HEALTH RISK BEHAVIORS AND LIFE SKILLS OF INDONESIAN CHILDREN: A QUALITATIVE ANALYSIS USING SOCIAL COGNITIVE THEORY

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Abstract. This study aimed to investigate behavioral health risks and life skills in children aged 9-11 years in Indonesia. A qualitative study was conducted from March 2021 to February 2022 in Semarang City, Central Java, Indonesia. Twenty participants (eight boys, eight girls, and four teachers) were interviewed and joined focus group discussions (FGDs). A content analysis technique was used on verbatim transcripts and conducted on ATLAS.ti 9.1.3.0 software. As many as 40 different codes were derived from 16 subcategories and classified into nine categories. Sex-related behavior was the biggest challenge encountered by Indonesian children. It included risky dating, access to pornography, sexual harassment, and masturbation. Low decision-making skills and external locus of control (especially for girls and younger children) may exacerbate such behaviors. Lack of parental control was one of the environmental factors that might be harmful to children, and it may make them imitate adults' risky behavior. Peer pressure negatively influenced children as they define themselves according to their peer group's identity. Risky sexual behaviors were found in children aged 9-11 years, contributed by low decision-making skills and a negative environment. The Indonesian Ministry of Health needs to provide cognitive life skills education for pre-pubertal children to prevent risky sexual behaviors among children aged 9-11 years.

Keywords: health risk behaviors, life skills, children, qualitative research, social cognitive theory, Republic of Indonesia

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INTRODUCTION

On average, Indonesian children enter puberty at the age of 11-12 years (Wahab *et al*, 2018). There is a decrease in the average age of puberty by 8-9 days per year, which means that Indonesian children will experience puberty at an increasingly younger age (Wahab *et al*, 2018). Children entering the adolescence often have great curiosity and desires to try new things. Not supported by sufficient knowledge, adolescents are considered a high-risk group for unhealthy behavior such as premarital sex, smoking, alcoholism, and drugs. A strong association has been found between smoking, risky dating behavior, and alcohol use among Javanese adolescents (Shaluhiyah *et al*, 2020). Almost all government programs, therefore, aim to address the behavioral health risk problem and prioritize adolescents as targets.

Based on preliminary research, the government has admitted efforts to educate and assist adolescents with their health as well as has to carry out prevention efforts on children prior to puberty. However, the behavioral health risk intervention programs in adolescents have been carried out late when some adolescents might have already engaged in risky behavior.

Children in late childhood (9-11 years old) have entered the concrete operational thinking stage where they perform inductive reasoning. Brain development in children at this age has significantly progressed in the prefrontal cortex where cognitive control increases and tends to be more progressive than at other life stages. The frontal lobe, which regulates thought processes, is developed when a child is 11 years old. At this time, children have understood the rules and behavior that are socially acceptable in their environment, and they are aware of the causal relationship and the impact of their behavior on others (Santrock, 2011; Papalia *et al*, 2011). Thus, cognitive life skills education is appropriate for the late childhood stage.

The World Health Organization (WHO) has recommended life skills education as the best effort to overcome behavioral health risks in adolescents. It can be carried out in the school environment, in collaboration with teachers, and thus it is called school-based life skills education. One of the reasons why it is carried out at schools is most teenagers are ill-equipped to handle decision-making and succumb to peer negative influence (WHO, 1997; WHO, 2018). WHO has also explained that life skills consist

of psychosocial competencies and interpersonal skills that help individuals make decisions, solve problems, think creatively and critically, communicate effectively, build healthy relationships, empathize with others and manage their lives in a healthy and productive manner (WHO, 2003).

Research is useful for formulating an intervention program, but insufficient government and public attention to the above problems have resulted in limited research on behavioral health risks in pre-pubertal children in Indonesia. This qualitative study aimed to investigate behavioral health risks and life skills in children aged 9-11 years in Indonesia.

MATERIALS AND METHODS

Research setting

This study was conducted in Semarang, Central Java, Indonesia, from March 2021 to February 2022. In that time, the Indonesian Ministry of Education still enforced limited learning activities in schools due to the coronavirus disease (COVID-19) pandemic. Elementary children studied at school for only two hours per day every three days a week while still implementing strict health protocols.

