Perspectives of Indonesian parents towards school-based sexuality education

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Internationally, school-based sexuality education programs have shown to improve sexual practices and health outcomes for young people. However, perceived parental discord is commonly cited as a barrier to implementation. Within Indonesia, there is limited empirical evidence regarding parents' attitudes towards school-based sexuality education. A sample of 768 Indonesian parents and caregivers completed an online Qualtrics survey to determine their level of support or disapproval towards the provision of sexuality education within primary and secondary schools. The majority of parents supported school-based sexuality education (n=756, 98.4%) and suggested certain topics should commence as early as kindergarten and elementary school (n=615, 80.0%). Religious affiliation was not associated with permissiveness. When presented with a range of sexuality topics, most parents agreed their inclusion was important. However, for some topics, there was significant variability in opinion based upon the ~~on~~ age, gender, or educational background of the parent; thereby providing opportunity for further work. This preliminary study challenges notions that parents, particularly those with religious affiliations, are barriers to the delivery of sexuality education within Indonesia schools. Further research and advocacy will hopefully encourage educators to expand their current levels of provision, to align with international and evidence-based guidelines.

Keywords**:** Indonesia, sexuality education, parents, attitudes.

Introduction

Sexuality education is described as a lifelong process in which people learn how to make responsible decisions regarding their sexual lives (UNESCO, 2018). Such education equips the learner with valuable knowledge and skills to develop and maintain better health and well-being (Bruess & Schroeder, 2014; European Expert Group on Sexuality Education, 2015). Within school-based settings, an extensive international evidence review has reported significant positive outcomes for providing sexuality education to young people in school-based settings, and many of these extend beyond sexual health parameters (UNESCO, 2016) .

For school settings within Indonesia, sexuality education did not receive much attention until the first Human Immunodeficiency Virus (HIV)/Acquired Immunodeficiency Syndrome (AIDS) cases were discovered in the late 1980s, resulting in specific policies for primary and secondary schools to promote abstinence (Utomo, 2003). Currently, sexuality education is not compulsory within Indonesian schools (Pakasi & Kartikawati, 2013; Utomo et al., 2010), and in public and religious schools where sexuality education *is* provided, the subject is usually delivered alongside religious teachings to provide a moral compass for students (Pakasi & Kartikawati, 2013; Utomo & McDonald, 2009). This means delivery is heavily influenced by an abstinence-only perspective (Benedicta, 2010), as opposed to a comprehensive sexuality education approach (UNESCO, 2018). Sexuality education is often integrated in biology, sport, and religion lessons (Tsuda, Hartini, Hapsari, & Takada, 2017; Utomo, McDonald, Reimondos, Utomo, & Hull, 2014), and textbooks for these subject areas typically focus on anatomy or morality, while safer sex practices and skills-based education is generally neglected (Diarsvitri, Utomo, Neeman, & Oktavian, 2011; Utomo et al., 2014).

Delivery of sexuality education in Indonesia is also impacted by a national school curriculum (Ministry of the National Education, 2012) that has been heavily criticised and not consistently implemented throughout the country (Mukminin, Habibi, Prasojo, Idi, & Hamidah,

2019). Teaching materials are developed centrally and generalised for students nationwide, with some criticism that this model may exclude students from less privileged backgrounds or remote districts (Mukminin et al., 2019). Community-based education, either formal or informal, is also encouraged as long as they align with national standards (MoEC, 2016b).

The Ministry of Education and Culture (MoEC) and the Ministry of Religious Affairs (MoRA) take overarching responsibility for education in Indonesia (MoEC, 2016a). Approximately three times as many students are enrolled in public schools than private schools, and many private schools are associated with various religious organisations (MoEC, 2016a). The schooling system typically takes 13-14 years to complete and occurs over the following timepoints: one to two years of early childhood education or kindergarten (*Taman Kanak-kanak*) for students aged three to six years, six years of primary school (*Sekolah Dasar*) at ages seven to 12 years, three years of junior high school (*Sekolah Menengah Pertama*) at 13-15 years, and three years of senior high school (*Sekolah Menengah Atas*) at 16-18 years (OECD & Asian Development Bank, 2015).

