Hardiness and Resilience in Women Who have Spontaneous Abortions

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Abstract. *Women who experience spontaneous abortion result in various psychological impacts. To overcome this, they must have a hardiness that can help individuals become strong and resilient in the face of complex events to survive and become resilient. This study aims to examine the relationship between hardiness and resilience in women who experience spontaneous abortion. The research method used is quantitative correlation design. Participants in this study were 117 women who had spontaneous abortions using the accidental sampling technique. The measuring instruments in this study used the Hardiness scales (α = 0.857) and Adult Resilience Scale (α = 0.920). The correlation test results showed a significant positive relationship between hardiness and resilience (r = 0.256 and sig. = 0.003), indicating that hardiness is one of the factors that has a relationship with strength. The higher the hardiness, the higher the resilience in the life of women who have experienced spontaneous abortion. The character of hardiness must continue to be formed by getting used to the dynamics of every challenge that exists to help individuals be resilient to face every difficult period in life.*
Keywords: *Hardiness, resilience, woman, spontaneous abortion.*

Introduction

As women enter early adulthood, they will face developmental tasks that will determine the future of life, especially in marriage and family life. Developmental tasks in early adulthood, among others, are choosing a companion, forming a family, having and caring for children, and managing the household (Hurlock, 1980). Women who have grown up and set out to get married, most of them want to be able to have children. New married couples will highly anticipate The child's presence (Cathlin et al., 2019). The same applies to those who have been married for a long time but have not been blessed with a child. For most women, being a mother is both a gift and a responsibility.

It is not uncommon for some women when the pregnancy process occurs to experience problems (Natasya, et al., 2019). Problems that generally occur in women when entering early

pregnancy are experiencing urinary tract infections, ulcers, nausea, anemia, abortion, wine pregnancy, and so on (Yuliana et al., 2021). Of the many problems of pregnancy, not infrequently among them can result in miscarriage or, in medical terms, spontaneous abortion.

Spontaneous abortion is the end of the pregnancy process naturally, with a gestational age of less than 20 weeks (Alves & Rapp, 2020). The occurrence of spontaneous abortion is very feared by pregnant women because it often occurs suddenly without a known cause (Due et al., 2018). The loss of a child or fetus is a heavy event for the women who experience it, so it can interfere with emotional states and increase physiological stress (Hill et al., 2017).

According to WHO, UNICEF, UNFPA World Bank Group, and the United Nations Population Division (2015), data obtained in general 4.2 million abortions that occur in ASEAN each year, with details of 1.3 million performed in Vietnam and Singapore, 750,000-1.5 million performed in Indonesia, 155,000-750,000 performed in the Philippines, and 300,000-900,000 performed in Thailand. In Indonesia, the percentage of spontaneous abortion incidence based on age group was found to be 3.8% at the age of 15-19 years, 5.8% at the age of 20-24 years, 5.8% at the age of 25-29 years, and 5.7% at the age of 30-34 years (Yanti, 2018).

Kulathilaka et al. (2016) found that women's depression levels increased by 18.6% after spontaneous abortion, resulting in feelings of deep loss and self-blame. Research results Farren, et al. (2016) showed that as many as 20% of women after a spontaneous abortion have moderate to severe anxiety, but anxiety and depression can decrease within a span of one to three months, but still experience symptoms associated with post-traumatic stress disorder (PTSD). Supported by the results of research from DeMontigny et al. (2020) that women after experiencing spontaneous abortion have high levels of sadness and anxiety on average in the moderate category, and many women experience high levels of depression.

Following up on this, the researchers conducted pre-study interviews with three early adult women who had spontaneous abortions starting on May 23-25, 2022. The three informants gave information that the cause of their spontaneous abortion was due to the weak condition of the womb, and the fetus could not develop or grow. The informants experienced severe abdominal pain accompanied by the appearance of black spots and bleeding before finally being delivered to the hospital and given a curettage action. The physical impact felt after having a spontaneous abortion and undergoing a curettage procedure is that the informants feel weak, have pain in the abdomen, and cannot lift heavy loads. Hence, it takes time to rest entirely because recovery is

quite long. In addition, the psychological impact felt is deep sadness, fear of getting pregnant again and experiencing repeated events, and trauma.