Central Java is the third most populous province in Indonesia (Central Statistics Bureau of Indonesia, 2010a). Semarang is its capital city that has a multicultural population that come from various districts in Central Java (Government of Semarang City, 2022). Based on the population pyramid, the largest population in this city is children under the age of 14 years (Central Statistics Bureau of Indonesia, 2010b). There are 327 elementary schools registered in the Education Office of Semarang (Education Office Semarang, 2021).

Study design

Consolidated criteria for reporting qualitative research (COREQ) were used for interviews and focus group checklists to guide the reporting structure (Tong *et al*, 2007). The current research applied a qualitative phenomenology

approach wherein the participants describe their everyday life (Cresswell, 2014). This approach is able to emphasize study participants' subjective experience of a phenomenon (Mohajan, 2018). This study aimed to explore behavioral health risks and life skills of pre-pubertal Indonesian children.

Data collected in November 2021 followed some steps: research proposal submission to the elementary schools, participant selection, focus group discussions (FGDs), and in-depth interviews. Fig 1 presents a flowchart of the study procedures.

Researcher characteristics and reflexivity

All researchers had expertise in conducting professional qualitative research and were accustomed to communicating in both Javanese and Indonesian. All researchers are familiar with the study area as they have conducted research and community services there since 2006.

Research participants

The research feasibility had been discussed with the school principals and 4th and 5th grade teachers of School A and School B. Upon agreement, eight child participants from each school were selected with a balanced sex variance and between 9-11 years of age. There was a total of 20 participants in this study consisting of eight girls, eight boys, and four teachers. The study included 4th and 5th grade teachers who guided children through online and offline learning during last two years of the pandemic.

Data collection

Data were collected via in-depth interviews and FGDs conducted at each participants' school. For the teacher group, FGDs were conducted at School A. Every interview and FGD occurred in solitary classrooms provided by the school. The sessions were conducted in Javanese and Indonesian according to the participants' convenience. The researchers provided interview and FGD guide that covered topics on dating (experience, activity, and permissiveness), daily problems and responses, behavioral health problems in children, and

