



ROLE OF NEUROTICISM AND RELATIONSHIP DISILLUSIONMENT BETWEEN GRIEF DUE TO PREGNANCY LOSS AND POST TRAUMATIC GROWTH AMONG AGE GROUPS AND NUMBER OF MISCARRIAGES

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Abstract

The purpose of the present study was to examine the role of neuroticism and relationship disillusionment between grief due to pregnancy loss and post traumatic growth. Sample consisted of young and middle adult women with different number of miscarriages from Sargodha Divisions in Punjab, Pakistan ($N = 200$). A cross-sectional research design and purposive sampling technique was used to collect data. Relationship disillusionment by Niehuis and Bartell (2006), Neuroticism a subscale of Big five inventory by John and Srivastav (1999), Perinatal Grief Scale (Potvin et al., 1989), and post-traumatic growth inventory by Todeschini and Calhoun (1996) were used. The findings indicated that all variables were correlated in the expected directions. Neuroticism moderates and relationship disillusionment meditates the relation of grief due to pregnancy loss and post traumatic growth. The loss of a pregnancy has diverse psychological effect on women and may also have potentially longer-term consequences for fertility. By embarking on a meticulous and comprehensive exploration of the intricate interplay between the profound depths of grief that accompany pregnancy loss, need to develop intervention programs that will help partner to control disillusionment feelings and negative thoughts to improve post traumatic growth of females with grief feeling. one of the focal objectives of this research study was to make a substantial contribution to the profound comprehension of strategies aimed at amplifying the emotional well-being and increase post traumatic growth of women following the heart-wrenching ordeal of pregnancy loss.

Key Words: Neuroticism, Relationship Disillusionment, Grief, Post-traumatic Growth

Introduction

A miscarriage or Pregnancy loss refers to the loss of a baby before the 20th week of pregnancy. Pregnancy loss is an intense emotional experience which affects a woman on multiple levels (Quenby et al., 2021). Losing a baby can trigger a variety of emotions. Initially, one can feel a sense of numbness or disbelief. As time goes on, feelings of anger, sadness, and confusion can arise. An individual can also experience moments of relief or acceptance (Health direct Australia, 2024). The true impact of reproductive loss is often underestimated from a medical perspective. Experiencing traumatic events often results in significant alterations to survivors' perspectives on the meaningfulness, goodness, and safety of their world, leading to a negative shift in fundamental assumptions (Farren et al., 2020). Similarly, a meta-analysis highlighted in the British Journal of Psychiatry revealed that women who had faced a pregnancy loss faced an increased post-traumatic stress disorder who compared to those who hadn't experienced such a tragedy (Henson et al., 2021). In other words, the intense grief that follows can either delay emotional recovery or serve as a catalyst for post-traumatic growth – PTG (Yoon et al., 2023). PTG is a constructive psychological change experienced after a crisis (Henson et al., 2021). It is critical to explore why some women experience growth while others remain stuck in pain (Blackie et al., 2017). Several studies have indicated that intense grief can lead to significant personal growth and transformation. This personal growth or post-traumatic growth is characterized by positive changes in emotional well-being, relationships, and attitudes towards life and death (Taylor, 2012; Yoon et al., 2023). While many have shown that grief of pregnancy loss can be linked with different psychological issues (Sprang & McNeil, 1998; Engelhard et al., 2001; Robinson, 2014). In this context, the connection between grief and post-traumatic growth can be affected by neuroticism and relationship disillusionment (Wallin et al., 2017; Yoon et al., 2023). Typically, individuals with serious mental illness experience trauma more often than the general population (Wang et al., 2019).

Neuroticism is an extensive personality characteristic that indicates the extent to which a person views the world as distressing and unsafe. It ranges from complete emotional stability to intense emotional instability. People with low levels of neuroticism are more confident, emotionally stable, and report fewer health and stress issues. Whereas, those with high neuroticism often experience frequent mood swings, anxiety, and withdrawal. High neuroticism is commonly linked with unhappiness and negative feelings like guilt, anxiety, and depression. It often causes a discomfort in various situations. Research suggests that extreme neuroticism can lead to prolonged distress for both the person and those close to them (Kwon et al., 2024). A study examined the relationship between neuroticism-related personality traits and the development of post-traumatic stress disorder, the results found that women with high scores on neurotic personality traits had a significantly higher risk of developing post traumatic stress symptoms after abortion as compared to those without these traits (Wallin et al., 2017).

