Jurnal Eduhealth
Volume 16, Number 01 2025 DOI 10.54209/eduhealth.v16i01
ESSN 2808-4608 (Online)
https://ejournal.seaninstitute.or.id/index.php/healt

Relationship Between Anxiety Levels In Pregnant Women And Length Of Second Stage Labor At Bara-Baraya Public Health Center, Makassar In 2024

Fahad Ahmad Hudzaif Ridwan[1,*], Anna Sari Dewi[2], Nur Fadhillah Khalid[3], Muh. Alim Jaya[4], Mona Nulanda[5]

[1]Student of the Medical Education Study Program, Faculty of Medicine, UMI, RSP Ibnu Sina YW-UMI, [2]Department of Obstetrics and Gynecology, Faculty of Medicine, Muslim University of Indonesia, RSP Ibnu Sina YW-UMI, [3]Department of Pharmacology, Faculty of Medicine, Muslim University of Indonesia, RSP Ibnu Sina YW-UMI, [4]Department of Mental Health Sciences, Faculty of Medicine, Muslim University of Indonesia, RSP Ibnu Sina YW-UMI

Article Info

Keywords:
Anxiety Level,
Second Stage of Labor

ABSTRACT

Anxiety during pregnancy and labor is one of the psychological factors that can affect the labor process , including the duration of labor in Stage II. High anxiety can lead to ineffective uterine contractions , thus prolonging the duration of labor . This study aims to determine the relationship between the level of anxiety in pregnancy women with the duration of labor during stage II at the Bara- Baraya Makassar Health Center in 2024. This study used an observational analytics design with a cross-sectional approach . The research sample was pregnant women who underwent normal labor at the Bara- Baraya Health Center, which was selected using purposive sampling technique . Measurements of anxiety level was carried out with the DASS-42 questionnaire , while data on the duration of labor at stage II was obtained from the patient's medical record . Data analysis was performed using the Likelihood Ratio statistical test . Data analysis showed a relationship between the anxiety level pregnant women and the duration of labor in Stage II. Mothers with a higher level of anxiety trend to experience longer second stage of labor than mother with a lower level of anxiety . Anxiety in pregnant women affects the duration of labor in Stage II. Therefore , effective interventions are needed in the psychological management of pregnant women to reduce anxiety and facilitate the labor process .

Corresponding Author:
Fahad Ahmad Hudzaif Ridwan
Student of Medical Education Study Program, Faculty of Medicine, UMI, RSP Ibnu Sina YW-UMI
phdrdwn21@gmail.com

INTRODUCTION

Obstetric diseases and complications are now understood to be caused not only by physical problems, but can also be influenced by psychological causes. Some of them arise or worsen due to psychological disorders. The causes of these diseases and complications can be related to the level of emotional maturity and psychosexual development of a person, which affects

Jurnal Eduhealth
Volume 16, Number 01 2025 DOI 10.54209/eduhealth.v16i01
ESSN 2808-4608 (Online)
https://ejournal.seaninstitute.or.id/index.php/healt

their ability to adapt to certain situations, such as pregnancy, childbirth, and the role of parenthood, especially the mother.[1,2]

Since the discussion of labor pain has long been a topic among women, many pregnant women feel afraid and anxious when facing the process of pregnancy and childbirth. This is an effort for doctors or birth attendants to pay attention not only to the physical aspect, but the emotional aspect also needs to be considered.[3]

Uncontrolled anxiety during pregnancy before the labor process can cause tension, difficulty relaxing the body, fatigue, or even endanger the health of the fetus while still in the mother. The body's muscles tense up due to this condition, especially the muscles in the uterine path, which become hard and stiff, making it difficult to expand. In addition, erratic emotions can worsen the pain. Pregnant women need to be calm before giving birth so that the labor process can run smoothly. Labor will run more smoothly if women are more comfortable during labor.[3,4]