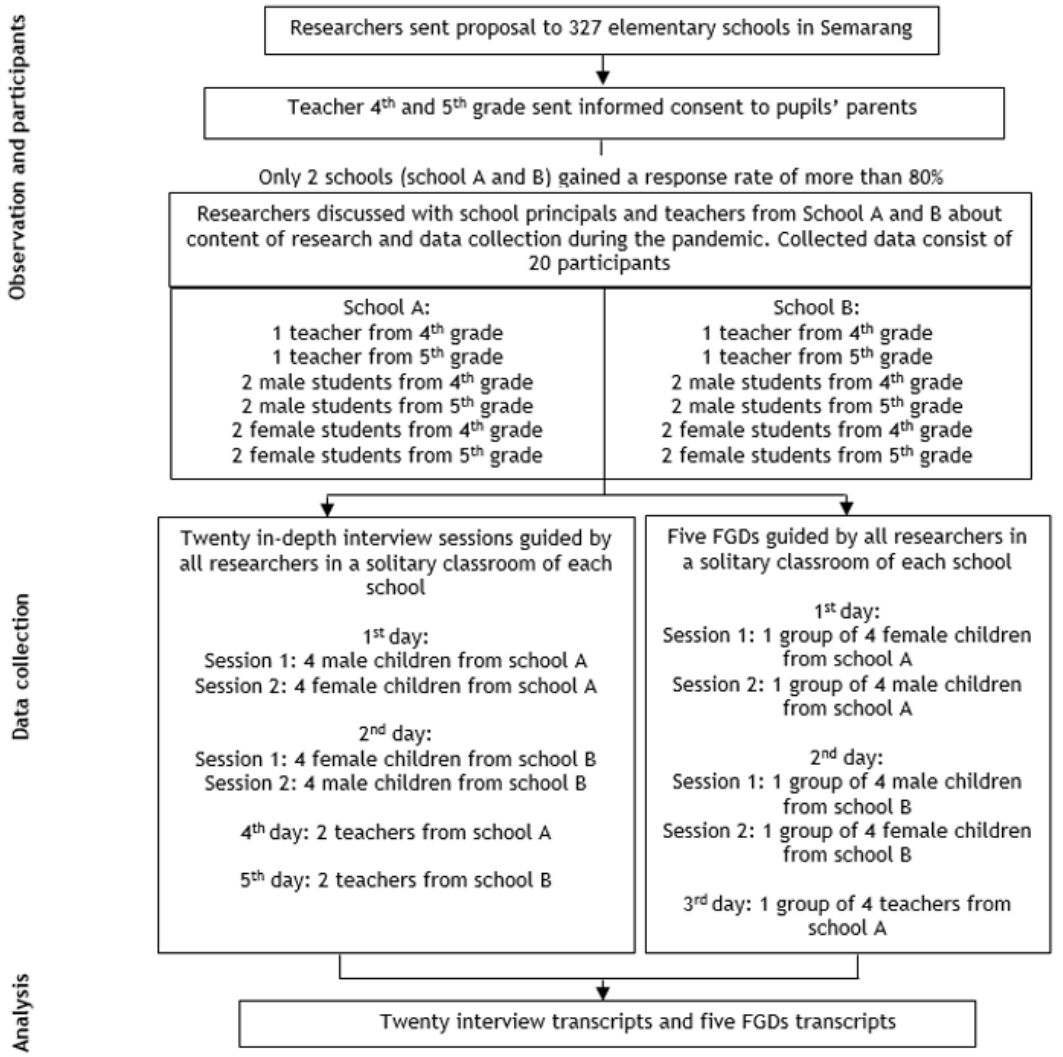

Fig 1 - Flowchart of the study procedures

FGD: Focus Group Discussion

social environmental engagement between children and their teachers, families, and peers.

Due to the pandemic in Indonesia, there were limitations regarding the time, number of FGD participants, and location for data collection. Interviews

and FGDs were only conducted at the participants' schools with a maximum duration of two hours from 07.30 until 10.00 am. The in-depth interviews lasted for about 30-45 minutes, and the FGDs took place around 50-70 minutes. The time was measured from the point when the participants agreed to be recorded. All audios of the interviews and FGDs were recorded.

Data processing and analysis

All interviews and FGDs were audio-recorded, and the verbatim transcripts were written. Directed content analysis was conducted to evaluate the data (Hsieh and Shannon, 2005) by using Bandura's social cognitive theory of health education, ie, behavioral factors, personal factors, and environmental factors (Govindaraju, 2021).

ATLAS.ti 9.1.3.0 software for free trial version (https://atlasti.com/free-trial-version) was used to assist in extracting meaning units, codes, subcategories, and categories from the verbatim transcripts. The transcripts were read and labelled to indicate the most meaningful statements independently from the coding process. The literal and latent meanings in each statement were extracted. The coding items were reduced by combining or eliminating redundant codes (Elliott, 2018). Table 2 presents examples of the coding process.

Trustworthiness

The information gathered from the girls, boys, and teachers was triangulated to increase the results' validity. Risk of prejudice was minimized through regular discussions during the research process. Peer debriefing between all researchers was conducted to discuss the codes, subcategories, and categories from the data.

Ethics statement

This study was given ethical clearance from the Ethics Committee, Faculty of Public Health Universitas Diponegoro (document number 65/EA/KEPK-FKM/2021, 22 March 2021). Written individual informed consent was

Table 2

Examples of coding processes

Meaning unit	Code	Subcategory	Category
We love holding hands and touching hands. (Children 12, male, FGD)	Risky dating	Sexual risk behavior	Health risk practices
He once invited his friends to his house when he was alone. They watched porn on a VCD. It's his grandfather's. (Teacher 3, female, interview)	Pornography		
Some children in my class have watched their friend masturbating in a cassava field near the school. But I did not understand at that time because they used their own words, like "shake" and "liquid cheese comes out". (Teacher 4, female, interview)	Exhibit masturbation		
This boy often holds and touches girls' sensitive body parts. And it's not only girls, he embraced and kissed boys too. (Teacher 4, female, FGD)	Sexual harassment		
They're still very young, but smoke freely on the side of the road. (Teacher 2, female, FGD)	Smoking	Another risk behavior	
A bunch of them drunk local alcohol. They mix it up. (Teacher 3, female, interview)	Alcohol consumption		
Because he's a bit of a sissy, many of his friends make fun of him. (Teacher 1, male, FGD)	Bullying		
That's my own student. Although she's a rich person, she likes to take what belongs to her friend. Money, anything. I know it's a book. That book is a friend's book, a theme book, she took it, then she changed the name written on the book cover with her own name. (Teacher 3, female, interview)	Theft		

