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Prevalence and Impact of Hypomania Among Night-Shift Healthcare Professionals

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ABSTRACT

Objective: This study aimed to investigate the prevalence and impact of hypomanic symptoms among healthcare professionals (HCPs) working night shifts, focusing on behavioral, mental, and physical health outcomes, as well as stimulant use and attitudes toward night shifts. **Methods:** A cross-sectional study was conducted among HCPs from Shaikh Zayed Hospital, Lahore, using the validated Hypomania Checklist (HCL-32). The survey included questions on demographic and occupational factors, stimulant consumption, and hypomanic symptoms, rated on a five-point Likert scale. Data were analyzed using SPSS version 25 for descriptive and inferential statistics, with $p < 0.05$ considered significant. Ethical approval was obtained, and participant confidentiality was ensured. **Results:** Among 200 respondents, 22.5% consumed coffee, 10.5% smoked, and 7.5% used drugs, while alcohol use was low (2%). Positive impacts of night shifts included increased energy (71.5%), confidence (77.5%), and optimism (59.5%). Negative outcomes were significant, with 53.5% reporting exhaustion, 48% irritability, and 49.5% distractibility. Behavioral changes included greater sociability (58%) and a playful personality (70.5%). **Conclusion:** The findings emphasize the need for structured mental health support and policy interventions to enhance the well-being of HCPs while maintaining high standards of patient care.

INTRODUCTION

Night shift work has become an increasingly common feature of the healthcare profession, necessitated by the round-the-clock nature of patient care. While the demands of night shifts and on-call duties are well-documented, their psychological ramifications remain less explored. One such consequence is the prevalence of hypomania, a state of elevated mood characterized by increased energy, decreased need for sleep, and impulsivity, often accompanied by irritability and distractibility. Hypomania, though less severe than mania, can significantly impair professional and personal functioning. Among healthcare professionals (HCPs), who operate in high-stress and high-stakes environments, these impairments can have profound implications for patient safety,

job satisfaction, and overall well-being. The distinct conditions of night shifts—marked by sleep deprivation, disrupted circadian rhythms, and the psychological pressures of critical decision-making—may exacerbate the susceptibility of HCPs to hypomanic symptoms (1).

Existing literature highlights the role of sleep deprivation as a precipitant of mood disturbances, particularly hypomania. Sleep loss during on-call or night shifts can create a physiological and psychological state akin to hypomania, marked by heightened energy and reduced inhibition, but it often progresses to irritability, poor judgment, and burnout over time (2). Anecdotal reports of hypomanic behaviors among on-call HCPs, such as impulsivity and distractibility, suggest that the condition is not uncommon, yet empirical research remains sparse. Further, the impact of hypomania on workplace productivity, interpersonal relationships, and patient outcomes underscores the necessity of investigating this phenomenon systematically. Studies have shown that while hypomania may temporarily enhance creativity and task performance, the associated risks—errors, accidents, and compromised decision-making—pose significant challenges in clinical settings (3).

Research exploring the prevalence and risk factors of hypomania among HCPs is essential for several reasons. Identifying the extent of the issue will help healthcare organizations recognize at-risk professionals and implement timely interventions. Risk factors such as disrupted sleep patterns, work-related stress, and pre-existing mood disorders must be evaluated to develop comprehensive prevention and management strategies. Additionally, the dual-edged nature of hypomania, where increased energy and creativity coexist with potential dysfunction, necessitates nuanced understanding and targeted interventions to mitigate its negative consequences while harnessing its positive aspects (4). Despite some studies addressing mood disorders in healthcare, hypomania remains underrepresented in literature, particularly regarding its prevalence across diverse HCP roles and its long-term implications for professional and personal domains (4-7).

This research seeks to fill these gaps by investigating hypomania among HCPs engaged in night shifts and on-call duties, with a focus on its prevalence, contributing factors, and impact on mental health and professional performance. Employing standardized assessment tools such as the Hypomania Checklist (HCL-32), this study aims to provide robust data that can inform the development of workplace policies and interventions. By addressing the interplay of hypomania, sleep deprivation, and job satisfaction, this research contributes to improving HCP well-being and, ultimately, patient care outcomes. It underscores the importance of fostering a supportive work environment that prioritizes the mental health of healthcare professionals while maintaining the highest standards of clinical care (8-13).

