

## **Do Teenager International Students Care About Emotional Changes During Puberty?**

**By**

**Herlina Usman**

Universitas Negeri Jakarta

Email: [herlina@unj.ac.id](mailto:herlina@unj.ac.id)

**Salwiah**

Universitas Haluoleo Kendari

Email: [salwiahfkip@uho.ac.id](mailto:salwiahfkip@uho.ac.id)

**Yuyun Elizabeth Patras**

Universitas Pakuan Bogor

Email: [yuyunpatras64@gmail.com](mailto:yuyunpatras64@gmail.com)

**Sri Wulan**

Universitas Negeri Jakarta

Email: [sriwulan@unj.ac.id](mailto:sriwulan@unj.ac.id)

**Minho Yeom**

Chungnam National University

### **Abstract**

This study aims to measure the knowledge of international school students in grades four until seven about the dynamic changes that occur during puberty. Data were obtained from 32 respondents from 4 international schools in Jakarta and 64 respondents from Yangji Elementry School in South Korea. Respondents' knowledge regarding emotional changes during puberty is high, with an average of 88, with the lowest score of 53 and the highest being 100 out of a total score of 100. One out of four respondents is aware of the emotional changes they experience, and other respondents feel more physical and vocal changes. If adolescents are intervened from now on, it has the potential to improve thinking/learning skills, positive emotions, and responsible healthy behavior which are prerequisites for superior human resources and realize Indonesia's leap from a developing country to a developed country with high productivity.

**Keywords:** emotional changes, puberty, youth, International school

### **Introduction**

The right to up-to-date information on the development of reproductive science and sexuality must be given to all levels of society at all ages, including when children experience puberty (Crockett et al., 2019; Susić, 2018). Unfortunately, adolescent knowledge about puberty is still a concern (Kranjec et al., 2021; Rachmadtullah et al., 2020). On the other hand, media access is very high where up to 90% of teenagers have accessed the internet in the last month, in the range of 86-89%, especially during online learning during the Covid-19 pandemic (Bulić & Blažević, 2020; Panchal et al., 2021). So it is miserable if the teenager took the wrong information on the internet at puberty. Several concepts state meaningful learning takes place in students' previous knowledge [Usman, H., & Anwar, M. 2021]. One of the

interventions that can be done to solve the problem is to provide character education in dealing with puberty in primary education. Character education is expected to hone students' personalities by involving teachers, parents,

and the community. On the other hand, these instructions were also students-friendly because of the use of simple language which could help students understand what to do. [Herlina et al., 2020]. The study results indicate a gap between teacher and student perceptions of puberty education. Most teachers and parents consider puberty education to be taboo (Bennett & Harden, 2019; Johansen et al., 2017; Wulandari et al., 2021), but most students feel the need for it, and puberty education should be provided, especially at the elementary level (Martin, 2018; Sari et al., 2020).

Teachers should deliver comprehensive puberty education according to the level of development of elementary school-age children. However, there are still perceptual obstacles in its implementation in the classroom where the wrong perception about puberty results in unhealthy behavior and risks disrupting the development (Iasha et al., 2020; Koch et al., 2020). Adolescents who experience anorexia nervosa and lousy eating behavior are at risk of experiencing mineral deficits in their bones (Clarke et al., 2021; Munoz & Argente, 2002). Likewise, to a certain degree, calorie restriction has the risk of affecting reproductive function, especially in the women's (Sun et al., 2021). Research has shown that puberty has a unique influence on developing a wider part of the brain (cortex) than previously identified (Modabbernia et al., 2021; Vijayakumar et al., 2021). Adequate puberty education can be provided by teachers who have positive perceptions and proper skills and are supported by appropriate and exciting media.