Table 2 (cont)

Meaning unit	Code	Subcategory	Category
Children are used to making things easier. Everything is practical now. "What comes later will be thought about later". (Teacher 3, interview)	Decision making skill	Cognitive skill	Life skills
Their mindset is… "Yes, the important thing is that I have finished it" but the consequences are sometimes unthinkable. (Teacher 1, male, interview)	Decision making skill		
If I asked them to choose or asked what they (6^{th} grade students) can do now, they can already give good reasons. (Teacher 4, female, interview)	Critical thinking skill		
I definitely cry in my room. (Children 16, female, interview)	Coping with emotion	Emotional skill	
I refresh myself. I enjoy seeing the view from the top floor of my mother's boarding house. (Children 9, male, interview)	Coping with stress		
I prefer to talk to my cousins who are in grade 5 and friends from the Quran-reciting place. I rarely talk with my brother and parents. (Children 1, female, interview)	Communication skill	Social skill	
I rarely socialize. I have a cellphone, so I never feel lonely. (Children 14, female, interview)	Interpersonal skill		

FGD: Focus Group Discussion; VCD: Video Compact Disc

collected from participating teachers and child parents as children did not fulfill minimum mature age requirement; the consent form explains permission to record the interviews and FGDs. Child participants also signed written assent forms after being informed about the research contents. Informant identity during data analysis and reporting were kept confidential.

RESULTS

Participant characteristics

Table 1 shows participants' characteristics. Eight girls, eight boys, and four teachers participated in this study. All the children (aged 9-11) were in 4th and 5th grade and participated along with their teachers (aged 20-40).

There were two schools that participated in this study. Each school invited eight children and two teacher participants from Grades 4 and 5. The ratio of children by age and sex was almost equal. Fig 2 shows the number of child and teacher participants by sex and age.

Health risk behaviors

Fig 3 presents overall codes that constitute the categories based on social cognitive theory; this allows for the reciprocal relationship between behavioral, personal, and environmental factors to be identified. The analysis revealed two behavioral health risk categories, namely sexual risk behavior and non-sexual risk behavior such as smoking, stealing, bullying, and alcohol consuming. The results were classified based on sexual and non-sexual behavior because many codes referred to sexual risk behavior, *ie*, risky dating, pornography, sexual harassment, and masturbation.

Children who start dating are considered safe from risky activity, but there are indications of change for the worst.

> *"We call by phone until the morning. I sleep while video calling. We walk together sometimes and have a chat. I'm jealous if he talks to another girl." (Children 16, female, FGD)*

Table 1
Characteristics of the participants

No.	Sex	Age (Years)	Grade	School
Child participants				
1.	Female	9	4	A
2.	Female	10	5	A
3.	Female	11	5	A
4.	Female	10	4	A
5.	Male	9	4	A
6.	Male	10	4	A
7.	Male	10	5	A
8.	Male	11	5	A
9.	Male	10	5	B
10.	Male	10	5	B
11.	Male	11	4	B
12.	Male	10	4	B
13.	Female	10	4	B
14.	Female	9	4	B
15.	Female	11	5	B
16.	Female	11	5	B
Teacher participants				
1.	Male	43	5	A
2.	Female	28	4	A
3.	Female	39	5	B
4.	Female	45	4	B

