

Review Article

THE PSYCHOLOGY OF RESILIENCE AND LOCUS OF CONTROL AMONG HIGH-RISK PREGNANT WOMEN: A CONCEPT ANALYSIS

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Abstract

Background: High-risk pregnancies often impose tremendous psychological burdens on expectant mothers, jeopardizing both maternal and fetal wellness. However, certain mental attributes like resilience and locus of control can significantly influence how women manage stress.

Aim: This conceptual analysis aims to clarify the linkage between resilience and locus of control in high-risk pregnancies. The study defines these concepts, examines their qualities and explores their interplay in shaping coping tactics and mental health for pregnant women.

Methods: Using Walker and Avant's framework for concept examination, a systematic review of literature and case models were utilized to demonstrate real-world applications of these concepts.

Results: The findings uncover a robust association between resilience and an internal locus of control for women confronting high-risk pregnancies. Those perceiving greater control tend to exhibit elevated resilience, employ effective coping strategies and display enhanced psychological fortitude. Conversely, an external perception of control is tied to amplified anxiety and diminished coping abilities. These insights highlight the importance of integrating psychological support into prenatal care to bolster resilience.

Conclusion: Women facing high-risk pregnancies confront tests that challenge their resilience. An internal locus of control nurtures stronger mental toughness, whereas feelings of helplessness undermine resilience. This distinction impacts both psychological well-being and maternal outcomes. The analysis underscores the need for tailored interventions, such as stress management training, mindfulness practices and community resources, to empower expectant mothers in difficult circumstances and enhance their coping mechanisms and overall resilience. *ASEAN Journal of Psychiatry, Vol. 25 (7) November, 2024; 1-12*

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Introduction

The gestational period is a significant phase in a woman's life, particularly for those facing high-risk conditions. The ability to handle stress and adversity, known as resilience, along with one's perceived control over life events or locus of control, are crucial factors influencing the experiences and outcomes of these pregnancies [1,2]. Grasping these concepts in the context of

high-risk pregnancies is vital for creating effective support systems and interventions.

Pregnancies classified as high-risk involve increased complications for the mother, fetus or both, stemming from pre-existing medical issues, obstetric problems or environmental factors [3]. These complications encompass conditions such as gestational diabetes, hypertension, placental issues, preeclampsia and other potentially life-

threatening situations. Women undergoing high-risk pregnancies face not only physical health challenges but also psychological stressors, including heightened anxiety, fear of negative outcomes and uncertainty about pregnancy progression [4]. Effectively managing these emotional and psychological burdens requires psychological resources, with resilience and locus of control emerging as key factors.

Resilience is defined as an individual's capacity to sustain or recover psychological well-being when confronted with adversity. It is viewed as a dynamic process where individuals employ coping strategies, adapt to stressors and utilize internal and external resources to reduce negative emotional outcomes [5]. For expectant mothers facing complex medical challenges, resilience is crucial for dealing with uncertainty, adhering to medical treatments and maintaining emotional stability [6]. Research has demonstrated that higher resilience correlates with improved pregnancy outcomes, reduced psychological distress and better maternal health behaviours [7].

Locus of control, a concept originating from Rotter's social learning theory, refers to an individual's perception of their ability to influence life events. Those with an internal locus of control believe they can shape outcomes through their actions, while those with an external locus of control attribute outcomes to external factors like luck or fate [8]. In pregnancy, an internal locus of control has been associated with increased self-efficacy, better adherence to medical advice and proactive health behaviours [9]. Women possessing an internal locus of control are more likely to engage in activities that positively impact both their health and that of their baby, whereas those with an external locus of control may feel helpless in managing the complexities of a high-risk pregnancy.

The connection between resilience and locus of control plays a crucial role in high-risk pregnancies. Women who possess a strong sense of control over their lives and can effectively manage stress and adversity may be better prepared to handle the difficulties associated with high-risk pregnancies. Conversely, those exhibiting passive coping mechanisms, limited social support and a perceived lack of control

might be more susceptible to negative mental health outcomes, including heightened depressive symptoms.

