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Bridging the Heart and Mind: A Gendered Lens On Post-MI Recovery

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The science of cardiology has advanced beyond the conventional biomedical boundaries, and there is a growing understanding that recovery from critical illness, including myocardial infarction (MI), depends on more than just pharmacological or revascularization treatments. Long-term prognosis is known to be significantly influenced by psychological and psychosocial factors, especially pain and anxiety. Aulakh *et al.* provide a convincing review on this aspect of medicine in their article, "Mind–body connections: Gender differences in pain perception, anxiety sensitivity, and their impact on cardiac health."[1]

The study highlights a noticeably higher sensitivity to anxiety and fear of pain in the female post-MI survivors. These findings are consistent with previous literature that demonstrated that females frequently experience a greater variety and intensity of cardiac symptoms, such as palpitations, dizziness, and chest pain.[2-5] These signs may result in misunderstandings, causing a vicious cycle of distress and fear.

In a descriptive, correlational study conducted by Frazier *et al.*,[6] patients recovering from MI experienced varying degrees of anxiety. Approximately 30 % did not report any anxiety symptoms; however, 23%, 25%, and 22% exhibited mild, moderate, and high levels of anxiety, respectively. Factors such as individual temperament, previous mental health history, and social interactions significantly influence recovery pathways, thereby reflecting a diversity of psychological reactions to cardiac events. Moreover, a heightened awareness of one's bodily sensations may exacerbate the recovery process, potentially triggering a distressing feedback loop characterized by hyperarousal.[6]

Watt *et al.*[7] pointed out that social reinforcement patterns—where women are encouraged, both culturally and clinically, to express somatic and emotional distress, while men are often conditioned to suppress such concerns—may clarify the gender disparity in psychological response. Over time, this reinforcement raises self-attention and internalization of suffering, therefore exacerbating anxiety reactions.[8] Educational background serves as a pertinent modulatory effect. Aulakh *et al.*[1] also noted that higher levels of education correlated with decreased anxiety sensitivity. This is further supported by earlier studies indicating that education is likely to improve access to health resources and coping skills, thus reducing psychological stress.[8]

Gender-specific complications delve deeper into the mechanisms of pain perception. Though there were no significant differences in overall pain scores, women in the current study scored much higher in both sensory and emotional aspects of pain. The above findings line up with Granot *et al.*,[9] who discovered that women experience more emotional responses to painful stimuli and lower pain thresholds. On the contrary, older people disclosed less pain and

fear, perhaps as a result of frequent exposure to medical treatments, which over time might normalize pain and lower its perceived risk.[10] Interestingly, the study also found that older women had lower pain perception, which suggests habituation or adaptation, a finding in line with Failla *et al*.[11]

The observations related to Health-related quality of life (HRQoL) in this study are particularly compelling. While men demonstrated better outcomes in physical domains, women excelled in mental health and social functioning—a dichotomy seen in earlier studies such as those by Brink *et al*.[12] and Oldroyd *et al*.[13] More specifically, in collectivistic countries like India, women's higher mental scores could indicate their propensity to seek validation from interpersonal cues, greater reliance on social support networks, and faster emotional adaptation.[14,15] Nevertheless, men often depend on their recuperation on their muscular ability and sense of fulfillment in their roles, qualities that may be more likely to occur after cardiac events, particularly in later life.

A chronological analysis further enriches the narrative. Men demonstrated greater variability over time, while women displayed more sustained trends in areas related to pain and anxiety. This might indicate differences in the stability of social roles and support systems: Men's perceived social value may diminish with age, particularly after health issues, whereas women often maintain strong social networks that alleviate psychological distress. According to Erikson's "generativity" theory, aged men can feel a disproportionate increase in emotional burden as they lose their functional capabilities.

Anxiety sensitivity was found to be the important predictor of health-related aspects of life in this study, accounting for almost 18% of its variance. This highlights the importance of psychological evaluations to be considered in post-MI management. Focusing on anxiety sensitivity, somatic hypervigilance, and maladaptive coping techniques could significantly enhance outcomes, especially for women.

The study encounters limitations, although it provides valuable data. The outcomes do not apply to larger populations due to the comparatively small sample size. Its cross-sectional approach also makes it challenging to evaluate how psychological parameters change over time and affect HRQoL. The study focuses on limited peculiar psychological variables and other factors that might have an important impact on HRQoL might have gone ignored.

In conclusion, this study contributes to the growing amount of evidence demonstrating that cardiac recovery is a psychosomatic journey that is greatly impacted by gender as well, psychology, culture, and context rather than being simply a physiological process. It is indeed vital to look beyond the angiograms and incorporate an assessment of patients' lifestyle factors to provide holistic, patient-centric management.

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