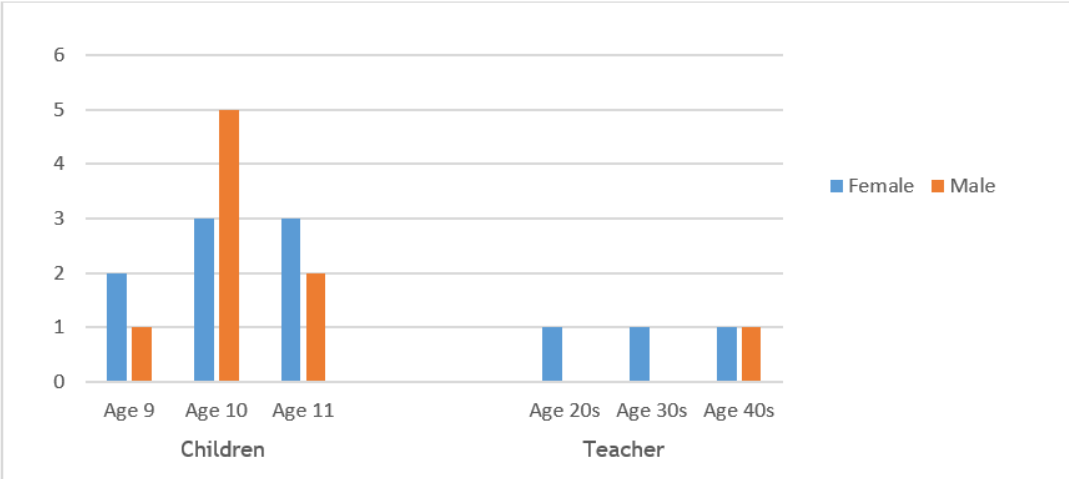

Fig 2 - Number of participants by sex and age

None of the teachers had been able to detect any deviations in children's behavior during the government's restrictions on school activities due to the pandemic, but almost all teachers had experience with student misbehavior before. A teacher once found a male student in his class creating comics depicting sexual intimacy between a man and a woman. Based on an investigation conducted by the teacher, it was found that he was inspired by some images he had seen from the gallery images on his father's cellphone.

> *"There was a piece of paper I found in the drawer. That boy made a comic. So, one piece of paper was divided into several pictures, like the comics. But that, I'm sorry, that comic depicts a husband and wife being intimate." (Teacher 1, male, interview)*

Another boy who lived alone with his grandfather accessed pornographic videos that his grandfather has. When his grandfather was not home, he invited his friends to come and watch those videos together.

Moreover, 3 boys once reported to their teacher that they were invited by their friends to watch their friends demonstrating masturbation, but the

