Re-examining the Role of Social Support in Post-Traumatic Stress Disorder Recovery: Evidence from Middle-Aged Immigrant Motor Vehicle Accident Survivors

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Abstract

Post-traumatic stress disorder (PTSD) can significantly disrupt emotional well-being, daily functioning, and overall quality of life. Social support is often viewed as essential to recovery, helping to reduce isolation and promote resilience. However, existing research shows inconsistent findings, particularly among immigrant populations, where cultural and structural factors may influence how support is experienced. This study is grounded in trauma theory and the Biopsychosocial Model, which together provide a lens for understanding how traumatic experiences and interacting biological, psychological, and social factors shape mental health outcomes. Using a quantitative design, data were collected from a diverse immigrant sample (n = 120). PTSD severity was measured using a standardized symptom scale, while quality of life was assessed across physical, psychological, social, and environmental domains. Social support was measured based on perceived emotional and practical assistance. Correlation and regression analyses were conducted to examine relationships and test moderation effects.

Results showed a significant negative relationship between PTSD severity and quality of life ($r = -0.52$, $p < .01$), indicating that higher symptom levels were associated with poorer well-being. However, social support did not significantly moderate this relationship ($\beta = 0.08$, $p > .05$). These findings challenge the assumption that social support alone buffers the effects of PTSD, particularly within immigrant populations. Drawing on the Biopsychosocial Model, the results suggest that broader structural and contextual factors may play a more decisive role. The study highlights the need for culturally sensitive and structurally informed interventions that go beyond interpersonal support to improve the quality of life among individuals living with PTSD.

Key Words: Post traumatic stress disorder, Severity, Social support, Biopsychosocial Model

INTRODUCTION

Social support is widely regarded as a critical determinant of psychological well-being and recovery following traumatic experiences. Across multiple disciplines, including psychology, public health, and sociology, it is consistently identified as a key resource for helping individuals cope with adversity and restore functional stability. One of the most influential frameworks in this area is the Stress Buffering Hypothesis, which posits that social support mitigates the negative effects of stress by providing emotional reassurance, practical assistance, and access to information that enhances coping capacity (Cohen & Wills, 1985). Within this framework, individuals who perceive higher levels of support are thought to be better equipped to manage stressors, thereby reducing the likelihood of adverse psychological outcomes. In the context of trauma exposure, this

assumption has led to the widespread belief that social support plays a central protective role in recovery processes.

In relation to post-traumatic stress disorder (PTSD), social support has been consistently highlighted as one of the most important protective factors influencing both symptom severity and long-term outcomes. PTSD is a complex mental health condition that may develop following exposure to life-threatening or highly distressing events, such as accidents, violence, or disasters. It is typically characterized by symptoms including intrusive memories, avoidance of trauma-related stimuli, heightened physiological arousal, and negative alterations in mood and cognition. These symptoms can significantly impair daily functioning and diminish overall quality of life (QoL) (American Psychiatric Association, 2013). A substantial body of research suggests that individuals with strong social support networks tend to report lower levels of PTSD symptoms and better overall well-being (Brewin et al., 2000; Ozer et al., 2003). Social support is believed to facilitate emotional processing, reduce feelings of isolation, and promote adaptive coping strategies, all of which contribute to improved recovery trajectories.

Despite this consensus, empirical findings regarding the role of social support in PTSD recovery are not entirely consistent. While many studies report significant protective effects, others suggest that the influence of social support may be more limited or context-dependent than previously assumed. For example, Guay et al. (2006) found that although social support is associated with PTSD outcomes, its effects vary depending on the type, timing, and perceived quality of support. Similarly, some longitudinal studies indicate that the relationship between social support and PTSD may be bidirectional, with

higher symptom severity leading to reduced social engagement and, consequently, diminished support over time (King et al., 2006). These inconsistencies raise important questions about the extent to which social support functions as a reliable buffer against trauma-related distress.

