

Exploring Burnout and Work Stress among Radiologists in a Tertiary Hospital

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Abstract

Burnout is a growing issue among radiologists, marked by emotional exhaustion, depersonalization, and reduced personal accomplishment. This qualitative study examines the factors behind burnout in radiologists at a tertiary hospital and looks into coping strategies they use to handle work-related stress. Semi-structured interviews with 15 radiologists provided the data, which was analyzed through thematic analysis. The findings showed that workload, administrative duties, and professional isolation are major contributors to burnout. Coping mechanisms included physical activities, self-care, and peer support. This study highlights the need for targeted organizational actions to reduce burnout and support radiologist well-being.

Keywords: Burnout, Radiologists, Qualitative Study, Workload, Coping Strategies, Professional Isolation, Administrative Duties, Healthcare

Introduction

Burnout is a major occupational risk in healthcare, particularly for those working in high-pressure fields like radiology. The rising demand for imaging services, combined with time-intensive diagnostic procedures, places immense pressure on radiologists (Magnavita et al., 2008). Their work often involves long hours, large case volumes, and repetitive tasks—all contributing to emotional exhaustion, depersonalization, and a diminished sense of personal accomplishment, which are key elements of burnout (Maslach & Jackson, 1981).

Previous studies have shown that burnout rates among radiologists are increasing, partly due to factors such as workload, professional isolation, and limited interaction with patients (McNeeley et al., 2013). The highly technical nature of radiology, coupled with growing administrative demands and the need to stay updated with rapidly evolving technology, intensifies work-related stress (Tankersley, 2014). Radiologists also deal with unique challenges, like maintaining high accuracy in interpretations, with potentially serious consequences if mistakes occur (Tankersley, 2014).

This paper explores the causes of burnout in radiologists working in a tertiary hospital and the coping methods they use to manage stress. Understanding these factors is essential for developing effective interventions to minimize burnout and enhance the well-being of radiologists. The qualitative approach used in this study offers deeper insight into their experiences, highlighting both the challenges they face and the strategies they use to cope.

Literature Review

Burnout among healthcare professionals has been studied extensively, largely because of its detrimental impact on both personal well-being and patient care (Maslach & Jackson, 1981). In radiology, several studies have identified a range of factors that contribute to burnout, including workload, working conditions, and the psychological and emotional demands of the job. According to Magnavita et al. (2008), increasing demands for imaging services have put radiologists under considerable pressure, resulting in high stress and burnout levels. The repetitive nature of radiological work, involving reviewing and interpreting numerous imaging studies daily, contributes significantly to emotional exhaustion, which is central to burnout.

Workload is consistently cited as a primary factor contributing to burnout in radiologists. Tankersley (2014) noted that administrative responsibilities, such as managing electronic health records and regulatory requirements, significantly add to the stress faced by radiologists. These administrative duties consume time and detract from core clinical work, leading to frustration and a sense of inefficacy. McNeeley et al. (2013) highlighted that professional isolation, as radiologists often work alone with minimal interaction with patients or colleagues, further exacerbates burnout, fostering detachment and reducing job satisfaction.

Another critical contributor to burnout is the need for high precision in diagnostic interpretation. Tankersley (2014) emphasized that radiologists must maintain high accuracy to avoid errors, which can have serious consequences for patient care. This pressure to be accurate, combined with fear of mistakes, leads to chronic stress and anxiety, ultimately contributing to burnout. The rapid advancements in imaging technology, while beneficial for patient outcomes, have also increased the complexity of radiological work, requiring radiologists to constantly update their knowledge and skills (Magnavita et al., 2008). The need for continuous learning, combined with an already demanding workload, adds further strain.

The literature also discusses various strategies radiologists use to manage burnout. Magnavita et al. (2008) found that physical activity, such as exercise, is a common method used by radiologists to alleviate stress. Peer support and collaboration have also been shown to be effective in mitigating burnout. According to Tankersley (2014), radiologists working in a supportive environment where they can discuss their experiences with colleagues report lower levels of burnout. Additionally, workplace interventions, such as redistributing workload and providing administrative support, have been suggested as potential solutions for reducing burnout (McNeeley et al. 2013).

Overall, burnout among radiologists is a complex issue, influenced by workload, administrative demands, professional isolation, and the pressure for diagnostic accuracy. Addressing these issues requires a multifaceted approach, including reducing administrative burdens, fostering peer support, and promoting work-life balance. By understanding the contributing factors and coping strategies, healthcare organizations can develop targeted interventions to improve radiologist well-being and patient care.

Methodology

This study used a qualitative research design to explore the factors contributing to burnout and the coping strategies used by radiologists in a tertiary hospital. A purposive sampling method was used to select participants with relevant experience in radiology. A total of 15 radiologists from different departments participated in the study. Semi-structured interviews were conducted to gain in-depth insights into their experiences with burnout and work-related stress.

Interviews were conducted face-to-face in a private setting within the hospital to ensure confidentiality and foster open communication. Each interview lasted between 45 and 60 minutes and was audio-recorded with participants' consent. The questions explored aspects of their work environment, workload, sources of stress, and the coping strategies they used. Open-ended questions were employed to allow participants to share their thoughts and experiences freely.

