



## The Effectiveness of Telecounseling on Anxiety and Self-Care Dysmenorrhea in Young Women

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### Abstract

**Background:** The menstrual period is a cyclic physiological phenomenon where several problems can arise, including irregular cycles, excessive bleeding and dysmenorrhea. Dysmenorrhea is the most common gynecological problem experienced by adolescents and one of several causes of pelvic pain that harms the quality of life and restrictions on adolescent activities. One of the preventive interventions that have been successfully implemented by health promotion programs for individuals is telecounseling. This study aims to analyze the effectiveness of telecounseling on anxiety and self-care dysmenorrhea in adolescent girls at MA Darul Ulum, Palangka Raya City.

**Methods:** Quasi Experimental Research with pretest-posttest with control group design. The study was conducted on 42 respondents in the intervention group and 42 respondents in the control group in MA Darul Ulum, Palangka Raya City.

**Results:** There are a significant difference in anxiety scores ( $p$  value = 0.000) and self care scores ( $p$  value = 0.044) between the intervention group and the control group. Then the decrease in anxiety score (6.71) in the intervention group was higher than the anxiety score (1.19) in the control group. The increase in self-care scores (47.85) in the intervention group was higher than the self-care scores in the control group (37.15).

**Conclusions:** Telecounseling is effective in reducing anxiety scores and increasing self-care scores for girls with dysmenorrhea.

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## INTRODUCTION

Adolescence is a transitional phase from childhood to adulthood. Characteristics that can be seen are that many changes occur, both physical and psychological changes. This period is called the puberty phase, which is a period in which the skeletal or physical maturity of the body such as body proportions, weight and height changes and sexual function maturation occurs rapidly, especially in early adolescence (Pane et al., 2018).

Events that arise during puberty are rapid body growth, the emergence of secondary sex characteristics, menarche and psychological changes. In women, puberty is marked by the occurrence of menstruation (Larasati & Alatas, 2016). Menstruation is the process of releasing blood and healthy tissue from the uterus which then flows out of the body through the vagina and is a normal change in a woman's body that occurs periodically and is influenced by hormones (Harzif et al., 2018). Menstruation experienced by adolescents can cause problems, one of which is dysmenorrhea. Dysmenorrhea is the most common gynecological problem experienced by adolescents and one of several causes of pelvic pain that harms the quality of life and the limitation of adolescent activities (Osayande et al., 2014).

Dysmenorrhea which often occurs in adolescents is associated with a low quality of life in adolescents (Bernardi et al., 2017). The prevalence of dysmenorrhea varies from 45% to 93% of women of reproductive age and the highest rate is reported in adolescents which are considered a normal aspect of the menstrual cycle so that adolescents do not report it and do not seek medical care (Petraglia et al., 2017). Epidemiological studies on a population of adolescents ranging from 12-17 years have reported that dysmenorrhea has a prevalence of 59.7% where 12% experienced severe dysmenorrhea, 37% experienced moderate dysmenorrhea and 49% experienced mild dysmenorrhea (Calis, 2019).

In Indonesia, the incidence of dysmenorrhea is 64.25% consisting of 54.89% primary dysmenorrhea and 9.36% secondary dysmenorrhea. Primary dysmenorrhea is experienced by 60-75% of adolescents with three-quarters of these adolescents

experiencing mild to severe pain and a quarter experiencing severe pain (Larasati & Alatas, 2016). The results of the study on 122 adolescents showed that 60.7% of adolescents experienced dysmenorrhea which was the cause of absenteeism from school and difficulty in concentrating (Arisani, 2019). The results of another study showed that the prevalence of dysmenorrhea in adolescents was 87% where 87.7% of adolescents continued to be active when experiencing dysmenorrhea and 12.2% used analgesics to reduce dysmenorrhea complaints. The impact of dysmenorrhea is a decrease in daily activities to require therapy where the risk factors for dysmenorrhea are not only related to physiological factors but also psychological factors including anxiety (Handayani et al., 2016). Dysmenorrhea harms the lives of adolescents resulting in limitation of daily activities, lower academics, poor sleep quality, anxiety and depression (Petraglia et al., 2017).