Similarly, relationship disillusionment goes beyond simple marital dissatisfaction. It includes feelings of disappointment, regret, and a sense of being defeated. It refers to a sense of disappointment when someone thinks that things are not as wonderful as they initially believed. Therefore, a person might have a belief that there is no hope or possibility left to improve the relationship (Niehuis et al., 2011; Weigel & Shrout, 2021). A grief in relationships can also arise when the idealized image of a partner breaks down which leads to disillusionment. Facing this reality is painful but one can ultimately transform the relationship (Schanfarber, 2015). Grief affects relationships by altering dynamics and causing emotional shifts. According to Finnis (2024), different mourning styles can create misunderstandings and add stress, which would in turn impact the way partners or family members respond to each other. Regarding pregnancy loss grief, a miscarriage may lead to considerable emotional suffering for both women and their spouses (Paton et al., 1999). Nevertheless, if the partners are supportive during grieving, it can increase the likelihood of post-traumatic growth (Yoon et al., 2023). Another investigation found a notable link between relationship disillusionment and

personal growth particularly that was influenced by attachment styles. Individuals with high avoidant attachment experienced greater disillusionment. It led them to increased conflict and reduced satisfaction in relationships with partners and in-laws (Liu et al., 2017). In the present study, we explored the moderating role of neuroticism and mediating role of relationship disillusionment, in association between pregnancy loss grief and post-traumatic growth. The aim of this study was to shed light on the pathways that influence emotional recovery after pregnancy loss.

Various studies have highlighted different factors contributing to miscarriages (Engelhard et al., 2003; Iqbal et al., 2021). According to WHO, threatened miscarriage occurs in about 20% of pregnant women and increases the risk of miscarriage by 2.6 times, with approximately 17% facing additional complications (Iqbal et al., 2024). In Pakistan, the miscarriage rate increased from 6% to 12% between 2015 and 2020 (National Institute of Population Studies, 2008). Out of which, mild to moderate bleeding, cramping, and pelvic pressure are common symptoms, but 50%-60% of cases result in successful pregnancies (Iqbal et al., 2024). Among the major risk factors are age, stress, and obesity. However, there is a need for consensus guidelines for managing miscarriages in Pakistan (Iqbal et al., 2024). Miscarriages also have profound psychological effects, highlighting the need for careful risk assessment (Iqbal et al., 2021). When such losses occur, individuals often experience grief which can later transform to the person's post-traumatic growth (Henson et al., 2021). While in some cases, it may lead to negative outcomes due to various influencing factors. Where different studies have identified various reason, this study identified the moderating roles of neuroticism and mediating role of relationship disillusionment in the relationship between grief from pregnancy loss and post-traumatic growth.