The audio recordings were transcribed verbatim, and the data were analyzed using thematic analysis. This approach allowed researchers to identify, analyze, and report themes within the data. Thematic analysis followed Braun and Clarke's (2006) six-phase framework: familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final report. The researchers independently coded transcripts and discussed findings to ensure consistency and reliability in the analysis.

To enhance trustworthiness, several strategies were used. Member checking involved giving participants the opportunity to review and comment on the preliminary themes derived from their interviews. Peer debriefing was conducted with other researchers experienced in qualitative methods to ensure credibility. Triangulation was used by comparing the interview data with existing literature to verify the accuracy and comprehensiveness of the identified themes.

The study received ethical approval from the hospital's ethics committee. Informed consent was obtained from all participants, who were assured of their anonymity. All data were stored securely to protect confidentiality.

Findings

Thematic analysis revealed three major themes: (1) Workload and Professional Pressures, (2) Emotional and Psychological Impact, and (3) Coping Mechanisms. Each theme was divided into sub-themes to better understand the factors contributing to burnout and the strategies radiologists use to cope.

Theme 1: Workload and Professional Pressures

Sub-theme 1.1: High Workload and Long Hours

Participants frequently cited high workloads and long hours as major contributors to burnout. One participant stated, "There is just too much work. The volume of imaging studies we need to interpret daily is overwhelming, and it feels like there's no end in sight." Another radiologist added, "We work long shifts, and even when we are at home, we are still thinking about the pending cases. It's like we never get a break."

Sub-theme 1.2: Administrative Burden

Many participants discussed how administrative tasks detract from their clinical work. One radiologist explained, "The paperwork and administrative tasks are just too much. It takes away the time that could be better spent on patient care or improving our diagnostic skills." Another participant added, "I often feel more like an administrator than a radiologist, which is very frustrating."

Theme 2: Emotional and Psychological Impact

Sub-theme 2.1: Stress and Anxiety

The constant pressure to be precise in diagnostics was a common source of stress. One participant noted,

"The fear of making a mistake is always there. It's mentally exhausting to know that a small error could have serious consequences for the patient." Another echoed this sentiment, saying, "The pressure to be perfect is immense, and it creates a lot of anxiety."

Sub-theme 2.2: Feelings of Isolation

Professional isolation was another recurring theme. Radiologists often work alone, leading to feelings of loneliness and detachment. A participant shared, "We don't have much interaction with patients or even our colleagues. Most of the time, it's just me and the images, and that isolation takes a toll." Another added, "I sometimes feel disconnected from the rest of the healthcare team, which affects my motivation and satisfaction with the job."

Theme 3: Coping Mechanisms

Sub-theme 3.1: Physical Activity and Self-Care

Participants highlighted physical activity as a way to manage stress. One radiologist said, "I make it a point to exercise regularly. It helps me clear my mind and feel better after a long day." Another mentioned, "Taking care of my physical health through exercise and proper sleep has been crucial in managing the stress I face at work."

Sub-theme 3.2: Peer Support and Collaboration

Some radiologists found relief in peer support and collaboration. One participant shared, "Talking to colleagues who understand what I'm going through makes a big difference. It helps to know that I'm not alone in this." Another added, "We have a small support group within the department where we can discuss our challenges, and it really helps reduce the feeling of burnout."

Discussion

The findings of this study indicate that burnout among radiologists in a tertiary hospital is driven by several interrelated factors, including workload, administrative duties, and professional isolation. The thematic analysis highlighted that high workloads and long hours, combined with administrative tasks, significantly contribute to burnout. These findings align with previous research, which has shown that excessive workload and administrative burdens are major contributors to burnout in healthcare professionals (Tankersley, 2014; Magnavita et al., 2008).

The emotional and psychological effects of these stressors are considerable, with participants frequently describing experiences of anxiety, fear of errors, and isolation. The constant pressure to be accurate, coupled with the risk of serious consequences for mistakes, creates a high-stress environment. This supports Tankersley (2014), who emphasized the anxiety related to diagnostic precision as a critical factor in radiologist burnout. The sense of isolation many participants expressed is consistent with McNeeley et al. (2013) findings on the effects of limited interaction. Professional isolation exacerbates feelings of detachment and further reduces job satisfaction.

The coping strategies identified by participants provide valuable insights into possible interventions. Many radiologists emphasized the importance of physical activity and self-care as effective ways to manage stress. Engaging in exercise and maintaining good physical health were crucial for alleviating work-related stress, consistent with Magnavita et al. (2008) study on stress relief. Peer support and collaboration also played

significant roles in reducing burnout. Opportunities for collegial interaction and a supportive work environment can help radiologists feel more connected and less isolated, as suggested by Tankersley (2014).

The implications of these findings highlight the need for organizational interventions focused on workload redistribution, reducing administrative burdens, and promoting peer support systems. Healthcare institutions should consider providing administrative support to alleviate non-clinical responsibilities, allowing radiologists to focus more on patient care and diagnostics. Furthermore, fostering a culture of support and collaboration within radiology departments is crucial in reducing burnout.

This study's qualitative approach allowed for an in-depth exploration of radiologists' lived experiences, providing rich insights into burnout factors and coping strategies. However, the findings are specific to a single tertiary hospital, which may limit generalizability. Future research should explore similar issues in different healthcare contexts to better understand burnout across a wider range of radiology practices. Quantitative studies could also measure burnout prevalence and evaluate the effectiveness of specific interventions in reducing burnout among radiologists.

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