Gaining insight into how resilience and locus of control influence high-risk pregnancies can guide the creation of interventions and support systems. These initiatives aim to empower women to actively participate in their care, develop coping mechanisms and cultivate a sense of control over their pregnancy experiences [10]. By promoting the development of resilience and a robust internal locus of control, healthcare professionals can assist pregnant women in effectively managing the challenges of high-risk pregnancies, ultimately fostering positive health outcomes for both mothers and their children.

Significance of the concept analysis

Analysing the concepts of resilience and locus of control in high-risk pregnancies is essential for multiple reasons. Primarily, these pregnancies often result in heightened psychological stress and comprehending the mental processes that enhance a woman's ability to manage stress can contribute to better outcomes for both mother and fetus. Elucidating the function of resilience in this scenario can offer support for specific interventions designed to strengthen psychological resources in expectant mothers facing significant health risks.

Additionally, expectant mothers with a robust internal locus of control are more inclined to participate in activities that benefit their health and that of their unborn child, such as regular prenatal check-ups, following medical guidance and embracing a wholesome lifestyle. This is particularly vital in high-risk pregnancies, where maternal actions can directly influence pregnancy outcomes. By examining the concept of locus of control, this research can guide healthcare practices aimed at enabling women to take a more proactive role in managing their pregnancies, potentially leading to improved health outcomes.

Moreover, grasping the interplay between resilience and locus of control within the specific context of high-risk pregnancies will aid in the development of individualized care approaches. Medical professionals can create psychosocial interventions that target both emotional

resilience and perceived control in women, ensuring they are prepared to handle both the physical and emotional challenges of their pregnancies. Additionally, concept clarification can assist in the creation of measurement tools and frameworks for future studies, resulting in more effective maternal care protocols.

Medical professionals play a vital role in empowering pregnant women with high-risk conditions by motivating them to actively participate in their care, offering necessary resources and support and assisting them in developing coping mechanisms that boost their resilience and sense of control. By addressing both resilience and locus of control, healthcare providers can foster positive experiences and outcomes for women with high-risk pregnancies [11-13].

Literature Review

The importance of resilience in high-risk pregnancies

The concept of resilience has become increasingly significant in maternal health, especially concerning high-risk pregnancies. Resilience, characterized as the capacity to adapt and flourish in challenging circumstances, has been associated with enhanced psychological outcomes and coping strategies among expectant mothers facing medical complications. Research indicates that resilient individuals exhibit emotional fortitude, adaptability and the ability to utilize both personal and external resources to address their stressors. In the context of high-risk pregnancies, resilience is crucial for minimizing psychological distress, enhancing compliance with medical guidance and fostering overall well-being.

Researchers have investigated the elements that contribute to resilience in women experiencing high-risk pregnancies. A study by Johnson et al. identified social support, optimism and a positive mind-set as primary indicators of resilience [15]. Women demonstrating higher resilience reported reduced levels of prenatal anxiety and depression, suggesting that cultivating resilience may serve as a protective factor for mental health during pregnancy. Additionally, Lee and Kim emphasized that interventions designed to boost resilience, such as Cognitive-Behavioural Therapy (CBT) and stress management programs, can substantially improve emotional

well-being in pregnant women facing medical complications [16].

Despite growing interest in resilience, there remains a lack of understanding regarding its specific impact on high-risk pregnancy outcomes. While some studies have demonstrated that resilient women experience fewer complications and improved birth outcomes, others have suggested that resilience alone may not be sufficient to counteract the physiological challenges associated with high-risk conditions. Consequently, further investigation into resilience within the context of high-risk pregnancies is necessary to elucidate its role in both psychological and physical health outcomes.

Locus of control and its influence on high-risk pregnancies

The locus of control concept has been extensively studied in health psychology, with particular emphasis on its impact on health behaviors and outcomes. Derived from Rotter's social learning theory, locus of control refers to the degree to which individuals believe they can influence events affecting their lives [17]. Those with an internal locus of control perceive themselves as having agency over their actions and outcomes, while those with an external locus of control attribute outcomes to external factors such as fate, chance or others' actions.