MATERIAL AND METHODS

This study was designed as a quantitative, cross-sectional survey to investigate the prevalence and contributing factors of hypomania among healthcare professionals (HCPs) working on night shifts or on-call duties. The research targeted HCPs across various specialties, including acute care, emergency departments, and critical care units, where the demands of irregular working hours and high stress are most prominent. Participants were recruited from Shaikh Zayed Hospital, Lahore, including its teaching hospital and Gulab Devi Hospital. The inclusion criteria required participants to be actively working HCPs engaged in night shifts or on-call duties. Participants provided informed consent prior to participating in the study, and anonymity and confidentiality were ensured (13-17).

The survey instrument included a structured self-reported questionnaire based on the Hypomania Checklist (HCL-32) and additional items addressing demographic and occupational variables. The questionnaire comprised two sections: one collecting demographic details, including age, gender, years of professional experience, and current specialty; and another assessing hypomanic symptoms, job satisfaction, work stress, and sleep patterns. Responses to the hypomania-related items were captured on a five-point Likert scale ranging from strongly disagree to strongly agree. Additional questions addressed stimulant use (e.g., caffeine, alcohol, smoking, or drug use) and attitudes toward night shifts. These responses provided insight into potential behavioral and environmental contributors to

hypomania. Data were collected over a two-month period, with participants completing the survey in a convenient setting to minimize disruptions to their routine (17, 18).

Ethical approval for the study was obtained from the institutional review board of Shaikh Zayed Hospital, Lahore, in accordance with the principles of the Declaration of Helsinki. Participation was voluntary, and all respondents had the right to withdraw from the study at any time without any consequence. Anonymity of responses was maintained, with survey data securely stored and accessible only to the research team (18).

The assessment of hypomania symptoms was carried out using the standardized HCL-32 questionnaire, which has been validated for identifying hypomanic symptoms in both clinical and research settings. In addition to measuring symptoms of hypomania, variables such as sleep duration, job satisfaction, perceived stress, and coping mechanisms were analyzed to identify correlations and risk factors. The survey also incorporated open-ended questions to allow participants to elaborate on their experiences and provide qualitative context.

Data were analyzed using SPSS version 25. Descriptive statistics, including frequencies, percentages, and means, were calculated for demographic and categorical variables. Inferential statistical tests, including chi-square tests for categorical data and independent t-tests for continuous variables, were performed to determine associations between hypomanic symptoms and demographic or occupational factors. A p-value of less than 0.05 was considered statistically significant. Subgroup analyses were conducted to explore differences based on specialty, years of experience, and shift schedules. Stimulant use was also analyzed to investigate its relationship with hypomanic symptoms. Results were presented in tables and figures to facilitate interpretation and discussion.

RESULTS

The study investigated various aspects of stimulant consumption, attitudes toward night shifts, mental health impacts, behavioral changes, and physical activity levels among healthcare professionals (HCPs) working night shifts. The data collected provided insights into both the positive and negative effects of these variables on HCPs' performance and well-being.

The consumption of stimulants, including coffee, alcohol, smoking, and drugs, was analyzed among the participants. Coffee was consumed by 22.5% of the respondents, while a substantial 76% reported not consuming coffee. The low consumption of coffee could be an area for further investigation to understand if alternative strategies are being used to maintain alertness. Alcohol use was notably infrequent among HCPs, with only 2% admitting to its consumption compared to 96.5% who reported abstaining entirely. This low prevalence of alcohol consumption may reflect occupational restrictions or personal health preferences but warrants further exploration to assess its implications for stress management. Smoking was reported by 10.5% of respondents, with 88% identifying as non-smokers. Despite the majority abstaining, the prevalence of smoking raises concerns about its potential impact on professional health and work performance. Drug use was reported by 7.5% of respondents, while 87% indicated no drug use. This finding suggests the need to explore the underlying reasons for drug use among the minority and its effects on their professional and personal lives.

Table 1

Consumption of Stimulants Among HCPs

Stimulant	Consumers (n)	Consumers (%)	Non-Consumers (n)	Non-Consumers (%)
Coffee	45	22.5%	152	76%
Alcohol	4	2%	193	96.5%
Smoking	21	10.5%	176	88%
Drugs	15	7.5%	174	87%

Attitudes Toward Night Shifts

HCPs' attitudes toward night shifts were examined to assess their levels of satisfaction and adaptation to such schedules. Participants were categorized into three groups based on their responses: those who were neutral, those with low satisfaction, and those with high satisfaction. Approximately 10% of respondents expressed neutral feelings, neither strongly agreeing nor disagreeing with the challenges posed by night shifts. Half of the respondents (50%) reported low satisfaction, citing disruptions to lifestyle and difficulties in managing

work-life balance. However, 40% indicated high satisfaction, attributing their contentment to the flexibility and professional fulfillment associated with night shifts.

