the groups may have some bearing on the way in which they interact. There is a strong sense of conformity to social hierarchy in Thailand and this may influence the way individuals feel able to express their true views. The study by Sridawruang cited in the discussion found that when parents were interviewed in focus groups they felt the need to present a publicly acceptable set of views which differed considerably to their experience expressed in one to one interviews.

A little more detail about the workshops could shed some light on how the data emerged.

The nature of the findings which are unsurprising, supports the opinions of the authors cited at the outset. The problems identified are not new. The purpose of the workshops in finding potential solutions is not met unfortunately.

Is the work clearly and accurately presented and does it cite the current literature?

Partly

Is the study design appropriate and is the work technically sound?

Partly

Are sufficient details of methods and analysis provided to allow replication by others?

No

If applicable, is the statistical analysis and its interpretation appropriate?

Not applicable

Are all the source data underlying the results available to ensure full reproducibility?

No

Are the conclusions drawn adequately supported by the results?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Maternal health, midwifery, family health

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Reviewer Report 23 April 2018

<https://doi.org/10.5256/f1000research.15470.r32829>

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Roger Ingham

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This article describes potentially important research that should enable exploration of the likely barriers to, and opportunities for, increasing effort to reduce unplanned pregnancies among young people in rural areas of northeast Thailand. An impressive sample size of professionals (103) was involved, although 25 to 28 in each of the groups/workshops is rather on the high side.

With such a large group in a workshop format, there is a risk of socially desirable responses being made, some of the participants not feeling able – or confident enough – to voice their opinions, etc.; having said this, the context does enable a wide range of views to be gathered relatively

quickly.

Alongside the group sessions some questionnaire data from young people were collected (see the supplementary material); I must confess, however, to finding the questions that were asked to be rather vague, and the response options were not specified. For example, what assumptions can be made regarding whether or not a young person has had dinner with, or enjoys nightlife with, or has a sleep over with, etc. someone from the opposite sex? Is it assumed that sex took place on these occasions? Further, a tighter translation of the instrument would assist readers.

The literature review is brief but highlights some of the traditional barriers to working on sexual issues with young people; some studies are from Thailand while others are from the USA and drawn from WHO overviews. It is not clear to what extent the USA studies are of relevance to the Thai context, and this could be discussed more fully. Some greater attention could be paid to justifying the value of talking to front-line professionals on this topic; they are after all an essential component of the process of implementation of any new policy initiatives in the field.

But, from this perspective, the results presented are a little disappointing. It is difficult to separate out what seem to be the personal opinions of those involved in the research, rather than being professional assessments of what is required at a policy and implementation level. To be frank, little is reported that had not been reported already in other research (for example, the US research cited, and the earlier work of Chamroonsawat et al. (spelt as Chamroonsawadi in one place in the text).

There are some specific issues that would have benefited from greater attention and/or reporting. These include the implications of quite a high proportion of young people being brought up by grandparents – what additional barriers (over and above those present for biological parents) are imposed by this? What suggestions were made (if any) for helping to overcome these barriers?

Second, the phrase ‘cultural traditions and beliefs’ could benefit from unpacking further, and these workshops could have been a chance to explore these issues, whether they are still relevant, how they can be addressed, to what extent are they gendered, whether they are related to early marriage and the implications of this for birth rates, etc. Nothing is static, and change can occur – the issue is how and what is needed to speed it up?

The suggestions for policy are very worthy, but what is preventing them happening? Resources? Attitudes? Fear? Shifting the ‘blame’ elsewhere? Some of the suggestions are rather vague, and would benefit from greater focus. One example concerns the mention of young people having greater access to pornography. The implication made is that access should be restricted, but achieving this is highly unrealistic; so what other approaches might be helpful to get young people more engaged in consideration of gender violence, pleasure, peer and partner pressures, etc., and relate more to the fast changing social environment in which young people are growing up?

Finally, the fieldwork for this study was carried out in 2014. Since then, there have been two national conferences on early pregnancy in Thailand, as well as the passing of an Act of Parliament on the topic (based on a rights approach). These do not get any mentions, which is regrettable given the potential relevance of the data collected in this study to implementation.

I would encourage the authors of this article to dig somewhat deeper into the wealth of material

that must have been collected from the workshops and prepare further publications to provide assistance to the challenges facing the country in the implementation of the ambitious targets for reducing the rate of early births.

Is the work clearly and accurately presented and does it cite the current literature?

Partly

Is the study design appropriate and is the work technically sound?

Partly

Are sufficient details of methods and analysis provided to allow replication by others?

Partly

If applicable, is the statistical analysis and its interpretation appropriate?

Not applicable

Are all the source data underlying the results available to ensure full reproducibility?

No

Are the conclusions drawn adequately supported by the results?

Partly

Competing Interests: No competing interests were disclosed.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

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