

The Effectiveness of the E-Book “Aku Siap Pubertas (ASiaP)” in Improving the Role of Mothers and Children's Readiness for Puberty

Mardeyanti^{1*}, Karningsih², Fauziah Yulfitria³, Jundra Darwenty⁴

^{1,2,3}Jurusan Kebidanan, Poltekes Kemenkes Jakarta III, Indonesia

email: devan243@gmail.com

Artikel history

Sent, Jul 28th, 2022

Reviewed, Mar 13th, 2023

Received, Mar 30th, 2023

ABSTRACT

Adolescents experience successive hormonal, physical, psychological and social changes. Adolescents detach themselves emotionally from their parents to assume social roles. As many as 47.7% of teenagers often feel anxious, and 84% feel repeated feelings of anxiety. One of the anxieties that are handled is the physical changes during puberty. The results of this research on family support are still relatively low, namely 12%. Families are overprotective, lack attention, and feel confused about adolescent emotions. Objective: To determine the effect of e-books on knowledge, attitudes, mother's role and children's readiness to face puberty. Methods: The research design is quasi-experimental. They conducted research in March-September 2022 in the Malaka Jaya sub-district, East Jakarta, with a total sample of 59 mothers and adolescents. The data results were analyzed using the non-parametric Wilcoxon Rank and linear regression tests. Results: This study shows the effect of e-books on knowledge, attitudes and the role of mothers in dealing with pubertal changes with a significance of 0.000, 0.04 and 0.000. Education affects learning with a value of 0.000 and a regression coefficient of 2.787, which means that education increases a mother's knowledge by 2.7 times. There 91.1% of children are ready to be cheerful and ready to go through puberty, with a significance of 0.002. Conclusion: Using e-books increases mothers' role in facing puberty changes, and adolescents can go through puberty well. Keywords: Attitude, E-Book, Knowledge, Puberty, Role of Mothers

ABSTRAK

Remaja mengalami perubahan hormonal, fisik, psikologis dan sosial secara berturut-turut. Remaja melepaskan diri secara emosional dari orang tua mereka untuk mengambil peran sosial. Sebanyak 47,7% remaja sering merasa cemas, 84% merasakan perasaan cemas yang berulang. Salah satu kecemasan yang dirasakan adalah perubahan fisik pada masa pubertas. Hasil penelitian tentang dukungan keluarga masih tergolong rendah yaitu 12%, keluarga terlalu protektif, kurang perhatian, dan merasa bingung terhadap emosi remaja. Tujuan: Untuk mengetahui pengaruh e-book terhadap pengetahuan, sikap, peran ibu dan kesiapan anak menghadapi pubertas. Metode: Rancangan penelitian ini adalah eksperimen semu. Melakukan penelitian pada bulan Maret-September 2022 di kecamatan Malaka Jaya Jakarta Timur dengan jumlah sampel 59 ibu dan remaja. Hasil data dianalisis menggunakan uji non parametrik Wilcoxon Rank Test dan uji regresi linier. Hasil: Penelitian ini menunjukkan bahwa ada pengaruh penggunaan e-book terhadap

pengetahuan, sikap dan peran ibu dalam menghadapi perubahan pubertas dengan signifikansi 0,000, 0,04 dan 0,000. Pendidikan berpengaruh terhadap pengetahuan dengan signifikansi 0,000 dan koefisien regresi 2,787 yang berarti pendidikan meningkatkan pengetahuan ibu sebesar 2,7 kali. Terdapat 91,1% anak yang siap bersikap positif dan siap menjalani pubertas dengan signifikansi 0,002. Kesimpulan: Penggunaan e-book meningkatkan peran ibu dalam menghadapi perubahan pubertas dan remaja dapat melalui pubertas dengan baik.