The emergence of feelings of sadness, anxiety, fear, guilt, depression, and even trauma will cause psychological health problems for women who experience spontaneous abortion. After experiencing spontaneous abortion, these women usually become more sensitive (Ayu, 2012). In difficult times, they must still live their lives because experiencing spontaneous abortion can be an event that can put women in a dilemma for themselves and their roles (Natasya et al., 2019). To overcome grief or trauma, it takes strength from within to be able to survive and face the difficulties experienced. Resiliency is the strength that can bring the individual to a point (Ayu, 2012). The research results from Russo et al. (2012) revealed that individuals who have resilience will have a strong determination ability, can adapt, and survive positively to recover from adversity or trauma.

Resilience is an individual's resilience, which includes a determination to survive, adapt, and recover from difficulties experienced (Taormina, 2015). The dimension that forms personal resilience is within the individual, formed from determination, endurance, adaptability, and recuperability (Taormina, 2015). Individuals with a low level of resilience impact adaptability when experiencing problems, and it is challenging to rise from the problems faced, the emergence of stress, and even emotional and behavioral disorders (Susanto & Soetjiningsih, 2021). In contrast, individuals with high levels of resilience can decrease the factors that cause psychological problems that generate stress and anxiety, thus improving their quality of life (Cosco et al., 2017). The results of research from Ayu (2012) found that women who have experienced spontaneous abortion have a level of resilience in the high and medium categories, where they can control impulsive attitudes that exist in themselves by controlling themselves and thinking positively in interpreting a traumatic event so that they can become more assertive and optimistic individuals in life. In line with that, Aburn et al. (2016) mentioned factors that can affect the achievement of resilience, including self-extension, repressive coping, positive emotions, and hardiness. Hardiness is considered to be one of the essential factors that need to be explored in this study to see an increase in resilience in women who experience spontaneous abortion.

Hardiness contributes to increased resilience and is essential in maintaining individual well-being (Menon & Yogeswarie, 2015). *Hardiness* is a personality characteristic that helps individuals become vital to face all life events that are full of pressure and can overcome it (Kobasa, 1979). Hardiness can be formed from within the individual through commitment,

control, and challenge (Kobasa, 1979). Therefore, individuals who have hardiness tend to react positively when experiencing events that can cause stress. According to Khaledian et al. (2013), individuals with low hardiness have a greater risk of pathological factors in the long term.

Meanwhile, individuals with high hardiness will have resistance from within themselves to factors that cause stress. Individuals with hardiness can also commit to turning difficult situations into opportunities for growth and Development (Lo Bue et al., 2018). Therefore, hardiness can be a significant controller or "mediator" when there is pressure or stress (Bartone et al., 2012).

Hardiness is one of the variables related to fostering resilience in individuals. Individuals with a hardy personality will divert difficult situations into opportunities to grow and develop in adapting to the environment. Lo Bue et al. (2018) argue that hardiness in individuals can help increase their resistance to stress. Then, in resilience, there is also the ability of endurance that individuals need to survive in unpleasant or difficult situations (Taormina, 2015). Therefore, both have a connection to increase the ability of resilience so that hardiness can help increase resilience in individuals.

Menon & Yogeswarie (2015) found a significant correlation between the level of 0.01 between hardiness and resilience in mothers with children with special needs, where resilience is also high when hardiness is high. In line with the results of a study conducted by Mohatashami, et al. (2015), it was found that hardiness and resilience have a positive and significant relationship ($p<0.001$ and $\beta=0.34$). Then, the results of a study by Bafroe et al. (2015) showed significantly correlated hardiness and resilience in Type 2 diabetes patients. On the other hand, research conducted by Setyanugraha (2019) found that there was no significant positive relationship between the hardiness and resilience of cyberbullying victims ($r = 0.045$ $p = 0.689$).

Based on the phenomenon and the results of previous research, hardiness and resilience are essential, especially in women who have had spontaneous abortions. This is so that they can survive in overcoming trauma or difficult times experienced so that they can recover from their depression and re-arrange their lives. Spontaneous abortion is an event that can cause not only abnormalities in the physical but also psychological condition. Thus, the purpose of this study was to determine the relationship between hardiness and resilience in women who experience spontaneous abortion. Then, the hypothesis proposed is that there is a positive relationship between hardiness and resilience in women who experience spontaneous abortion.