Research on primary school-level puberty is still relatively limited, even though puberty begins to occur at the age of 9 and even younger (O'Keeffe et al., 2020; Setiawan et al., 2017). Engles et al. conducted a study on a junior high school that awareness of puberty will affect the level of psychological well-being of students (Fomina et al., 2020). Oberle reports in his research that the role of personal and contextual assets affects the emotional well-being of early adolescents in grades 4 through 7 of elementary school (Oberle, 2018). Farid et al. also reported in their research that knowledge about puberty is very important in the transition stage because this knowledge can reduce students' stress levels (Farid et al., 2019). Some of these studies illustrate that knowledge about puberty for students is very important. Teachers have an important role in helping provide information about puberty knowledge because elementary school-aged children are relatively more likely to listen and obey teachers than junior and senior high school levels. This is in line with previous research, which stated that the role of teacher support for students' knowledge of puberty dramatically affects students' emotional changes (Kwon et al., 2018; Rapee et al., 2019; Schweder & Raufelder, 2019).

Unfortunately, there are still many elementary school teachers who consider puberty education taboo and avoid the topic of conversation (Asrifah et al., 2020). Therefore, this study explores the perceptions of primary school teachers in the two countries to compare and serve as lessons for improving the current pubertal education system. The benefit of this research is to become the basis for applied research on pubertal education at the elementary school level. In addition, this research will have an impact on increasing the capacity and competence of teachers regarding puberty education. This research is expected to change the mindset of elementary school teachers about the importance of puberty education for students.

## Method

This research uses a cross-sectional design. A survey was implemented to measure the knowledge of fourth until seventh grader students from international elementary schools in Indonesia and South Korea. Elementary schools in Jakarta include Bina Nusantara elementary school for International School, students of Gandhi Memorial Intercultural School (SGMIS), students of National High International School in its surroundings, Yangji Elementary School in South Korea. Data were collected by conducting individual interviews with 32 respondents from Indonesia and 64 respondents from South Korea. The Demography of the respondent is shown in table 1. Respondents were selected purposively. A teacher took the data with scheduled and parental assistance from June-October 2021.

**Table 1.** *Frequency distribution of respondents (n=96)*

Variable		n	Percentage (%)
Sex	Male	51	53.1
	Female	45	46.9
Age (year old)	9	2	2.1
	10	29	30.2
	11	29	30.2
	12	27	28.1
	13	9	9.4
Country	Indonesia	32	33.3
	South Korea	64	66.7
Total		96	100

The instrument consists of 10 questions to measure knowledge about psychosocial changes during puberty and one open question about puberty experience. This instrument is intended to determine students' knowledge about the material in the learning media of Children's Emotional Change Animation Videos. The questions raised were about the onset of puberty, specific behavior changes during puberty, the cause of emotional instability, friend bond, responding to a friend who is behaving inappropriately, perception about what makes a good friend, how to treat friends and ways to prevent harassment. The last question was open-ended about the experience of puberty and the changes, especially in terms of emotional changes.

## Result And Discussion

The number of male students is slightly more than the number of females. One-third of the students are aged ten or younger. All of the respondents in Indonesia went to private schools. The respondents' knowledge of emotional changes during puberty is high, with an average of 81.3, with the lowest score of 50 and the highest being 100 out of a total score of

One out of four respondents are aware of the emotional changes they experience, and other respondents feel more physical and vocal changes. Table 2 shows the proportion of students who answer the questions correctly.

**Table 2.** *Proportion of students who answer the questions correctly (n=9)*

No	Question	Korean	Indonesian
1	At what stage does puberty occur?	85.9	100
2	What do girls going through puberty generally like to do?	71.8	100
3	What do girls and boys going through puberty generally pay more attention to?	78.1	97
4	From the following selections, what leads to emotional changes at puberty?	35.9	67
5	What makes a friendship feel much stronger?	92.3	67
6	If you find your friend behaving inappropriately, what would you do?	87.5	88
7	What makes a good friend?	81.3	100
8	What does "Every person has their advantages" mean?	79.7	100
9	From the following options, making fun of others and treating others badly are equally as bad as which option?	71.8	53
10	Which one is the way to prevent harassment?	96.9	100
	Average	70,2	87,2