Conceptual Framework

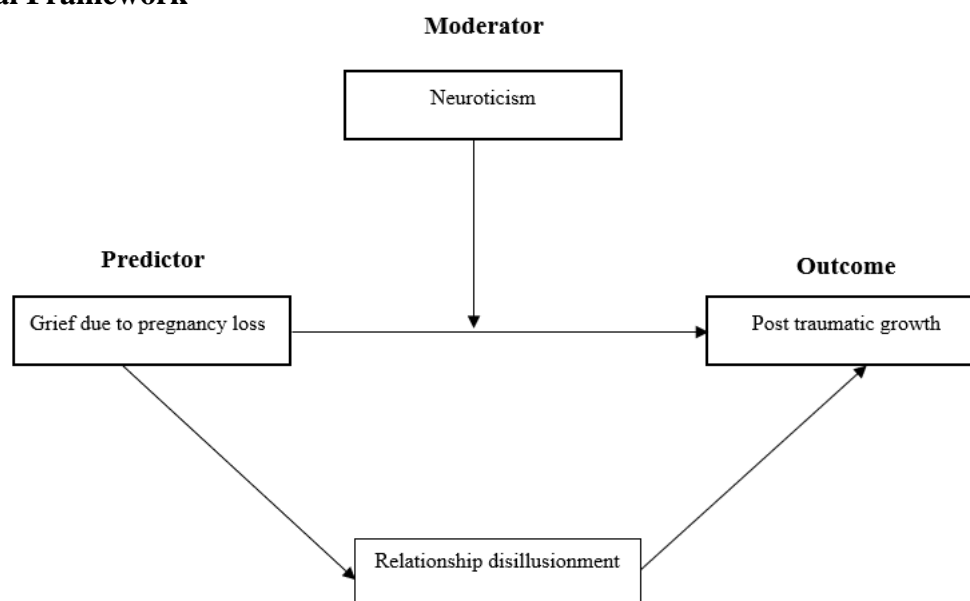


Figure: Conceptual framework illustrating the moderating role of neuroticism and mediating role of relationship disillusionment in association of grief due to pregnancy loss and post traumatic growth.

Hypotheses

- H1. There would be significant negative correlation between grief due to pregnancy loss and post-traumatic growth
- H2. Neuroticism will moderate the relationship between grief of pregnancy loss and post traumatic growth
- H3. Relationship disillusionment will mediate the relationship between grief of pregnancy loss and post traumatic growth
- H4. There would be significant mean differences among age groups in neuroticism, relationship disillusionment, grief due to pregnancy loss, and posttraumatic growth

H5. There would be significant mean differences between groups based on number of miscarriages in neuroticism, relationship disillusionment, grief due to pregnancy loss, and posttraumatic growth

Methodology of the Study

Nature of the Study

This study is based on descriptive quantitative approach. Co relational and Cross-sectional survey research design was used to collect the information to examine the role of neuroticism and relationship disillusionment between grief due to pregnancy loss and post traumatic growth.

Sample and Sampling Technique

Sample of the present study were consisted of young and middle adult women with different numbers of miscarriages from Sargodha Division Punjab, Pakistan ($N = 200$). Purposive sampling technique was used to collect the information. The sample included those who were married and facing miscarriages problems. Also understand English language, and were not facing any serious psychological or physical health issues, and were willing to participate in the study. Informed consent was obtained from the participants before administering the questionnaires.

Data Measuring Tools

Perinatal Grief Scale by Potvin et al. (1989). It consisted of 33 items. The scale is based on negatively phrased items which are rated on a 5-point Likert scale, response pattern ranging from *strongly disagree* = 1 to *strongly agree* = 5. Individual can minimum obtain 33 scores on this scale whereas maximum scores cannot exceed than 165. Obtained scores on this scale were interpreted in terms of low and high scores rather than cut off scores. Original reliability of the scale is .84.

Neuroticism subscale of Big five inventory by John and Srivastava (1999). Neuroticism subscale consisted of 8 items. The scale is based on negatively phrased items which are rated on a 5-point Likert scale, response pattern ranging from *strongly disagree* = 1 to *strongly agree* = 5. Individual can minimum obtain 8 scores on this scale whereas maximum scores cannot exceed than 40. Obtained scores on this scale were interpreted in terms of low and high scores rather than cut off scores. 3 items of neuroticism scales are reverse scoring items (1, 5, 7). Original reliability of the scale range .79 to .88.

Marital disillusionment scale developed by Niehuis and Bartell (2006). It consisted of 16 items. The scale is based on negatively phrased items which are rated on a 5-point Likert scale, response pattern ranging from *strongly disagree* = 1 to *strongly agree* = 5. Individual can minimum obtain 16 scores on this scale whereas maximum scores cannot exceed than 80. Obtained scores on this scale were interpreted in terms of low and high scores rather than cut off scores. Original reliability of the scale is .98.

Post-traumatic growth inventory by Todeschini and Calhoun (1996). It consisted of 21 items. The scale is based on positively phrased items which are rated on a 6-point Likert type scale, response pattern ranging from *I did not experience this change as a result of my crisis* = 0 to *I experienced this change to a very great degree as a result of my crisis* = 5. Individual can minimum obtain 0 scores on this scale whereas maximum scores cannot exceed than 105. Obtained scores on this scale were interpreted in terms of low and high scores rather than cut off scores. Original reliability of the scale is .84.