Methods

This study uses a quantitative approach with a correlational design to investigate and test the relationship between hardiness (independent variable) and resilience (dependent variable). The study population was early adult women who had spontaneous abortions. The sampling technique uses accidental sampling with sample criteria, namely early adult women aged 22-40 years who have experienced spontaneous abortion within the last two years but already have children and have been married. Based on the results of data collection, dipole 117 early adult women who experienced spontaneous abortion as study participants. The data collection method was carried out by spreading the scale of the study through Google Forms to the followers of the Instagram account of the community of women who have experienced spontaneous abortions starting in August-October 2022. Overall demographic data are presented in Table 1.

Table 1.
Demographic Data of Research Participants

Description		Frequency	Percentage
	22-27 years old	47 people	40
Age	28-34 years old	51 people	44
	35-40 years old	19 people	16
	1-5 years old	65 people	56
Duration of marriage	6-10 years old	34 people	29
	10-14 years old	18 people	15
	1-2 months	54 people	46
Miscarriage month	2-4 months	53 people	45
	> 5 months	10 people	9

Research data collection uses two psychological scales: the hardiness scale, compiled by researchers, and the Adult Resilience Scale, compiled by Taormina (2015). The hardiness scale was compiled by researchers who refer to the hardiness aspects of Kobasa (1979), namely commitment, control, and challenge. Each item is designed with two statements, namely favorable and unfavorable. The hardiness scale was then tested for the validity of the constructs and contents by three people experts (2 experts in psychology and one linguist). An example of a hardiness Scale item is "I am an optimistic person in life." From the results of the discrimination power test item hardiness scale, obtained all item meet the criteria ($p>0.30$) with a range of item value of total correlation between 0.344-0.755 and Alpha Cronbach reliability value of 0.857 (very reliable).

The Adult Resilience Scale was compiled by Taormina (2015), which was then translated into Indonesian by researchers and validated by three experts (2 experts in psychology and one

linguist). Each item is created based on determination, endurance, adaptability, and recovery. The resilience scale is designed using only the favorable statement. From the test results of the discrimination power item scale Adult Resilience Scale, all items met the criteria (p>0.30) with a range of item values of the total correlation between 0.378-0.782 with Alpha Cronbach reliability value of 0.920 (very reliable).

Researchers used descriptive data analysis to determine the categorization on the hardiness scale and resilience scale. In addition, the data was obtained by an assumption test consisting of a normality test and a linearity test. Hypothesis testing was conducted using Spearman's Rho correlation analysis to examine the relationship between hardiness and resilience.

Results

Descriptive Analysis Test

Table 2.
Categorization of Hardiness Variables

Interval	Categories	Frequency	Percentage
48 ≤ x ≤ 62	Low	25	21,4
62 ≤ x ≤ 77	Medium	47	40,2
77 ≤ x ≤ 90	Height	45	34,5
Total		**117**	**100**
Min = 48; Max = 90; Mean = 73,34; SD = 10,018			

Based on the results of the test categorization of hardiness variables in Table 2, the lowest score is 48, the highest score is 90, and the average value is 73.34, with a standard deviation of 10.018. Thus, the hardiness of women who experienced spontaneous abortion was mainly in the medium category (N = 47 / 40.2%).

Table 3.
Categorization of Resilience Variables

Interval	Categories	Frequency	Percentage
52 ≤ y ≤ 68	Low	6	5,1
68 ≤ y ≤ 84	Medium	25	21,4
84 ≤ y ≤ 100	Height	86	73,5
Total		**117**	**100**
Min = 52; Max = 100; Mean = 88,51; SD = 10,062			

Based on the test categorization of resilience variables in Table 3, the lowest score is 52, the highest score is 100, and the average value is 88.51, with a standard deviation of 10.062. Thus, the

resilience of women who experienced spontaneous abortion was mainly in the high Category (N = 86 / 73.5%).

Normality Test

Table 4.
One Sample Kolmogrov-Smirnov Test

	Hardiness	*Resilience*
N	117	117
Kolmogorov-Smirnov Z	0,949	1,371
Asymp. Sig. (2-tailed)	0,329	0,046

Based on the results of the normality assumption test in Table 4, the value of K-S-Z on the hardiness variable is 0.949 with GIS. = 0.329 (p>0.05) means the hardiness variable is normally distributed. Meanwhile, the value of K-S-Z on the variable resilience is 1.371 with GIS. = 0.046 (p<0.05) indicates that the resilience variable is not normally distributed, so the correlation test is performed using Spearman's Rho. If the correlation test is not normally distributed, then the correlation test in this study uses the Spearman correlation test (Sugiyono, 2019).