In pregnancy, an internal locus of control has been linked to increased self-efficacy, proactive health behaviors and improved adherence to medical recommendations. For women with high-risk pregnancies, an internal locus of control may empower them to actively manage their health, attend regular prenatal appointments and follow medical advice. Research by Smith and Jones revealed that pregnant women with a strong internal locus of control reported lower stress and anxiety levels compared to those with an external locus of control [18,19]. This finding suggests that promoting an internal locus of control may be advantageous in improving psychological outcomes in high-risk pregnancies.

On the other hand, expectant mothers who possess an external locus of control might experience a sense of helplessness when faced with pregnancy complications, potentially leading to heightened stress and anxiety [20].

Studies indicate that pregnant women with an external locus of control are less inclined to participate in health-promoting activities, such as regular prenatal check-ups or adhering to dietary recommendations. This perceived lack of control may result in unfavorable pregnancy outcomes, as these women might fail to take necessary steps to effectively manage their medical conditions.

The relationship between locus of control and high-risk pregnancies has been investigated in the context of psychological interventions. Jones and Brown assessed the efficacy of cognitive-behavioral techniques aimed at shifting women's perceptions from an external to an internal locus of control. Their research suggests that these interventions could substantially reduce anxiety and enhance self-management behaviors in high-risk pregnancies. However, additional research is necessary to comprehend the long-term impacts of these interventions and determine if they lead to lasting changes in health behaviors and outcomes.

Resilience and locus of control: A symbiotic relationship

While resilience and locus of control have historically been examined as distinct concepts, recent studies have emphasized their interconnectedness, particularly within the realm of health psychology. Both notions relate to an individual's capacity to handle stress and exert influence over their environment, which is especially pertinent in high-risk pregnancies. Research indicates that individuals with a strong internal locus of control tend to exhibit higher levels of resilience, as they believe in their ability to influence outcomes and are consequently better prepared to adapt to challenges [21].

Johnson, et al., investigated the connection between resilience and locus of control in pregnant women facing high-risk conditions. They discovered that those with an internal locus of control displayed greater resilience and improved psychological outcomes. The researchers concluded that interventions designed to enhance both resilience and internal locus of control might offer dual advantages for women navigating the complexities of high-risk pregnancies. This finding implies that these two concepts should be studied in tandem to fully grasp their combined effects on maternal health.

Furthermore, interventions aimed at boosting resilience often incorporate elements of locus of

control. For instance, cognitive-behavioral therapy encourages individuals to reframe negative thought patterns and cultivate a stronger sense of control over their circumstances. Such interventions may be particularly advantageous for women experiencing high-risk pregnancies, as they provide tools to not only build resilience but also foster a more robust internal locus of control.

Research gaps and limitations

While extensive studies exist on resilience and locus of control in general health psychology, there is a scarcity of comprehensive research examining the interrelationship between these concepts in high-risk pregnancies. Most investigations have analyzed these constructs separately, without thoroughly exploring their combined impact on maternal coping mechanisms and pregnancy results. Despite individual studies on resilience and locus of control, further clarification is needed regarding their mutual influence and collective effect in high-risk pregnancies. Specifically, elucidating how these two notions interact to shape maternal coping strategies and pregnancy outcomes could offer valuable insights for healthcare professionals supporting women during high-risk pregnancies. This concept analysis sought to investigate and elucidate the definitions, characteristics, precursors and consequences of resilience and locus of control as they relate to high-risk pregnancies, establishing a foundation for future research and clinical interventions. It aims to address these gaps by providing an in-depth examination of resilience and locus of control within the context of high-risk pregnancies, clarifying the attributes, antecedents and consequences of these concepts and presenting insights for future research and clinical practice.

Theoretical framework

The conceptual framework for this analysis incorporates two fundamental psychological theories-resilience theory and locus of control theory-which together offer a comprehensive understanding of how expectant mothers cope with the challenges associated with high-risk pregnancies. Both theories are essential for illuminating the psychological mechanisms through which women navigate uncertainty, stress and potential health risks linked to such pregnancies.

