

Psychological Coping Mechanisms in Military Physicians: A Qualitative Exploration of Stress Management Strategies

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Abstract

Background: This qualitative study investigates the coping strategies utilised by military physicians facing the dual demands of military service and healthcare provision. Recognising the unique stressors within this professional context, the study aims to identify both adaptive and maladaptive coping mechanisms employed by military physicians.

Methods: A purposive sample of 18 military physicians from diverse branches of the armed forces was recruited. Participants, ranging in ranks from junior officers to senior medical officers, were selected based on experience levels, deployment history and demographic characteristics to ensure a comprehensive representation. Semi-structured interviews, guided by an interview guide developed through an extensive literature review, were conducted to explore participants' experiences, specific stressors encountered, coping mechanisms employed and the perceived effectiveness of these strategies.

Results: Thematic analysis revealed a spectrum of coping strategies among military physicians. Adaptive strategies included reliance on social support networks, engagement in self-care practices, proactive problem solving, effective time management and seeking professional support. Maladaptive strategies encompassed avoidance behaviours, substance use patterns, isolation tendencies, denial or minimisation and emotional suppression.

Conclusion: The findings offer a nuanced understanding of the coping landscape of military physicians, highlighting both strengths and vulnerabilities within this professional community. Identifying adaptive and maladaptive coping mechanisms provides a foundation for targeted interventions and support initiatives. The study's implications extend to organisational practices, policy considerations and avenues for future research, emphasising the importance of prioritising the mental health and wellbeing of military physicians facing the multifaceted challenges of their roles.

Keywords: Military physicians, Stress management, Coping strategies, Military healthcare

Introduction

In military medicine, where the intersection of healthcare and rigours of military service converge, the wellbeing of healthcare providers is a critical determinant of overall mission success.^{1,2} This expanded study undertakes a profound inquiry into the intricate dynamics of stress experienced by military doctors to advance our comprehension of the nuanced challenges inherent in their roles and the strategies employed to mitigate the multifaceted impacts of stress. The importance of this study lies in the dual commitment that military physicians uphold

– the solemn duty to preserve life and wellbeing, coupled with the challenges of operating in dynamic, often unpredictable, military environments. As frontline responders, military doctors navigate a landscape where the exigencies of battlefield medicine intertwine with the emotional toll of caring for servicemen and women during conflict.^{3,4} The importance of their physical and mental resilience cannot be overstated, as it directly correlates with the effectiveness of military healthcare delivery and the overall readiness of the armed forces.⁵ Despite the acknowledged significance of understanding

stress in military contexts and the plethora of studies addressing stress in healthcare professionals, a conspicuous gap persists in the focused examination of military physicians.^{6,7} This study recognises and addresses this void in the research. The existing literature on stress management for military physicians often overlooks their unique challenges, treating them as extensions of the broader medical or military community.^{8,9} This study addresses this gap by specifically examining the distinct stressors faced by military physicians, their impact on wellbeing and the strategies used to navigate these challenges. The study aims to unravel the complexity of stress experienced by military physicians, contributing to both military medicine and broader healthcare and stress management fields. By exposing the intricacies of stress management in this group, the study seeks to inform evidence-based interventions, policies and support structures, ultimately enhancing the resilience and efficiency of military healthcare systems in demanding operational contexts. The research benefits individuals and has broader implications for optimising healthcare delivery in military operations.

Literature review

Military physicians operate in a uniquely demanding environment that requires medical expertise and resilience to navigate the stressors inherent to military healthcare systems.^{10,11} The existing literature highlights the complex interplay between military service, medical practice and the psychological wellbeing of these healthcare providers.¹² A key theme is the dual burden military physicians face: managing the clinical demands of their profession while addressing the operational challenges of military service.¹³ Brintz¹⁴ provides a foundational analysis of stress in military healthcare providers, identifying operational tempo, deployment-related stress and exposure to combat trauma as primary stressors that distinguish military physicians from their civilian counterparts. Similarly, Shutzberg¹⁵ explores the emotional toll of treating comrades-in-arms, emphasising the added complexity of the 'warrior ethos', where personal relationships with patients blur the traditional doctor-patient dynamic. This emotional entanglement creates a unique stressor, requiring military physicians to balance professional detachment with empathetic care. The dynamic nature of military healthcare settings further complicates stress management. Varpio⁷ highlights the importance of adaptability and situational awareness, noting that the rapid transition between peacetime and wartime healthcare delivery demands a specialised skillset, often exacerbating stress

levels. The study also underscores the role of targeted training programs in enhancing adaptability and mitigating stress. Research on coping mechanisms among military physicians reveals various strategies to manage these unique stressors. A longitudinal study¹⁶ tracks stress-related outcomes, including burnout, job satisfaction and quality of life. The findings emphasise the interconnectedness of stress, job performance and overall wellbeing, advocating for holistic interventions tailored to the specific needs of military physicians.