Despite concerns that sexuality education may conflict with family values and parents' consent (UNESCO, 2018), studies of parental attitudes commonly conclude that, overall, parents are supportive of the provision of sexuality education in schools. As examples, a Canadian study reported 87% their 1,0002 parents either strongly agreed or agreed that sexuality education should be provided (McKay, Byers, Voyer, Humphreys, & Markham, 2014). In Australia, two different studies determined that parents overwhelmingly supported such education in schools (Macbeth, Weerakoon, & Sitharthan, 2009; Robinson, Smith, & Davies, 2017). Research in countries considered to be highly religious have also revealed strong positive support from parents. In Oman, amongst 250 participants, 72.8% were in favour of school-based sexuality education (Al Zaabi, Heffernan, Holroyd, & Jackson, 2019); in Malaysia, 73.0% of 211 respondents, (Makol-Abdul, Nurullah, Imam, & Rahman, 2010); in

Iran 77.6% of 600 parents (Ganji, Emamian, Maasoumi, Keramat, & Merghati Khoei, 2018); and in Bangladesh 84% of 1,531 parents (Rob, Ghafur, Bhuiya, & Talukder, 2006) were all supportive of school-based sexuality education. One study conducted in Ghana presents conflicting results, with 58% of 100 parents not being in favour of sexuality education (Nyarko, Adentwi, Asumeng, & Ahulu, 2014). However, the parents in this study who contested sexuality education did so because they thought children in lower primary school were too young for the subject (Nyarko et al., 2014).

Peer-reviewed literature regarding parental views towards school-based sexuality education, in Indonesia specifically, is very limited. In 2001, Utomo conducted in-depth interviews with parents, young people, teachers, religious leaders, and professional counsellors. All groups were supportive of sexuality education within schools (Utomo, 2003). However, this study does not provide a contemporary account of parental attitudes as the data is more than 15 years old and only two parents were interviewed. Similarly, the United Nations Educational, Scientific and Cultural Organization (UNESCO) compiled a report on the education sector's response to HIV, drugs, and sexuality within Indonesia (UNESCO, 2010). This report stated that parents are either unwilling or incompetent to discuss sexual health with their children. However, parental attitudes towards school-based sexuality education were not a specific focus.

In light of this background, this current study set out to document the opinions of Indonesian parents towards school-based sexuality education. The intention was to identify levels of support for specific topics and the best starting age for delivery, from the perspective of parents. Findings will be used to strengthen advocacy efforts and to inform future delivery of school-based sexuality education throughout Indonesia.

Materials and methods

A quantitative, cross-sectional design was adopted for this this study. Participation was voluntary through an anonymous, online Qualtrics survey with two inclusion criteria. Participants were required to be Indonesian citizens and/or to be living in Indonesia during the study period. Participants also had to identify as the parent or carer of a child aged less than 18 years of age.

Ethics approval was obtained from the Curtin University Human Research Ethics Committee (HRE2019-0320). Specific approval from an Indonesian-based organisation was not required as the first author was an Indonesian citizen. The survey was advertised on various social networking sites (Facebook, Messenger, Instagram, WhatsApp groups) and was open for three months throughout 2019. Social media influencers in Indonesia were also contacted through emails and private messages to promote the survey. Eligible participants were able to view a Participant Information Sheet, to establish informed consent, prior to commencing the survey.

Survey instrument

The online survey was initially prepared in English and translated into Bahasa Indonesia which is the official language of Indonesia. Back translation was then conducted during data analysis and final write-up of results. All translations were performed automatically using the functionality of the Qualtrics platform and verified by the first author who is a native speaker of Bahasa Indonesia.

The online survey ~~was divided into seven sections and~~ was based on items given to 4,206 parents as part of a study conducted in New Brunswick, Canada (Weaver, Byers, Sears, Cohen, & Randall, 2001). Several adjustments were made to suit the Indonesian context. For example, the term ‘sexuality education’ was altered to ‘reproductive health education’ or

'*Pendidikan Kesehatan Reproduksi'* as the term is widely known and used in Indonesia. Additional items focused on pornography were also added to the instrument as this issue was not considered in the original survey, and exposure to sexually explicit materials online is known to be common in Indonesia amongst university students (Hald & Mulya, 2013) . The survey was divided into seven sections. Section A collected simple demographic information including age, current residential province, highest level of education, and gender. Section B obtained parental opinions regarding the extent to which they agreed that sexuality education should be provided in schools. A 5-point Likert scale was utilised to measure a parents' level of agreement, from *(1) strongly disagree* to *(5) strongly agree*. In Section C, parents were presented with ten common sexuality education topics and ask to determine the importance of each, from *(1) not at all important* to *(5) extremely important.* For Section D, parents were provided with 26 topics and asked to indicate the grade level when each topic should be first introduced. These topics were generated from key concepts and topics recommended by UNESCO in the International Technical Guidance on Sexuality Education Report (UNESCO, 2018). Section E elicited parents' feelings and opinions regarding themselves as sources of sexuality information for their children. The last two sections used open-ended question fields. In section F, parents were asked to describe how they would respond if their child was exposed to pornography. Section G asked parents to provide general comments about the current delivery of school-based sexuality education in Indonesia, topics they desired to be covered, and suggestions to improve delivery.