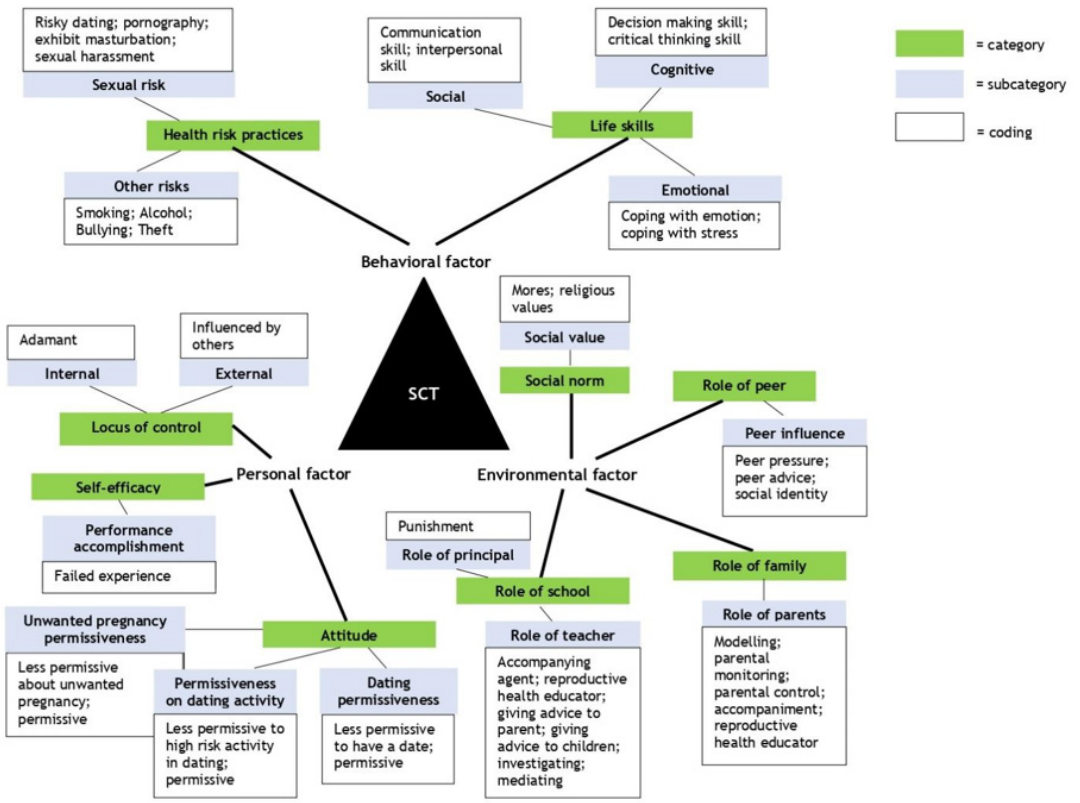

Fig 3 - Scheme of data synthesis according to social cognitive theory: coding and categories

SCT: Social Cognitive Theory

teacher did not understand the terms used by the children at the time and did not follow up the report.

Based on these interview results, it is clear that family greatly influences children's behavior. Besides family, children's behavior is also influenced by their peers. Children want to be accepted in their friendship group and try to adjust their self-identity to the group though that comes with the pressure to conform.

"I have a gang at school. One time, the gang leader forced my boyfriend to kiss me on my cheek at school when there was no teacher. Then, R (the name of my boyfriend) kissed me. I felt so disgusted but I had to do it, so I didn't get kicked out of the gang." (Children 16, female, FGD)

Most of the child participants felt that dating was inappropriate for primary school students. Children aged 17 years and above may be allowed to have a romantic partner when they are already in high school, college or university, or already working and they can fulfill their own needs.

"Not good. We are not at the right age to date. If you're dating, you're supposed to be an adult, you know… You're still young to do dating." (Children 7, male, FGD)

The children have a latent desire to have a boyfriend or girlfriend because they were jealous of seeing their friends who were already dating. Only a few of them dared to tell their friends not to continue dating at school because it was considered embarrassing. In addition, most of them also thought that dating was not in accordance with the religious values that had been taught at school and religious sites. However, their religious and family values were not able to suppress their desire to start dating.

"I've been dating my classmate for one month. I actually don't agree with dating. There is no (dating) in Islam. It should be ta'aruf (the process of getting to know a prospective husband/wife according to Islamic perspectives), but I like him. When he asked me to be his girlfriend, I said yes. People said that opportunity won't come twice, right?" (Children 16, female, FGD)

"Actually, my parents don't give me permission (to start dating), but I have so many friends who are dating now. I think it's okay… we can date backstreet." (Children 1, female, FGD)

Some of them perceived that they were allowed to kiss their girlfriends. When asked for their opinion on adolescent pregnancy, all of them admitted that

they have heard and read about similar cases and felt it was weird because students were not supposed to be pregnant due to kissing. However, it was considered very disgraceful and they could not accept it. Some participants believed that their future would be ruined due to unwanted pregnancy because they would not be able to continue school anymore, but they would eventually accept the pregnancy.

> *"If you're already pregnant, it's okay as long as you get married right away." (Children 16, female, FGD)*

Consent in dating and adolescent pregnancy occurs due to weakening social values and behavior imitation by children. Likewise, children imitate unhealthy behaviors such as smoking and drinking alcohol from their surrounding environment. Based on the FGDs with teachers, it was found that children with problems in their families had problems at school as well. From child participants' answers about permissiveness, unsupportive environments, and risky behavior (ie, pornography, sexual harassment, masturbation, bullying, and others), they had indications of greater risky sexual behaviors in their early adolescence.

Life skills

The children were asked about what kind of problems they experienced in their life and how they resolved them. It was found that, in dealing with any problems, most children were more comfortable when telling their problems to their friends. They thought their friends understood the situation at hand and provided better solutions than their families. Few children preferred to tell their problems to their parents and siblings. These two approaches are used to solve problems or make decisions.

> *"I told my problem to my mom. However, sometimes if the problems will make her disappointed and angry, I won't tell it to her." (Children 14, female, interview)*

One of the teachers mentioned that children avoid complicated things. They tend to solve all problems quickly and in a practical way. Almost all the children in her class could not give robust and deep reasons for the questions in case studies. According to the teacher, older children are more skilled at critical thinking and problem solving than younger children.