Analyses

Multiple statistical analyses were conducted on SPSS. Descriptive statistics were calculated to summarize key variables. Correlation analysis explored the relationships between variables. Moderation model run to check the role social peer rejection and mediating analysis run to check the role of relationship disillusionment between grief due to pregnancy loss and post traumatic growth.

Results

Table 01 Mean, Standard deviation and Pearson correlation of Grief due to pregnancy loss, Neuroticism, Relationship Disillusionment and Post-traumatic Growth.

Variables	<i>M</i>	<i>SD</i>	<i>a</i>	1	2	3	4
Grief due to pregnancy loss	96.12	33.13	.79	---	.67***	.39***	-.43***
Neuroticism	20.80	7.12	.78		---	.31***	-.41***
Relationship disillusionment	35.25	17.92	.73			---	-.49***
Post-traumatic growth	59.34	19.88	.84				
Skewness				-.66	-.53	.56	-.32

N = 200

P* < .05, ** *P* < .01, * *P* < .001

Table 02 Moderation of Neuroticism between Grief due to pregnancy loss and Post-traumatic Growth

Variables	Model 1			Model 2		
	<i>B</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>B</i>	<i>SE</i>
Constant	59.34***		1.24	64.85***		1.74
Grief	-5.16**	-.27**	1.67	-9.01***	-.45***	1.83
Neuroticism	-5.04**	-.25**	1.67	-4.95**	-.24**	1.61
Grief x neuroticism				-8.32***	-.33***	1.90
<i>R</i> ²	.47***			.54***		
ΔR^2				.07***		

Note: *N* = 200, ****p* < .01, ***p* < .01, **p* < .05

Table 03 Direct and Indirect Effect of grief on post traumatic growth through relationship disillusionment

Variable	<i>B</i>	95% <i>CI</i>	<i>SE B</i>	<i>B</i>	<i>R</i> ²	ΔR^2
Step 1					.18	.18***
Constant	84.06***	[76.33, 91.78]	3.91			
Grief due to pregnancy loss	-.26***	[-.33, -.18]	.04	-.43***		
Step 2					.30	.12***
Constant	90.56***	[83.97, 97.99]	3.76			
Grief due to pregnancy loss	-.17***	[-.24, -.09]	.04	-.28***		
Relationship disillusionment	-.43***	[-.56, -.29]	.07	-.39***		

Note: *N* = 200, *CI* = confidence interval, ****p* < .001, ***p* < .01, **p* < .05

Table 04 Mean, Standard Deviation and *t*-values of Age groups on Grief due to pregnancy loss, Neuroticism, Relationship Disillusionment and Post-traumatic Growth

Variables	Young adults (<i>n</i> = 91)		Middle adults (<i>n</i> = 109)		<i>t</i> (198)	95% <i>CI</i>		Cohens'd
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		LL	UL	
Grief due to pregnancy loss	77.65	33.59	111.55	23.55	-8.36***	-	-	1.16
Neuroticism	17.45	7.36	23.60	5.56	-6.71***	41.89	25.90	.94
Relationship disillusionment	28.63	14.64	40.79	18.58	-5.06***	-7.95	-4.34	.72
Post traumatic growth	63.47	20.03	55.89	19.18	2.72**	-	-7.42	.38

Note: *N* = 200, ****p* < .001, ***p* < .01, **p* < .05

Table 05 *One-way ANOVA of Numbers of Miscarriages on Grief due to pregnancy loss, Neuroticism, Relationship Disillusionment and Post-traumatic Growth*

Variables	One (n = 59)		Two (n = 85)		More than 2 (n = 56)		F	η^2	Post hoc
	M	SD	M	SD	M	SD			
Grief of pregnancy loss	59.97	23.49	105.54	28.54	119.93	5.33	112.36***	.53	1<2<3
Neuroticism	14.80	6.20	22.53	6.33	24.50	4.95	44.56***	.31	1<2<3
Relationship disillusionment	25.46	10.97	36.39	18.41	43.86	18.35	18.04***	.16	1<2<3
Post traumatic growth	71.29	18.32	56.75	19.40	50.68	16.18	19.84***	.17	1>2>3