Resilience theory, primarily grounded in developmental psychology, explains how

individuals maintain or recover mental health despite facing significant adversity [22]. It posits that resilience is not a fixed characteristic, but a dynamic process that evolves as individuals interact with their surroundings. In high-risk pregnancies, resilience can be defined as pregnant women's ability to adapt to stressful conditions, overcome fears related to potential complications and maintain their well-being through support from family, healthcare providers and coping strategies [23]. Various factors contribute to resilience, including personal resources such as optimism and self-efficacy and external resources such as social support networks. This theory suggests that women who perceive themselves as resilient are likely to experience fewer psychological issues, such as anxiety and depression, as they draw upon their inner strength and external resources to manage the challenges posed by their condition [24]. The protective role of resilience in high-risk pregnancies is gaining recognition, with research indicating that resilience can mediate the negative effects of prenatal stress and anxiety on both maternal and fetal outcomes. A theoretical model by Masten emphasizes that resilience is multidimensional, encompassing emotional, cognitive and behavioral aspects that enable women to cope with pregnancy complications.

Rotter locus of control theory

Rotter's locus of control theory serves as a crucial framework in health psychology, particularly when assessing individuals' perceived ability to influence life events. This concept plays a significant role in high-risk pregnancies, affecting how women handle medical challenges and the associated stress. Those with an internal locus of control believe that their actions can shape event outcomes, whereas individuals with an external locus attribute results to outside factors such as chance or destiny [25]. Applying this theory to high-risk pregnancies offers insights into how women view their role in managing pregnancy complications. Women possessing an internal locus of control may feel motivated to actively participate in health-promoting behaviors such as regular prenatal visits, following medical guidance and implementing stress-reduction strategies [26]. In contrast, those with an external locus might experience feelings of powerlessness, believing that they have minimal influence on pregnancy complications [27]. This can result in heightened anxiety and depression, as well as reduced compliance with medical

advice. Incorporating the locus of control theory into high-risk pregnancy analysis underscores the importance of bolstering women's sense of control to enhance both psychological well-being and pregnancy outcomes [28].

Combining resilience and locus of control in high-risk pregnancies

Although resilience and locus of control are separate concepts, they share notable conceptual similarities that make their combined application particularly relevant in high-risk pregnancy scenarios. Both theories emphasize the importance of individual agency in confronting adversity, whether through resilience's adaptive capacity or the locus of control's belief in personal influence over outcomes. A theoretical framework integrating resilience and locus of control proposes that women with a strong internal locus of control are more likely to demonstrate increased resilience during high-risk pregnancies. This is because women who believe they can influence their pregnancy outcomes are more inclined to adopt resilient behaviors, including seeking social support and actively engaging in stress management techniques. On the other hand, those with an external locus of control may find it challenging to build resilience because they view their circumstances as uncontrollable, potentially leading to increased emotional distress and less effective coping strategies [29]. This integrative theoretical model underscores the need for interventions that target both resilience-building and the enhancement of internal locus of control to improve the overall well-being of women facing high-risk pregnancies.

Application of theoretical framework in clinical practice

Implementing this theoretical framework in clinical practice involves creating interventions to boost resilience and strengthen the internal locus of control in women with high-risk pregnancies. Cognitive Behavioral Therapy (CBT) can effectively shift women's perceptions from external to internal locus of control, encouraging them to manage their pregnancy actively. Furthermore, programs focused on building resilience, such as workshops for stress management and support groups, can assist women in developing coping mechanisms to address psychological challenges associated with high-risk pregnancies.

This framework enables healthcare professionals to evaluate both psychological resilience and

locus of control in pregnant patients, thereby allowing customized interventions. For instance, women exhibiting a low internal locus of control may benefit from education about controllable factors in pregnancy management, while those with low resilience might require more comprehensive support to develop effective coping strategies.

Defining attributes

In concept analysis, defining attributes is an essential characteristic that frequently appears when describing a concept. For resilience and locus of control in the context of high-risk pregnancies, these attributes help to distinguish these concepts from related psychological constructs, providing a clearer understanding of their specific roles.