Linearity Test

Table 5.
Anova linearity test

	F	Sig.
Linearity	11,156	0,001
Deviation from Linearity	1,642	0,039

Based on the results of the linearity test in Table 5, we obtained an F-count value of 11.156 with GIS. = 0.001 (p<0.05), which shows that the relationship between hardiness and resilience in women who have spontaneous abortions is linear.

Hypothesis Test

Table 6.
Spearman Correlation Test

			Hardiness	Resiliensi
Spearman's rho	*Hardiness*	*Correlation Coefficient*	1,000	0,256**
		Sig. (1-tailed)	.	0,003
		N	117	117
	Resiliensi	*Correlation Coefficient*	0,256**	1,000
		Sig. (1-tailed)	0,003	.
		N	117	117

Based on the hypothesis test results in Table 6, the Spearman rho correlation value is 0.256 with GIS. = 0.003 ($p<0.01$), which indicates that there is a significant positive relationship between hardiness and resilience in women who had spontaneous abortions. This indicates that the higher the hardiness of people, the higher the resilience possessed by women who experience spontaneous abortion. The Hardiness variable gives a practical contribution value of 6.6% (r^2) on the resilience variable.

Discussion

The results of this study indicate that the hypothesis of the study is accepted, where the hardiness variable has a significant positive relationship with the resilience variable in women who experience spontaneous abortion. The higher the hardiness in the individual, the higher the resilience in his life. The results of this study are supported by previous research from Nuroso & Harsono (2022), who found a significant relationship and direction between hardiness and resilience.

Most of this study's participants have resilience, leading to a high category. The women who participated had every dimension of resilience in terms of determination, endurance, adaptability, and the ability to recover after experiencing spontaneous abortion events that cause difficulties and traumatic experiences. In line with the views of Oshio, et al. (2018), resilience is the ability to adjust after experiencing difficult and potentially traumatic events in life.

Individuals possess good resilience, which makes them able to face difficulties and produce a solid determination to face the impact of these problematic situations (Gmuca et al., 2019). Participants in this study can be said to have pretty good determination, although they have experienced spontaneous abortion events. They remain steadfast in making decisions to determine the goals that must be achieved to reorganize their lives. As stated by Mamahit and

Situmpeople (2016), having a unanimous determination can make individuals determined to achieve a goal.

Endurance is known as an individual's resilience in the face of difficult situations. This is illustrated when the participants were able to go through difficult times after spontaneous abortion so that they were able to survive and struggle to deal with all the physical and mental impacts felt when experiencing the spontaneous abortion event. Participants realized that this abortion incident was a problem that must be borne and dealt with so that the same incident did not happen again. Supported by Haru's opinion (2022), resilience is seen in how individuals can realize their problems and survive and struggle in even the most difficult circumstances.

Luthar (2015) explained that the ability to adapt can reflect resilience in individuals. In the dimension of adaptability, after the spontaneous abortion, the participants showed the ability to be still able to adjust and place themselves in the surrounding environment and adapt to challenging conditions or situations. According to Utami (2017), individuals who can adapt can overcome their difficulties to survive them and try to put themselves in place when facing difficult situations.

Recovery is the last dimension of resilience, which is the ability to rise (recovery) from various difficulties and return to its original or normal condition. The participants had a resilience that was described as being able to heal themselves both physically and mentally from all the effects of spontaneous abortion events that happened to them. According to Keye & Pidgeon (2013), recovering from events can enhance knowledge for adapting and coping with similar adverse situations. Resilience helps them to stay alive and recover from the traumatic event.

The existence of good resilience in women who experience spontaneous abortion in this study is also quite good because the hardiness is also quite good. The results showed that the value of the effective contribution of the hardiness variable was 6.6% against the participants' resilience. In this study, the participants had a hardiness in the category of good enough, where they have commitment and control over themselves and turn difficult experiences into challenges.