Data analysis

Data were imported and analysed using SPSS 25. Descriptive statistical analyses, independent t-tests, and one-way analysis of variance (ANOVA) with significance level (α=0.05) were utilised to examine the mean difference of participants and level of support

towards school-based sexuality education. Qualitative data from open-ended items are not presented in this paper.

Results

A total of 1,175 surveys were submitted to the Qualtrics system. Incomplete surveys, due to timing out or participants actively closing the survey (n = 214), were removed leaving 961 participants. Additional data cleaning filtered out a further 193 participants who did not meet the inclusion criteria or whose responses indicated a lack of genuine intent because they completed less than half of all items. There was a total of 768 final responses for data analysis. The average completion time was 16.8 minutes.

Key demographic information is provided in Table 1 and is compared to 2010 national census data (BPS, 2010). The sample is a fair snapshot of the Indonesia's total population; however, it was not considered representative. Most participants were female (61.4%) and aged 30-39 years (47.5%). The most common religious affiliations were Muslim (39.1%) and Christian (34.75%). Most participants held higher education degrees, specifically with undergraduate (63.2%) or postgraduate (26.5%) degrees. Geographically, 51.5% of respondents lived in cities and less than 10% lived in rural areas. Fifty-four percent of participants had more than one child currently enrolled in school.

[Insert Table 1 here]

Parents attitudes towards sexuality education

Most parents either strongly agreed (n=550, 71.6%) or agreed (n=206, 26.8%) that sexuality education should be provided by schools. Only 1.6% remained neutral (n=12). Most parents (n=752, 97.9%) believed that school and parents should share the responsibility for this education. When asked when this education should begin, 41% opted for kindergarten to grade

3, and 39% preferred grades 4-6. One-fifth of parents indicated that sexuality education should not be introduced until high school, with 18% preferring grades 7-9 and 2% preferring grades 10-12. There were no parents who felt that sexuality education should not be introduced at all.

Parents were asked to evaluate the quality of sexuality education delivered by their current school. Only responses from parents whose children were enrolled in grades 4 to 12 (n=402) were analysed and are presented in Table 2. Nearly a quarter (24%) of parents were unsure if their child had received such education at school. For others, parents rated the quality as very good (18%), good (18%) or fair (21%).

[Insert Table 2 here]

In terms of different demographic criteria, ANOVAs showed that level of support for school-based sexuality education was not significantly associated with a parent's age or religious affiliation (p value > 0.05). Nevertheless, an independent sample t-test indicated a statistically significant difference between mothers and fathers (t (730) = -2.782, p= 0.006); with mothers expressing more support for sexuality education (M = 4.74) than fathers (M = 4.64). Female caregivers were also more supportive of the idea that sexuality education is a shared responsibility between school and family (M = 4.76 > M = 4.63) and that school delivery should begin early (M = 1.72 > M = 2.01). In addition, a one-way ANOVA showed a significant difference between a parent's education level and the grade at which sexuality education should commence (F (4, 749) = 4.488, p = 0.001). The higher a parent's level of education the earlier they wanted their child to receive sexuality education (see Table 3).

[Insert Table 3 here]

Importance of specific sexuality education topics

Parents indicated that the topics of *personal safety (to prevent child sexual abuse), sexual coercion and sexual assault, sexually transmitted infections (STIs),* and *sexual decision-making*

in dating relationships were extremely important (Mean range = 4.3-4.6). Whilst *sexual pleasure and enjoyment* was rated as important (Mean = 3.0), this topic had the highest standard deviation (SD = 1.235) indicating wide variability amongst respondents (see Table 4).