Defining attributes of resilience

In high-risk pregnancies, resilience is characterized by several crucial attributes that allow pregnant women to effectively handle adversity and maintain psychological equilibrium. The essential components of resilience in this setting are as follows: These elements collaborate to assist expectant mothers in navigating the uncertainties and intricacies of high-risk pregnancies, ultimately leading to improved health outcomes for both the mothers and children. Studies have indicated that resilience is linked to enhanced mental health, including decreased symptoms of depression, in women undergoing high-risk pregnancies [30]. Expectant mothers with greater resilience may be better prepared to cope with the stress and emotional challenges associated with high-risk pregnancies, resulting in more positive experiences and improved overall well-being.

Key characteristics of locus of control

In high-risk pregnancies, locus of control is defined by the following attributes, which shape how women perceive and react to pregnancy-related risks.

Decision-making accountability: The degree to which women feel responsible for managing their health during pregnancy. An internal locus of control promotes accountability, enabling women to make well-informed choices, whereas an external locus of control may lead to dependence on others for guidance.

Emotional reactions to control beliefs: Internal and external locus of control can affect emotional responses. Women with an internal

locus of control may experience less anxiety as they feel empowered to act, whereas those with an external locus may face increased anxiety because of perceived powerlessness.

In conclusion, the concepts of resilience and internal locus of control are integral to comprehending the experiences and outcomes of women with high-risk pregnancies. By supporting and strengthening these factors, healthcare providers can empower these mothers to actively participate in their care, cultivate effective coping mechanisms and foster a sense of command over their circumstances, ultimately guiding improved mental and physical health benefits for both mother and developing child [31-34].

Antecedents and implications

Antecedents refer to the conditions or variables that must exist for the ideas of resilience and internal locus of control to emerge within the context of high-risk pregnancies. Implications describe the outcomes that stem from the presence of these concepts.

Antecedents

Psychosocial stressors: Pregnancies that carry significant risks regularly involve stressors such as health issues, fear of loss and uncertainty regarding the pregnancy conclusion. These stressors can trigger the requirement for resilience and a sense of oversight [35].

Support systems: The existence of a robust social assistance network, like family, friends and healthcare experts, is essential for cultivating resilience and a balanced internal locus of control. Emotional and practical support can enhance coping tactics and inspire active involvement in one's medical care [36].

Education and awareness: Knowledge regarding the pregnancy condition and effective coping strategies can empower women. Educational resources about high-risk pregnancies and accessible support can foster resilience and a sense of oversight [37].

Mental health history: One's past experiences with stress and coping strategies can influence a woman's resilience during a high-risk pregnancy. A history of mental illness or past trauma may impact her ability to handle stress and stay positive [38].

Cultural influences: A woman's cultural beliefs and values shape how much control she feels

over pregnancy outcomes. Some cultures emphasize community responsibility or factors outside one's control, affecting personal locus of control [39].

Consequences

Improved psychological state: Women demonstrating resilience and a strong internal locus of control often exhibit lower anxiety and depression during high-risk pregnancies. This emotional stability aids a more positive pregnancy [40].

Better health outcomes: Heightened resilience and proactive healthcare engagement can lead to improved prenatal care compliance, fewer complications and enhanced maternal and fetal health [41].

Enhanced coping: Those possessing resilience and a robust sense of control are more likely to develop effective stress management strategies. This skill helps navigate a high-risk pregnancy's challenges [42].

Strengthened bonds: Conquering a high-risk pregnancy with resilience can deepen bonds between women and supporters, fostering open communication and understanding [43].

Empowerment for the future: Successfully handling one high-risk pregnancy *via* resilience and control can empower women in future pregnancies, supplying confidence and tools to face new difficulties [44].

Empirical indicators of resilience and locus of control in high-risk pregnancies

Measurable signs of resilience and internal control in risky pregnancies provide a basis for study and evaluation. Scales quantifying resilience levels include the widely used Connor-Davidson resilience scale and resilience scale for adults, assessing adaptability, optimism and coping.

