



Original Research

Understanding Islamic Junior High School Students' Attitudes and Thoughts Toward Puberty: A Qualitative Study

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Abstract

Puberty is a transitional period experienced by humans. This period is closely associated with physical, psychological, and emotional changes. Adolescents' responses to puberty can vary. We conducted a qualitative study to determine the definition of puberty and opinions and feelings about facing or experiencing puberty. Our research was conducted in one junior high school by conducting interviews in two focus group discussions. We found two major themes in this study: first is the definition of puberty, and second is the feeling about puberty. Both themes consisted of several sub-themes. The respondents stated that puberty is a maturity period characterized by significant physical, psychological, and emotional changes. The respondents also expressed that they were surprised by the changes they experienced. In addition, for them, puberty is the beginning of new obligations in their social environment. Attraction to the opposite sex makes them more careful and they must be able to control themselves. The need to share friends and role models is one of their recognitions in puberty. Other than that sex education indeed for better information. This study can be used as a reference for understanding the needs of adolescents regarding puberty so that they can better adapt and maintain sexual and reproductive health for good health and well being.

1. Introduction

Puberty is one of the stages of human life and is characterized as a transition period with striking changes.¹ These changes include physical and psychological changes and are stages that dramatically determine the formation of a person for adolescents.² Basically, puberty lasts only a few days or weeks in human life. This period also sometimes confuses adolescents with feelings of inadequacy and insecurity. In some cases, this condition can lead to destructive behavior.³ Puberty can be defined as the period of sexual development, with the associated behavior and emotions.^{4,5}

Biological factors that play a role in the process of puberty are the Hypothalamus-pituitary axis. At 2-3 years old, the human hypothalamus becomes inactive regarding sexual development.⁴ Puberty begins because the sensitivity of the hypothalamus to negative steroid feedback is reduced, meaning that the set point for negative feedback increases so that higher concentrations of steroid hormones are needed in the blood to reduce the secretion of gonadotropins from the anterior pituitary gland.⁶ Physical, psychological, and emotional changes occur due to the influence of these hormones.

Adolescents' primary problem at puberty is how they deal with puberty and how they respond to puberty because this will affect their behavior. Lack of knowledge will lead adolescents to the wrong response in dealing with puberty and tends to be traumatic.^{1,3} Several studies said that the level of knowledge and attitudes of adolescents have a significant relationship with the physical changes they experience during puberty. Knowledge will require adolescents to be more responsible for themselves and the surrounding environment by increasing their knowledge of physical changes during puberty.^{1,3}

Previous studies have often reported quantitative data on adolescents' knowledge levels, but they need to report the extent to what they understand about puberty. In addition, adolescents' responses to puberty are often yet to be reported, even though their responses and ways of dealing with puberty will be constructive in providing appropriate materials/information according to adolescents' needs. In this study, we conducted a qualitative approach related to the meaning and how adolescents responded to puberty.

2. Methods

This study was designed with a qualitative approach.⁷ The study was conducted using a descriptive qualitative design with in-depth interviews to gain the respondents' understanding and experience related to the research questions. This study is part of the Faculty of Medicine community service of Universitas Airlangga at an Islamic boarding junior high school in Jombang with decision number 277/UN3.15/PM/2023. The study was approved by the faculty ethics committee with number 193/EC/KEPK/FKUA/2023.

Samples and Settings

The respondents in this study were students from an Islamic boarding junior high school in Jombang. Respondents were recruited by purposive sampling and then grouped into two groups, men and women, because the school does not allow men and women to be in the same class. The respondents had to be able to communicate in Indonesian. Both groups were then interviewed in a focus group discussion (FGD) format led by an interviewer who had previously led FGDs. The interviewer would ask questions such as, "What is the definition or meaning of puberty for them?" and "How did they feel when they realized they were pubescent for the first time?". The interviews were stopped when data saturation was reached.⁷

Data Collection and Analysis

Data collection took place in July 2022. Interviews lasted 30-45 minutes in each group. The interviews were recorded on a mobile phone. Interviews were conducted in Indonesia. Each respondent involved first signed an informed consent form with guidance from the teacher. The themes of each respondent's answers were then analyzed.