[Insert Table 4 here]

Independent sample *t*-test and one-way ANOVA were employed to assess the difference between parents' socio-demographic backgrounds and their attitudes toward each topic (see Table 5). Generally, female caregivers were more supportive of most topics compared to their male counterparts ($p < 0.05$). Moreover, parents from different age groups showed significantly different attitudes towards several topics such as *correct names for genitals, birth control methods and safer sex practices, STIs and sexual pleasure and enjoyment* ($p < 0.05$). For these topics, the younger (aged <30years) and older (aged 50+ years) parents were typically more supportive. In terms of religious affiliation, most parents expressed similar attitudes towards all topics ($p > 0.05$) apart from *abstinence*. Parents with awho did not belong to one of the five most commonly known religions in Indonesia were less supportive of *abstinence*, although they still viewed it as important (M=3.28, SD=1.074), $F(5, 731) = 3.53$, $p = 0.004$.

[Insert Table 5 here]

Grade level at which sexuality topics should be first introduced

Parents were presented with a more detailed list of 26 sexuality education topics and asked to indicate the most appropriate grade to introduce these lessons. Response options were 'grade K–3', 'grade 4–6', 'grade 7–9', 'grade 10–12', or 'this topic should not be included'.

There was strong support for all 26 topics to be addressed by ~~to include all 26 topics in CSE provided in~~ schools (see Table 6). Most parents believed that 15 of the 26 topics should begin being taught at grade 7-9. Those 15 topics ranging from *building equal romantic relationships* (44%) to *teenage pregnancy/parenting* (62%). At least one-fifth of parents

indicated that the following topics should not be included in Indonesian school curriculum at all: *communicating about sex* (35%), *sexual pleasure and orgasm* (35%), *being comfortable with the other sex* (22%), and *sex as part of a loving relationship* (21%).

[Insert Table 6 here]

Discussion

This study provides contemporary and unique data to document the level of support Indonesian parents have for school-based sexuality education, and their opinions regarding when various topics should first be introduced. Data was obtained from a large, but not nationally representative, sample of Indonesian parents; the majority of whom were aged over 30 years and possessed a tertiary qualification.

Every parent in this study supported the provision of school-based sexuality education for their children. This finding is consistent with similar research conducted amongst Western samples in Canada (McKay et al., 2014), the United States of America (McKee, Ragsdale, & Southward, 2014), Australia (Macbeth et al., 2009; Robinson et al., 2017), Austria (Depauli & Plaute, 2018), and Croatia (Igor, Ines, & Aleksandar, 2015). Furthermore, strong support for school-based sexuality education has also been observed in Muslim-majority countries such as Malaysia (Makol-Abdul et al., 2010), Oman (Al Zaabi et al., 2019), Iran (Ganji et al., 2018) and Bangladesh (Rob et al., 2006). Although most parents in this study were associated with one of five national religions, there was no relationship between religious affiliation and level of support for school-based sexuality education. Studies conducted in other Muslim-majority countries, similarly determined that the level of support was not associated with religious affiliation (Al Zaabi et al., 2019; Ganji et al., 2018; Makol-Abdul et al., 2010).

Indonesian parents, in particular female caregivers, viewed sexuality education as a shared responsibility between parents and schools. Previous studies in Australia (Robinson et al., 2017), Croatia (Igor et al., 2015), Oman (Al Zaabi et al., 2019) and China (Liu, Dennis, &

Edwards, 2015) support these findings. In these studies, parents recognised the important role schools play as a source of sexuality information but acknowledged themselves as the primary sexuality educators for their children. Others have argued that parents are more likely to be responsible for the sexual socialisation of their child, as opposed to delivering intentional sexuality education (Goldfarb & Constantine, 2011).

Despite varying viewpoints on who holds primary responsibility for this area of education, the critical role of schools should not be underestimated. School-based education is a cost-effective way to support the sexual health of students, as young people spend a significant proportion of their time in these settings, at a time when they are navigating many sexuality-related milestones (UNESCO, 2016, 2018). Furthermore, schools provide structured learning environments, employ educators who are skilled in delivering age-appropriate content and differentiating materials for learners, are seen as trustworthy sources of information, are often aware of personal student circumstances, and are also in the position to link students and parents with a variety of local support services (UNESCO, 2016, 2018).