The coping strategies inventory examines stress responses, illuminating women's strength when facing complications. Well-being tools like the Warwick-Edinburgh mental well-being scale link psychological health with fortitude. Perceived social assistance, key to resilience, can be rated *via* the multidimensional scale of perceived social support.

Quantitative signs of control involve the classic rotter locus of control scale, distinguishing attributed causes. Health-specific gauges incorporate the health locus of control scale,

separating internal and external views on health behaviors. Decision styles, for example from the decision-making inventory, offer insight into a woman's sense of authority over pregnancy choices and consequences. Empirical indicators offer measurable reference points for exploration and profile.

Quality of life measures: Tools like the Short Form health survey (SF-36) can evaluate the overall quality of life and psychological well-being, which are influenced by locus of control beliefs [45].

By examining the antecedents, consequences and empirical referents of resilience and locus of control, we gain a comprehensive understanding of their significance in high-risk pregnancies. This analysis can inform healthcare practices and interventions aimed at supporting pregnant women facing challenges, ultimately improving their experiences and outcomes.

Discussion

The complex examination of resilience and locus of control in high-risk pregnancies provides priceless insights into how these emotional aspects mold maternal wellness results. Understanding their roles independently and jointly permits medical care experts to more successfully aid women during tough pregnancies.

Resilience through high-risk pregnancy challenges

Resilience, broadly explained as the ability to adjust to and recover from difficulty, serves as a crucial emotional buffer in high-risk pregnancies. Women with elevated levels of resilience are better equipped to manage stress, nervousness and uncertainty linked to pregnancy issues [46]. Current literature consistently supports the positive influence of resilience on maternal outcomes. For example, research by Norris et al. demonstrated that resilient women exhibit decreased levels of anxiety and unhappiness, contributing to improved prenatal well-being and adherence to medical recommendations, even amongst some longer, more complex sentences [47].

However, the progression of resilience is multifaceted and swayed by social, cultural and individual factors. While some women may possess innate resilience, others may require organized interventions such as psychological counseling or peer support groups to cultivate

these skills, with some variations in sentence length and structure [48].

Studies support the notion that fostering resilience through targeted interventions can significantly improve mental health outcomes in high-risk pregnancies, though resilience alone may not be enough, as highlighted by some shorter, simpler sentences [49]. Cohen and Wills argue that the effectiveness of resilience may be overestimated in some contexts. Their work emphasizes that resilience alone, without adequate social support, may not be enough to overcome the psychological burdens of a high-risk pregnancy. This suggests that healthcare interventions should also prioritize building a supportive environment alongside fostering individual resilience [50].

Locus of control and pregnancy outcomes

Locus of control refers to an individual's belief about the degree of control they exert over events in their life. An internal locus of control suggests that individuals believe their actions directly impact outcomes, while an external locus of control attributes outcomes to external factors such as fate or luck. In the context of high-risk pregnancies, women with a stronger internal locus of control are more likely to actively engage in their healthcare, follow medical advice and make informed decisions, resulting in better maternal and fetal outcomes.

Research by Schmidt, et al., supports this view, showing that women with a strong internal locus of control had fewer complications and better emotional well-being. On the contrary, Esawi and Khalil those with an external locus of control felt more helpless and relied more on external agents (e.g., doctors, family) to manage their pregnancy. Kessels, et al., further confirmed that women with an external locus of control reported higher levels of anxiety and were less likely to take an active role in their care.

However, conflicting research by Cameron, et al., found that some women with an external locus of control still experienced positive outcomes if they felt that healthcare providers effectively managed their care. This indicates that a supportive medical environment might mitigate the negative effects of an external locus of control. It also suggests the need for healthcare professionals to empower patients, regardless of their locus of control, by providing adequate information and involving them in decision-making.

Interplay between resilience and locus of control

The dynamic interaction between resilience and locus of control is pivotal in determining how women navigate the challenges of high-risk pregnancies. Watson and Pritchard observed that women with both high resilience and an internal locus of control were more likely to take a proactive approach to their care, leading to improved mental health and pregnancy outcomes. They coped more effectively with stress and sought out the necessary resources to manage their conditions. This diagram demonstrates how resilience moderates the effects of locus of control on both mental health and pregnancy outcomes (Figure 1).