Kata Kunci: E-Book, Pengetahuan, Pubertas, Peran Ibu, Sikap

INTRODUCTION

Adolescence is the phase of life between childhood and adulthood, from 10 to 19 years. It is a unique stage of human development and a necessary time to lay the foundations for good health. The visible changes are physical changes, where the body develops rapidly to reach the shape of an adult body, accompanied by the development of reproductive capacity. In addition, adolescents also change cognitively and begin to be able to think abstractly like adults. During this period, adolescents start to emotionally detach themselves from their parents to carry out their new adult social roles (Ajhuri, 2019). Changes that occur physically and psychologically require children to adapt to the environment and the challenges of life in front of them. The developmental tasks of adolescence, accompanied by the development of intellectual capacity, stress and new expectations experienced by adolescents, make them easy to experience disturbances in the form of thoughts, feelings and behaviour disorders. Adolescents' stress,

sadness, anxiety, loneliness, and self-doubt make them take risks by delinquency (Hasanah and Priyantoro, 2019). Adolescence is the beginning of puberty, a biological event, and ends with the transition to social roles that signify adulthood, such as work, financial independence, and parenting. Puberty begins in late childhood when complex and interrelated hormonal changes bring about sexual and reproductive maturity. A marked increase in the rate of physical growth, remarkable brain development, and the maturation of many other body systems accompanies it.

At puberty, adolescents become irritable, anxious, shy and often complain. According to the Indonesian Mental Health Federation, as many as 47.7 per cent of adolescents often feel nervous, 84 per cent feel recurring feelings of anxiety, and 70.3 per cent often think about things. One of the anxieties felt by teenagers is anxiety about physical changes during puberty (Aisyah, 2015). Regarding material changes during puberty, 64.1% of adolescents have a negative attitude (Susanto *et al.*, 2016). The results

showed that 33.3% of adolescents had low self-confidence in physical changes (Pasaribu, Rahmayati and Puri, 2017). The stage of a family with teenagers is the most challenging because a child's development in adolescence is accompanied by conflicts and turmoil that cannot be avoided. The main challenge in families with adolescents is around the developmental changes experienced by adolescents in the areas of cognitive change, identity formation and biological growth (De Los Reyes and Ohannessian, 2016)

Research states that family support for adolescents during puberty is still relatively low at 12%. Many families are overprotective, lack attention, and feel confused about adolescent emotions. Teenagers with turbulent emotions accompanied by social thirst are often the leading cause of parental confusion in dealing with them (Triyanto, Setiyani and Wulansari, 2014). Adolescents need a high-quality, safe, and stable environment to acquire skills in emotional processing and social cognition, such as the capacity to infer the thoughts, intentions, and beliefs of others (Pescosolido, Perry and Krendl, 2020) However, brain development encourages adolescents to engage and challenge their social environment. Parents and schools must balance their protective

roles with roles that allow adolescents to engage safely with their communities and the wider world because it is through this engagement that social, emotional, and cognitive learning takes place (Patton *et al.*, 2016)

The initial analysis conducted on five parents who had children entering their teens showed that 60% said they were still confused about children entering puberty. 20% of people stated that they have difficulty understanding changes in children. Most noted the importance of parents knowing the changes that will occur in their children. Therefore, it is necessary to optimize the preparation of parents to face their child's puberty. This study aims to identify the effect of using e-books on knowledge, attitudes, mother's role and children's readiness to face puberty.

METHOD

This study used a quasi-experimental method with a pre-post-test without a control group design. This research looks at mothers' knowledge and attitudes about changes in adolescence and the role of mothers in assisting adolescents to face changes during puberty. Data were collected before and after the intervention with an e-book. The intervention in this study was that mothers were given e-books about preparing for puberty about knowledge, attitudes and roles

of mothers. The results of this role are seen in the child's readiness to face puberty. This study considers the mother's characteristics: age; education; work; and parity. This research was conducted in the Malaka Jaya Village from March to September 2022. The research sample was mothers who had adolescents aged 11-15 years and 59 children. The example in this study was

taken using purposive random sampling. The data collected in this study used a knowledge questionnaire with 34 questions, attitudes in dealing with child puberty with ten questions and the role of the mother with 25 queries. The number of questions about the readiness of children is 20 questions. The data results were analyzed using Wilcoxon Rank Test and linear regression test.

RESULTS AND DISCUSSION

Table 1: Characteristics of Mothers

Characteristics	Amount	%
Age:		
- 20 – 35 years old	8	13.6
- >35 Years old	51	86.4
Parity:		
- >2	9	15.3
- ≤2	50	84.7
Education:		
- Tall	34	57.6
- Low	25	42.4
Work:		
- Working	12	20.3
- Housewife	47	79.7