Commitment is the individual's ability to remain fully involved in each activity. This ability is possessed by the participants who described that they were able to keep living their daily lives and not blame the circumstances (spontaneous abortion) that had befallen them. This is reinforced by the opinion of Daulay (2017) that individuals with a strong commitment will easily be sincerely involved in any activity they are doing. A reasonable feeling will lead them to identify and give meaning to every incident and everything in their environment. The participants believe

that amid complex events, they must continue carrying out their duties and responsibilities and do their best to achieve life goals.

Control is considered the ability of an individual to control any event or situation in his life. It is owned quite well by the participants. Nuroso & Harsono (2022) argue that situations that occur in life can be conditioned and the holder of control over all possibilities that will occur. Women who experience spontaneous abortion can control the problematic situation experienced so as not to make it worse, so they take advantage of the opportunities available to recover after experiencing spontaneous abortion. Control allows people to take action to transform existing pressures or adverse events into opportunities for self-growth (Maddi, 2013).

Experiencing spontaneous abortion is undoubtedly a disaster and a challenge that makes participants stronger and more mature in order to maintain their physical and mental health better so as not to experience repeated events. In line with this, Silitonga et al. (2017) emphasized that women who have experienced spontaneous abortion will better maintain their health conditions and future pregnancies so as not to experience abortion again. The events faced by the participants are a challenge to face every change in life and make it so that it can develop for the better so as not to consider it an obstacle or threat that will worsen their condition. Swagery et al. (2017) say that when individuals have hardiness in life, they will face every problem in their lives and assess it as a challenge, not a threat or pressure that can trigger the emergence of stress.

Every individual must have experienced some unwanted events, and even these events cause pressure. In this study, participants who had spontaneous abortions stored deep trauma until they had a fear of getting pregnant again. The characteristic of hardiness is essential for them to be resilient in the face of trauma suffered to achieve resilience. Georgoulas-Sherry & Kelly (2019) explain that hardy individuals tend to believe that they can do something to achieve success to overcome the pressure or trauma that occurs in them to make the individual become resilient. Resilience will arise when individuals experience stress or trauma, while hardiness has a role as a resilient individual to overcome trauma and become resilient. Thus, the existence of hardiness is a variable that can help individuals control themselves, survive when problems hit them, and become resilient (Tadayon et al., 2018). This is in line with the results of the study obtained, where when women experience spontaneous abortion, of course, hardiness characteristics are needed to be able to increase resilience in the face of trauma in individuals.

As for the limitations of this study, the results found that the value of the effective contribution of hardiness to resilience is only 6.6%, so the other 93.4% is influenced by factors

not mentioned in this study. It is known that hardiness is only a tiny part that is related to resilience, so there are internal factors from within, such as Hope, self-efficacy, mindset, and optimism, and external factors, such as social support, living environment, husband's role that are not found in this study. However, the results showed that women who had spontaneous abortions had hardiness in a pretty good category. Of course, the existence of hardiness can help increase resilience in individuals, enabling them to survive and overcome complex events to recover from the devastation.

Conclusion

This study concludes that there is a significant positive relationship between hardiness and resilience variables in women who have spontaneous abortions. It can be known where the participants have reasonably high hardiness and resilience, which are classified as high. Having experienced spontaneous abortion is certainly not an experience that is forgotten, so hardiness becomes one of the factors that can help individuals slowly be resilient to face every problem in life.

References

Aburn, G., Gott, M., & Hoare, K. (2016). What is resilience? An integrative review of the empirical literature. *Journal of Advanced Nursing, 72*(5), 980-1000. https://doi.org/10.1111/jan.12888

Alves, C., & Rapp, A. (2020). Spontaneous abortion. *Europe PMC Plus.* Diunduh dari https://europepmc.org/article/nbk/nbk560521#free-full-text

Ayu, I. B. (2012). Resiliensi pada wanita yang mengalami abortus spontanea. *Jurnal Penelitian dan Pengukuran Psikologi, 1*(1), 71–77. https://doi.org/10.21009/jppp.011.10

Bafroe, N. M., Abadi, H. S. E., Jalali, M., Ardakani, M. A., & Dadgari, A. (2015). The relationship between resilience and hardiness in patients with type 2 diabetes in Yazd. *Journal of Shahid Sadoughi University of Medical Sciences, 23*(2), 1858-1865. http://jssu.ssu.ac.ir/article-1-2641-en.html