Most children had good interpersonal skills as they performed their daily activities, such as learning and playing in groups in their neighborhood. Only a few children faced difficulty in socializing with their friends because they often felt angered by their friends. They choose to play alone with their cellphones at home. Meanwhile, children who are dissatisfied with their family's response tend to enjoy hanging out with friends outside the home.

> *"I never tell (any problems) to anyone at home... if I try to talk about something to my mom, she does not really listen as she's with her cellphone. My brother is also the same. He leaves me for study." (Children 10, male, interview)*

Some children did not receive adequate monitoring and controlling from their parents. One of the teachers also stated that some parents were unaware of simple changes in their children, and they were uncooperative with the school. What is more unfortunate is that parents, who should be the best role models for their children, behave the opposite way.

> *"It's strongly influenced by the culture in which they live. The children tend to imitate the habits of adults, such as smoking, constantly drinking mixed alcohols. That's imitation, right? They are imitating. Maybe they've seen it from adults or YouTube or something. Because they have seen what adults do very often, they want to try by themselves. Even during Ramadhan (the fasting month of Moslems), they drank alcohol in front of children as normal, and they look so... Uh, I can't say. My student told me that his mother was horrified. Yes, I came there (his house) at 8 in the morning, and his mother was still sleeping! She knew I was coming but she kept lying down, not moving at all, let alone getting up or asking me to*

sit down. Oh my God… another student is on TikTok a lot. I asked her why she made TikToks with her mother. She said that was a favor for her mother. Hmm, I see… her mother is just a narcissist, let alone her daughter. (Teacher 3, female, interview)

All teachers agreed that children's behavior was greatly influenced by their family and friends. They sometimes play a bigger role than parents in preventing health-risk behaviors. Besides teaching, they also tried to understand children's respective problems by conducting investigations, accompanying them, mediating, and giving directions to children and their parents. They understood the importance of a supportive environment to make children the best version of themselves. They expected that their students' families and peers did not exemplify unhealthy behavior. Not many children have strong convictions, especially girls who are considered more easily influenced by their friends in a positive or negative way.

"I pray, yes, just pray for ease. Sometimes I talk to my mother or sister about a friend who bullied me." (Children 7, male, interview)

At this age, the daily problems faced by children are generally related to friendships. In dealing with emotions, children try to hold it in for some time and only talk about it after meeting the right person. Girls react by crying first before starting to think of a way out. If children feel stressed because of something, they try to be calmer and more patient with simple self-soothing or prayers to be given ease in overcoming problems.

This study categorized the social, emotional, and cognitive life skill codes. Basically, children like to socialize with friends, but the pandemic has caused them to be at home more often. In addition, problems that arise in friendships make some children reduce their socialization. Children are not involved in dangerous things as a coping strategy. However, it was found that children lack cognitive life skills because of less critical thinking and poor decision-making on the problems they face. They rely on family and peers to find the solutions they need. Their family and peers' opinions are very important in helping them decide what to do and how to behave.

DISCUSSION

Children aged 9-11 years started to show unhealthy behaviors. Some children at this age have tried smoking, consuming traditional alcohol, bullying, and stealing. Aside from stealing, they perform other deviant behaviors in groups. Children are more likely to make more risky decisions when they are in peer groups. Previous research has found that peer groups have a strong influence on increasing risky decision-making. The younger the child, the stronger the influence of their peer group (Spadafora *et al*, 2019).

Besides, children who smoked also consumed alcohol in groups. These two behaviors are mutually influential. A strong association is found between smoking, alcohol use, and risky dating behavior. Smoking behavior and self-efficacy are predictors of risky dating behavior.

The self-efficacy variable also influences multiple risky behaviors (Shaluhiyah *et al*, 2020). Self-efficacy is formed by previous experiences that can be vicarious or direct (Maddux, 2012). A female child may feel confident to avoid peer influence after previously experiencing failure and being forced to follow the group expectations. Girls in this current study tend to have an external locus of control, while boys are more able to make their own decisions even though they are harmful or risk their health. Previous research has found that people with an internal locus of control are not necessarily satisfied and happy with their choices (Ramezani and Gholtash, 2015). This is especially true for children who want to be accepted in their environment; they will seriously consider their peer advice (Gibbs *et al*, 2014) while their advice is harmful. Another study has reported that individuals with an external locus of control are more likely to engage in risky health behaviors (Mendolia and Walker, 2014).

