

# Hypothetical Model of Puberty and Character Education in Elementary School

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**Abstract:** This study aims to provide a hypothetical model of puberty and character education to be implemented in a elementary school in Indonesia. Methods used in the study was conducted by online survey and a qualitative approach to develop a hypothetical model based on the Health Belief Model. The result shows that most of the teachers perceived the knowledge and behavior of students are still problematic. The consequences that may occur are also quite serious. Perceived benefits are mostly pointed at students. Perceived barriers vice versa, include the point of view of teachers and facilities. The puberty education that is carried out is also very much in line with the strengthening of character education which includes 5 main values, namely religiosity, nationalism, independence, cooperation, and integrity. It is highly recommended that puberty education need to be applied in elementary schools in Indonesia.

**Keywords:** puberty education, character, elementary school

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## INTRODUCTION

Indonesia is currently experiencing a demographic bonus (Kemendikbud RI, 2017; Nurfadhilah, 2017). The peak is estimated to be in 2030, but it needs to be anticipated so that the situation will become a demographic burden/disaster. The fulfillment of reproductive and sexual rights (especially the latest information according to the development of science) is needed by all levels of society at all stages of age, so it requires broad and far-reaching agreement and views in determining the limits and needs of a comprehensive program (Biccard, 2018; Nurfadhilah, 2019b).

It is difficult for some teachers and parents to convey information on reproductive health and sexuality (Lailani et al., 2019; Nurfadhilah et al., 2019; Rahmawati et al., 2018; Utomo et al., 2019). Health workers and psychologists are needed to provide such information and services in schools (Tabong et al., 2018). The critical period occurs at a teenager, so interventions must be carried out from childhood to prevent adolescent sexual behavior (Santelli et al., 2018, 2019). The collaboration of various parties with integrated and sustainable programs is needed to ensure that all information (and services) needed by youth can be accessed (Dawson, 2018). The previous research stages found misconceptions between teachers and students in puberty education (Utomo et al., 2019). The 2013 curriculum, on the other hand, places teachers as learning instruments, so they must have high creativity and innovation as well as being able to communicate and be role models for students. Puberty education in Indonesia aimed at facilitating students to develop their self-concept and to perform sexual abstinence during their adolescence (Nurfadhilah, 2019a; Nurfadhilah et al., 2020; Rahmawati et al., 2018).

Character is a source of and is sufficient for happiness (Bryan & Babelay, 2009). The implementation of character development education in Indonesia is not only the duty of the education sector but also the responsibility of all parties. Education is sought to sharpen the character of students, involving teachers, parents, and the community (Utomo, 2018, 2020). An intervention strategy at the root of the problem is needed to plan a high-quality generation, in this case with a focus on puberty education and strengthening character education. The research uses the Health Belief Model (HBM) as the theoretical foundation.

## METHODS

### Study design

This study was conducted by an online survey on 112 teachers and health educators in Jakarta and surrounding cities. The data followed up by online interviews and/or discussion to deepen the respondents' statement. The development of a hypothetical model is carried out by using the HBM literature review as the basis for the model, strengthening character education, and puberty education conducted in Indonesia and worldwide as well as analyzing the qualitative data.

The questionnaire consisted of three parts. The first part consisted of 3 questions on demographic and targeted students/audiences and the second part consisted of 7 questions on puberty education experiences. The third part consisted of 8 questions on the perceived threat, benefits, barriers, and the relevance of puberty education to character education (according to 5 values in the national curriculum). The questions were designed as multiple choices and open-ended questions which allows the respondent to explain the answer.

The subject of the study were teachers of elementary schools in Indonesia. The teachers might teach specific grade or subject and had been teaching for at least 12 months when the data was taken.

### Ethical consideration

The plan was first approved by the university's postgraduate vice-director and received research permits 3546/UN39.6.Ps/LT/2020 on July 29<sup>th</sup>, 2020.

## RESULTS

Out of 112 responses collected from Google form, as many as 86.6% of respondents are female. The majority of respondents were <21 years old (76.8%) with the youngest 19 years old and the oldest 27 years old. Generally, respondents taught higher-grade students (70.5%) and the rest taught lower-grade students, certain subjects, or others. All data of the samples under study are shown in Table 1 and the hypothetical model is shown in Figure 1.