Indonesian parents in this study were also supportive of various sexuality education topics being introduced prior to grade four (approximately 9-10 years of age). Previous Indonesian researchers suggest that sexuality education should be commensurate with age, maturity, and physical development (Bennet, 2007; Pakasi & Kartikawati, 2013), and research in other Muslim-majority countries report similar results. In Malaysia, more than 90% of parents favoured topics on physical and social changes related to puberty to be included in school curriculum (Makol-Abdul et al., 2010). In Oman, parents wanted topics on personal safety and sexual abuse to be introduced as early as grades one to four, and other topics to be delivered in later grades in accordance with children's developmental stages (Al Zaabi et al., 2019). All these study findings align with international technical guidelines that advocated for age-appropriate sexuality education across all levels of schooling (UNESCO, 2018).

Viewed collectively, findings from this study should be used to challenge concerns that parents oppose the delivery of school-based sexuality education (Dyson, 2010; Robinson et al., 2017; UNESCO, 2018), even if the parents report a religious affiliation (Benedicta, 2010; Hashem, 2009; Tabatabaie, 2015; Zain Al-Dien, 2010). While the vast majority of parents agreed to the provision of school-based sexuality education, and to shared responsibility, it is important to highlight that about half the parents in this study were either not aware of any school-based education being delivered at their child's school or indicated that it had not been provided. There is opportunity here for both of these shortcomings to be addressed.

Previous studies in Australia and Canada reported a desire by parents to be informed about the sexual health topics that will be delivered to their children (Dyson, 2010; McKay et al., 2014). Similarly, positive outcomes have been reported by programs that made an effort to foster dialogue between parents, and either a primary school (Alldred, Fox, & Kulpa, 2016) or secondary schools (Marques & Ressa, 2013). Recent mandatory guidelines for the provision of relationships and sexuality education throughout all schools in England, require parents to be fully informed about lesson content and to be consulted in the development of a specific school policy that focuses on relationships and sexuality education (Department for Education, 2019).

Parents who were younger, female and/or more highly educated, were most supportive of school-based sexuality education in Indonesia, were most likely to support the inclusion of a wide variety of sexuality-related topics, and were most likely to recommend that such topics be introduced at earlier year levels. When provided with a general list of sexuality education topics (n=10), all parents considered these to be important for inclusion. However, a more detailed list of topics (n=26), that aligns with international guidelines for the *comprehensive* delivery of sexuality education (UNESCO, 2018), identified wider variability in the level of support for some topics and some parents felt such topics were not suitable in the school context. These findings may present opportunities for additional education and advocacy work.

For example, effort could be made to ensure a shared understanding of what school-based sexuality education, particularly in the Indonesian context, actually entails (Peter, Tasker, & Horn, 2015). Parents of primary school students may be more open to coverage of some topics if they are informed about how these issues will be addressed in an age-appropriate way, how these lessons connect to issues covered later in high school, and the broad-ranging benefits that sexuality education can provide for their children. Similarly, as males appear to be less supportive of school-based sexuality education than females, perhaps more work is needed to empower male caregivers to provide this sort of education in the home context. The important role that male caregivers play as sexuality educators for their children should not be underestimated (Bennett, Harden, & Anstey, 2018). Advocacy efforts may also need to focus on the importance of providing school students with specific skills in communication and negotiation as it applies to their sexual health (Schneider & Hirsch, 2020), as a notable proportion of parents in this study felt such skills were not a responsibility for schools. Finally, the benefits of taking a sex-positive approach that includes concepts about pleasure should be highlighted (Ford et al., 2019). Examples of school programs (Allen, Rasmussen, & Quinlivan, 2013; Bakaroudis, 2014; Koepsel, 2016) and teacher training programs (Ollis, 2016) that have taken a pleasure-inclusive approach have been published elsewhere.

The high level of parental support for school-based sexuality education, as documented in this study, provide an argument for Indonesian educators to consider adopting a whole-school approach to this area of education. This means that comprehensive classroom instruction, provided by well-trained and supported teaching staff, is augmented by meaningful consultation with parents and key stakeholders, and a supportive school environment (Stewart-Brown, 2006). Whilst this holistic approach is often applied to other areas of health like nutrition or mental health (Stewart-Brown, 2006), specific examples related to sexual health are emerging

(Sharyn Burns et al., 2019; Kearney, Leung, Joyce, Ollis, & Green, 2016; Debbie Ollis & Lyn Harrison, 2016).

