

The Relationship Between Knowledge and Attitude of Adolescent Female Students to Physical Changes During Puberty in Public Secondary School, Bogoro Branch Class, Liquiça District, Timor-Leste

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Abstract

Introduction: Adolescence is a transition in a person's life that changes from childhood to adulthood. Lack of knowledge of adolescent female students about the physical changes will cause anxiety, fear, shame, different feelings, and confusion. In this case, knowledge is the main component in shaping adolescent attitudes, inadequate knowledge will make adolescents tend to take the wrong attitude. **Objective:** The purpose of this study is to find out the relationship between the knowledge and attitude of adolescent female students to physical changes during puberty. The research design was a cross-sectional study. **Method:** The study population was 104 and a sample of 51 adolescent female students was taken using the proportional stratified random sampling technique. **Result and Discussion:** The results showed that there was a significant relationship between the knowledge of adolescent female students ($p\text{-value} = 0.012$), and attitudes of adolescent female students ($p\text{-value} = 0.000$) to physical changes during puberty. **Conclusion:** It was concluded that there was a significant relationship between the knowledge and attitudes of adolescent female students to physical changes during puberty.

Keywords: Knowledge; Attitude; Adolescents; Female; Physical Changes;

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Introduction

Adolescents is a transition in a person's life which changes from the phase of children to adults (Jannah, 2017). The most striking changes that can be seen and felt are physical changes that occur naturally and sometimes adolescents do not know or are not ready for these physical changes, causing them to become anxious, embarrassed and feel that there are problems with their physical condition, so they feel alien to their bodies (Arfah & Yarni, 2023). According to the World Health Organization, the age limit for adolescents is 12-24 years, in the world the number of adolescents aged 10-19 years is about 18% of the total population or about 1.2 billion adolescents. Furthermore, between 2011 and 2020, every day more than 140 million girls who will marry before they are 18, 50 million will be under the age of 15 (Joseph, 2017)

Puberty is a period of rapid developmental changes, where sexual and physical maturation occur (Özdemir et al., 2016). It has been observed that puberty for girls starts between the age of 8-13 years, and for boys ages 9- 14 years, and it may continue until the age 19 or over.

Adolescent physiologic changes as the first characteristic of biological processes that occur in the adolescent phase (Rochmania, 2015). In this phase, there are rapid physical changes and are not balanced with mental or emotional. Physical changes that occur include changes in the reproductive organs to reach the maturity level followed by reproductive function. When adolescent do not know about the changes they will experience, they tend to have higher stress levels, especially problems with physical (body) changes (Indrianita, 2019). Lack of knowledge greatly affects the attitudes and behavior of adolescents during puberty. Ignorance of reproductive health and reproductive organ care can result in a lot of losses and co-morbidities for adolescents.

Today the influence of technological developments, information and globalization has a major influence in the formation of adolescent's knowledge (Lubis & Siregar, 2020). The lack of knowledge of adolescents about reproductive health and lack of clear information about the physical changes they experience will cause anxiety, fear, shame, feeling different, and confused (Alomair et al., 2022). In this case, knowledge is the main component in forming attitudes of adolescent, with inadequate knowledge it will make adolescents tend to take the wrong attitude.

According to the data from UNICEF in Timor-Leste, 2016; percentage of women aged 20–24 years who were married before age 15 of 3%, and before age 18 in urban 7%, rural 20%, richest 6%, poorest 26%, and total 15%.

The results of research conducted by Wallace, H.J. et al (Wallace, 2016), which was conducted in three districts namely Viqueque, Baucau, Ermera and Dili, with the topic of decision-making on reproductive health in Timor-Leste. This study uses the de-colonizing method to obtain good knowledge from local communities about sensitive organs for making decisions on reproductive health, a sample of 17 women and 80 men of reproductive age. The results of this study indicate that decision making on

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reproductive health in Timor-Leste is a complex matter, with various phenomena, influenced by historical, cultural, geographic and psychological factors.

In connection with the research entitled adolescent marrying easily in Timor-Leste, conducted by the United Nations Population Fund (UNFPA), in 2017 in the districts of Covalima, Aileu and Dili, it shows that 19% of adolescent girls marry young at the age of (20-24) years, 18% and 24% already have children at the age of 20 years. The results of the investigation were caused by three factors, namely the lack of information about sexual and reproductive health education, the use of contraceptives was still limited, and the ability to control self was still limited.

The needs and types of reproductive health risks faced by adolescents have different characteristics from children or adults. Types of reproductive health risks that must be faced by adolescents include pregnancy, abortion, sexually transmitted diseases, sexual violence, and the problem of limited access to information and health services. This risk is influenced by various interrelated factors, namely the demand for young marriage and sexual relations, access to education and employment, gender inequality, sexual violence and the influence of the mass media and lifestyle.