Based on data from the 2020 Indonesian Health Profile, there were 5,256,483 pregnant women recorded in various health care facilities throughout Indonesia. South Sulawesi is in sixth place as the province with the highest number of pregnant women, namely 185,004 people, with Makassar City being the area with the largest number of pregnant women in the province, reaching 30,990 people. More than half or around 54% of pregnant women tend to experience psychological changes in the form of anxiety during pregnancy. So, this is the background for researchers to conduct research related to the relationship between anxiety levels and the length of the second stage at the Bara- Baraya Health Center, Makassar.[5,6]

RESEARCH METHODS

This research is observational analytical in nature using a *cross-sectional approach. Sectional* . The study was conducted at the Bara- baraya Health Center , Makassar. The study was conducted from August to November 2024. The population in the study was 41 mothers. And the sample in this study was 37 samples. The sampling technique for this study was *purposive sampling,* which was based on predetermined criteria. The primary data collection instrument used a modified DASS-42 questionnaire to assess the level of anxiety during pregnancy. In secondary data, namely the recording of the duration of labor stage 2 in the medical record. The data that has been collected is input into *Excel* and analyzed using the SPSS 27 program. Data analysis was carried out descriptively and analytically. Descriptively, the data is presented in the form of a frequency distribution table accompanied by explanations and percentages. Meanwhile, to analyze the relationship between the level of anxiety and the length of labor stage 2 using the likelihood test ratio .

RESULTS AND DISCUSSION

Results

Table 4.1. Respondent Characteristics Based on Age

Age	Frequency (n)	Percentage
< 21 Years	5	13.5%

Jurnal Eduhealth
Volume 16, Number 01 2025 DOI 10.54209/eduhealth.v16i01
ESSN 2808-4608 (Online)
https://ejournal.seaninstitute.or.id/index.php/healt

Age	Frequency (n)	Percentage
21 – 35 Years	27	73.0%
> 35 Years	5	13.5%
Amount	37	100%

Source: Secondary Data, 2024

Based on table 4.1, the characteristics of respondents related to age, the majority of respondents were aged 21-35 years, as many as 27 mothers (73.0%).

Table 4.2. Respondent Characteristics Based on Occupation

Work	Frequency (n)	Percentage
housewife	36	97.3%
Private sector employee	1	2.7%
Amount	37	100%

Source: Secondary Data, 2024

Based on table 4.2, the characteristics of respondents related to work, the majority of respondents have the status of work as housewives (IRT) as many as 36 mothers (97.3%).

Table 4.3. Respondent Characteristics Based on Last Education

Education	Frequency (n)	Percentage
SD	6	16.2%
JUNIOR HIGH SCHOOL	11	29.7%
SENIOR HIGH SCHOOL	20	54.1%
Amount	37	100%

Source: Secondary Data, 2024

Based on table 4.3, the characteristics of respondents related to their last education, the majority of respondents had a last education history of high school, as many as 20 mothers (54.1%).

Table 4.4. Parity Distribution of Respondents

Parity	Frequency (n)	Percentage
Multigravida	26	70.3%
Primigravida	11	29.7%
Amount	37	100%

Source: Secondary Data, 2024

Based on table 4.4, the distribution of respondents' parity status is mostly multigravida. Multigravida parity has 26 respondents (70.3%).

Table 4.5. Distribution of Respondents' Anxiety Levels

Anxiety Level	Frequency (n)	Percentage
There isn't any	15	40.5%
Light	7	18.9%
Currently	8	21.6%

Jurnal Eduhealth
Volume 16, Number 01 2025 DOI 10.54209/eduhealth.v16i01
ESSN 2808-4608 (Online)
https://ejournal.seaninstitute.or.id/index.php/healt

Anxiety Level	Frequency (n)	Percentage
Heavy	7	18.9%
Amount	37	100%

Source: Primary Data, 2024

Based on table 4.5, it describes the level of anxiety of respondents during pregnancy who gave birth at the Bara- Baraya Health Center in 2024. The data results were obtained through the modified DASS-42 questionnaire (secondary data), There were 15 mothers (40.5%) who had no anxiety (normal). Mothers who experienced mild anxiety were 7 mothers (18.9%). Mothers who experienced moderate anxiety were 8 mothers (21.6%). And severe anxiety was 7 mothers (18.9%).