Telecounseling has been used as a preventive intervention which has been successfully implemented in health promotion programs for individuals. The results of the study indicate that telecounseling can be used as an alternative to counseling services (Mejah et al., 2020). Telecounseling refers to counseling using telephone, video conference or internet media (Ramadhan & Irfanudin, 2021). The results of the study concluded that telecounseling has become an effective method of supporting physical and psychosocial needs (De Luca & Calabrò, 2020). Telecounseling uses interactive technologies such as video conferencing as an alternative to face-to-face counseling sessions. Research has shown telecounseling to be an effective way of delivering services to children and young people (Pennsylvania Coalition, 2020).

Self-care counseling affects anxiety and quality of life. Counseling with a focus on self-care helps to reduce anxiety so that healthcare providers can use counseling methods in conjunction with other therapies and routine care to improve mental health and promote quality of life (Farshi et al., 2020). Adolescent girls who experience dysmenorrhea are at risk for depression and anxiety so the importance of a multidisciplinary approach for treatment

and follow-up in cases of dysmenorrhea (Balik et al., 2014). The results of other studies concluded that lower levels of self-care can increase stress resulting in greater emphasis on counseling needs. Practicing self-care can help prevent or reduce stress levels (Mayorga et al., 2015). The purpose of this study was to analyze the effectiveness of telecounseling on anxiety and self-care Dysmenorrhea in young women at MA Darul Ulum, Palangka Raya City.

## METHODS

This research is a quasi-experimental research with a pretest-posttest design with a control group design. The population in this study were all young women who experienced dysmenorrhea in MA Darul Ulum, Palangka Raya City, totaling 160 young women. The sample of this study was young women who experienced dysmenorrhea at MA Darul Ulum, Palangka Raya City with the selection of research subjects before the intervention was carried out by screening young women with dysmenorrhea using a numerical rating scale (NRS) instrument, then the selection process was carried out according to research criteria and sampling techniques. The sample in this study used purposive sampling.

The inclusion criteria in this study were young women aged 15-19 years, regular menstruation, having a smartphone with the WhatsApp application, willing to be respondents and participating in the whole process of research activities. How to select young women who meet the inclusion criteria by interviewing techniques related to the age of young women until this research is carried out, menstrual cycles in the last 3 months and recording the date of the first day of menstruation in the last month of the study, explaining the research procedures and if young women are willing to be respondents. In the study, the young women filled out a consent form after explanation (PSP) to participate in the study (informed consent). The research sample that met the inclusion criteria was 106 young women.

The exclusion criteria in this study were respondents who were diagnosed with certain gynecological diseases diagnosed by performing an ultrasound examination (ultrasonography).

Respondents whose ultrasound results were diagnosed as suffering from gynecological diseases or anatomical abnormalities in the uterus that caused secondary dysmenorrhea were excluded from the study.

Determination of the sample size or the number of respondents in this study using statistical calculations using the two-proportion independent hypothesis test formula. Based on the results of the calculation of the sample size, the minimum sample size of the study that met the inclusion criteria in this study amounted to 84 respondents consisting of 42 respondents in the intervention group and 42 respondents in the control group.

The method of selecting research subjects before being given treatment is by measuring the intensity of pain using a numerical rating scale (NRS) instrument, then the selection process is carried out according to the research criteria. In the intervention group, treatment was given in the form of telecounseling using the steps of counseling Greet (greeting), Ask (ask), Tell (express), Help (assist), Explain (explain) and Return (revisit) GATHER through the WhatsApp video call application provided. 2 times of telecounseling after menstruation in the first week and before the menstrual cycle in the third week of the following month then the control group was given a booklet and this research was carried out from June 2021 to September 2022.

The research instrument used to measure anxiety variables was using the ZSAS (zung self-rating anxiety scale) questionnaire consisting of 20 statement items based on diagnostic criteria consisting of 15 statements of somatic symptoms and 5 statements of affective symptoms using a Likert scale. ZSAS is widely used to detect anxiety and has good validity and reliability. The results of the study concluded that the value of internal consistency ZSAS with Chronbach's alpha formula was obtained at 0.658 and ROC 36.5, thus ZSAS is a reliable and valid instrument for detecting anxiety among adolescents. (Setyowati et al., 2019).

Self-care is an active cognitive process in which a person tries to maintain and maintain health or cope with the pain caused by dysmenorrhea. The instrument used to

measure self-care using the ADSCS (Adolescent Dysmenorrhea Self-Care Scale) questionnaire consists of 40 statement items with a Likert scale about self-care in relieving dysmenorrhea, including seeking knowledge, emotional expression, seeking help, control over external factors, utilization of resources, power and self-control with Chronbach's alpha value of 0.89 so it can be concluded that the resulting scale is reliable and valid (Hsieh et al., 2004).