Note: N = 200, ***p < .001, **p < .01, *p < .05

Discussion

In Pakistani culture, marriage signifies a lifelong commitment. After marriage, partners are expected to make decisions jointly and share responsibilities equally. Key elements such as fairness, balance, care, quality time, and love are essential for a strong relationship. These factors promote and reinforce their bond (Hussain, 2024). This lifelong relationship can sometimes prove detrimental for both partners, particularly when they fail to understand each other. After experiencing a pregnancy loss, both partners should prioritize personal growth and mutual support (Yoon et al., 2023). However, if neuroticism or relationship disillusionment arises during such times, it can severely impact the connection between pregnancy loss grief and post-traumatic growth.

The connection between grief and relationship disillusionment can be explained as; disillusionment occurs when partners face the reality of their relationship, and it highlights the emotional pain (grief) experienced when the fantasy of a perfect partner or ideal relationship crumbles. Where, accepting this reality can lead to deep disappointment, sadness, and anger. However, it is suggested that this grief is a transformative process and it helps individuals see their partner clearly. Moreover, it confronts the disillusionment, and possibly grow through it (Schanfarber, 2015). The hypotheses of the current study were accepted by the findings which revealed that there was a significant negative relationship between grief of pregnancy loss and post-traumatic growth. Besides, when neuroticism moderated this relationship, it further had a detrimental effect on post-traumatic growth. Similarly, when relationship disillusionment acted as a mediator, it also enhanced the negative impact of grief on post-traumatic growth. Literature also supported the findings. Post-traumatic growth involves positive personality changes after negative events. Close relationships, especially romantic partners, can influence PTG. Three studies in different countries examined post-traumatic growth in individuals and their partners. Results showed that both personal and partner's negative events rarely led to positive changes. Relationship factors like support and satisfaction did not impact personality change much (Purol, 2024).

Pregnancy loss grief involves intense sorrow, anxiety, guilt, and self-blame that can impact women long-term (Robinson, 2014). A study highlighted that grief and PTSD responses share common predictors after the death of a family member. In other words, grief and PTSD are influenced by similar factors, and it further indicates that separate models of grief may not be sufficient to capture the full psychological impact of such traumatic losses (Sprang & McNeil, 1998). Another study found that pregnancy loss can be a traumatic event, leading to a high prevalence of PTSD. About 25% of women met the criteria for PTSD one month after the loss, with symptom severity comparable to other trauma survivors. However, according to the researchers, after four months the rate decreased to about 7% but half of these cases were chronic. Women with PTSD also had a significantly higher risk of depression. It indicated a strong link between pregnancy loss, PTSD, and subsequent mental health issues (Engelhard et al., 2001).

Apart from this, grief and loss deeply affect relationships and often cause a shift in dynamics as individuals cope differently. When people experience grief, they may become emotionally unstable. This can lead to changes in behavior and expectations from their loved ones. In addition, differences

in mourning styles can cause misunderstandings, tension, and unmet expectations, especially when partners or family members don't react as expected. Hence, these varying reactions might strain relationships, in turn leading to feelings of isolation or disappointment. Furthermore, grief also alters the roles people previously played in relationships and make it challenging for others to adapt to these changes. While some relationships grow stronger, many face increased stress, which potentially exacerbates pre-existing issues. Therefore, knowing that everyone grieves uniquely can be important to navigating these changes (Finnis, 2024).

Engelhard et al. (2006) conducted a study whose aim was to assess the impact of neuroticism and educational attainment on PTSD risk. The researchers surveyed 1,339 pregnant women under 12 week's gestation. They focused on those who experienced pregnancy loss. Out of 126 women (9%) who faced unsuccessful pregnancies, a high response rate of 94% was recorded for follow-up. The findings showed that 31 women (26%) met the DSM-IV criteria for PTSD. Besides, there was a significant association identified between higher neuroticism, lower educational levels, and increased PTSD risk. Women with high educational levels and low neuroticism had negligible PTSD risk, while those with low education and high neuroticism faced a 70% risk. Thus, the study highlighted the need for targeted support for women at higher risk due to these factors, especially neuroticism (Engelhard et al., 2006).