Table 4.6. Distribution of Time Period of 2 Respondents

Old Time 2	Frequency (n)	Percentage
Normal	28	75.7%
Elongated	9	24.3%
Amount	37	100%

Source: Secondary Data, 2024

Based on table 4.6, it describes the distribution of the duration of the second stage of labor at the Bara- Baraya Health Center , Makassar in 2024. The data results were obtained through medical records (primary data), the results of the normal duration of the second stage were 28 respondents (75.7%) and the results of the prolonged duration of the second stage were 9 respondents (24.3%).

Table 4.7. Analysis of the Relationship between Respondents' Anxiety Levels and the Duration of Second Stage of Labor at the Bara- baraya Health Center , Makassar

Anxiety level	Old Time II				Total		P- Value
	Normal		Elongated				
	n	%	n	%	n	%	
There isn't any	15	100	0	0	15	100	0.000
Light	7	100	0	0	7	100	
Currently	6	75.0	2	25.0	8	100	
Heavy	0	0.0	7	100	7	100	
Total	28	75.7	9	24.3	37	100	

(Source: Data Processed with SPSS, 2024)

Based on Table 4.7, the length of the second period is divided into normal and prolonged periods. The number of respondents in the normal period of the second period was 28 mothers (75.7%) with the majority of respondents, 15 mothers (100%) who did not experience anxiety. However, some of them had respondents who had anxiety, namely mild anxiety with a total of 7 mothers (100%) and moderate anxiety with 6 mothers (75%). Meanwhile, in the prolonged period of the second period, there were 9 mothers (24.3%) with

Jurnal Eduhealth
Volume 16, Number 01 2025 DOI 10.54209/eduhealth.v16i01
ESSN 2808-4608 (Online)
https://ejournal.seaninstitute.or.id/index.php/healt

the majority of respondents, 7 mothers (100%) who experienced severe anxiety and respondents who experienced moderate anxiety, numbering 2 respondents (25.0%). In the *chi-square analysis test square* contains an analysis of *expected results count* less than 5 while fisher results exactly test is not in the 2x2 table, so the results refer to the *likelihood test ratio* with a *p value* of 0.000 ($p < 0.05$). So the results of the hypothesis obtained H0 are rejected and H1 is accepted, which means there is a significant relationship between the level of anxiety and the length of period 2.

Discussion

Discussion of Respondent Characteristics

Based on research conducted at the Bara- baraya Health Center , Makassar, the research sample consisted of 37 mothers in labor with characteristics categorized based on age, occupation, last education and parity status. From the results of the study, it is known that the majority of respondents are aged 21-35 years. This result is in line with the research of Siallagan D (2018) at the Jombang Health Center, the age distribution in this study was divided into at-risk ages (<20 and >35 years) and non-risk ages (20-35 years). With the majority of non-risk ages (20-35 years) amounting to 117 people (95.1%). This is because the level of maturity of a woman is at the age of 20-35 years, both in terms of reproductive organs and psychology. Meanwhile, at the risk age (<20 and >35 years) tends to be less. At the age of <20 years, the condition of the reproductive organs and psychology is not mature. Meanwhile, at the age of >35 years, it is a vulnerable age for childbirth, because the condition is no longer as good as that of mothers aged 20-35 years.[7]

Based on occupation, almost all of the study samples had a job status of housewives with a total of 36 people (97.3%). The results of this study are in line with Selina (2023) showing that most mothers who gave birth at the Long Ikis Health Center had a job status of housewives totaling 28 people (73.7%). This shows that the majority of respondents who have jobs as housewives (IRT) have an influence on knowledge, including knowledge obtained through the workplace. Individuals who work outside the home are more likely to obtain information and knowledge than those who work as housewives (IRT). Less data obtained combined with the busyness of the mother's household will undoubtedly have limited options for obtaining more information for their health.[8]