Children have the potential to engage in dangerous dating activities. Most children were not permissive about dating and its related activities, but some children thought that physical activities such as holding hands and kissing their partners are normal. Some children were also accepting of unwanted pregnancies. There was no significant difference in acceptance between religious and non-religious children. Some of the children were very religious, according to the religious observance, but they could not handle

their peer influence. In fact, religious children still decided to date as they saw their friends having boyfriends or girlfriends despite religious beliefs they have. Several studies have found an association between religiosity and premarital sex behavior (Wahyuni, 2017; Safitri *et al*, 2021), but the effectivity of religious approach may need to be studied further although previous study has found correlations between these two factors to formulate a religion-based intervention (Shahid and Bakar, 2017).

According to triangulation results with teachers, there were several cases of sexually deviant behavior such as sexual harassment, creating pornographic comics, accessing pornographic videos, and exhibiting masturbation. Masturbation is a normal thing done by children who have reached puberty, but it is not normal when done publicly. It may provide a negative impact on other children who watch it as they might adopt and imitate what they see what comes from others' behavior (Meltzoff and Williamson, 2017). Such negative imitation could ruin the moral and social values that guide people's behavior in their communities. The worse the social value in society, the poorer the permissiveness of behavioral health risks (Muwaga *et al*, 2020).

Some children had bad communication with their parents. Parents may be physically present but do not pay attention to their children's emotional needs. Previous studies have reported that adolescents are more likely to exhibit risky behavior, including early initiation of sexual intercourse if not accompanied by parental monitoring. Individuals with close parental supervision and relationships have been observed to engage in less risky behavior (Shahid and Bakar, 2017) although not all parents dare to discuss with their children about reproductive health which is considered taboo (Indraswari *et al*, 2021).

The absence of a close relationship between parents and children may hinder them to tell their problems to parents. Instead, they will seek information from other people. This study revealed that friends are the people who children reach out to for help in finding solutions because they provide the most comfort. If there is no opportunity to tell their friends, they will think about whether their own decision would validate their opinions from others and social norms. Some children are able to think about alternatives and

their reasons in-depth, but others cannot. In making decisions, children need to have critical thinking by looking for new ideas or the correct information (Mayo and Issa, 2015). They need cognitive skills that aim to strengthen knowledge or understanding based on the desire to know and understand their environment (Webster and Kruglanski, 2011).

Children at this age are developing cognitively and emotionally. Families and schools should be present and provide education they need. Additionally, being ignorant will raise children's external locus of control, which could be detrimental. Once they have stronger external locus of control, they will more likely decide to behave according to their group expectation that might be harmful. Adopting positive attitudes, increasing self-efficacy, and implementing positive behavior require self-belief as well as assistance from a positive environment; such personal and contextual factors allow children to anticipate unfortunate conditions that can cause relapse (Abassi *et al*, 2018).

Some limitations in this study concern limited data that were only collected from two elementary schools in Semarang. Child participants were selected by schools with very general criteria (age and sex) because teachers were unable to detect cases of their behavioral deviations during two years of online learning. The rapport that was built may have also been less than optimal because of limited duration and location of the interviews, which may have influenced children's answers. However, interviews at school are still better than at home because not every home provides solitary rooms, and some family members might distract the interviews and affect the participants' answers.

This study analyzed the risky health behavior, life skills, personal factors, and environmental factors that influence behaviors of Indonesian children aged 9-11 years. This topic has not been explored in-depth in previous studies. The research findings can be used as references in future research aimed to investigate children aged 9-11 years in similar sociocultural settings in Indonesia and other developing countries.

In summary, children aged 9-11 years are at risk of harmful behaviors. Sexual-related behavior has the greatest potential above all other unhealthy behaviors that may occur to them. Lack of parental monitoring and control, robust negative peer pressure, weak internal locus of control, and low decision-

making skills have greatly influenced their engagement with unhealthy behaviors. The religious approach may no longer be fully reliable in deterring this behavior as most children ignore some religious values they know. The government should start implementing preventive behavioral health risk programs to improve life skills of children aged 9-11 years.

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CONFLICT OF INTEREST DISCLOSURE

No potential conflict of interest relevant to this article was reported.

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