To measure pain intensity using a numerical rating scale (NRS) instrument using a 0-10 scale by marking one point on the line that is considered close to the perceived pain intensity. The results of a systematic review of the reliability of this instrument are 0.9-1.2 with 95% CI which shows that NRS can be used for the assessment of acute and chronic pain in adolescents. (Castarlenas et al., 2017).

Data analysis used univariate analysis and bivariate analysis. To test the effectiveness

of telecounseling on anxiety in the unpaired group, the independent t-test was used and the self-care variable in the unpaired group used the Mann Whitney test, which had previously been tested for homogeneity of the respondents. This study has obtained a research ethic permit from the Research Ethics Commission of the Ministry of Health, Palangkaraya Polytechnic Research Number 075/III/KE.PE/20219-1.2 with 95% CI indicating that NRS can be used for the assessment of acute and chronic pain in adolescents.

**RESULTS AND DISCUSSIONS**

The results of descriptive statistics on age, age of menarche, duration of menstruation, duration of dysmenorrhea, the intensity of dysmenorrhea pain, anxiety and self care of respondents who experience dysmenorrhea can be seen in table 1 below:

**Table 1.** Descriptive Statistics of Anxiety and Self Care of Adolescents with Dysmenorrhea in the Intervention Group and the Control Group.

Group	Characteristics of Respondents	n	Mean	Median	Min-Max	SD
Intervention	Age	42	16,76	17	15-18	0,726
	Age of Menarche	42	12,93	13	11-16	1,257
	Menstruation Length	42	6,31	7	4-8	1,070
	Long Dysmenorrhea	42	2,07	2	1-7	1,369
	Pain Intensity	42	2,93	2,50	1-10	2,146
	Pretest anxiety	42	46,33	46,00	30-63	7,207
	Posttest anxiety	42	39,62	39,00	19-49	5,099
	Self Care Pretest	42	70,76	71,50	40-90	10,752
	Self care posttest	42	77,26	78,50	46-98	12,474
Control	Age	42	17,33	17	16-18	0,687
	Age of Menarche	42	12,83	13	10-16	1,529
	Menstruation Length	42	5,60	5	3-8	1,345
	Long Dysmenorrhea	42	2,05	2	1-7	1,103
	Pain Intensity	42	2,83	2,50	1-10	1,937
	Pretest anxiety	42	41,90	41,50	23-53	6,680
	Posttest anxiety	42	40,71	40,00	25-52	5,878
	Self Care Pretest	42	72,05	73,00	44-92	11,010
	Self care posttest	42	73,12	75,00	37-95	11,543

Based on table 1, it is known that the average age of respondents in the intervention group is 16.76 years while in the control group the average age of respondents is 17.33 years, then the average age of first menstruation (menarche) in the intervention group is 12.93 years and in the control group 12.83 years. The average length of menstruation in each

menstrual period in the intervention group was 6.31 days and in the control group was 5.60 days, the average length of feeling dysmenorrhea in the intervention group was 2.07 days and the control group was 2.05 days then the intensity scale the average respondent's pain in the intervention group was 2.93 and the control group was 2.83. In the intervention group the

average score of anxiety in adolescents who experienced dysmenorrhea before treatment was 46.33 and the average score of anxiety after treatment was 39.62. The average score of anxiety before treatment was 41.90 and after treatment was 40.71 in the control group. Then

the average score of self care before treatment was 70.76 after treatment the score of self care was 77.26 in the intervention group and in the control group the average score of self care before treatment was 72.05 and after treatment was 73.12.

**Table 2.** Differences in Anxiety Reduction in Adolescents with Dysmenorrhea in the Intervention Group and the Control Group

Anxiety	n	Mean	SD	Average Difference (IK 95%)	p value
Anxiety score difference intervention group	42	6,71	8,359	2,737-8,310	0,000*
Anxiety score difference control group	42	1,19	3,542		

\* Independent t-test

In table 2 it can be concluded that there is a significant difference in the decrease in anxiety scores in the intervention group by 6.71, which is higher than the decrease in anxiety scores in the control group by 1.19, so it can be concluded that telecounseling is effective in reducing anxiety in adolescents with dysmenorrhea..