Bartone, C. O. L. P. T., Hystad, S. W., Eid, C. J., Medical, N., Corps, S., & Brevik, J. I. (2012). Psychological hardiness and coping style as risk / resilience factors for alcohol abuse. *Military Medicine, 177*(5), 517-524. https://doi.org/10.7205/MILMED-D-11-00200

Cathlin, C. A., Anggreany, Y., & Dewi, W. P. (2019). Pengaruh harapan terhadap resiliensi wanita dewasa muda yang pernah mengalami abortus spontan. *Jurnal Psikologi Ulayat, 6*, 1-13. https://doi.org/10.24854/jpu02019-106

Cosco, T. D., Kaushal, A., Hardy, R., Richards, M., Kuh, D., & Stafford, M. (2017). Operationalising resilience in longitudinal studies: A systematic review of methodological approaches. *Journal of Epidemiology and Community Health, 71*(1), 98-104. https://doi.org/10.1136/jech-2015-206980

Connor, K. M., & Davidson, J. R. T. (2003). Development of a new resilience scale: The Connor-Davidson resilience scale (CD- RISC). *Journal of Depression and Anxiety, 18*(2), 76-82. Https://doi.org/10.1002/da.10113

Darvishzadeh, K., & Bozorgi, Z. D. (2016). The relationship between resilience, psychological hardiness, spiritual intelligence, and development of the moral judgement of the female students. *Asian Social Science, 12*(3), 170-176. https://doi.org/10.5539/ass.v12n3p170

Daulay, N. (2017). Gambaran ketangguhan ibu dalam mengasuh anak autis. *Psikohumaniora: Jurnal Penelitian Psikologi, 1*(1), 49-74. https://doi.org/10.21580/pjpp.v1i1.929

DeMontigny, F., Verdon, C., Meunier, S., Gervais, C., & Coté, I. (2020). Protective and risk factors for women's mental health after a spontaneous abortion. *Revista Latino-Americana de Enfermagem, 28*, 1-11. https://doi.org/https://doi.org/10.1590/1518-8345.3382.3350

Due, C., Obst, K., Riggs, D. W., & Collins, C. (2018). Australian heterosexual women's experiences of healthcare provision following a pregnancy loss. *Women and Birth, 31*(4), 331-338. https://doi.org/10.1016/j.wombi.2017.11.002

Farren, J., Jalmbrant, M., Ameye, L., Joash, K., Mitchell-Jones, N., Tapp, S., Timmerman, D., & Bourne, T. (2016). Post-traumatic stress anxiety and depression following miscarriage or ectopic pregnancy: A prospective cohort study. *BMJ Open, 6*(11), e011864. https://doi.org/10.1136/bmjopen-2016-011864

Georgoulas-Sherry, V., & Kelly, D. R. (2019). Resilience, grit, and hardiness: Determining the relationships amongst these constructs through structural equation modeling techniques. *Journal of Positive Psychology and Wellbeing, 3*(2), 165-178. https://mail.journalppw.com/index.php/jppw/article/view/50

Gmuca, S., Xiao, R., Urquhart, A., Weiss, P. F., Gillham, J. E., Ginsburg, K. R., ... & Gerber, J. S. (2019). The role of patient and parental resilience in adolescents with chronic musculoskeletal pain. *The Journal of Pediatrics, 210*, 118-126. https://doi.org/10.1016/j.jpeds.2019.03.006

Haru, E. (2022). Membangun resiliensi dalam diri mahasiswa di masa pandemi COVID19. *Jurnal Alternatif-Wacana Ilmiah Interkultural, 11*(1), 44-60. https://doi.org/10.60130/ja.v11i1.71

Hill, P. W., Cacciatore, J., Shreffler, K. M., & Pritchard, K. M. (2017). The loss of self: The effect of miscarriage, stillbirth, and child death on maternal self-esteem. *Death Studies, 41*(4), 226-235. https://doi.org/10.1080/07481187.2016.1261204

Hurlock, E. B. (1980). *Developmental psychology: A life-span approach.* New Delhi: Tata McGraw-Hill.