There were differences among age groups in Pregnancy Loss Grief, Neuroticism, Relationship Disillusionment, and Post-traumatic Growth. Literature also supported this finding as Köneş and Yıldız (2021) indicated differences in grief responses based on maternal age. Their study showed that older maternal age is associated with higher levels of grief, despair, and difficulty coping within the first three months after pregnancy loss. Another study reported that age influences grief levels but not post-traumatic growth. Younger individuals reported less grief compared to middle-aged adults. It suggested that age affects the experience of grief (Patrick & Henrie, 2016). The results of the current study also indicated that there were differences between groups based on the number of miscarriages (one, two, and more than two miscarriages) in Pregnancy Loss Grief, Neuroticism, Relationship Disillusionment, and Post-traumatic Growth. These findings also align with the literature. It is suggested that recurrent pregnancy loss effects can differ from those associated with single miscarriages. The book highlighted the need to understand the way couples cope with recurrent pregnancy loss (RPL). Furthermore, according to the author, it should not just be understood from a pathological point of view, but also its impact on self-esteem, marital, and social relationships should be considered. The emotional suffering experienced by couples is influenced by the significance they attribute to their losses. It can vary based on personal views and societal perceptions of infertility and prenatal life. This perspective emphasizes the importance of examining the broader psychological and social context surrounding RPL (Shakhar, 2007).

A grounded theory method was used to understand how trauma affects the onset, progression, and recovery of mental illness. In it, interviews with 15 participants revealed that trauma worsened self-functioning. It further led to emotional instability, troubled relationships, and negative self-image. Despite this, participants could achieve post-traumatic growth through self-exploration and self-acceptance. The study suggested that trauma-informed care should focus on clients' trauma histories to prevent harm and help them grow by building on their strengths (Wang et al., 2019).

Therefore, the current research study highlights several important suggestions for enhancing emotional recovery and promoting post-traumatic growth (PTG) among women experiencing pregnancy loss. At first, it is vital to provide psychological support tailored to individual needs. This should be especially for those exhibiting high neuroticism, as they may be more vulnerable to prolonged grief and hindered growth. Additionally, implementation of support groups can foster connection and shared experiences which in turn allow women to feel understood and less isolated. Secondly, addressing relationship dynamics during grieving is critical. Specifically, partners should receive education on improvement in communication and support. For this, couples therapy or workshops focused on navigating grief together may enhance understanding and can strengthen the relationships. Lastly, healthcare providers should incorporate discussions related to emotional

resilience into prenatal care, emphasizing coping strategies that facilitate PTG after loss. We can help women transform their grief into meaningful growth and improve overall well-being in this way.

Conclusion

This study explored the moderating role of neuroticism and mediating role of relationship disillusionment in the association between pregnancy loss grief and post-traumatic growth. The findings indicate a significant negative relationship between grief of pregnancy loss and post-traumatic growth. Likewise, high levels of neuroticism and relationship disillusionment intensified the negative impact on post-traumatic growth. These insights are crucial for understanding the emotional complexities surrounding pregnancy loss and emphasize the need for tailored support systems in Pakistan. Furthermore, healthcare providers can better assist women in navigating their grief and fostering resilience by addressing the psychological factors at play. Ultimately, it would aid in their journey toward post-traumatic growth after a pregnancy loss.