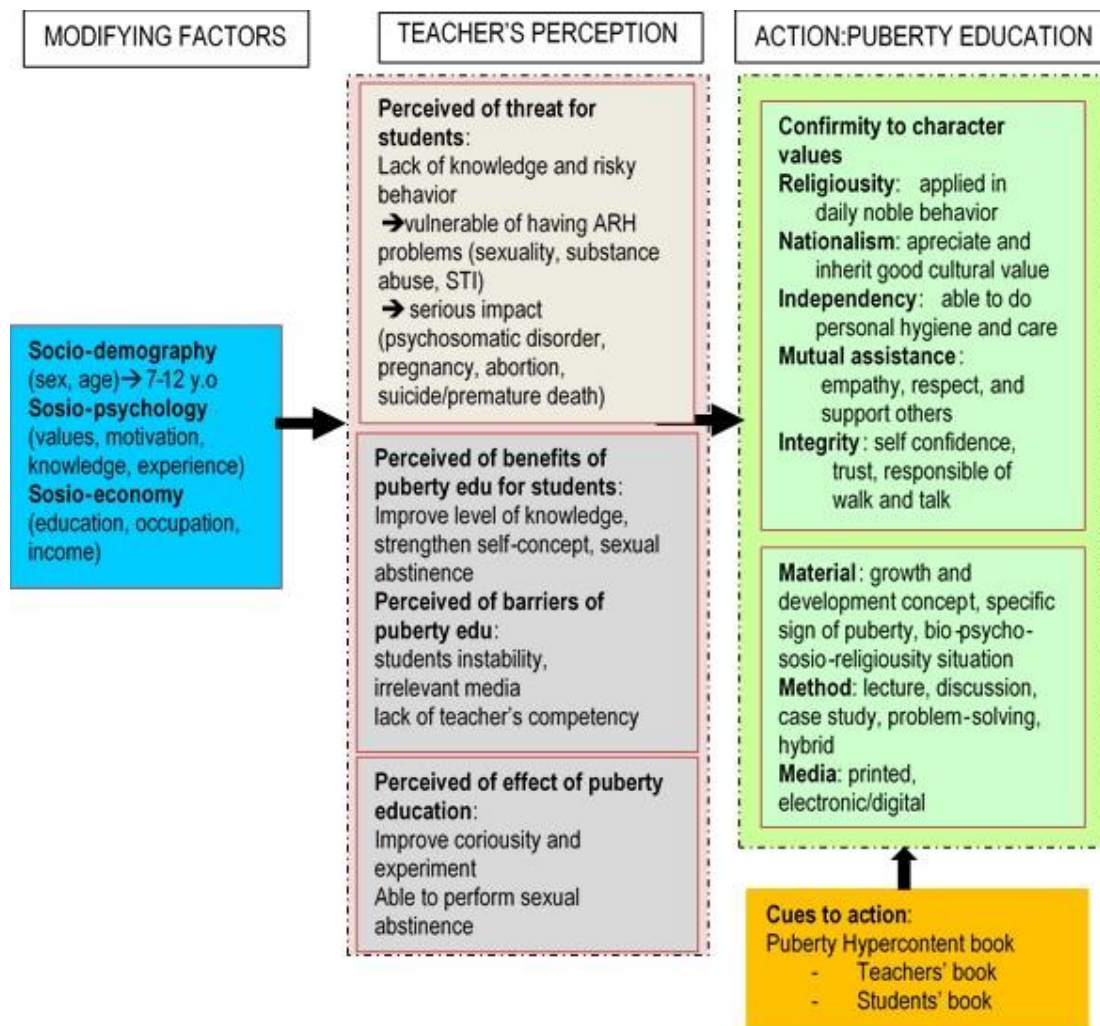
**Table 1.** Descriptive Analysis of Variables in the Model (n=112)

No	Variables	N	%
<b>Modifying Factors</b>			
1	<b>Sex</b>		
	Male	15	13.4
	Female	97	86.6
2	<b>Age</b>		
	< 21 year old	86	76.8
	>= 21 year old	26	23.2
3	<b>Target audience</b>		
	higher-graders	79	70.5
	lower-graders and others	33	29.5
<b>Action</b>			
4	<b>The specific topic of puberty</b>		
	definition and concept	30	26.8
	specific sign in girls and boys	56	50.0
	bio-psycho-socio problems	26	23.2
5	<b>Methods used in puberty education</b>		
	lecture	20	17.9
	interactive discussion	80	71.4
	case study, problem-solving, others	12	10.7
6	<b>Media used in puberty education</b>		
	book and worksheet	22	19.6
	picture, poster, leaflet, and booklet	15	13.4
	video and digital media	55	49.1
	others	20	17.9
<b>Perceived of Threat for Students</b>			
7	<b>Perceived of students level of knowledge</b>		
	meet the requirement	52	46.4
	threatened and seriously threatened	48	42.9