Many students have experienced the primary and late signs of puberty in Grades Three and Four or at the age of nine or ten (Bahij et al., 2020; Nurfadhilah & Utomo, 2020). Early puberty is happening in Indonesia and other countries (Noipayak et al., 2016; O'Keeffe et al., 2019). This certainly has a significant effect on the physical, mental, emotional, and social situations of students, which in turn impacts the learning process. Each teacher's experience resulted in a change in the mindset that puberty material could only be delivered to certain classes. They stated that they would be ready to discuss it if they felt the students needed it to support from teachers and parents is very important in assisting and directing adolescents when experiencing emotional changes to practice controlling them.

The gap between the onset of emotional change and the maturation of control may contribute to the window of risk for emotional dysregulation and potentially damaging impulsive actions in early adolescence. The timing and gender differences of these emotional changes suggest the role of puberty hormones and their effects on the body and brain. Emotions must often be cognitively regulated to give rise to adaptive behavior, for example, controlling anger or avoiding temptation. The teacher must be ready to answer random questions calmly and stably. If the teacher looks shocked or panicked, it will cause students to lose confidence and trust. This can result in students not being willing to talk about their situation, especially regarding puberty and sexuality field (Nurfadhilah, Utomo, et al., 2021; Setiawan et al., 2017).

Fields of science that discuss the theme of puberty are not limited to science but also humanities. For example, the vocabulary discussion related to the theme and morals and ethics related to the theme. It requires coordination between teachers and supervision of school management in its implementation, even if facilitation is needed in planning and the learning process itself. The government should integrate education on the dangers of smoking, alcohol, and drug consumption through the Generation Planning program or Youth Information and Counseling Center package. This program integration will help the government decrease the number of unwanted pregnancies, prevent sexually transmitted diseases, and minimize the impact of addictive substance abuse (Mundhiro et al., 2021; Supena et al., 2020).

The emotional changes during adolescence are not equal for both sexes (Cohen et al., 2016). Other studies have also found similar results. There is a significant difference in the level of self-esteem and level of anxiety of the girls and boys (regardless of age). Girls show lower levels of self-esteem than boys. There was no difference between the two groups regarding emotional maturity. Both girls and boys showed a low level of emotional maturity (Ignat, 2014). Female students who have a secure attachment to their mother (56%), father (53%), and peers (64%), are slightly more significant than that male students. Male students tend to have insecure attachments to their mother (52%), father (54%), and peers (64%) (Herwandha & Prastuti, 2021). Both male and female classroom teachers felt uncomfortable presenting puberty, reproduction, and sexuality material. Teachers at state non-religious-based schools found the material in Grade VI and religion-based schools in Grade V. They selected the material to be delivered so that not all material was discussed because it was considered too vulgar.

As academic tasks become more complex and friendships become less stable, the way the brain processes emotions dramatically transforms. Puberty changes in brain structure and hormonal activity result in minor social difficulties such as rejection of friends, which is very painful and challenging to deal with without adult guidance. The Social-Emotional Learning

(SEL) program is one way to help them overcome this difficulty. One of the most prominent meta-analyses of the SEL program reviewed 213 school-based universal social and emotional programs delivered from kindergarten through 12th grade. It found that older adolescents changed their socio-emotional skills substantially less than younger children (Yeager, 2017). Studies show that preschoolers benefit from SEL interventions in various contexts, especially those requiring early intervention. In addition, the best practice for Preschool SEL interventions may differ from best practice for K-12 students, given the unique development of the preschool years (Murano et al., 2020).

Adolescents learn to make decisions in relationships with friends. In adolescents who reported ever having had a girlfriend, boyfriend, or partner, equitable decision-making was measured by asking who made the following decisions: when to visit friends; participate in school activities; go to the movies, go out in general, go to parties; whether to skip a class; what type of clothes the adolescent him or herself should use. A higher score was assigned when the adolescent responded that decisions were made by both members of the couple, except for what clothes the adolescent should wear, which was given a higher score (for equitable decisions) if the adolescent decided him or herself (de Castro et al., 2018).