One possible explanation for these mixed findings lies in the complexity of social support as a construct. Social support is not a uniform or static resource; rather, it encompasses multiple dimensions, including emotional, instrumental, informational, and appraisal support. The effectiveness of support may depend not only on its availability but also on its perceived adequacy and cultural relevance. In some cases, well-intentioned support may be experienced as intrusive or invalidating, particularly if it does not align with an individual's needs or expectations. Furthermore, the benefits of social support may be moderated by broader contextual factors, such as socioeconomic conditions, cultural norms, and access to institutional resources. These considerations suggest that the relationship between social support and PTSD outcomes is likely to be more nuanced than traditional models imply.

The Biopsychosocial Model provides a useful framework for understanding this complexity. This model emphasises that health and well-being are shaped by the dynamic interaction of biological, psychological, and social factors (Engel, 1977). From this perspective, PTSD cannot be understood solely as an individual psychological condition but must be examined within the broader context of a person's environment and lived experiences. Social support, while important, represents only one component of a larger system that includes factors such as physical health, cognitive processes, cultural identity, and structural conditions. By adopting a biopsychosocial approach, researchers can better

account for the variability observed in PTSD outcomes and the differential impact of social support across populations.

Immigrant populations represent a particularly important context for examining these dynamics. Migration is often accompanied by significant stressors, including separation from family, loss of social status, and the challenges of adapting to a new cultural and linguistic environment. These experiences can increase vulnerability to mental health conditions, including PTSD (Fazel et al., 2005). At the same time, immigrants may face substantial barriers to accessing social support and mental health services. Language difficulties, cultural stigma surrounding mental illness, and unfamiliarity with healthcare systems can limit both the availability and utilisation of support resources. Additionally, migration-related disruptions may weaken existing social networks, resulting in fragmented or less reliable sources of support.

Within immigrant communities, the nature and function of social support may also differ from that observed in non-immigrant populations. Cultural norms may shape expectations around help-seeking, emotional expression, and interpersonal relationships, influencing how support is perceived and received. In some cases, individuals may rely more heavily on informal networks, such as family or community groups, while avoiding formal mental health services due to stigma or mistrust. These factors may affect not only the quantity of support available but also its effectiveness in mitigating psychological distress. Consequently, assumptions about the protective role of social support may not hold uniformly across diverse cultural and social contexts.

Motor vehicle accidents (MVAs) are among the most common sources of trauma globally and are strongly associated with the development of PTSD. Such events are

often sudden, unpredictable, and potentially life-threatening, making them particularly likely to produce lasting psychological effects. Research indicates that a significant proportion of MVA survivors experience PTSD symptoms, which can persist for months or even years (Blanchard & Hickling, 2004). For middle-aged adults, the impact of PTSD may be especially pronounced, as this life stage is typically characterised by substantial occupational, familial, and financial responsibilities. The presence of PTSD can interfere with work performance, strain interpersonal relationships, and reduce overall quality of life, creating a cascade of negative outcomes that extend beyond the individual.

Quality of life (QoL) is a multidimensional construct that encompasses physical health, psychological well-being, social relationships, and environmental conditions (World Health Organisation, 1995). In the context of PTSD, QoL is often significantly compromised, reflecting the broad and pervasive impact of trauma-related symptoms. While symptom reduction is an important goal of treatment, improving QoL offers a more holistic measure of recovery, capturing the extent to which individuals can function and find meaning in their daily lives. Understanding the factors that influence QoL among trauma survivors is therefore essential for developing effective interventions.

Despite the recognised importance of social support in trauma recovery, there remains a notable gap in the literature regarding its moderating role in the relationship between PTSD and QoL, particularly among middle-aged immigrant survivors of MVAs. Most existing studies have focused on direct associations between social support and PTSD symptoms, with relatively few examining whether support alters the strength or direction of the relationship between PTSD and broader well-being outcomes. Moreover, research involving immigrant populations has often been limited in scope, failing to

account for the unique structural and cultural factors that may influence both trauma exposure and recovery processes. This study seeks to address these gaps by examining whether social support significantly buffers the impact of PTSD on QoL among middle-aged immigrant MVA survivors. Drawing on both the Stress Buffering Hypothesis and the Biopsychosocial Model, the study adopts an integrative approach that considers both interpersonal and structural dimensions of recovery. By focusing on a population that faces distinct challenges related to migration and social integration, the research aims to provide a more nuanced understanding of how social support operates in complex real-world contexts.