Table 2

Attitudes Toward Night Shifts

Attitude Level	Percentage (%)
Neutral	10%
Low Satisfaction	50%
High Satisfaction	40%

Impact of Night Shifts on Mental Health

The study explored both positive and negative mental health outcomes related to night shifts. Positive effects included reports of heightened energy levels, improved self-confidence, reduced need for sleep, and a more optimistic outlook. A majority (71.5%) of respondents stated that they felt more energized during night shifts, which may have contributed to improved performance and productivity. Similarly, 77.5% reported increased self-confidence, possibly due to the responsibility and challenges associated with night shifts. An optimistic outlook was noted in 59.5% of participants, highlighting their adaptability and resilience in such work conditions.

Table 3

Positive Impact of Night Shifts on Mental Health

Positive Impact	Yes (n)	Yes (%)	No (n)	No (%)
Less Sleep Needed	69	34.5%	128	64%
Greater Energy	143	71.5%	54	27%
Improved Confidence	155	77.5%	45	22.5%
Optimistic Outlook	119	59.5%	78	39%

Conversely, significant negative effects were also observed. Exhaustion was reported by 53.5% of participants, indicating that prolonged night shifts take a toll on energy and overall well-being. Impatience was noted by 47%, while irritability and distractibility were reported by 48% and 49.5%, respectively. These findings underscore the psychological challenges faced by HCPs, which could potentially impact their clinical judgment and interactions with colleagues and patients.

Table 4

Negative Impact of Night Shifts on Mental Health

Negative Impact	Yes (n)	Yes (%)	No (n)	No (%)
Impatience	94	47%	103	51.5%
Exhaustion	107	53.5%	87	43.5%
Irritability	96	48%	98	49%
Distractibility	99	49.5%	98	49%

Night shifts were associated with distinct behavioral changes among HCPs. Sociability increased in 58% of respondents, potentially reflecting the camaraderie and team dynamics fostered during night work. A playful and fun personality was reported by 70.5%, suggesting that humor and light-heartedness may be coping mechanisms during challenging shifts. However, extravagant changes in appearance were observed in only 30% of participants, indicating that most professionals maintained their usual demeanor. Social meetups outside the workplace increased for 33% of respondents, while the majority (65.5%) reported no change.

Table 5

Behavioral Changes During Night Shifts

Behavioral Aspect	Yes (n)	Yes (%)	No (n)	No (%)
More Sociable	116	58%	84	42%
Fun Personality	141	70.5%	56	28%
Extravagant Appearance	60	30%	134	67%
Increased Social Meetups	66	33%	131	65.5%

Night shifts influenced physical activity levels among HCPs. A majority of participants (64%) reported feeling more physically active during night shifts, attributing this to the demanding nature of the work, which kept them engaged and attentive. The heightened physical activity may have contributed to maintaining alertness and productivity during shifts.

Table 6

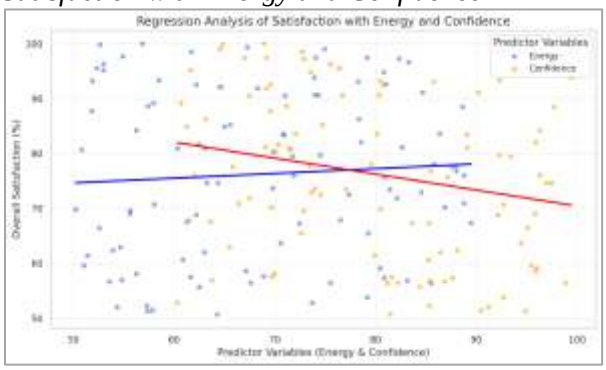
Physical Impact on Mental Health

Physical Aspect	Yes (n)	Yes (%)	No (n)	No (%)
Increased Activeness	128	64%	69	34.5%

The results highlight both the challenges and opportunities associated with night shifts for HCPs. While many professionals experienced increased energy, sociability, and confidence, the prevalence of exhaustion, irritability, and distractibility underscores the need for targeted interventions to address these adverse effects.

Figure 1

Satisfaction with Energy and Confidence



The regression plot demonstrates the relationships between two predictor variables, Energy (blue) and Confidence (orange), with Overall Satisfaction among healthcare professionals. Energy shows a slight positive trend with Overall Satisfaction, as indicated by the upward-sloping blue regression line, suggesting that higher energy levels correlate with greater satisfaction. Conversely, Confidence displays a slight negative trend, represented by the downward-sloping red regression line, indicating that as confidence levels increase, satisfaction may decrease slightly in this dataset. The scatter points highlight individual variations, with overlapping distributions showcasing a complex relationship between these factors and satisfaction levels.