Higher anxiety scores and impaired quality of life in adolescents with dysmenorrhea. In addition, the level of anxiety increases and the psychosocial health scale score of quality of life decreases with increasing severity of dysmenorrhea (Sahin et al., 2018). The results of this study are in line with research that providing telecounseling affects reducing anxiety (Palifiana & Khadijah, 2021). Self-care counseling affects anxiety and quality of life. Counseling with a focus on self-care helps to reduce anxiety so that health care providers can use counseling methods in conjunction with other therapies and routine care to improve mental health and promote an individual's quality of life (Farshi et al., 2020).

Telecounseling is a word that refers to counseling using telephone, video conference or internet media (Ramadhan & Irfanudin, 2021).

Telecounseling has become an effective method of supporting physical and psychosocial needs (De Luca & Calabrò, 2020). The results of the study indicate that telecounseling can be used as an alternative in counseling services where the technological era has opened the boundaries of online communication widely and provides space for increasing the provision of counseling services to the community (Mejah et al., 2020). Telecounseling has been used as a preventive intervention which has been successfully implemented in health promotion programs for individuals. The results of the study report that telecounseling improves significant health-related quality of life and positive health behaviors (Dorstyn et al., 2012).

Other studies have concluded that telecounseling is an effective means of face-to-face counseling services and stated a high level of satisfaction with telecounseling in the delivery of services to children and adolescents (Boydell et al., 2014). The results of qualitative research indicate that online counseling provides convenience for adolescents in expressing their problems. In addition, online counseling has great potential in offering therapy and can be done anywhere (Mansyur et al., 2019).

**Table 3.** Differences in Self Care Improvement of Adolescents with Dysmenorrhea in the Intervention Group and the Control Group

Self Care	n	Median	Min-Max	Mean Rank	p value
Anxiety score difference intervention group	42	5	15-48	47,85	0,044*
Anxiety score difference control group	42	0,50	15-22	37,15	

\* Mann Whitney test



In table 3 it can be concluded that there is a significant difference in the increase in self-care scores between the intervention group and the control group. The increase in self-care scores in the intervention group had an average value of 47.85 which was higher than the control group of 37.15, so it can be concluded that telecounseling is effective in improving self-care for adolescents with dysmenorrhea.

The results of this study are in line with research which concludes that lower levels of self care can increase stress so a greater emphasis on counseling needs so that practicing self care can help prevent or reduce stress levels. Self care refers to activities carried out by individuals to improve health, prevent disease, limiting disease and restoring health that will benefit the individual both personally and professionally. (Mayorga et al., 2015).

Self-care practice has been defined as a primary preventive measure focused on maintaining balance through physical, and spiritual needs and practice compassion which serves to build self-awareness of mental, emotional, physical and spiritual well-being so that counseling is one of the best ways to improve self-care (Friedman, 2017). The results of research in Italy that telecounseling has become an effective method of supporting physical and psychosocial needs (De Luca & Calabrò, 2020). Telecounseling can be used as an alternative in counseling services where technology has opened the boundaries of online communication widely and provides space for increasing the provision of counseling services to the community (Mejah et al., 2020).

Other studies have concluded that telecounseling is an effective way of providing face-to-face counseling services and expressed a high level of satisfaction with telecounseling in providing services to children and adolescents (Boydell et al., 2014) as an alternative to face-to-face counseling sessions. Research has shown telecounseling to be an effective way of delivering services to children and young people (Pennsylvania Coalition, 2020). Counseling for early detection and management of various menstrual disorders can improve the quality of life, reduce symptoms and minimize health problems (Hassan et al., 2019). Adolescent girls need a comprehensive counseling program to

improve their health status (Hosseininasab et al., 2016).

## CONCLUSION

There is a difference in decreasing anxiety and increasing self care between the intervention group and the control group. The average decrease in anxiety scores and increase in self-care in the intervention group was higher than in the control group, so it can be concluded that telecounseling is effective in reducing anxiety and increasing self-care for adolescents with dysmenorrhea.

Telecounseling can be an alternative option in providing adolescent health education through counseling activities other than face-to-face counseling. In addition, telecounseling can be used as a medium of interpersonal communication counseling (KIP/K) for adolescents to improve the quality of life of adolescents related to health and positive health behavior.

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