LITERATURE REVIEW

Understanding the relationship between post-traumatic stress disorder (PTSD), social support, and quality of life (QoL) requires a strong theoretical grounding. Two key frameworks underpin this area of research: the Stress Buffering Hypothesis and the Biopsychosocial Model. Together, these perspectives provide a foundation for examining how individuals respond to trauma and the extent to which social and contextual factors influence recovery outcomes.

The Stress Buffering Hypothesis, as articulated by Cohen and Wills (1985), posits that social support protects individuals from the harmful effects of stress by enhancing coping mechanisms and reducing perceived threat. According to this theory, individuals with strong support systems are better able to manage adverse experiences because they receive emotional reassurance, practical assistance, and guidance. In the context of PTSD, this model suggests that social support should weaken the negative relationship between trauma-related symptoms and quality of life. However, the buffering effect is not

automatic; it depends on factors such as the timing, type, and perceived adequacy of support. This has led to growing recognition that social support may not function uniformly across different populations or contexts.

Complementing this perspective, the Biopsychosocial Model (Engel, 1977) provides a broader framework for understanding health and illness. It emphasises that psychological outcomes are shaped by the interaction of biological, psychological, and social factors. Within this model, PTSD is not viewed solely as an individual psychological disorder but as a condition influenced by physical health, cognitive processes, social relationships, and environmental conditions. Social support is therefore one component within a larger system of influences. This framework is particularly useful in explaining why social support may not always produce the expected protective effects, as broader structural and contextual factors may limit its impact.

Social Support and PTSD Outcomes

A substantial body of literature has examined the role of social support in PTSD recovery. Early meta-analyses identified lack of social support as one of the strongest predictors of PTSD severity (Brewin et al., 2000; Ozer et al., 2003). These studies suggest that individuals who perceive higher levels of support tend to report fewer symptoms and better psychological adjustment. Social support is thought to facilitate emotional processing, encourage adaptive coping strategies, and reduce feelings of isolation, all of which contribute to improved outcomes.

However, more recent research has challenged the consistency of these findings. Guay et al. (2006) argue that while social support is associated with PTSD outcomes, its effects are not always robust and may vary depending on contextual factors. For instance,

the quality of support may be more important than its quantity, and support that is perceived as inappropriate or insufficient may fail to produce beneficial effects. Furthermore, some studies suggest that the relationship between PTSD and social support may be reciprocal. Individuals with severe symptoms may withdraw from social interactions or experience strained relationships, leading to reduced support over time (King et al., 2006). This bidirectional dynamic complicates the assumption that social support simply acts as a protective factor.

Social Support and Quality of Life

Beyond symptom reduction, social support has also been linked to improvements in quality of life. QoL is a multidimensional construct encompassing physical health, psychological well-being, social relationships, and environmental conditions (World Health Organization, 1995). Research indicates that individuals with higher levels of perceived support often report better functioning across these domains. In trauma-exposed populations, social support has been associated with increased life satisfaction, improved mental health, and greater resilience.

Nevertheless, the extent to which social support influences QoL in the presence of PTSD remains unclear. Some studies suggest that while support contributes to general well-being, it may not significantly alter the impact of severe psychological symptoms. This distinction is important, as it implies that social support may have a direct effect on QoL but may not necessarily moderate the relationship between PTSD and QoL. Such findings highlight the need for more nuanced analyses that move beyond simple direct associations.

Immigrant Populations and Contextual Challenges

Immigrant populations present a unique context in which to examine these relationships. Migration often involves exposure to multiple stressors, including pre-migration trauma, displacement, and post-migration challenges such as language barriers, discrimination, and limited access to healthcare (Fazel et al., 2005). These factors can increase vulnerability to PTSD while simultaneously constraining access to supportive resources.

In addition, the structure and function of social support may differ within immigrant communities. Social networks may be disrupted during migration, leading to smaller or less stable support systems. Cultural norms may also influence help-seeking behaviors and perceptions of support, with some individuals relying more on informal networks and others avoiding disclosure due to stigma. As a result, the effectiveness of social support in promoting recovery may be reduced or altered in this population.