No	Variables	N	%
	unidentified	12	10.7
8	<b>Perceived of students behaviour</b>		
	safe and controllable	52	46.4
	threatened and seriously threatened	55	49.1
	unidentified	5	4.5
	<b>Perceived Benefits and Barriers of Puberty Education</b>		
9	<b>Perceived benefits</b>		
	improve the level of knowledge	37	33.0
	perform/strengthen students' self concept	15	13.4
	directing sexual abstinence	51	45.6
	others	9	8.0
10	<b>Perceived barriers</b>		
	lack of competencies of the teachers	16	14.3
	irrelevant of media available	23	20.5
	unidentified students' characteristic	56	50.0
	other	17	15.2
11	<b>Perceived of effect</b>		
	improve curiosity and experimental behav.	46	41.1
	able to perform sexual abstinence	45	40.2
	free to express sexual orientation	5	4.5
	other positive cognitive and affective effects	16	14.2

## DISCUSSION AND CONCLUSIONS

This section discusses about the results defined in the previous section. The data explained in table 1 described in figure 1 to illustrate the hypothetical model of puberty education practice in Indonesian elementary schools.



**FIGURE 1.** Hypothetical Model of Elementary School Teacher's Belief about Puberty Education

The latest data on the profile of teachers in Indonesia shows that female teachers in Indonesia are 61%, considering that there are 30-39 years old teachers in Indonesia (29%) (Kemendikbud, 2020). It should be noted that puberty education can be carried out by all teachers, both those who teach certain classes and subjects. It also can be delivered by those who coach extracurricular activities and student organizations/activities. However, there are still teachers who consider puberty education to be taboo (Nurfadhilah et al., 2019) so there are still misconceptions between teachers and students about puberty education (Utomo et al., 2019).

### Modifying Factors

Modifying factors include socio-demographic characteristics (age, sex), socio-economic (work, income), and socio-psychological characteristics (personality, knowledge). These factors are also present in the process of civilizing and empowering character (character education); for example education, psychology, socio-cultural values, experience, as well as legal and state foundations that determine noble values (Kemendikbud, 2019; Kemendikbud RI, 2018). The noble values are then intervened and habituated in the education, family, and community units with certain supporting devices.

Age and sex have a major influence on teacher's perception, especially about puberty education. While senior teachers tend to perceive it as taboo and vulgar to be delivered in elementary school students (Nurfadhilah et al., 2019; Utomo et al., 2019), those who are younger mostly realize the urgent need for puberty education in earlier school age. Male teachers in some schools also have a higher concern about puberty education comparing to female teachers. More than three-quarters of teachers provide puberty education in higher-grade students recently. The teacher relatively mindful about the

earlier puberty phenomenon nowadays, some of their students (both female and male) got the first period (menarche) and wet dream at grade three or four.

## **Action**

In this study, puberty and character education are specific behaviors that are part of an action group. The most common specific materials discussed were specific signs of puberty in girls and boys (50%), the rest also discussed the concepts and definitions of growth and development (26.8%), physical-biological and psycho-social problems at puberty, life skills, communication skills, and development. self. The reaction of students when educators discuss or ask questions about puberty varies. Some respond naturally (normally), but some initially act negatively (confused, embarrassed, surprised). Many of them also gave positive responses (curious, interested, enthusiastic, comfortable, listening).

The most popular method was the discussion (71.4%). Respondents explained that during the discussion, students were allowed to express their opinions, while teachers and other students had to listen with full attention. This is very good for training assertiveness (the ability to convey ideas and feelings) and communication skills (Nurfadhilah, 2017, 2019b; Nurfadhilah et al., 2020).

Video becomes a popular medium of choice when delivering puberty education (49.1%). This can be related to the characteristics of millennial educators so that they are quite open and mastering communication and information technology and the digital world. Videos are considered to be able to describe and provide more concrete explanations and increase the interest of students. Research had proven students' interest in audio-visual media in the learning process (Hurwitz et al., 2018; Siang et al., 2019; Utomo et al., 2019). Some respondents still use books provided by the school (textbooks), but some think that the books available are not suitable. This situation was dealt with by using the method of sharing experiences, and it was responded to well by students.