Table 1 describes the characteristics of respondents consisting of 86.4% aged > 35 years, 84.7 % of respondents with parity ≤ 2, 57.6 % with a college education and 79.7 % as housewives or not working. Age is related to healthy adolescent reproduction to prepare for puberty in children, mothers whose age is ideal for already having children tend to know a better preparation for puberty in

children than mothers whose age has not been quite perfect. A mother who ages is ideally married and has children will tend to have a more mature way of thinking and sufficient knowledge of how to face puberty compared to a mother whose age is not ideal for marriage and having children. There is a significant relationship between knowledge and the efforts of mothers in preparing for

puberty in their children, where mothers with good knowledge have a greater chance of participating in preparing puberty for their children (Pratiwi, 2019)

The number of children will increase the opportunities and experiences of mothers to give affection. One way to show love to children is: by listening and sharing what children feel; sharing insights, knowledge, emotions and beliefs with children; providing reinforcement, trust, appreciation and encouragement to children; praying for the child sincerely and sacrificing for the child in terms of time availability and serving the child's needs (Nafiah and Wijono, 2021). The mother's education is the determinant in absorbing and understanding knowledge gained about efforts in preparing for puberty in his son. So, this is why educating mother

influences efforts to organise puberty in children (Farida, Mugiarto and Hartati, 2014).

The higher the education a mother takes, the more she will know, and he will be more mature in her efforts to prepare for puberty in their children so that when their children enter puberty, unwanted deviations will not occur (Pratiwi, 2019). One can learn from various experiences and sources, both electronic media and print media. With a working mother, someone with other people, friends or officers' health will often add insight and knowledge (Ramli, 2020). The analysis of knowledge, attitudes and the role of the mother obtained data on the average knowledge and philosophy of the mother in dealing with changes in child puberty before and after using the e-book.

Table 2 Average Knowledge, Attitudes and Mother's Role in Facing Changes in Adolescent Puberty Before and After Using E-Books

Variable	Mean	N	Std. Deviation	Std. Error Mean
Knowledge:				
- Pre-Test	26,05	59	3,579	0,466
- Post Test	31,63	59	4,085	0,532
Attitude:				
- Pre-Test	45,46	59	6,109	0,795
- Post Test	47,41	59	5,657	0,737
Role:				
- Pre-Test	0.56	59	0.501	0.065
- Post Test	0.70	59	0.429	0.056

These results indicate that before using the e-book, the average knowledge result was 26.05 with an SD of 3.579. After using the e-book, the average was 31.63, with an SD of 4.085. The results before using the average attitude were 45.46 with SD 6109, and after using the perspective e-book, the average results increased to 47.41 with SD 5,657. The results before using the intermediate role

were 0.56 with SD 0.501, and after utilising the attitude e-book, the average results increased to 0.70 with SD 0.429. The average result of knowledge, attitude and mother's role before using the e-book is more diminutive than after using the e-book, so descriptively explains the difference in the average knowledge and attitude between before and after using the e-book.

Table 3 Differences in Average Knowledge, Attitudes and Mother's Role Before and After Using the E-book

Variabel	N	Correlation	Sig.
Knowledge Pre-Test & Post-Test	59	0,563	0,000
Attitude Pre-Test & Post-Test	59	0,761	0,004
Role Pre-Test & Post Test	59	0.628	0.000

Table 3 shows the different between knowledge, attitude and mother's role variables before and after using e-book. These results show the knowledge correlation coefficient value of 0.563 with a significance value of 0.000 <0.05, it can be interpreted that there is a different between knowledge before and after using e-book. The results above also show the attitude variable, where the correlation coefficient is 0.761 with a significance value of 0.000 <0.05, so it can be concluded that there is a different between attitudes before and after using e-book. The results above also show the role

variable, where the correlation coefficient is 0.628 with a significance value of 0.000 <0.05, so it can be concluded that there is a different between role before and after using e-book.

Knowledge is closely related to mother, mother who has enough knowledge will tend to be calmer in prepare for their child's puberty. Unlike mothers who have knowledge lacking, he will feel restless in preparing for puberty her son. Education regarding sexuality, maturity and sex drive, social masturbation problems heterosexual, need to be given

well. Contents from the aspects applied adjusted with the age and level of maturity of the child. Keep in mind that sex problems are usually sensitive and not easy to talk about openly, So, in explaining, you have to find a way and the right timeso that the child can understand it well (Pratiwi, 2019)

The condition of the respondents which includes changes in the knowledge and attitudes of the respondents towards changes in the child's puberty period is relatively the same. Table 5.4 shows that there is no decrease (reduction) from the Pre-Test value to the Post Test value. The results showed that there was an increase in knowledge and attitudes from the Pre-Test value to the Post Test value. Change behavior is based on the existence of changes or additions knowledge, attitude, or skills. Factors that effect on success an education is a choice method with the right media (Ani *et al.*, 2020).