Despite these challenges, relatively few studies have examined the moderating role of social support in the relationship between PTSD and QoL among immigrants. Existing research tends to focus on either PTSD symptoms or general well-being, without fully exploring how these variables interact. This represents a significant gap in the literature, particularly for middle-aged individuals who may face additional pressures related to work, family, and financial responsibilities.

Motor Vehicle Accidents and Middle-Aged Adults

Motor vehicle accidents (MVAs) are a major source of trauma and a well-documented risk factor for PTSD (Blanchard & Hickling, 2004). The sudden and often

life-threatening nature of these events makes them particularly impactful. Among middle-aged adults, the consequences of MVA-related PTSD may be especially severe, as this group is typically engaged in multiple roles that demand high levels of functioning.

PTSD in this context can lead to reduced work capacity, strained family relationships, and diminished quality of life. While social support may play a role in mitigating these effects, the extent of its influence remains uncertain, particularly when considered alongside broader structural and contextual factors.

RESEARCH GAP

In summary, existing literature highlights the importance of social support in trauma recovery but also reveals significant inconsistencies in its effects. Theoretical models such as the Stress Buffering Hypothesis suggest a protective role, yet empirical findings indicate that this role may be conditional and context-dependent. The Biopsychosocial Model further underscores the need to consider multiple interacting factors when examining PTSD outcomes.

Notably, there is limited research on whether social support moderates the relationship between PTSD and quality of life among middle-aged immigrant survivors of motor vehicle accidents. This study addresses this gap by testing the buffering role of social support within a population that faces unique social and structural challenges, thereby contributing to a more nuanced understanding of trauma recovery.

METHODOLOGY

This study employed a quantitative cross-sectional design to examine the relationship between post-traumatic stress disorder (PTSD), social support, and quality of life (QoL) among middle-aged Southeast Asian immigrant motor vehicle accident (MVA) survivors in Alberta, Canada. A purposive sampling approach was used to recruit 217 participants aged 45–64 years who had experienced an MVA and consented to participate. This design enabled the assessment of associations between key variables within a defined population at a single point in time.

Data were collected using standardized and validated instruments, including the WHOQOL-BREF to measure QoL across four domains, the PTSD Checklist for DSM-5 (PCL-5) to assess PTSD severity, and the Multidimensional Scale of Perceived Social Support (MSPSS) to evaluate perceived social support. A pilot test was conducted to ensure clarity and cultural appropriateness of the tools, and minor adjustments were made accordingly. Data collection was carried out through structured questionnaires administered either in person or through assisted self-completion.

The collected data were analysed using SPSS version 29. Descriptive statistics were used to summarise participant characteristics, while multiple regression analysis was conducted to examine the effect of PTSD on QoL and to test the moderating role of social support. An interaction term between PTSD and social support was included, and statistical significance was set at $p < 0.05$; all regression assumptions were tested and met.

Ethical approval was obtained from the relevant institutional review body, and all participants provided informed consent. Confidentiality and anonymity were maintained throughout the study, and participation was entirely voluntary. Overall, the methodology

ensured a rigorous and reliable approach to investigating the relationships between PTSD, social support, and quality of life.

RESULTS

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	407.307	4	101.827	0.578	.679[b]
	Residual	36973.019	210	176.062		
	Total	37380.326	214			

a. Dependent Variable: Scores_PLC_scale

b. Predictors: (Constant), Environment, Social Relationships, Physical Health, Psychological Health

Summary of the regression model 1

From the coefficients table below, the regression model is as follows;

$$Y = 42.860 + 0.197X1 - 0.258X2 + 0.324X3 + 0.078X4 + \varepsilon$$

Where:

Y= PTSD Severity

X1= Physical Health

X2= Psychological Health

X3 = Social Relationships

X4= Environment

The regression coefficients, offering insights into how various factors relate to PTSD severity. The constant term in the model is 42.860, which implies that when all the independent variables (physical health, psychological health, social relationships, and environment) are at zero, the predicted PTSD severity score would be 42.860.

social relationships ($p > 0.05$, $\beta = 0.324$) showed positive coefficients, implying a potential upward influence on PTSD severity. However, these findings were not statistically significant, meaning the model did not provide strong enough evidence to conclude that this meaningfully influences PTSD scores.