Many children have difficulty managing their emotions and relating to others because caregivers abuse or neglect them early on (Landhuis, 2020). Emotion management is the ability to cope with one's emotional reactions. Emotion Management Skills include: showing emotions, verbal expression of feelings, controlling negative physical responses, coping, and anger management. There is no statistically significant difference between genders in managing certain emotions during puberty (Akbari Kamrani & Farid, 2017). There are two kinds of people who always have negative feelings (sad, angry, disappointed, and the like) and always maintain positive feelings (happy to share, cheerful, grateful, and the like). If we have positive emotions, we can always see the good in ourselves and others, focusing on solutions, not problems. Therefore, by collaborating, we will rise to fight and no longer need to depend on others (Nurfadhilah, 2020). They have recommended fun activities, namely mountain climbing and beach ecotourism. This activity is very beneficial for cleanliness, health, and environmental sustainability for individuals who participate in the training, both physically and

mentally. Actions need to be carried out periodically and involve more individuals and communities. Various groups can be applied even in elementary school (Nurfadhilah, Komalasari, et al., 2021).

Puberty education is the responsibility of all teachers. The process of education and parenting is a social responsibility that involves parents, teachers, peers, professionals, and the community (Dawson, 2019; Leerlooijer et al., 2014; Roux et al., 2019; Susanto et al., 2018). Several informants (Mrs. M\_MS, 49 years old, Class V) stated, "... have never discussed puberty material, especially online learning makes it difficult to deliver the material." Indeed, all teachers can contribute to pubertal education. For example, teachers who teach Indonesian, regional, or foreign languages can take advantage of readings/literature containing materials to support puberty. Students can also be asked/assigned to conduct interviews or write essays about the myths that develop in society about the puberty (Bahij et al., 2020). At the same time, it trains communication skills and assertiveness so that students are accustomed to expressing their opinions and feelings. Adolescents were not communicating much with parents about sexual and reproductive health issues even though they were aware of adolescent and youth-friendly sexual and reproductive health services. In addition, the promotion of service availability may be necessary to motivate adolescents to communicate with their parents. Contextual and age-dependent communication barriers should be further identified. Further research is needed to determine the obstacles, particularly from the parent side (Kusheta et al., 2019; Wahyudiana et al., 2021).

The COVID-19 pandemic situation, which for most teachers, is considered an obstacle to the process of delivering material, is regarded as an opportunity by some other teachers. Learning resources that tend to be monotonous are used before the pandemic period, then modified creatively. Several teachers collaborated and, facilitated by the school management, developed learning content uploaded to the YouTube channel to be widely used, one of which was the Pesona Guru channel created by the elementary Lab school, Faculty of Education, University of Muhammadiyah Jakarta. Teachers should act as coaches, mentors, and counselors, apart from being an educator. Some teachers still think that their task is only to deliver material according to the existing manual (teacher), thus limiting material that is considered too vulgar and taboo. Students with special conditions, for example, with disabilities, also need attention. The puberty process experienced by students is unique, and not many parents teach their children to prepare themselves (Grossman et al., 2018; Hurwitz et al., 2018; Susanto et al., 2018).

## **Conclusion**

The research about the measurement of international school students' knowledge in grades four until seven about the dynamic changes during puberty was successfully investigated. The research result shows that the respondents' knowledge regarding emotional changes during puberty is high. One out of four respondents were aware of the emotional changes they experienced, and other respondents were aware more of physical and vocal changes. The students need to have comprehensive knowledge about puberty to improve thinking/learning abilities, positive emotions, and responsible behavior. These are prerequisites for superior human resources and realize Indonesia's leap from developing to developed countries with high productivity. Although, the respondents answered well most of the fundamental questions about the emotional changes they experienced. But it turns out that their understanding is still very varied and tends to focus more on the physical changes at puberty. Intervention is still needed for students and teachers to teach material on emotional changes during puberty comprehensively and interestingly.

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