Trustworthiness

The validity of the research data was maintained through several stages⁸. Researchers conducted triangulation and member checking. The formulation of the research questions and procedures was discussed in regular researcher meetings. The transcription process was carried out by recording all respondents' statements, after which the data that had been collected and transcribed were discussed first before being submitted to independent coders (peer debriefing)

for further analysis. The analysis results were discussed again before being written in the research report.

3. Result

The study was conducted on Grade 8 students by dividing them into two groups: boys and girls. The researcher then conducted interviews in groups (focus group discussion). The researcher led the discussion by asking several questions regarding the topic to be explored. The first question was, "What is the definition or meaning of puberty for them?" Then the question continued with, "How did they feel when they realized they were pubescent for the first time?"

The results of the discussion in the group were divided into two major themes with several sub-themes. The results of the qualitative analysis are shown in Figure 1.

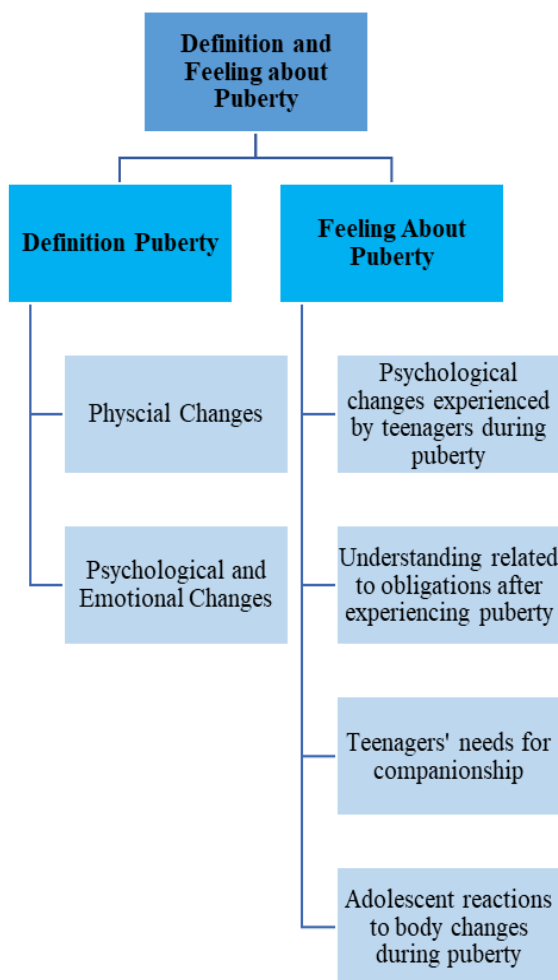


Figure 1. A theme analysis was conducted based on the results of the researcher's interviews with respondents.

Theme 1: Definition of Puberty

The respondents expressed their understanding of the meaning or definition of puberty. The respondents generally expressed two sub-themes that represented their understanding of puberty.

Physical changes

For the respondents, puberty involves increasing age accompanied by significant physical changes. They also revealed that hormones were involved in these changes. The respondents expressed that this period was a change from childhood to adulthood. In addition, as far as they are concerned, puberty should be experienced by everyone.

A, Girl, 14 years old: *"Puberty is a period of growth experienced by every human being, such as from babies to toddlers and then to children, then to adolescents, to adults, to the elderly."*

B, Girl, 14 years old: *"The period of hormone development experienced by every human being."*

Psychological and Emotional Changes

In addition to physical changes, respondents also stated that puberty includes psychological, emotional, and mindset changes. It also leads teenagers to change their lifestyles and behaviors. They try to explore themselves and look for new things. Things that they consider no longer appropriate to do during puberty.