In relation to consultation, at a minimum, schools should provide updates for parents that summarises classroom lessons, as they would for all learning areas, but may supplement this with more formal education opportunities such as parent information evenings. The provision of written content (e.g., newsletters, booklets, leaflets), messages during an assembly address, or social media posts are other opportunities for schools to engage with, and to inform their parent groups. Consultation efforts should also involve the school's pastoral care team and extend to the wider community. School-based and local support services should be approached to support or inform classroom lessons, and equally, students and family groups should be made aware of what services are available to them.

Fostering a dialogue between families and schools may also have additional benefits. With consent from parents, teachers' anxiety may be diminished, and they may feel more confident to deliver sexuality education in a comprehensive manner. Furthermore, parents may also be less anxious, as they are informed about what their children are studying, and they can support classroom instruction with more personalised conversations at home.

Finally, a whole-school approach also requires a supportive school environment. Stewart -Brown (2006) describes this as the 'hidden' curriculum that can either reinforce or contradict formal classroom teaching. Within the context of sexuality, a supportive school environment manifests itself through an overall school culture that values and prioritises the personal and social development of students, including their sexual health; school policies that specifically address issues related to sexuality, such as access to education or penalties for discrimination based on gender or sexuality; and the general attitudes of school administrators and teaching staff towards human sexuality (S Burns et al., 2019; D Ollis & L Harrison, 2016; Stewart-Brown, 2006).

Limitations

This study utilised a convenience, non-probability sampling technique, which has the tendency to be biased (Acharya, Prakash, Saxena, & Nigam, 2013; Etikan, Musa, & Alkassim, 2016). The voluntary, self-identified nature of the sampling framework may have also been impacted by social desirability (Grimm, 2010), in which the sample is unlikely to be representative of the population being studied. Social desirability posits that the participants who took part in the study were more likely to agree with the values the study might carry. Demographically, there was an over-representation of participants who were female, lived in cities or possessed a tertiary degree, based on the most recent census data available. Similarly, there was an under-representation of participants with an Islamic affiliation, or those aged less than 30 years or more than 50 years. A significant number of participants reported that their eldest child was not yet enrolled in school (n=96, 13.2%) or was currently enrolled in kindergarten-year three (n=227, 31.3%). As the survey was online, access to a computer and internet connection was also required.

The researcher team also acknowledge that constraints in time, finances, and translational expertise may be additional limitations. For example, the phrase '*Pendidikan Kesehatan Reproduksi' ('reproductive health education'),* whilst widely used in Indonesia, does imply sexual relationships in the context of reproduction and may not be a neutral replacement for 'sexuality education.' However, the extensive lists of sexuality topics provided to parents (see Tables 5 and 6) should have mitigated this risk. The bilingual researcher may have carried their own biases when reporting sexuality-related issues (Liamputtong, 2010). Whilst this study did not employ experts to evaluate the quality of translation, extensive checks and cross-checks were undertaken.

Conclusion and future direction

The research team believe this is the first large-scale quantitative study to examine the perspectives of Indonesian parents towards school-based sexuality education. Parents in this study expressed overwhelming support for this sort of education and a desire to be informed about lesson content. Despite high levels of religious affiliation, parents were open to most content being introduced in early year levels.

This preliminary investigation should challenge assumptions that Indonesian parents are barriers to the delivery of school-based sexuality education. It is hoped these findings will catalyse further research and advocacy efforts within the region, so that schools can expand upon their current levels of provision, adhere to international and evidence-based guidelines, and provide truly comprehensive school-based sexuality education throughout Indonesia.

Directions for future study may take the study limitations into account. Replicating the research with a larger and more representative sample size from different areas will elicit further insights into parents' attitudes towards school-based sexuality education. Additional qualitative and quantitative studies that involves all key stakeholders in this process – students, parents, teachers, education ministries and religious leaders - will contribute to the development of contemporary and culturally-sensitive programs. There is also a need to evaluate current school-based practices, with findings used to inform future education and health-related policies.

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No potential conflict of interest was reported by the authors.

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Data availability statement

The data that support the findings of this study are available from the corresponding author, XX, upon reasonable request.