Based on the last education history, the majority of the samples had a high school education with a total of 20 people (54.1%). The results of this study are in line with research conducted by Hidayat S (2013) which showed that the majority of the last education level was high school/Islamic high school (56.5%). The education industry aims to have a positive impact on individual attitudes and behavior by reducing the influence of negative culture. Mothers' negative views on life challenges, such as pregnancy and childbirth preparation, can be eliminated through education. Education plays a role as the main foundation in delivering and receiving information that is continuously updated. In addition, education is able to instill a positive understanding that can change the concept of the mother's personality. Over time, the mother's coping mechanisms become more stable and can be adjusted through appropriate adaptive responses to anxiety. The knowledge gained from education can also

Jurnal Eduhealth
Volume 16, Number 01 2025 DOI 10.54209/eduhealth.v16i01
ESSN 2808-4608 (Online)
https://ejournal.seaninstitute.or.id/index.php/healt

form healthy behaviors that support the mother's physical and mental health, thereby maintaining the consistency of the mother's adaptive response to anxiety.[9]

Based on parity status, in this study the parity status of the most samples was multigravida with a sample size of 26 people (70.3%). This study is in line with the study conducted by Hidayati H (2011) at the Tegalrejo Health Center in Yogyakarta which showed that the largest number of respondents in her study were multiparas with 103 respondents (59.2%). Based on these results, it supports the theory that explains that in the multipara category, the possibility of experiencing a risk of labor process tends to be small.[10]

Discussion of the Relationship between Respondents' Anxiety Levels and the Duration of the Second Stage of Labor

Childbirth is a profound experience that affects physical, psychological, social, and existential aspects , both in the short and long term. This process leaves a strong and deep impression on women. The impact can be an empowering and positive experience, or conversely, a traumatic and negative experience.11

The labor process can be influenced by psychosomatic factors, where many psychic elements play a role in the smoothness or delay of the process. Psychological factors are one of the important aspects that greatly affect the smoothness of the labor process. Anxiety, tension, feelings of insecurity, or worry often arise due to the perception of unpleasant things. However, the source of these feelings is generally not clearly known and comes from within (intra-psychic). This condition can cause tension in the muscles of the birth canal, which leads to a longer labor process or a prolonged second stage.12

Based on the results of the cross-tabulation test, a significant relationship was found between anxiety levels and the duration of the second stage ($p = 0.000$). These results are in line with research conducted by Mutmainnah et al. (2021) at BLUD RSU Tenriawaru, Bone Regency, where out of 53 respondents, 45 mothers (84.9%) experienced fast/normal second stage duration , of which 44 respondents experienced moderate anxiety and 1 respondent experienced severe anxiety. Meanwhile, 8 mothers (15.1%) experienced long second stage duration , of which 7 respondents experienced severe anxiety and 1 respondent experienced moderate anxiety.13,14

Labor-related anxiety is gaining attention, with approximately 5 to 20% of pregnant women experiencing fear of childbirth. Several factors contribute to this increased anxiety, including young maternal age, primiparity , pre-existing psychological problems, lack of social support, and a history of abuse or malpractice . Anxiety and fear can lead to increased plasma catecholamine levels, which at high levels can affect uterine contractility and prolong the second stage of labor.14

The labor process will always be accompanied by pain. This pain will stimulate the respiratory system causing hyperventilation and oxygen consumption, respiratory alkalosis, and decreased blood flow to the fetus. During labor, pain, anxiety, and stress can trigger the release of higher catecholamines and cortisol into the bloodstream. This pain and anxiety also activate the sympathetic nervous system , triggering a series of physiological responses that begin with the release of corticotropin- releasing hormone (CRH). CRH stimulates the

pituitary gland to release adrenocorticotropic hormone (ACTH), which then encourages the production of stress hormones, namely glucocorticoids , from the adrenal cortex. This increase in glucocorticoids has a negative impact on uterine contractions, causing a longer duration of labor.[12,14]