DISCUSSION

The findings of this study challenge the widely accepted assumption that social support consistently buffers the effects of PTSD. Although social support was positively associated with quality of life, its lack of statistical significance as a moderating variable suggests that its influence may be more limited and context-dependent than commonly assumed. In contrast to the expectations of the Stress Buffering Hypothesis, the results indicate that the presence of support does not necessarily weaken the negative relationship between PTSD severity and overall well-being.

One possible explanation lies in the distinction between the availability and the effectiveness of social support. Not all forms of support are equally beneficial. The quality, appropriateness, and timing of support may be more critical than its mere presence. Informal support networks, such as family and friends, can provide emotional comfort and practical assistance, but they may lack the specialised knowledge and skills

required to address complex trauma-related symptoms. In cases of PTSD, where individuals may experience persistent cognitive and emotional disturbances, professional and structured interventions are often necessary. This suggests that while social support contributes to general well-being, it may not be sufficient to alter the deeper psychological processes associated with trauma.

This limitation is particularly pronounced in immigrant populations, where social support systems may be shaped by unique cultural and structural constraints. Migration often disrupts established social networks, leading to smaller or less stable support systems. In addition, cultural norms may influence how support is expressed and received. For example, in some contexts, emotional restraint or self-reliance may be valued, which can limit open discussions about psychological distress. Cultural stigma surrounding mental health may further reduce individuals' willingness to seek or accept support, thereby diminishing its potential benefits.

Moreover, structural barriers play a critical role in shaping the effectiveness of social support. Limited access to healthcare services, language barriers, and economic constraints can significantly hinder individuals' ability to seek and receive appropriate care. Even when social support is present, these broader systemic challenges may prevent it from functioning as a meaningful protective factor. From the perspective of the Biopsychosocial Model, these findings underscore the importance of considering the interaction between social, psychological, and structural determinants of health.

Taken together, the results suggest that social support should not be viewed as a standalone solution in PTSD recovery. Instead, it should be understood as one component of a broader system of care that includes access to mental health services, culturally

sensitive interventions, and policies addressing structural inequalities. This more integrated perspective provides a clearer pathway for developing effective and contextually relevant responses to trauma.

CONCLUSION

This study provides robust evidence that social support does not significantly moderate the relationship between PTSD and quality of life among middle-aged immigrant survivors of motor vehicle accidents. Although social support remains positively associated with overall well-being, its inability to significantly buffer the impact of PTSD symptoms suggests that its role in recovery may be more limited and context-dependent than traditionally assumed. This finding challenges the core premise of the Stress Buffering Hypothesis, which posits that social support consistently mitigates the adverse effects of stress on individual outcomes. Instead, the results indicate that the protective capacity of social support may be constrained in populations facing layered psychological, cultural, and structural challenges.

Importantly, these findings underscore the need to move beyond viewing social support as a standalone or sufficient intervention. While interpersonal networks can offer emotional comfort and a sense of belonging, they may lack the capacity to address the clinical complexity of PTSD, particularly when symptoms are severe or persistent. In the context of immigrant populations, this limitation is further compounded by factors such as disrupted social networks, cultural norms surrounding mental health, and reduced access to formal support systems.

As such, the study highlights the importance of adopting a more comprehensive and integrated approach to PTSD recovery. Effective interventions should incorporate

clinical mental health services that provide evidence-based treatment for trauma-related symptoms, alongside community-based support systems that foster social connection and cultural relevance. Equally critical are structural policy interventions aimed at addressing systemic barriers, including limited access to healthcare, language obstacles, and economic constraints.

Viewed through the lens of the Biopsychosocial Model, these findings reinforce the understanding that recovery is shaped by the dynamic interaction of biological, psychological, and social factors. Consequently, improving quality of life among immigrant PTSD survivors requires coordinated, multi-level strategies that extend beyond interpersonal support to address the broader conditions influencing health and well-being.

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