This study aims to provide actionable insights for developing targeted interventions, training programs, and mental health support systems by exploring how these professionals navigate the dual demands of military service and healthcare provision. Ultimately, the findings could inform policies and practices that enhance the resilience and wellbeing of military physicians, contributing to the broader fields of military medicine and healthcare.

In summary, the existing literature highlights the unique stressors and coping mechanisms faced by military physicians, underscoring the need for further qualitative exploration. Building on these insights, the following section outlines the methodological approach employed in this study to investigate stress management strategies in this population.

Method

A qualitative research design was deliberately chosen to understand how military physicians cope with military service and healthcare provision challenges. This approach adheres to industry standards, providing a detailed insight into the psychological and professional complexities experienced by military physicians.

Participants and procedures

This study employed a qualitative design, utilising purposive sampling to select 18 military physicians from various branches, ensuring a diverse and representative cross-section of the population. Participants were chosen based on key criteria, including diverse experience levels (ranging from early-career physicians to those with extensive military medical practice), varied deployment histories (considering different numbers of tours and operational settings) and demographic diversity (including age, gender and cultural background). Including participants across ranks, from junior officers to senior medical officers, reflects the hierarchical structure of the military medical community. While the sample size was intentionally

kept small to allow for in-depth qualitative analysis, this limitation is acknowledged and will be discussed further in the discussion section.

Data were collected through semi-structured interviews, allowing participants to share their experiences openly. The interview guide, developed based on a comprehensive literature review, included key questions such as:

- ‘Can you describe the most significant stressors you face as a military physician?’
- ‘What coping strategies have you found most effective in managing these stressors?’
- ‘How do you perceive the role of social support networks in your stress management?’
- ‘Have you encountered any challenges in accessing mental health resources or support?’

Each interview lasted between 60 to 75 minutes, allowing for a thorough exploration of participants’ experiences. Thematic analysis was used to analyse the data, involving familiarisation with the data, generating initial codes, identifying overarching

themes and refining these themes through iterative review. To ensure reliability and validity, member checking was conducted to verify interpretations with participants, peer debriefing was used to gain external perspectives, and an audit trail was maintained to document each step of the research process.

Ethical considerations

Ethical considerations were a central priority throughout the study. Before participating, all potential participants received comprehensive information about the research objectives, procedures and potential implications. Emphasis was placed on voluntary participation, the right to withdraw at any time without consequence and the assurance of confidentiality. Written informed consent was obtained from all participants prior to their involvement in the study.

All data were anonymised immediately after collection by removing participant identifiers, such as names and specific locations, and replacing them with unique codes to maintain confidentiality. Data were stored

Table 1. Characteristics of interviewees in the study on coping strategies among military physicians

Rank	Clinical experience (yrs)	Deployment history	Demographic characteristics
Junior Officer	4	1	Male, age: 30s
Senior Medical Officer	12	3	Female, age: 40s
Junior Officer	3	No	Male, age: 20s
Senior Medical Officer	18	4	Female, age: 40s
Junior Officer	5	2	Male, age: 30s
Senior Medical Officer	15	3	Female, age: 40s
Junior Officer	6	1	Male, age: 30s
Senior Medical Officer	20	5	Female, age: 40s
Junior Officer	8	2	Male, age: 30s
Senior Medical Officer	22	6	Female, age: 50s
Junior Officer	7	3	Male, age: 30s
Senior Medical Officer	25	7	Female, age: 50s
Junior Officer	9	4	Male, age: 30s
Senior Medical Officer	28	8	Female, age: 50s
Junior Officer	10	5	Male, age: 40s
Senior Medical Officer	30	9	Female, age: 50s
Junior Officer	11	6	Male, age: 40s
Senior Medical Officer	32	10	Female, age: 60s

securely in password-protected files, accessible only to the research team. During reporting, care was taken to ensure that no individual could be identified through direct or indirect references.

Given the hierarchical nature of military organisations, power dynamics were carefully managed during interviews to ensure participants felt comfortable sharing their experiences openly. Interviews were conducted in neutral, private settings to minimise perceived pressure or influence from superiors or peers. Participants were assured that their responses would not impact their professional standing or relationships within the military. The interviewer, who was not part of the military hierarchy, emphasised their role as an independent researcher, fostering an environment of trust and openness.