References

1. Blackie, L. E., Jayawickreme, E., Tsukayama, E., Forgeard, M. J., Roepke, A. M., & Fleeson, W. (2017). Post-traumatic growth as positive personality change: Developing a measure to assess within-person variability. *Journal of Research in Personality*, 69, 22-32. <https://doi.org/10.1016/j.jrp.2016.04.001>
2. Engelhard, I. M., van den Hout, M. A., & Arntz, A. (2001). Posttraumatic stress disorder after pregnancy loss. *General Hospital Psychiatry*, 23(2), 62-66. [https://doi.org/10.1016/S0163-8343\(01\)00124-4](https://doi.org/10.1016/S0163-8343(01)00124-4)
3. Engelhard, I. M., van den Hout, M. A., & Kindt, M. (2003). The relationship between neuroticism, pre-traumatic stress, and post-traumatic stress: A prospective study. *Personality and Individual Differences*, 35(2), 381-388. [https://doi.org/10.1016/S0191-8869\(02\)00200-3](https://doi.org/10.1016/S0191-8869(02)00200-3)
4. Engelhard, I. M., Van Den Hout, M. A., & Schouten, E. G. (2006). Neuroticism and low educational level predict the risk of posttraumatic stress disorder in women after miscarriage or stillbirth. *General Hospital Psychiatry*, 28(5), 414-417. <https://doi.org/10.1016/j.genhosppsych.2006.07.001>
5. Farren, J., Jalmbrant, M., Falconieri, N., Mitchell-Jones, N., Bobdiwala, S., Al-Memar, M., ... & Bourne, T. (2020). Posttraumatic stress, anxiety and depression following miscarriage and ectopic pregnancy: a multicenter, prospective, cohort study. *American journal of obstetrics and gynecology*, 222(4), 367-e1.
6. Healthdirect Australia (2024). Experiencing a pregnancy loss. *Pregnancy Birth & Baby*. <https://www.pregnancybirthbaby.org.au/experiencing-a-pregnancy-loss>
7. Henson, C., Truchot, D., & Canevello, A. (2021). What promotes post traumatic growth? A systematic review. *European Journal of Trauma & Dissociation*, 5(4), 100195. <https://doi.org/10.1016/j.ejtd.2020.100195>
8. Hussain, M. Z. (2024, February 12). The beauty of marital relationship. *Linkedin*. <https://www.linkedin.com/pulse/beauty-marital-relationship-mirza-zia-hussain-ra0rf>
9. Iqbal, M., Zubair, M., Awan, A. S., Khan, Y., Yasmin, H., Rahim, R., Srichand, P., Pal, S. A., Mazhar, S. B., Sohail, R., Zaman, F., Ali, S., Ali, T. (July 22, 2024). Consensus Statements for Assessment and Management of Threatened Miscarriage in the First Trimester in Pakistan: A Three-Step Modified Delphi Approach. *Cureus* 16 (7): e65079. doi:10.7759/cureus.65079
10. Iqbal, Z., Jilane, S. D. A., Uppada, L. P., Imtiaz, S., Khan, H., Shah, S. M. H., ... & Rahim, A. (2021). Evaluating the clinical risk factors associated with miscarriages in women in Karachi, Pakistan. *Cureus*, 13(10). <https://www.ncbi.nlm.nih.gov/pmc/articles/PM C8610211/>
11. John, O. P., & Srivastava, S. (1999). The Big-Five trait taxonomy: History, measurement, and theoretical perspectives.