N, Girl, 12 years old: *"Puberty is an interest in new things, such as things that used to be disliked as a child and now start to like or be interested; an example of new things that I am interested in are adult activities such as hanging out, hanging out."*

N, Boy, 14 years old: *"I feel more mature in my mindset, my mindset has become more different, like I used to do a lot of silly and embarrassing experiences, but now I feel that I no longer want to do that."*

Theme 2: Feeling about puberty

The respondents realized that puberty changed their lives. They experienced different feelings from those in the previous phase of their lives than when they reached puberty.

Psychological changes experienced by teenagers during puberty

Hitting puberty makes them realize that there are significant changes in their lives. These changes vary, such as mindset, feelings of shame about certain things, and attraction to the opposite sex, which makes them unprepared and surprised. These changes are sometimes challenging because they must harmonize religious teachings.

N, Boy, 14 years old: *"I feel more mature in my mindset, my mindset has become more different, like I used to do a lot of silly and embarrassing experiences, but now I do not want to do that anymore."*

A, Boy, 14 years old: *"When I realized that my lust had increased, I already liked the opposite sex, sometimes feelings like this made me feel guilty for thinking about and liking those who were not 'mahram.'"*

Understanding related obligations after experiencing puberty

In addition, as students who are educated in a Muslim school and live in a dormitory, their experience of puberty demands new obligations that they previously had to fulfill as children. They realize that puberty is a new phase of life with new obligations.

B, Girl, 14 years old: *"...As are adults, we must behave more maturely. Puberty is also considered 'baliqh', so you have to fulfill the obligations required in Islam."*

Teenagers' need for companionship

Respondents realized there were unusual changes during puberty, including physical, psychological, and emotional changes. Such things make them need friends to talk to or share this experience. They need advice from those who had previously experienced these times. Sharing can make them more prepared and adapt to the changes they are experiencing.

R, Girl, 15 years old: *"The first feeling was shock, then fear, thinking it was only us who were like that. What is needed, in my opinion, is someone to tell because we are afraid and need someone to share so that we know each other."*

Adolescent reactions to body changes during puberty

The contrasting physical, psychological, and emotional changes during puberty surprised the respondents. Feeling that this is unusual requires them to be more careful.

S, Girl, 13 years old: *"At first, I was surprised, but when I got used to it, it was normal. Because I was experiencing my first menstruation, I did not know how to react."*

Respondents were surprised at the time of menarche because they were not familiar with the experience. This may also be because they needed to realize or prepare for it. In addition to being surprised by physical changes, the respondents also stated that they were surprised by significant changes in mood and emotions.

A, Girl, 12 years old: *"We like to be emotional, moody, it feels..."*

L, Girl, 14 years old: *"I often feel not in the mood, often angry, shocked."*

Male respondents felt different when they realized the attractiveness of the opposite sex. Especially since they are in an Islamic boarding school, controlling such feelings is not easy.

K, Boy, 14 Years Old: *"I felt shocked and unusual, but realized there was something fun when it happened. I also felt uncomfortable, but I became used to it over time. I have been pubescent for about three years now."*

4. Discussion

The study reported that the respondents had the same understanding of puberty, which is the transition from childhood to adulthood. The respondents stated that puberty involves physical, psychological, and emotional changes. This report is by theories stating that puberty includes physical changes such as increased body size, especially height, as well as organ maturity and behavioral changes (psychological, mental, and emotional).^{6,9} We agree that the respondents have a good understanding of the changes that occur during puberty.

This study also reported that changes such as mindset made them start to like previously foreign activities. They believed that these activities were appropriate for adults. They thought that they could

engage in activities such as "hanging out" during puberty. In addition, activities familiar to them during childhood are now silly to do. Park et al. reported that developing into adulthood will make adolescents more persistent and change their mindset.¹⁰ Puberty is characterized by hormone changes that affect brain development and adolescent behavior, creating a foundation for long-term behavior patterns, including problem behaviors such as psychopathology.^{11,12} This triggers unusual mood and emotional changes, as stated by the respondents in this study.