Keye, M. D., & Pidgeon, A. M. (2013). Investigation of the relationship between resilience, mindfulness, and academic self-efficacy. *Open Journal of Social Sciences, 1*(6), 1-4. http://dx.doi.org/10.4236/jss.2013.16001

Khaledian, M., Hasanvand, B., & Pour, S. H. (2013). The relationship of psychological hardiness with work holism. *International Letters of Social and Humanistic Sciences, 5*, 1-9. https://doi.org/10.18052/www.scipress.com/ILSHS.5.1

Kobasa, S. C. (1979). Stressful life events, personality, and health: An inquiry into hardiness. *Journal of Personality and Social Psychology, 37*(1), 1-11. https://doi.org/10.1007/BF00263951

Kulathilaka, S., Hanwella, R., & de Silva, V. A. (2016). Depressive disorder and grief following spontaneous abortion. *BMC Psychiatry, 16*(1), 1-6. https://doi.org/10.1186/s12888-016-0812-y

Lestari, Y. I. (2017). Fear of success pada perempuan bekerja ditinjau dari konflik peran ganda dan hardiness. *Jurnal Psikologi, 13*(1), 55-63. https://dx.doi.org/10.24014/jp.v13i1.3090

Lo Bue, S., Kintaert, S., Taverniers, J., Mylle, J., Delahaij, R., & Euwema, M. (2018). Hardiness differentiates military trainees on behavioural persistence and physical performance. *International Journal of Sport and Exercise Psychology*, *16*(4), 354-364. https://doi.org/10.1080/1612197X.2016.1232743

Luthar, S. S. (2015). Resilience in development: A synthesis of research across five decades. *Developmental Psychopathology*: *Volume Three: Risk, Disorder, and Adaptation*, 739-795. https://doi.org/10.1002/9780470939406.ch20

Maddi, S. R. (2013). *Hardiness: Turning stressful circumstances into resilient growth*. Netherlands: Springer. https://doi.org/10.1007/978-94-007-5222-1

Mamahit, H. C., & Situmpeople, D. D. B. (2016). Hubungan self-determination dan motivasi berpretasi. *Jurnal Psikologi Psibernetika, 9*(2), 78-92. http://dx.doi.org/10.30813/psibernetika.v9i2.459

Marisa, P. A. A., & Utami, L. H. (2021). Kontribusi stres kerja dan hardiness pada burnout pekerja. *Jurnal Psikologi Integratif, 9*(1), 29–41.

Menon, P., & Yogeswarie. (2015). Sociability, hardiness and resilience in mothers of differently able children. *International Journal of Scientific Research, 4*(7), 533-535.

Mohatashami, A. R., Tajari, F., & Rad, M. R. A. (2015). Studying the relationship between hardiness and resilience personality traits and academic achievement among students of Kashan University in 2014. *Science Journal, 36*(3), 3294-3301. https://dergipark.org.tr/en/pub/cumuscij/issue/45132/564664

Natasya, S., Suharsono, Y., & Saraswati, P. (2019). Hubungan antara partner support dengan resiliensi pada wanita yang mengalami abortus spontanea. *Cognicia, 7*(3), 333-345. https://doi.org/10.22219/cognicia.v7i3.9206

Nuroso, G. R. I. J., & Harsono, Y. T. (2022). Hubungan antara hardiness dengan resiliensi pada pengusaha muda anggota hipmi cabang kota Malang. *Flourishing Journal, 2*(3), 161-165. https://doi.org/10.17977/um070v2i32022p161-165

Oshio, A., Taku, K., Hirano, M., & Saeed, G. (2018). Resilience and big five personality traits: A meta-analysis. *Personality and Individual Differences, 127*, 54-60. https://doi.org/10.1016/j.paid.2018.01048

Purwaningrum, E. D., & Fibriana, A. I. (2017). Faktor risiko kejadian abortus spontan. *Public Health Research and Development, 1*(3), 84-94. http://journal.unnes.ac.id/sju/index.php/higeia

Putri, A. F. (2018). Pentingnya people dewasa awal menyelesaikan tugas perkembangannya. *SCHOULID: Indonesian Journal of School Counseling, 3*(2), 35-40. https://doi.org/10.23916/08430011

Reivich, K., & Shatte, A. (2002). *The resilience factor: 7 essential skills for overcoming life's inevitable obstacles*. Broadway books.