Objectives

1. To find out the knowledge of adolescent female students to physical changes during puberty.
2. To find out the attitude of adolescent female students to physical changes during puberty.

Procedures

The procedures of data collection are described bellow:

1. An official letter was sent to head of school to explain about the objectives of research and to ask for permission to collect data at the Public Secondary School, Bogoro Branch Class, Liquiça District.
2. The researcher explains the research objectives to the respondents and maintains the confidentiality of the information obtained from the respondents.
3. After the questionnaire was completed, the researcher checked and entered the data into analysis statistic.
4. Special Package for Social Sciences (SPSS) 21.0 for windows was used for data analysis.

Research Design

The research design was a cross-sectional study to find out the relationship between knowledge and attitude of adolescent female students to physical changes during puberty in Public Seconmdary School, Bogoro Branch Class, Liquiça District, Timor-Leste. The target population of 104 adolescent female students, who are studying in Public

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Secondary School, Bogoro Branch Class. The sample size of 51 was calculated using the following formula:

$$n = \frac{N}{N(d^2) + 1}$$

Where by:

- N = Total of population
- n = Total of sample
- d² = Needed Value 0.1 (10%)
- 1 = Permanent Value (Constant)

Sample calculation:

$$n = \frac{104}{104(10^2) + 1} = \frac{104}{104(0,01) + 1} = \frac{104}{2.04} = 50.9 = 51$$

The proportional stratified random was applied to take 51 students from various majors and classes in Public Secondary School, Bogoro Branch Class. The interviews methods questionnaire comprised three parts. The first part asked about age of respondents, parent education, parents' job, source of health information. The second part asked about knowledge of female adolescents to physical changes during puberty.

And the third part asked about attitude of female adolescents to physical changes during puberty. The data analysis used was univariate and bivariate with the aim of knowing the relationship of each variable to be studies. The degree of confidence used is with = 0.05.

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Results and Discussion

Result

Table 1

The distribution and frequency based on the age of female students, parent education, parents' job, and source of health information in Public Secondary School, Bogoro Branch Class, Liquiça District, Timor-Leste

Characteristic	Category	Frequency	Percent (%)
Age	16 years old	15	29.4
	17 years old	13	25.5
	18 years old	13	25.5
	19 years old	10	19.6
Parent Education	Not Educated	27	52.9
	Primary School	10	19.6
	Junior High School	6	11.8
	Secondary High School	3	5.9
	Graduate Diploma	3	5.9
	Bachelor Degree	2	3.9
Parents' Job	Unemployed	16	31.4
	Self-Employed	14	27.5
	Government Staff	4	7.8
	Agriculture	13	25.5
	Fishery	4	7.8
Source of Health Information	Parent	20	39.2
	Friend	6	11.8
	Health Workers	6	11.8
	Mass Media	6	11.8
	Never	13	25.5
Total		51	100

Based on the table above, it shows that the number of respondents was 51 female students. Respondents who age 16 years old are 15 respondents (29.4%), who age 17 years old are 13 respondents (25.5%), who age 18 years old are 13 respondents (25.5%), and who age 19 years old are 10 respondents (19.6%). Parent education with category not educated 27 (52.9%), primary school 10 (19.6%), junior high school 6 (11.8%), secondary high school 3 (5.9%), graduate diploma 3 (5.9%), and bachelor degree 2 (3.9). Parent's job with category unemployed 16 (31.4%), self-employed 14 (27.5%), government staff 4 (7.8%), agriculture 13 (25.5%), fishery 4 (7.8%). Source of health information with category parent 20 (39.2), friend 6 (11.8%), health workers 6 (11.8%), mass media 6 (11.8%), never 13 (25.5%).

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Table 2

The relationship of knowledge and attitude of adolescent female students to physical changes during puberty in Public Secondary School, Bogoro Branch Class, Liqueça District, Timor-Leste

Variable	Physical Changes During Puberty				Total		Valor P-Value
	No Changes		Changes				
	N	(%)	N	(%)	N	(%)	
Knowledge							*0.012
Don't know	12	46.2	20	80.0	32	62.7	
Know	14	53.8	5	20.0	19	37.3	
Total	26	100	25	100	51	100	
Attitude							*0.000
Disagree	26	100	12	48	38	74.5	
Agree	0	0	13	52	13	25.5	
Total	26	100	25	100	51	100	

**Statistically Significant Level = 0.05*

Based on the table above, it shows that the knowledge of adolescent female students with P-value = 0.012 and Attitude of adolescent female students with P-value = 0.000. This means that there is a significant relationship between knowledge and attitude of adolescent female students to physical changes during puberty.