CONCLUSION

Based on the description above , the researcher concluded that the results of the study on mothers who experienced severe anxiety tended to experience prolongation of the second stage. Thus, anxiety experienced during pregnancy should not be ignored because if not handled properly, anxiety will worsen as the labor process approaches. It is hoped that the community will pay more attention to mental health conditions, especially in pregnant women, by providing adequate emotional and psychological support. Awareness of the importance of mental health during pregnancy can help reduce excessive anxiety, so that the labor process can proceed more smoothly.

REFERENCE

1. Prawirohardjo S. *Ilmu Kebidanan Sarwono Prawirohardjo*. 4th ed. PT Bina Pustaka; 2008.
2. Obstetri Patologi FK Unpad Ed 3.
3. Slade P, Sheen K, Weeks A, et al. Do stress and anxiety in early pregnancy affect the progress of labor: Evidence from the Wirral Child Health and Development Study. *Acta Obstet Gynecol Scand*. 2021;100(7):1288-1296. doi:10.1111/aogs.14063
4. Bayrampour H, Ali E, McNeil DA, Benzies K, MacQueen G, Tough S. Pregnancy-related anxiety: A concept analysis. *Int J Nurs Stud*. 2016;55:115-130. doi:10.1016/J.IJNURSTU.2015.10.023
5. Kemenkes RI. Profil Kesehatan Indonesia Tahun 2020. Published online 2021:97-119.
6. Aprillia Fadila V, Haruna N, Setiawati D, Hakim A. Hubungan Dukungan Keluarga dengan Tingkat Kecemasan dalam Mempersiapkan Persalinan pada Ibu Hamil Primigravida Trimester III di RSIA Sitti Khadijah 1 Makassar. 2024;07(1):9-19.
7. Siallagan D, Lestari D. Tingkat Kecemasan Menghadapi Persalinan Berdasarkan Status Kesehatan, Graviditas dan Usia di Wilayah Kerja Puskesmas Jombang. *Indonesian Journal of Midwivery*. 2018;1(2):104-110. http://jurnal.unw.ac.id/index.php/ijm
8. Selina, Rahman G, Wahyuni R. Pengaruh Pengetahuan dan Sosial Budaya dalam Keluarga terhadap Pemilihan Tempat Persalinan di Wilayah Kerja Puskesmas long Ikis. *Journal of Comprehensive Science*. 2023;2(1):306-315.
9. Hidayat S, Sumarni S. Kecemasan Ibu Hamil dalam Menghadapi Proses Persalinan. *Jurnal Kesehatan "Wiraraja Medika."* Published online 2013.
10. Hidayati HFL, Hikmah. *Hubungan Paritas Dengan Lama Persalinan Kala II Di Puskesmas Tegalrejo Yogyakarta Tahun 2011*.; 2011.

11. Olza I, Leahy-Warren P, Benyamini Y, et al. Women's psychological experiences of physiological childbirth: a meta-synthesis. *BMJ Open*. 2018;8(10):e020347. doi:10.1136/BMJOPEN-2017-020347
12. Gündoğdu G, Eryilmaz G. The Effect of Anxiety Experienced in The Last Trimester of Pregnancy on Anxiety and Pain during Childbirth. *Journal of Women's Health Nursing*. 2023;9:114-126.
13. Mutmainnah, Novianti I. Hubungan Tingkat Kecemasan dengan Lama Persalinan Kala II pada Ibu Inpartu di BLUD Tenriawaru Kabupaten Bone Tahun 2016. *Jurnal Ilmiah Mahasiswa Kesehatan*. 2021;6(1).
14. Adams SS, Eberhard-Gran M, Eskild A. Fear of childbirth and duration of labour: A study of 2206 women with intended vaginal delivery. *BJOG*. 2012;119(10):1238-1246. doi:10.1111/j.1471-0528.2012.03433.x