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Tables

Table 1. Sociodemographic characteristics of participants (n = 768[a])

Characteristics	Survey n	%	2010 National Census[b] %	Difference
Gender				
Male	282	38.2	50.3	-12.1
Female	454	61.4	49.7	11.7
Other	3	.4	N/A	N/A
Age				
Under 30	102	13.7	37.6	-23.9
30-39	354	47.5	32.2	15.3
40-49	254	34.0	18.5	15.5
50+	36	4.8	20.7	-15.9
Religion				
Islam	295	39.1	87.18	-48.08
Christian	262	34.7	6.96	27.74
Catholic	144	19.1	2.91	16.19
Hindu	21	2.8	1.69	1.11
Buddhist	14	1.9	0.72	1.18
Agnostic	11	1.5	0.13	2.27
Atheist	7	0.9		
Highest level of education				
Elementary or less	6	.8	59.1	-58.3
Junior high school	6	.8	16.9	-16.1
Senior high school	66	8.7	18.8	-10.1
University (undergraduate degree)	478	63.2	5.0	58.2
University (postgraduate degree)	200	26.5	0.2	26.3
Residential type				
Rural community	72	9.5	49.8	-40.3
Town	295	39.0	50.2	40.3
City	389	51.5		
Number of children in school				
1	313	45.6		
2	277	40.4		
3 or more	96	14.0		
Gender of oldest child				
Male	339	45.7		
Female	402	54.3		
Grade of oldest child				
Not yet enrolled in school	96	13.2		
Kindergarten-3	227	31.3		
4-6	127	17.5		
7-9	98	13.5		
10-12	177	24.4		

Note:
[a] Some missing data
[b] Indonesia's Central Bureau of Statistics (Badan Pusat Statistik or BPS), population census 2010 (BPS, 2010)

Table 2. Parents' opinion about the quality of sexuality education received by children at school (n=402)

Overall, please rate the quality of the sexual health education that your child/children has/have received in school…	n	%
Excellent	4	1
Very good	72	18
Good	72	18
Fair	85	21
Poor	24	6
Unsure if my child received sexuality education at their school	97	24
My child/children has/have not received any sexuality education	48	12

Table 3. Parents' attitudes towards CSE by gender and education level

	Gender			Parent's education level					
Variables	Male	Female	*t-test (ρ value)*	Elementary school	Junior high school	Senior high school	Under-graduate degree	Post-graduate degree	*F (ρ value)*
Support[a]									
n	n=279	n=453		n=6	n =6	n =65	n =473	n=196	
Mean	4.64	4.74	-2.782	4.83	5.00	4.66	4.71	4.67	1.073
(SD)	(0.524)	(0.467)	(0.006)	(0.408)	(0.000)	(0.567)	(0.488)	(0.483)	(0.369)
Sexuality education as a shared responsibility[a]									
n	n=281	n=453		n=5	n=6	n=66	n=477	n=199	
Mean	4.63	4.76	-3.689	4.40	5.00	4.68	4.72	4.71	1.192
(SD)	(0.519)	(0.450)	(0.000)	(0.894)	(0.000)	(0.501)	(0.40)	(0.467)	(0.313)
Appropriate grade level [b]									
n	n=282	n=453		n=5	n=6	n=66	n=477	n=200	
Mean	2.01	1.72	4.799	2.20	2.17	2.06	1.85	1.65	4.488
(SD)	(0.833)	(0.778)	(0.000)	(0.447)	(0.774)	(0.842)	(0.865)	(0.756)	(0.001)

Note:
[a] Mean scores vary from 1 (strongly disagree) to 5 (strongly agree)
[b] Mean scores divided as 1 (Kindergarten – 3rd grade), 2 (grade 4-6), 3 (grade 7-9), 4 (grade 10-12), and 5 (there should be no sexual health education in schools)

Table 4. Importance of specific sexual health topics for inclusion in Indonesian curriculum (n=768)

Rating	Topic	Mean[a]	Median	Standard Deviation
Extremely important				
	Personal safety (to prevent child sexual abuse)	4.6	5.00	0.691
	Sexual coercion & sexual assault	4.5	5.00	0.732
	STIs	4.3	5.00	0.816
	Sexual decision-making in dating relationships	4.3	5.00	0.905
Very Important				
	Abstinence	4.1	4.00	0.925
	Puberty	4.0	4.00	0.862
	Birth control methods & safer sex practices	4.0	4.00	0.979
	Correct name for genitals	3.8	4.00	0.980
	Reproduction	3.6	4.00	0.935
Important				
	Sexual pleasure & enjoyment	3.0	3.00	1.235

Note:
[a] Mean scores vary from 1 (not at all important) to 5 (extremely important)

Table 5. Parents' attitudes towards ten sexuality education topics by gender and age.