E-Book contains optimizing the preparation of parents for their child's puberty. Optimizing parental preparation is done through increasing knowledge, attitudes and role in dealing with and providing support to children entering puberty, so that adolescents are able to behave positively adaptively. This proves

that the method withe-book is effective in increasing the value of knowledge, attitudes and role of parents in dealing with changes in children's puberty. E-book as a visual medium involves the sense of sight in the process of delivering messages, human sensing will produce knowledge, because knowledge is the result of thinking from students someone to an object through the senses it has such as eyes, ears, nose and others. Sense of conveys the most knowledge to the brain is the sense of sight. Sense of sight has the highest level compared to other senses, which is 75% to 87% of the knowledge obtained by humans is channeled through the sense of sight, 13% through the sense of hearing while the remaining 12% obtained from other senses (Pawarti *et al.*, 2020)

One of the positive results or impacts of the process learning is a change in the affective domain namely the creation of awareness and existence increased positive attitude towards what taught. The relationship with this research is that the education provided through the module to parent can increase awareness and produce changes in knowledge and positive attitudes towards better (Rakotomamonjy *et al.*, 2015)The advantages of the module allow delivery

of material in more depth, besides that someone can review or study repeatedly until he understands the material in the module. The results research show that the mother's knowledge about preparing for puberty in children is mostly in the "less" category, which is 71 people (57.7%), so it is hoped that the module as information material will increase parents' knowledge (Coast, Lattof and Strong, 2019).

The increase in the attitude of the respondents was caused by several factors. The results of this study are in line with previous studies which stated that book media were more effective in improving family attitudes in preventing DHF. The average increase from pretest to posttest indicates an increase in attitude. This means that through the module is effective in improving attitudes (Farida, Mugiarto and Hartati, 2014). This is in accordance with the theory of Harvey and Smith that there are 3 groups of variables that influence attitude change, namely communicators, message sources (e-book) and targets. The maturation factor is the change experienced by the subject during the research in the form of physical changes to become excited and the testing factor due to the repetition of the questionnaire, so that the increase in the

attitude value in the posttest is due to the respondent having worked on the pretest and any factors affect the success of education (Siregar *et al.*, 2021).

The method aspect is not the only one, but is still influenced by other factors such as the level of education and the availability of time, especially for those who do not work, so that it is easier to understand and the time available to read the module. Because in this study these variables can support increasing the results of knowledge and attitudes of respondents and person's attitude depends on the knowledge possessed (Hämäläinen *et al.*, 2021). Mothers who have knowledge about puberty will be able to make preparations for their child's puberty well. On the other hand, mothers who lack knowledge about puberty do not know what efforts will be made to prepare their children for puberty, even mothers tend to let it go. Adolescents who lack information will have a negative experience (De Los Reyes and Ohannessian, 2016). An individual is very closely related to his attitude each as a personal characteristic. General attitude often defined as an action taken by an individual to give feedback on something. Attitude is defined as a reaction or

response that arises from an individual to an object that then raises individual behavior towards the object in certain ways (Ajhuri, 2019)

If parents already have a good attitude towards the changes of puberty, then parents will be able to accompany their children to enter puberty (Pasaribu, Rahmayati and Puri, 2017). According to research there is a relationship between

mother's attitude and her child's preparation for puberty. With the results of this study, it is hoped that reading the e-book will be able to improve parents' understanding so that they have a positive attitude in dealing with pubertal changes. To control for characteristic variables as confounders to see the effect of characteristics on changes in knowledge and attitudes, it can be seen in the table below (Susanto *et al.*, 2016).

Table 4 The Effect of Characteristics on Mother's Knowledge in Facing Puberty Changes

	B	Std. Error	Beta	t	Sig.
(Constant)	24,288	2,713		8,954	,000
Age	1,198	2,276	,071	,526	,601
Parity	1,712	1,745	,128	,981	,331
Education	2,787	1,056	,359	2,639	,011
Work	-,367	,988	-,048	-,371	,712

Table 4 shows that most of the controlled mother characteristics have no impact on changes in mother's knowledge where there is no significance value < 0.05 , only the education variable has an impact on

knowledge with a significance of $0.011 < 0.05$ and a regression coefficient value of 2.787 which means that education increases mother knowledge by 2,7 times.