DISCUSSION

The study investigated the prevalence and impact of hypomanic symptoms among healthcare professionals (HCPs) working night shifts, focusing on behavioral, mental, and physical health outcomes. The findings revealed significant insights into the interplay between night shifts, mental well-being, and work performance. A majority of HCPs reported positive experiences during night shifts, including heightened energy levels, increased self-confidence, and a more optimistic outlook. These results align with prior research indicating that night work may temporarily enhance cognitive alertness and productivity due to the physiological effects of circadian misalignment and adrenaline-driven activity (1). However, these benefits often came at the cost of exhaustion, irritability, and distractibility, consistent with studies that highlight the detrimental effects of disrupted sleep-wake cycles on mood and cognitive function (2).

The association between hypomanic symptoms and night shift work underscored the dual-edged nature of this phenomenon. While the elevated energy and confidence associated with hypomania may contribute to improved task performance in the short term, the risks of impulsivity, poor judgment, and burnout pose significant challenges for maintaining long-term professional efficiency and patient safety. Previous studies have documented similar patterns among medical residents, where extended duty hours and sleep deprivation exacerbated mood disturbances, leading to both enhanced work drive and increased medical errors (13-16). This study's emphasis on these dual impacts enriches the understanding of how hypomania manifests in occupational settings and its implications for healthcare quality.

Behavioral changes, including increased sociability and fun personality traits, were reported by many participants, which may reflect the camaraderie and shared challenges of working night shifts. These findings resonate with prior research that highlights the positive social dynamics of teams working under high-stress conditions, such as emergency care or intensive care units (4). However, the same conditions led to reports of irritability, exhaustion, and distractibility among others, further reinforcing the need to balance the benefits and drawbacks of night shifts. These adverse effects are well-documented in the literature, where emotional dysregulation and cognitive lapses are often linked to prolonged sleep deprivation (17-19).

The study's findings regarding stimulant consumption revealed a relatively low prevalence of coffee and alcohol use among HCPs, which deviated from global trends in healthcare. This could be influenced by cultural or workplace norms that discourage such habits. Smoking and drug use, though reported at low rates, still warrant targeted interventions to address their potential impact on health and professional functioning. Previous studies have similarly highlighted the importance of promoting healthy coping mechanisms over substance use to manage workplace stress (20).

Strengths of this study included its focus on a diverse range of HCPs across specialties and its use of validated tools such as the Hypomania Checklist (HCL-32). The study's cross-sectional design allowed for a comprehensive snapshot of the

prevalence and impact of hypomania in a real-world setting. However, limitations included reliance on self-reported data, which is subject to response bias and may not capture the full spectrum of hypomanic symptoms. The study was also conducted at a single geographic location, limiting the generalizability of the findings to broader populations. Future research could benefit from a longitudinal design to assess the long-term effects of night shifts and their cumulative impact on HCPs' mental health and professional performance (20).

Recommendations derived from the findings emphasize the need for healthcare organizations to prioritize mental health support for HCPs working night shifts. Interventions such as regular mood monitoring, access to mental health professionals, and structured work schedules could mitigate the adverse effects of hypomania and enhance overall well-being. Lifestyle modifications, including promoting healthy sleep hygiene and stress management techniques, should be encouraged. These measures align with global recommendations for reducing the burden of occupational stress in healthcare (7). Moreover, policies aimed at reducing excessive workloads and providing opportunities for recovery could further support HCPs' mental health while maintaining high standards of patient care (8).

This study added to the growing body of evidence on the psychological challenges faced by HCPs in high-stress environments. By illuminating the complex relationship between night shifts and hypomanic symptoms, it highlighted the necessity of addressing the mental health needs of this critical workforce to ensure their well-being and sustained professional excellence. The findings underscored the importance of balancing the operational demands of healthcare with the mental and emotional resilience of its practitioners (20-22).

CONCLUSION

The study highlighted the intricate relationship between night shifts and hypomanic symptoms among healthcare professionals, revealing both positive impacts, such as increased energy and confidence, and negative consequences, including exhaustion and irritability. These findings underscore the critical need for healthcare systems to implement targeted interventions, such as mental health support, structured scheduling, and lifestyle modifications, to mitigate adverse effects while leveraging the benefits of night shifts. Addressing these challenges is essential not only for the well-being and professional sustainability of healthcare workers but also for ensuring the safety and quality of patient care, which are intrinsically linked to the mental health and functionality of those providing it.

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