Topics[a]	Gender			Age				
	Male	Female	*t-test (ρ value)*	Under 30	30-39	40-49	50+	*F (ρ value)*
Correct name for genitals								
n	278	446		97	351	251	36	
Mean (SD)	3.65 (0.986)	3.81 (0.983)	*2.135 (0.033)*	3.95 (0.982)	3.79 (0.974)	3.61 (1.011)	3.94 (0.924)	*3.73 (0.011)*
Reproduction								
n	278	443		98	348	250	36	
Mean (SD)	3.96 (0.926)	4.07 (0.829)	*1.561 (0.119)*	4.20 (0.849)	4.03 (0.877)	3.98 (0.852)	4.06 (0.860)	*1.61 (0.186)*
Birth control methods & safer sex practices								
n	275	444		98	350	247	35	
Mean (SD)	3.99 (0.980)	4.03 (0.983)	*0.593 (0.553)*	4.32 (0.937)	3.97 (1.021)	3.97 (0.921)	4.03 (1.071)	*3.48 (0.016)*
Abstinence								
n	275	439		97	348	245	35	
Mean (SD)	3.99 (0.985)	4.19 (0.877)	*2.864 (0.005)*	4.28 (0.933)	4.10 (0.961)	4.04 (0.879)	4.26 (0.886)	*1.78 (0.149)*
STIs								
n	278	441		98	348	249	35	
Mean (SD)	4.27 (0.873)	4.37 (0.782)	*1.572 (0.116)*	4.48 (0.749)	4.36 (0.821)	4.23 (0.858)	4.49 (0.562)	*2.83 (0.038)*
Sexual coercion and sexual assault								
n	276	441		98	346	249	35	
Mean (SD)	4.44 (0.831)	4.58 (0.666)	*2.457 (0.014)*	4.57 (0.718)	4.57 (0.732)	4.47 (0.751)	4.54 (0.657)	*1.07 (0.361)*
Personal safety (to prevent child sexual abuse)								
n	274	444		98	349	250	33	
Mean (SD)	4.49 (0.757)	4.65 (0.647)	*3.007 (0.003)*	4.65 (0.644)	4.62 (0.720)	4.53 (0.689)	4.70 (0.529)	*1.36 (0.255)*
Sexual pleasure and enjoyment								
n	274	440	*0.788 (0.431)*	97	345	249	34	*3.28 (0.020)*
Mean (SD)	3.03 (1.164)	2.95 (1.271)		3.32 (1.335)	2.89 (1.254)	2.98 (1.122)	3.12 (1.320)	
Sexual decision-making in dating relationships								
n	274	442	*2.913 (0.004)*	98	344	250	35	*0.49 (0.688)*
Mean (SD)	4.18 (0.955)	4.38 (0.868)		4.41 (0.823)	4.30 (0.939)	4.31 (0.839)	4.23 (1.190)	

Note:
[a] Mean scores vary from 1 (strongly disagree) to 5 (strongly agree)

Table 6. Grade level at which sexuality topics should be first introduced.

Topic	Grade level at which topic should first be introduced (%)				
	K[a] to 3	4 to 6	7 to 9	10 to 12	Should not be included
Correct names for genitals	59	28	12	1	0
Body image	67	23	9	1	0
Puberty	16	66	18	1	0
Wet dreams	9	63	26	1	1
Menstruation	13	71	15	1	0
Reproduction and birth	7	36	48	8	2
Birth control methods & safer sex practices	2	24	59	13	2
Abstinence	3	25	59	11	3
STIs including HIV and AIDS	4	29	59	8	0
Teenage pregnancy/parenting	2	24	62	11	2
Personal safety (to prevent child sexual abuse)	46	30	22	3	0
Sexual coercion & sexual assault	47	31	19	2	0
Building equal romantic relationships	5	15	44	28	9
Homosexuality	6	18	45	17	15
Attraction, love, intimacy	5	30	51	9	4
Communicating about sex	2	9	27	27	35
Being comfortable with the other sex	4	13	37	24	22
Dealing with peer pressure to be sexually active	5	27	56	11	1
Masturbation	3	23	47	12	15
Sexual behaviour (e.g., French kissing, intercourse)	5	21	46	15	14
Sex as part of a loving relationship	2	10	35	32	21
Sexual pleasure & orgasm	1	7	27	30	35
Sexual problems & concerns	3	17	51	28	1
Sexuality in the media	5	23	51	19	3
Pornography	8	29	51	12	1
Teenage prostitution	2	18	53	21	6

Note:
[a] K=kindergarten