Table 5 The Effect of Characteristics on Mother's Attitudes in Facing Puberty Changes

	B	Std. Error	Beta	t	Sig.
(Constant)	40,809	3,769		10,829	,000
Age	-,339	3,162	-,013	-,107	,915
Parity	4,524	2,424	,229	1,866	,067
Education	5,012	1,467	,435	3,416	,001
Work	3,415	1,373	,302	2,488	,016

Table 5 shows that the characteristics of respondents who are controlled do not all have an impact on changes in respondents' attitudes. The educational variable also influences changes in mothers' attitudes in dealing with changes in puberty with a significance value of 0.001 and a regression coefficient value of 5.012 which means that higher education increases mothers' attitudes in dealing with changes in puberty. Times are more excellent than those with low education. The work variable with a significance of 0.016 and a regression coefficient value of 3.415 means that not working also influences changes in mothers' attitudes in dealing with changes in puberty, three times greater than those who work.

The results of the multivariate analysis show that education also influences changes in mother's attitudes in dealing with changes in puberty with a significance value of 0.001 and a regression coefficient of 5.012 means that higher education increases mothers' attitudes in dealing with changes in puberty five times greater than high school education. The work variable with a significance of 0.016 and a regression coefficient value of 3.415 means that not working also influences

changes in mothers' attitudes in dealing with changes in puberty, three times greater than those who work. One of the weaknesses of quasi-experiments is that because treatment allocation is not done randomly, the researcher will be less able to control confounding factors so that not all confounding variables appear to influence knowledge and attitudes (Ramli, 2020).

One of the functions of the family is socialization function. Socialization refers to the number of learning experiences provided in the family to educate teenagers. This means that the family is the first experience for children, so it is essential for parents to know and determine how to deal with and teach children who are entering puberty (Coast, Lattof and Strong, 2019). Education is needed to get information, such as things that support health, to improve a person's quality of life. In addition, education is a significant factor that plays a role in increasing one's information and knowledge, and in general, the higher a person's education, the easier it is to receive information (Hämäläinen *et al.*, 2021)

Table 6 The Role of Mothers in Adolescent Readiness Through Puberty Role

	Readiness		No	%	Total	Sig
	Yes	%				
Positive	41	91.1	4	8.9	45	0.002
Negative	7	50	7	50	14	

The data above shows that of the 45 mothers with a positive role, 91.1% of children are ready to have a positive attitude and are prepared to go through puberty with a significant 0.002. Positive and effective relationships are found between the support of the parents and the children's readiness to face puberty. The children are considered ready to face puberty because it is a normal phase, and every person will face it in childhood. Also, parents must support their children in meeting puberty (Rakotomamonjy *et al.*, 2015). In entering puberty, the role of parents is critical, where parents become a place for children to ask everything they want to know about puberty (Coast, Lattof and Strong, 2019)

CONCLUSION

This study compares the results of measuring knowledge, attitudes and the role of mothers after using the e-book. It can be concluded that the use of the I'm Ready for Puberty e-book for accompanying children entering puberty causes a tremendous increase in knowledge, attitudes and roles, where

there is an influence of the use of the e-book on the inside, perspectives and positions of parents in dealing with puberty changes with a significance of 0.000. The positive part of the mother influences the child's readiness, where 91.1% of children are ready to have a positive attitude and are prepared to go through puberty, with a significance of 0.002.

Education impacts increasing knowledge with a significance of $0.011 < 0.05$ and a regression coefficient value of 2.787, meaning that education increases mothers' ability by 2.7 times. Education affects changes in the mother's attitude in dealing with changes in puberty with a significance value of 0.001 and a regression coefficient of 5.012. Work involves changes in the mother's attitude in dealing with changes in puberty with a significance value of 0.016.

REFERENCES

- Aisyah, S. (2015) *Perkembangan peserta didik dan bimbingan belajar*.