The study protocol, including participant recruitment and data collection, received ethical approval [Approval ID: IR.AJAUMS.REC.1401.186] from the Institutional Review Board (IRB), ensuring adherence to high ethical standards and participant protection guidelines.

While the purposive sampling approach and small sample size allowed for a detailed exploration of stress management strategies among military physicians, it also limited the generalisability of the findings. This limitation will be explicitly addressed in the discussion section, along with recommendations for future research to include larger and more diverse samples to enhance the external validity of the findings.

Characteristics of interviewees

Eighteen participants were chosen, representing diverse demographic characteristics. The group includes junior and senior officers with service ranging from 3 to 32 years, experiencing 0 to 10 deployments. Gender diversity was maintained with male and female participants, and ages 29 to 60 ensured a broad perspective within the military physician community. The study intentionally ensures a representative sample, as detailed in Table 1, showcasing the comprehensive nature of the selected participants.

Results

The findings presented below emerged through thematic analysis, offering a nuanced understanding of how these professionals navigate stressors unique to their professional roles.

1 Adaptive coping strategies

Adaptive coping strategies employed by military physicians emerged as crucial mechanisms for navigating the unique stressors associated with their dual roles in military service and healthcare provision. The study identified several key adaptive coping strategies, highlighting the resilience and resourcefulness of these professionals. These strategies encompassed the following:

1.1 Social support networks

Military physicians consistently sought emotional support from social support networks, including colleagues, friends and family. These networks played crucial roles in fostering camaraderie, offering a valuable outlet for sharing experiences, and navigating the complexities of their professional and personal lives. This underscores the pivotal role of interpersonal connections as a cornerstone for resilience and wellbeing in the demanding context of military medical practice.

1.2 Self-care practices

Participants consistently emphasised the importance of self-care practices in managing the complex demands of their dual roles. Engaging in activities like regular exercise, mindfulness and pursuing hobbies demonstrated their collective awareness of the crucial role personal wellbeing plays in mitigating professional stressors. Regular exercise promoted physical health and tension release, mindfulness practices cultivated mental resilience, and pursuing hobbies offered constructive relaxation. This thematic revelation underscores the proactive and personalised approaches military physicians adopt to safeguard their wellbeing in the demanding contexts of their roles.

1.3 Proactive problem solving

The study highlighted a proactive problem-solving approach as a fundamental coping strategy among military physicians. Participants consistently demonstrated the ability to systematically analyse stressors, showcasing awareness of the intricate challenges in their dual roles. This adaptive strategy went beyond problem identification to actively developing effective solutions. Military physicians exhibited a commitment to addressing challenges in both military and healthcare contexts, illustrating resilience and resourcefulness in navigating their professional responsibilities.

1.4 Effective time management

The study revealed effective time management as a crucial coping mechanism among participants,

particularly for military physicians juggling dual roles. Emphasising the value of time as a resource, participants prioritised organised schedules, consciously balancing military duties and healthcare responsibilities through strategic time allocation. This adaptive strategy showcased a practical approach to workload management and a proactive stance in enhancing productivity. The significance of effective time management underscores its pivotal role in the coping toolkit of military physicians, aiding them in navigating their roles with precision and efficiency.

1.5 Seeking professional support

A notable coping strategy among military physicians was actively seeking professional support. Some participants recognised the value of consulting mental health professionals and utilising counselling services within the military structure. This strategic approach acknowledges the importance of mental wellbeing and reflects a proactive commitment to addressing the unique stressors of military service and healthcare provision. Participants' willingness to engage with professional support demonstrates a positive and forward-thinking attitude towards mental health in the military medical community, contributing to resilience and emphasising the importance of addressing mental health needs as integral components of effective coping strategies.

2 Potential maladaptive coping mechanisms

2.1. Avoidance behaviours

The study found that some participants used avoidance behaviours as a maladaptive coping mechanism, avoiding stressors instead of facing them directly. While this strategy offers temporary relief, it indicates a need for interventions that promote direct engagement with challenges. Recognising avoidance as maladaptive underscores the importance of addressing underlying issues and developing coping strategies that encourage active and constructive confrontation of stressors. This finding emphasises the complexity of coping responses among military physicians and underscores the need for interventions fostering resilience and adaptive strategies to manage stress in their dual roles effectively.

2.2. Substance use patterns

A concerning maladaptive coping strategy among some military physicians was substance use. In isolated cases, participants admitted turning to

substances like alcohol or drugs to cope with stress. This finding underscores the urgent need to address potential substance misuse within the military physician community. Substance use as a coping mechanism raises concerns not only for individual wellbeing but also for the overall health and functioning of this professional group. Recognising and addressing substance use patterns is crucial for promoting a healthier and more resilient military medical community, emphasising the necessity for targeted interventions and support systems in this unique professional setting.