Discussion

The results of this study obtained that most of the respondents aged 16 years were 15 respondents (29.4%). Sufficient knowledge of adolescent girl about physical changes during puberty because it is influenced by the age of the respondent. Sufficient knowledge of young women about physical changes during puberty because it is influenced by the age of the respondent. That one of the factors that influence knowledge is age. If a person is of sufficient age, will have a mature mindset and experience as well. Age will greatly affect the capture power so that the knowledge obtained will be better (Yunus et al., 2021)

The education of the respondents' parents was mostly illiterate as many as 27 respondents (52.9%). Adolescents' girl gets their source of information from parents with mostly illiterate backgrounds. That the higher a person's education, the more likely they are to get good information from other people. With good parental knowledge, parents can understand more about the physical changes of puberty in children, and closeness to children, a harmonious atmosphere between children so that parents can talk openly to their children about puberty (Baharuddin, 2019).

The parents' job of respondents mostly unemployed as many as 16 respondents (31.4%). Parents who do not have the income generated because they do not work will affect the family's needs, especially in children's education, so that children will drop out of school or not continue their education at a higher level.

Most of the respondents' sources of information came from their parents as many as 20 respondents (39.2%). Good parental education and work and experience make parents have a high level of awareness to seek information about puberty so as to provide

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information obtained to early adolescents who do not have high awareness to seek information on their own and do not have experience. Someone who has a lot of information sources will have better knowledge

The relationship of knowledge of female adolescents to physical changes during puberty

Knowledge is the result of knowing someone after has sensed an object. Sensing in question is through the senses of sight, hearing, smell, taste and touch. The factors that influence knowledge are divided into two parts, namely internal factors and external factors. Internal factors such as education, age, experience, and personality. While external factors such as environment, information, culture, and socio-economic

The results of the statistical test showed that there was a significant relationship between the knowledge of adolescent female students on physical changes during puberty with the P-Value = 0.012 ($p < 0.05$). These results can be interpreted that the lack of knowledge of adolescent girls about physical changes during puberty because it is influenced by the lack of information about adolescent reproductive health. The condition of lack of information on reproductive health and emotional development is still unstable, thus making adolescents faced with unhealthy habits, such as free sex. This habitual adaptation, along with the reproductive organs of adolescents starting to function, will eventually accelerate the early age of being sexually active, and lead them to high-risk sexual behavior habits.

This result was supported by the study done in Dhulikhel Municipality, there was significant association between the knowledge regarding pubertal changes and age of the respondents ($p = 0.001$). However, similar studies that were conducted in three different curriculum board schools around Kumarapalyam, Namakkal district, Tamilnadu, India, revealed that there was significant association between knowledge level on puberty with ($p\text{-value} < 0.0001$).

The relationship of attitude of female adolescents to physical changes during

Attitude is a certain regularity in terms of cognitive (thinking), affective (feeling), and conative (predisposition to action) towards an aspect in the surrounding environment. Attitude is not a trait, but the result of interaction between the individual and environment so that it can change due to the conditions and influences given. Several factors that can affect a person's attitude change are personal experience, the influence of other people who are considered important, the influence of culture, mass media, educational institutions and religious institutions, and emotional factors, (Azwar, 2013) in (Sujana et al., 2018).

The results of the statistical test showed that there was a significant relationship between the attitude of adolescent female students on physical changes during puberty with the P-Value = 0.000 ($p < 0.05$). These results can be interpreted that changes in the

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attitude of adolescent girls when experiencing puberty depend on the information they get. adolescents' ignorance about the changes that occur in themselves can lead to changes in attitudes such as anxiety, shame, and lack of confidence. Types of reproductive health risks that must be faced by adolescents include pregnancy, abortion, sexually transmitted diseases, sexual violence, and the problem of limited access to information and health services. This risk is influenced by various interrelated factors, namely the demand for young marriage and sexual relations, access to education and employment, gender inequality, sexual violence and the influence of the mass media and lifestyle.

This result was supported by the study done in Dhulikhel Municipality, there was association between attitude related to pubertal changes and type of school in which the respondents studied was observed ($p = 0.006$). However, similar studies that were conducted in three different curriculum board schools around Kumarapalyam, Namakkal district, Tamilnadu, India, revealed that there was significant association between attitude level towards puberty with ($p\text{-value} < 0.000$)

Conclusion

Puberty is a vulnerable period for adolescents because during puberty adolescents experience physical and mental changes due to hormones, so that adolescents become irritable, change their emotions and grow rebellious. There was a significant relationship between the knowledge of adolescent female students on physical changes during puberty with the P-Value = 0.012 ($p < 0.05$). There was a significant relationship between the knowledge of adolescent female students on physical changes during puberty with the P-Value = 0.012 ($p < 0.05$).

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