Their desire to engage in activities modeled by other adults indicates their learning abilities. Puberty also has the potential to increase the desire for attention and sensation-seeking. Sensation-seeking, or the pursuit of high-intensity, exciting experiences, occurs more frequently in adolescents than in either children or adults.¹³ Notably, sensation-seeking tendencies are correlated more strongly with puberty than age.¹⁴ In our study, respondents admitted that they preferred adult things and other novelties.

Attraction to the opposite sex is common during puberty, as stated by the respondents in this study. Significant changes in sex hormones such as testosterone and estrogen play a role.^{13,15} Sex steroids also play a role not only in attraction to the opposite sex but also in their social role in the community.¹³ This is also what respondents began to interpret in their recognition that puberty also required them to fulfill social and religious responsibilities according to their age. This awareness of demands and responsibilities is fascinating, along with respondents who understand that puberty is new to them, so they need role models and places to tell stories as part of their coping mechanisms for the changes that occur.

The changes adolescents experience make them go in both positive and negative directions. Our respondents stated that the factor of religious knowledge controls them in their actions, including in controlling their lust. They consider these changes as new obligations and responsibilities for them. The positive attitude they show is that puberty makes them psychologically more mature. This attitude can have a good impact on adolescents in responding to the social dynamics that occur to avoid mental abnormalities in

adolescence.¹⁶ Biologically, the adaptability of adolescents in dealing with this situation is influenced by brain development both structurally during puberty.^{17,18} Each adolescent has different abilities in brain development adjusted to puberty timing.¹⁹ This reason naturally gives a varied response to our respondents in responding to the changes they experience related to puberty, but this becomes a reference in emphasizing the correct information about puberty so that they are better prepared to face it.

This study provides a new picture of adolescents' knowledge of puberty and their responses to puberty, which has rarely been reported. These findings will help to provide education and respond to adolescents' needs regarding puberty. The respondents suggested that new things make them have to adapt. This information is essential for reference in responding to adolescents in puberty, so that the assistance provided is targeted and according to the needs of adolescents.

5. Conclusion

Puberty is a transition period experienced by humans, accompanied by physical, psychological, and emotional changes. Sex steroid hormones also play a significant role in these changes. Teenagers are more interested in new things and activities that are considered appropriate for adults. Adolescents also begin to recognize the attraction of the opposite sex and consider the things they did in childhood to be silly. However, adolescents also stated that puberty surprised them, shocked by the drastic changes, unstable emotions, and mood. In this phase, they admitted that they needed a story buddy to understand their needs and phases. In addition, their maturity, thinking that puberty is a period towards adulthood, also requires them to be able to adapt to social and environmental demands, wildly behaving in accordance with religious norms.

Author's Contribution

CP, BA, and RS contributed to the concept of the study. CP, BA, RS, CMS, AA, LHP, and TM contributed to collecting the data. CP and BA analyzed the data. CP, BA, RS, CMP, AA, LHP, and TM wrote and approved the manuscript.

Conflict Of Interest

The authors state there is no conflict of interest.

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Ethics Approval

The protocol was approved by Faculty of Medicine Universitas Airlangga Research Ethics Committee No. 193/EC/KEPK/FKUA/2023.