All of the respondents agreed that puberty education falls together with the five character values. The first character value (religiosity) is aligned with puberty education, starting from simple things such as how to dress, behaviors that must be avoided (touching with the opposite sex), how to bathe (cleaning self after menstruation or wet dreams according to the Shari'a), habituation/enforcement of worship, tolerance between fellow religious followers. Furthermore, the verses contained in the holy book must be used as a basis for praiseworthy behavior (good moral or akhlak karimah) and implemented in daily life. The value of this religious character includes three dimensions of relationship at once, namely the relationship of individuals with God, individuals with others, and individuals with the universe (environment). The value of this religious character is shown in the behavior of loving and maintaining the integrity of creation and by continuing to get closer to the Creator, having faith and piety, the discipline of worship, love of peace, tolerance, respect for differences in religion and belief, firm stance, confidence, cooperation between religious followers, and trust, anti-bullying, and anti-violence, as well as friendship.

Secondly, nationalism is shown through appreciation of one's own culture, and providing an understanding of puberty as well as providing understanding and mutual care/prevention of sexual harassment. Other respondents stated that proper puberty education makes students able to think and carry out positive and healthy activities, and to realize that students play an important role as the nation's people/generation.

Third, the value of independence is consistent with and strengthened by puberty education because it makes students know and understand for themselves, what they need, what they should protect, and avoid for their growth and development. Other respondents stated that independent students have their autonomy and are not dependent on others. The implementation is by training the students to get used to cleaning their clothes so that when it's time for puberty, they are used to caring for and cleaning themselves. The next respondent stated that with puberty education the child's mind would be broader and the child's emotionality would be better, more controlled than before going through puberty. Students will have attitudes and behaviors that are independent of others and use all their energy, thoughts, and time (all potentials they have) to realize hopes, dreams, and ideals.

Fourth, puberty education has a relationship with the value of cooperation, because in puberty education it is also taught how social maturity begins to form, the implication is that students have a sense of empathy, help each other, like to work together, and instill the perception that they cannot live alone. Other respondents stated that puberty education is implemented so that all citizens play a role in preventing forbidden and unhealthy sexual behavior. The impact of puberty education on strengthening

the values of other cooperation, namely students having respect for others, being able to work together, being inclusive, being able to commit to joint decisions, consensus building, helping out, having empathy and a sense of solidarity, anti-discrimination, anti-violence, and volunteerism.

Finally, respondents stated that the character of integrity includes responsibility, respecting individual dignity, and being able to be a good role model. Integrity is a value that underlies behavior based on efforts to make himself a person who can always be trusted in words, actions, and work, has commitment and loyalty to human and moral values (moral integrity). Students have developed self-confidence and honesty towards others and themselves.

### **The perceived threat for students**

The perceived threat is assessed by perceived vulnerability if a student's knowledge and behavior are poor. Besides, it is identified by the perceived severity of the effect of the low level of knowledge and behavior of the students as well. If these two things are perceived as high, then the threat is indicated as high, and vice versa. Many cases are reported through the media, one of which is the marriage of a female junior high school student (15 years) with her partner (17 years) in Central Lombok. This marriage cannot be registered at an official government institution because it violates the Marriage Law. The reason for marriage is because during the Covid-19 pandemic the student was unable to carry out the learning process due to limited facilities. Economic conditions forced her to accept the marriage proposal, to reduce the burden on his grandmother who had been living together in deprived conditions (Kompas.com, 2020). Such cases have occurred in many regions in Indonesia. Moreover, in emergencies, especially natural disasters, the number of cases related to the adolescent reproductive health triad (sexuality, drug abuse, and sexually transmitted infections) increases significantly (Nurfadhilah, 2020).

Respondents have varied experiences and perceptions about difficult situations related to puberty. Some felt that there was no difficulty when delivering the material, but not a few conveyed difficulties at various levels. One of them was when 70% of male students and 50% of female students admitted to having watched pornography. This phenomenon may be related to the Covid-19 pandemic situation which requires learning to be carried out online and automatically all students must have internet access. A momentary view of this information is likely to be negative (vulnerable and severe) and therefore perceived as a threat. However, if seen from the positive side, this shows the trust of students in teachers because they dare to openly admit it, and this should be a golden opportunity to approach and educate students according to the needs of students. If this situation cannot be anticipated, it is very risky to the ability of students to maintain abstinence behavior, reinforced by previous research that proves this phenomenon (BPS et al., 2017; Nurfadhilah & Ariasih, 2019; Pinandari et al., 2015b).