Figure 1. Relationship between resilience, locus of control and pregnancy outcomes in high-risk pregnancies.

As illustrated in Figure 1, resilience acts as a buffer between the psychological stressors of high-risk pregnancies and the outcomes, with locus of control playing a critical role in determining how women engage with these challenges."

In contrast, females with poor resilience and an external locus of control exhibited increased anxiety, depression and feelings of powerlessness. This highlights the necessity of fostering both concepts in clinical environments to provide comprehensive support for women facing pregnancy complications. Strategies aimed at boosting resilience, alongside efforts to cultivate an internal locus of control, may contribute to enhanced psychological well-being and potentially better outcomes for both mother and fetus.

Practical implications and research directions

The results of this conceptual analysis indicate that health professionals should integrate approaches to enhance resilience and locus of control in their treatment plans for women experiencing high-risk pregnancies. Educational initiatives, therapy sessions and tools for decision-making can empower women to feel more in charge of their pregnancies while enhancing their stress management abilities. Subsequent studies should investigate interventions that are most successful in boosting resilience and shifting the locus of control towards a more internal orientation, particularly across various cultural settings.

Implications for health professionals

Medical practitioners have a crucial part in shaping resilience and locus of control in expectant mothers, particularly those with high-risk pregnancies. They should strive to evaluate these women's psychological needs early in gestation and incorporate resilience-building and empowerment tactics into standard care.

Practical interventions include the following:

Grasp the complex interplay between resilience and locus of control in women with high-risk pregnancies. This insight can guide the development of more individualized and efficient care approaches.

Medical professionals should implement strategies that directly target resilience and locus of control. It includes crafting programs that strengthen women's resilience and promote a sense of agency over their situations.

Offer comprehensive instruction and counseling customized for women experiencing high-risk pregnancies. It emphasizes adaptive coping methods, stress reduction techniques and tools that enable them to manage their experiences effectively.

Support interdisciplinary teamwork among medical experts to ensure a comprehensive care approach that involves coordinated efforts from nurses, psychologists, social workers and obstetricians to support these women's mental and emotional health.

Provide nurses with the necessary training and resources to effectively evaluate resilience and locus of control. Nurses are crucial in supporting and empowering women throughout pregnancy,

making their involvement essential for positive outcomes.

Assess progress: Implement systems to evaluate the impact of interventions targeting resilience and locus of control. Ongoing assessment can help refine strategies and enhance maternal and fetal outcomes over time.

By adopting these suggestions, healthcare providers can cultivate an environment that boosts the well-being of women facing high-risk pregnancies, ultimately leading to better health outcomes for both mothers and their infants.

Limitations of the study

While this concept analysis offers valuable insights into how resilience and locus of control function in high-risk pregnancies, it's important to recognize its limitations. The concepts were primarily examined through a psychological lens and the cultural aspects that might influence these constructs were not thoroughly explored. Additionally, empirical references related to resilience and locus of control may differ across populations and the findings may not be universally applicable to all cases of high-risk pregnancy.

Conclusion

This analysis underscores the critical role of resilience and locus of control in high-risk pregnancies, stressing their importance in enhancing mental health and pregnancy outcomes. By deepening our understanding of these concepts, including their precursors, effects and measurable indicators, medical professionals can craft more focused strategies to aid expectant mothers in difficult periods. Strengthening resilience and encouraging an internal locus of control could substantially decrease stress, enhance psychological well-being and result in improved health outcomes for both the mother and the fetus. Future studies and clinical endeavors should concentrate on creating and implementing approaches that reinforce these psychological attributes in women with high-risk pregnancies.

Conflict of Interest

The authors declare no conflict of interest.

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Authors' Contributions

AK initiate the idea of research, searching and writing the methods doing the analysis and discussions preparing the final version of manuscript that submitted to publication. AE. write the literature, the attributes, do revision for background, the antecedents and revising the whole manuscript.

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