2.3. Isolation tendencies

The study identified maladaptive coping, seen as isolation tendencies, in some participants. This pattern involves intentionally withdrawing from social and professional networks, highlighting potential negative impacts on military physicians' wellbeing. Addressing this finding calls for targeted interventions to foster social connectedness within the military physician community, promoting a supportive and collaborative environment. Enhancing social connectedness can contribute to military physicians' overall resilience and wellbeing.

2.4. Denial or minimisation

The study found that some military physicians use denial or minimisation as a maladaptive coping strategy, downplaying the impact of stressors. While offering temporary relief, this strategy risks hindering acknowledgment and resolution of underlying issues. Recognising this as maladaptive underscores the need for interventions encouraging open acknowledgment and constructive processing of stressors. This fosters a more resilient and adaptive approach to coping with the unique challenges of military medical practice.

2.5. Emotional suppression

The study identified emotional suppression as a maladaptive coping mechanism in some participants, indicating difficulty in openly expressing feelings about stressful situations. While offering temporary control, this coping strategy highlights areas for interventions promoting emotional expression and overall wellbeing. Challenges in expressing emotions suggest a need for targeted interventions fostering a supportive environment for military physicians to articulate and process emotions effectively. Addressing emotional suppression can contribute to developing healthier coping strategies and enhancing the emotional resilience of military physicians.

Discussion

This study explores coping strategies among military physicians navigating the dual responsibilities of military service and healthcare provision. It identifies adaptive strategies, such as leveraging social support networks and proactive problem solving, contributing to enhanced professional performance and wellbeing. Conversely, maladaptive mechanisms, including avoidance behaviours and substance use, highlight the need for targeted interventions.

The findings have significant practical implications for mental health interventions and organisational policies. For instance, the emphasis on social support networks suggests that military medical institutions should prioritise fostering peer support systems and mentorship programs. These initiatives could be integrated into training curricula to help physicians build and maintain robust support networks. Additionally, proactive problem-solving skills could be cultivated through scenario-based training modules that simulate high-stress environments, equipping physicians with practical tools to manage stressors effectively.

To address maladaptive coping mechanisms like substance use, institutions should implement tailored training programs focused on prevention, early recognition and intervention. These programs could include workshops on emotional intelligence, stress management techniques and strategies to reduce isolation tendencies. Furthermore, creating a culture of openness and reducing stigma around mental health is essential. Initiatives such as confidential counselling services and regular mental health checks could encourage physicians to seek help without fear of judgment.

While this study provides valuable insights, it is not without limitations. First, the reliance on self-reported data introduces the potential for bias, as participants may underreport maladaptive behaviours or overstate adaptive strategies due to social desirability. Future studies could incorporate mixed-methods approaches, combining self-reports with observational data, to mitigate this bias.

Second, the small sample size, though representative in terms of experience and deployment history, limits the generalisability of the findings. Caution is advised when applying these results to broader populations of military physicians or other healthcare professionals. Future research should

aim for larger, more diverse samples to enhance the external validity of the findings.

Lastly, the qualitative nature of the study introduces subjectivity in data interpretation. Employing diverse analytical approaches, such as triangulation with quantitative data or multiple researchers' cross-validation, could strengthen future studies' robustness. Exploring cultural and temporal factors, and addressing negative cases would also provide a more comprehensive understanding of coping strategies in this population.

This study deepens our understanding of how military physicians cope with the unique stressors of their roles, offering a foundation for evidence-based interventions to enhance their wellbeing. The findings underscore the importance of integrating adaptive coping strategies, such as social support and proactive problem solving, into organisational policies and training programs. Simultaneously, addressing maladaptive mechanisms like substance use and avoidance behaviours is critical for effective stress management.

Organisational support plays a pivotal role in shaping coping strategies. Military medical institutions should establish comprehensive programs, including mental health resources, resilience training and initiatives to reduce stigma. A proactive organisational approach that prioritises emotional wellbeing and fosters open discussions can significantly enhance the resilience of military physicians.

In conclusion, this study highlights the intricate interplay of coping strategies and organisational support in military medical practice. By prioritising the wellbeing of military physicians through tailored interventions, cultural shifts and resilience initiatives, we can ensure they are better equipped to manage their dual responsibilities of national security and healthcare provision. This research lays the groundwork for a more supportive environment, contributing to the broader goal of redefining how we address and support the mental health of those serving on the frontlines of both medicine and military service.

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