Resnick, B., Gwyther, L. P., & Roberto, K. A. (2018). *Resilience in aging: Concepts, Research, and Outcomes (ed.2).* New York: Springer International Publishing. https://doi.org/10.3928/02793695-20081101-04

Russo, S. J., Murrough, J. W., Han, M.-H., Charney, D. S., & Nestler, E. J. (2012). Neurobiology of resilience. *Nature Neuroscience, 15*(11), 1475-1484. https://doi.org/10.1038/nn.3234

Sadeghi, A., & Einaky, S. (2021). Relationship between psychological hardiness and resilience with mental health in athlete students in the Guilan Unit of University of Applied Science and Technology. *Sociology Mind, 11*(1), 10-24. https://www.scirp.org/journal/paperinformation.aspx?paperid=105705

Setyanugraha, B. (2019). Hubungan antara efikasi diri dan ketangguhan (hardiness) dengan resiliensi pada remaja korban cyberbullying. *Naskah tidak dipublikasikan*. Surabaya: Universitas 17 Agustus 1945 Surabaya.

Silitonga, J. M., Sitorus, R. J., & Yeni. (2017). Faktor-faktor penyebab kejadian abortus spontan di rumah sakit umum pusat Dr. Mohammad Hoesin Palembang. *Jurnal Ilmu Kesehatan Masyarakat, 8*(2), 100-108. https://doi.or/10.26553/jikm.unsri.ac.id/index.php/jikm

Sugiyono. (2019). *Metode penelitian kuantitatif, kualitatif dan R&D*. Bandung: Alfabeta.

Susanto, T. I., & Soetjiningsih, C. H. (2021). Successful aging lansia yang tinggal di panti Wreda: Peran resiliensi dan hardiness. *Psikodimensia, 20*(1), 115-124. https://doi.org/10.24167/psidim.v20i1.3318

Swagery, R. V., Hikmatul, & Husna, A. (2017). Hardiness pada wanita karir single parent yang memiliki anak tunarungu. *Jurnal Psikologi: Mdia Ilmiah Psikologi, 15*(2), 66-73. https://doi.org/10.47007/jpsi.v15i2.23

Tadayon, M., Dabirizadeh, S., Zarea, K., Behroozi, N., & Haghighizadeh, M. H. (2018). Investigating the relationship between psychological hardiness and resilience with depression in women with breast cancer. *The Gulf journal of oncology, 1*(28), 23-30.

Taormina, R. J. (2015). Adult personal resilience: A new theory, new measure, and practical implications. *Psychological Thought, 8*(1), 35-46. https://doi.org/10.5964/psyct.v8i1.126

Utami, C. T. (2017). Self-efficacy dan resiliensi: Sebuah tinjauan meta-analisis. *Buletin Psikologi, 25*(1), 54-65. https://doi.org/10.22146/buletinpsikologi.18419

Wahyuni, I. S., Farida, K., & Raden, A. (2022). Dampak kejadian pasca abortus spontan pada ibu hamIL. *Jurnal Kesehatan, 13*(1), 091–101. https://doi.org/10.24252/kesehatan.v7i2.54

Wahyuni, S., Ngadiyono, & Sumarni, S. (2017). Faktor resiko yang berhubungan dengan kejadian abortus di RSUD Uangaran Jawa Tengah. *Jurnal Kebidanan, 6*(13), 1-11. https://doi.org/10.31983/jkb.v6i13.2864

WHO, UNICEF, UNFPA World Bank Group, & United Nations Population Division. (2015). *Trends in maternal mortality: 1990 to 2015*. Geneva: WHO Press.

Yanti, L. (2018). Faktor determinan kejadian abortus pada ibu hamil: Case control study. *Medisains, 16*(2), 95-100. https://doi.org/10.30595/medisains.v16i2.3002

Yuliana, Y., Paradise, P., & Kusrini, K. (2021). Sistem pakar diagnosa penyakit ispa menggunakan metode naive bayes classifier berbasis web. *CSRID (Computer Science Research and Its Development Journal), 10*(3), 127-138. https://doi.org/10.22303/csrid.10.3.2018.127-138

Zimmerman, D. W., & Zumbo, B. D. (1993). Significance testing of correlation using scores, ranks, and modified ranks. *Educational and Psychological Measurement, 53*, 897-904. https://doi.org/10.1177/0013164493053004003