### **Perceived benefits and barriers of puberty education**

Nearly half of the respondents agreed that puberty education is beneficial in the formation of healthy and responsible behavior, namely abstinence. The benefits of puberty education were perceived by respondents as important to deal with adolescence. Respondent stated that the psychological characteristics of the students showed the urge to seek who they were, but on the other hand, they were also confused about their strengths and role. If the teachers continue to treat them as children, it may take a long time to identify (know) themselves. Puberty needs to be carried out optimally as an important moment that can be used as an awareness to change. God will continue to provide that moment throughout life, depending on how we make it meaningful learning. Research has proven that adequate puberty education to increase knowledge and behavior of abstinence (Hurwitz et al., 2018; Kansime et al., 2020; Ziapour et al., 2020)

Other respondents stated that puberty education is useful for increasing self-confidence because students will feel comfortable in themselves if they already know every part of their body and the functions of these parts. Furthermore, the students will know what to do and what not to do. Eventually, the students will begin to learn to take responsibility for themselves. They also understand their gender roles, so that no one feels uncomfortable with what they have. The students will then accept every physical change experienced naturally and as it is. Especially when they begin the process of puberty, where physical and psychological changes experience the fastest stages compared to the period before

and after. Children will understand how to respond to these changes, so they will not feel strange, shocked, confused, and afraid when facing them.

However, almost half of the respondents in this study agreed that the barriers to puberty education were mainly due to the characteristics of the students themselves which were difficult to recognize and/or control. A respondent stated that the relationship between men and women is not restricted, so students must know and apply their boundaries. The time available for the learning process is limited. Other respondents supported by stating that sometimes the environment becomes a barrier to education related to puberty by inciting to underestimate the education/information that has been given.

The other obstacle to puberty education is the lack of competence of educators or the opinion that puberty education is only related to science subject teachers. Puberty education should be related to the inculcation of religious or social values for students, which should be the responsibility of all elements of educators, both teachers, and parents. Teachers and parents have an important role to play in puberty education (Lailani et al., 2019). The collaboration of various parties (including health professionals/educators) with an integrated and sustainable program is required to ensure that all information (and services) needed by youth can be accessed (Dawson, 2018). , teachers and parents recommend that they should improve their own communication and management skills to solve child misbehaviors (Doğan et al., 2021). Some problems with the implementation of education if they were referred to 7M (Man, Money, Method, Machine, Material, Market, Minute); the solutions suggested in previous study related to the problems defined were conducting a competence training for teachers, and arranging additional lessons or classes, and enrolling the number of teacher to the local office (Marmoah et al., 2021).

The availability and use of media is also an obstacle to the transformation of knowledge to students. Moreover, the stage of development of students is still concrete operations, it needs visualization, audio, and maybe media that can be seen, direct touch, etc. So, educators must be creative to innovate learning media for students, so that it becomes fun and meaningful learning. Hypermedia (hyper content book) is one of the alternatives for future educational media. Research shows the effectiveness of hyper content books in learning in Indonesia (Amin et al., 2019; Herlina, 2019; Hidayat & Rusijono, 2020; Siang et al., 2019). Hyper content books are more interesting because they contain various types of teaching materials, not just printed texts and pictures. This type of book can also be developed by the teacher himself or herself so that the teacher in this case acts as a liaison to learning resources (resource linker).

The hypothetical model in this study describes the theoretical and practical basis of teachers' perceptions about the current situation of puberty and character education in elementary schools. Age, gender, and various belief construct direct action in the form of education that is by the character values of the Indonesian nation as well as to prepare students to deal with puberty.

Puberty education needs to be applied in the learning process of elementary schools in Indonesia. Currently, there is also a hyper content teacher's handbook entitled Puberty: Ready to Face and the development of a student book on puberty is being implemented which will soon be implemented by the ministry of education and culture through the Center for Curriculum and Bookkeeping to ensure that puberty material is delivered at the elementary school level.

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## **Authors' contribution**

NF and EU conceived and designed the study and finalized the methodology and tools used. NF collected the data. NF, EU, SS, and OSH analyzed the data and drafted the manuscript. All the authors made significant contributions in the manuscript writing and finalizing of the manuscript. The final manuscript has been read and approved by all the authors.

## Competing interests

The authors declare that they have no competing interests.

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