12. Köneş, M. Ö., & Yıldız, H. (2021). The level of grief in women with pregnancy loss: a prospective evaluation of the first three months of perinatal loss. *Journal of Psychosomatic Obstetrics & Gynecology*, 42(4), 346-355. <https://doi.org/10.1080/0167482X.2020.1759543>
13. Kwon, S., Weed, N. C., Gaur, A., Lotha, G., Luebering, J. E., Rafferty, J. P., Young, G. (2024, September 23). Neuroticism. *Britannica*. <https://www.britannica.com/science/neuroticism>
14. Liu, J., Wang, Y., & Jackson, T. (2017). Towards explaining relationship dissatisfaction in Chinese dating couples: Relationship disillusionment, emergent distress, or insecure attachment style?. *Personality and Individual Differences*, 112, 42-48. <https://doi.org/10.1016/j.paid.2017.02.041>
15. National Institute of Population Studies and Macro International Inc: Pakistan Demographic and Health Survey, 2006-07. Government of Pakistan, Islamabad; 2008.
16. Niehuis, S., & Bartell, D. (2006). The marital disillusionment scale: development and psychometric properties. *North American Journal of Psychology*, 8(1).
17. Niehuis, S., Lee, K. H., Reifman, A., Swenson, A., & Hunsaker, S. (2011). Idealization and disillusionment in intimate relationships: A review of theory, method, and research. *Journal of Family Theory & Review*, 3(4), 273-302. <https://doi.org/10.1111/j.1756-2589.2011.00100.x>
18. Paton, F., Wood, R., Bor, R., & Nitsun, M. (1999). Grief in miscarriage patients and satisfaction with care in a London hospital. *Journal of Reproductive and Infant Psychology*, 17(3), 301-315. <https://doi.org/10.1080/02646839908404596>
19. Patrick, J. H., & Henrie, J. (2016). Up from the ashes: Age and gender effects on post-traumatic growth in bereavement. *Women & Therapy*, 39(3-4), 296-314. <https://doi.org/10.1080/02703149.2016.1116863>
20. Potvin, L., Lasker, J., & Toedter, L. (1989). Measuring grief: A short version of the Perinatal Grief Scale. *Journal of Psychopathology and Behavioral Assessment*, 11(1), 29-45.
21. Purol, M. F. (2024). Post-Traumatic Growth Across Partners and in Relationships [Doctoral dissertation, Michigan State University]
22. Quenby, S., Gallos, I. D., Dhillon-Smith, R. K., Podsek, M., Stephenson, M. D., Fisher, J., ... & Coomarasamy, A. (2021). Miscarriage matters: The epidemiological, physical, psychological, and economic costs of early pregnancy loss. *The Lancet*, 397(10285), 1658-1667. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)00682-6/abstract](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00682-6/abstract)
23. Robinson, G. E. (2014). Pregnancy loss. *Best practice & research Clinical obstetrics & gynecology*, 28(1), 169-178. <https://doi.org/10.1016/j.bpobgyn.2013.08.012>
24. Schanfarber, J. (2015, April 11). On disillusionment, failure, and facing your relationship as it really is. *Justice Schanfarber Counselling*. <https://www.justiceschanfarber.com/on-disillusionment-failure-and-facing-your-relationship-as-it-really-is/>
25. Shakhar, K. (2007). Coping with recurrent pregnancy loss: Psychological mechanisms. In *Recurrent Pregnancy Loss* (pp. 243-254). CRC Press.
26. Sprang, G., & McNeil, J. (1998). Post-homicide reactions: Grief, mourning and post-traumatic stress disorder following a drunk driving fatality. *OMEGA-Journal of Death and Dying*, 37(1), 41-58. <https://doi.org/10.2190/GCGW-86DC-A30R-286A>
27. Taylor, S. (2012). Transformation through suffering: A study of individuals who have experienced positive psychological transformation following periods of intense turmoil. *Journal of Humanistic Psychology*, 52(1), 30-52. <https://doi.org/10.1177/0022167811404944>
28. WallinLundell, I., SundströmPoromaa, I., Ekselius, L., Georgsson, S., Frans, Ö., Helström, L., ... & Skoog Svanberg, A. (2017). Neuroticism-related personality traits are associated with posttraumatic stress after abortion: Findings from a Swedish multi-center cohort study. *BMC Women's Health*, 17, 1-12. <https://doi.org/10.1186/s12905-017-0417-8>
29. Wang, X., Lee, M. Y., & Yates, N. (2019). From past trauma to post-traumatic growth: The role of self in participants with serious mental illnesses. *Social Work in Mental Health*, 17(2), 149-172. <https://doi.org/10.1080/15332985.2018.1517401>

30. Weigel, D. J., & Shrout, M. R. (2021). Relationship conflict, appraisals, and disillusionment: The moderating role of depression. *Personality and Individual Differences*, 171. <https://doi.org/10.1016/j.paid.2020.110494>
31. Yoon, M. S., Jeon, Y. B., & Lee, S. B. (2023). Grief, partner support, posttraumatic growth among women with pregnancy loss in Korea. *Journal of Loss and Trauma*, 28(3), 206-216. <https://doi.org/10.1080/15325024.2022.2106682>