References

1. Kas SR, Istiqamah NF. Tingkat Pengetahuan Terhadap Pubertas Pada Perubahan Fisik Remaja Putri. *Jurnal Keolahragaan Juara* 2023; 2: 17–23.
2. BKKBN. Peraturan Kepala Badan Kependudukan dan Keluarga Berencana Nasional Nomor 24 Tahun 2017 Tentang Pelayanan Keluarga Berencana Pasca Persalinan dan Pasca Keguguran. *Pelayanan Keluarga Berencana Pasca Persalinan dan Keguguran* 2017; 1: 64.
3. Mutia WON. Tingkat Pengetahuan Terhadap Perubahan Fisik Pubertas Remaja Putri. *Jurnal Ilmu Kebidanan* 2022; 9: 18–23.
4. Bogin B. *Puberty and Adolescence: An Evolutionary Perspective*. Elsevier Inc., 2011. Epub ahead of print 2011. DOI: 10.1016/B978-0-12-373951-3.00033-8.
5. Viner RM, Allen NB, Patton GC. Puberty, Developmental Processes, and Health Interventions. In: *Disease Control Priorities, Third Edition (Volume 8): Child and Adolescent Health and Development*. The World Bank, 2017, pp. 107–118.
6. Agustinus A, I'tishom R, Pramesti M. *Biologi Reproduksi Pria*. 1st ed. Surabaya: Airlangga University Press, 2018.
7. Liamputtong, P. (2019). *Qualitative research methods*, 5th Edition. Oxford University Press: Melbourne.
8. Lindgren B-M, Lundman B, Graneheim UH. Abstraction and interpretation during the qualitative content analysis process. *Int J Nurs Stud* 2020; 108: 103632.
9. Sawyer SM, Azzopardi PS, Wickremarathne D, et al. The age of adolescence. *Lancet Child Adolesc Health* 2018; 2: 223–228.
10. Park D, Tsukayama E, Yu A, et al. The development of grit and growth mindset during adolescence. *J Exp Child Psychol* 2020; 198: 104889.
11. Sisk CL, Zehr JL. Pubertal hormones organize the adolescent brain and behavior. *Front Neuroendocrinol* 2005; 26: 163–174.
12. Vijayakumar N, Op de Macks Z, Shirtcliff EA, et al. Puberty and the human brain: Insights into adolescent development. *Neurosci Biobehav Rev* 2018; 92: 417–436.
13. Forbes EE, Dahl RE. Pubertal development and behavior: Hormonal activation of social and motivational tendencies. *Brain Cogn* 2010; 72: 66–72.
14. Spear LP. The adolescent brain and age-related behavioral manifestations. *Neurosci Biobehav Rev* 2000; 24: 417–463.
15. Wang Y, Wu H, Sun ZS. The biological basis of sexual orientation: How hormonal, genetic, and environmental factors influence to whom we are sexually attracted. *Front Neuroendocrinol* 2019; 55: 100798.
16. Ullsperger, J.M., Nikolas, M.A., A Meta-Analytic Review of The Association between Pubertal Timing and Psychopathology in Adolescence: Are There Sex Differences in Risk? *Psychol. Bull* 2017. 143 (9), 903–938. <https://doi.org/10.1037/bul0000106>.
17. Vijayakumar, N., Youssef, G.J., Allen, N.B., Anderson, V., Efron, D., Hazell, P., Mundy, L., Nicholson, J.M., Patton, G., Seal, M.L., Simmons, J.G., Whittle, S., Silk, T., A longitudinal analysis of puberty-related cortical development. *NeuroImage* 2020, 117684. <https://doi.org/10.1016/j.neuroimage.2020.117684>.
18. Croypley, V.L., Tian, Y., Fernando, K., Mansour, L., S, Pantelis, C., Cocchi, L., Zalesky, A., Brain-predicted age associates with psychopathology dimensions in youths. *Biol. Psychiatry Cogn. Neurosci. Neuroimag* 2021. 6 (4), 410–419. <https://doi.org/10.1016/j.bpsc.2020.07.014>.
19. Byrne, M.L., Whittle, S., Vijayakumar, N., Dennison, M., Simmons, J.G., Allen, N.B., A systematic review of adrenarche as a sensitive period in neurobiological development and mental health. *Dev. Cogn. Neurosci* 2017. 25, 12–28. <https://doi.org/10.1016/j.dcn.2016.12.004>.