- Yogyakarta:Deepublish.
- Ajhuri, K.F. (2019) *Psikologi Perkembangan: Pendekatan Sepanjang Rentang Kehidupan*, Yogyakarta: Penebar Media Pustaka.
- Ani, M. et al. (2020) ‘Peningkatan Pengetahuan Dan Ketrampilan Konseling Menyusui Melalui Pelatihan Menggunakan Media Dukesi (Modul Paket Asi)’, *Jurnal EMPATI (Edukasi Masyarakat, Pengabdian dan Bakti)*, 1(1), pp. 36–45.
- Coast, E., Lattof, S.R. and Strong, J. (2019) ‘Puberty and menstruation knowledge among young adolescents in low-and middle-income countries: a scoping review’, *International journal of public health*, 64, pp. 293–304.
- Farida, N.I., Mugiarto, H. and Hartati, M.T.S. (2014) ‘Meningkatkan Kepercayaan Diri Remaja Putri Melalui Layanan Penguasaan Konten Teknik Role Playing’, *Indonesian Journal of Guidance and Counseling: Theory and Application*, 3(1).
- Hämäläinen, R. et al. (2021) ‘Understanding teaching professionals’ digital competence: What do PIAAC and TALIS reveal about technology-related skills, attitudes, and knowledge?’, *Computers in Human Behavior*, 117, p. 106672.
- Hasanah, U. and Priyantoro, D.E. (2019) ‘Pengembangan Kreativitas Anak Usia Dini Melalui Origami’, *Elementary: Jurnal Ilmiah Pendidikan Dasar*, 5(1), pp. 61–72.
- De Los Reyes, A. and Ohannessian, C.M. (2016) ‘Introduction to the special issue: Discrepancies in adolescent–parent perceptions of the family and adolescent adjustment’, *Journal of Youth and Adolescence*. Springer, pp. 1957–1972.
- Nafiah, U. and Wijono, H.A. (2021) ‘Konsep Pola Asuh Orang Tua Perspektif Pendidikan Islam’, *Irsyaduna: Jurnal Studi Kemahasiswaan*, 1(2), pp. 155–174.
- Pasaribu, V.S., Rahmayati, E. and Puri, A. (2017) ‘Hubungan perubahan fisik usia remaja dengan rasa percaya diri pada siswi kelas 7’, *Jurnal Ilmiah Keperawatan Sai Betik*, 11(1), pp. 81–85.
- Patton, G.C. et al. (2016) ‘Our future: a Lancet commission on adolescent health and wellbeing’, *The Lancet*, 387(10036), pp. 2423–2478.
- Pawarti, P. et al. (2020) ‘Modul Kesehatan Gigi untuk Meningkatkan Pengetahuan Ibu dalam Mencegah Malnutrisi pada Anak Penderita Karies Gigi’, *Jurnal Kesmas (Kesehatan Masyarakat) Khatulistiwa*, 7(4), pp. 150–157.
- Pescosolido, B.A., Perry, B.L. and Krendl, A.C. (2020) ‘Empowering the next generation to end stigma by starting the conversation: bring change to mind and the college toolbox project’, *Journal of the American Academy of Child & Adolescent Psychiatry*, 59(4), pp. 519–530.
- Pratiwi, A. (2019) ‘Hubungan Umur, Pendidikan, dan Pengetahuan Ibu dengan Upaya Mempersiapkan Masa Pubertas pada Remaja di RT 48 Kelurahan 3-4 Ulu Palembang Tahun 2018’, *Jurnal Kesehatan Saelmakers PERDANA*, 2(1), pp. 63–70.
- Rakotomamonjy, S.N. et al. (2015) ‘The effects of environmental education on children’s and parents’ knowledge and attitudes towards lemurs in rural Madagascar’, *Animal Conservation*, 18(2), pp. 157–166.
- Ramli, R. (2020) ‘Correlation of Mothers’ Knowledge and Employment Status with Exclusive Breastfeeding in Sidotopo’, *Jurnal PROMKES*, 8(1), p. 36.
- Siregar, P.A. et al. (2021) ‘Improvement of Knowledge and Attitudes on Tuberculosis Patients with Poster Calendar and Leaflet’, *JHE (Journal of Health Education)*, 6(1), pp. 39–46.
- Susanto, T. et al. (2016) ‘Immaturity in

puberty and negative attitudes toward reproductive health among Indonesian adolescents', *International journal of adolescent medicine and health*, 30(3), p. 20160051.

Triyanto, E., Setiyani, R. and Wulansari, R. (2014) 'Pengaruh dukungan keluarga dalam meningkatkan perilaku adaptif remaja pubertas', *Jurnal Keperawatan Padjadjaran*, 2(1).