BioSocial Health J 2026;3(3):85-92
doi:10.34172/bshj.185
https://biosocialhealthjournal.com

BioSocial Health Journal

Original Article

Personal, Work-Related, and Client-Related Burnout Among Community Health Workers: A District-Wide Cross-Sectional Study from Tamil Nadu, India

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Abstract

Introduction: Anganwadi workers (AWWs) are the community health or social or grass root workers delivering services through Anganwadi centres (AWCs) and house-to-house visits in India. Our aim was to estimate the prevalence of burnout among Anganwadi workers in Coimbatore, Tamil Nadu. We also determined the factors associated with burnout among AWWs (disaggregated by personal, work-related, and client-related burnout).

Methods: This was an analytical cross-sectional study conducted among AWWs in the AWCs of Coimbatore district, Tamil Nadu. The outcome was assessed using Copenhagen Burnout Inventory (CBI).

Results: The present study included a total of 1,333 AWWs. More than half the AWWs had moderate to severe levels of burnout (56.0%); majority (78.1%) had personal burnout, 60.8% had work-related and 44.0% had client related burnout. Age (<40 years), non-Hindu religion, presence of additional tasks, perceived burden with additional tasks, lack of timely renumeration for additional tasks, presence of leaves related to stress at work in the past month, feelings towards quitting the job, lack of sound sleep, lack of regular exercise, and presence of active complaints were significant predictors of burnout among AWWs.

Conclusion: Strategies such as workload management, improved renumeration policies, stress reduction initiatives, and fostering a supportive work environment could positively impact the well-being of Anganwadi workers.

Keywords: Burnout, Anganwadi workers, India, Community health workers

Received: June 19, 2026, **Revised**: July 2, 2026, **Accepted**: July 10, 2026, **ePublished**: July 30, 2026

Introduction

Integrated Child Development Services (ICDS) program is a centrally sponsored women and child development program of Government of India.[1] The target beneficiaries and services provided are for pregnant women (for routine health checkup, immunization against tetanus, supplementary nutrition, and health education), nursing mothers (for supplementary nutrition and health education), other women of reproductive age group (15 to 45 years; for health education), children up to six years of age (less than 3 years – supplementary nutrition, immunization, health checkup and referral services; 3 to 6 years – additionally, nonformal preschool education), and adolescent girls (11 to 18 years; supplementary nutrition and health education).[2] The main thrust of this scheme is on the villages, urban slums and tribal areas.[3] The services are provided by the Anganwadi Worker (AWW) under one roof, the Anganwadi centre (AWC) located at a convenient reach within the community.[4-6] AWW acts as a liaison between health functionaries and the community.[7] They also assist in other activities like surveys beyond the working hours, election works, maintain records and follows up the recorded cases to ensure complete coverage and in campaigning like pulse polio and family planning. Recently, they have also been involved in COVID-19 vaccination service delivery.[8,9] AWWs have to perform and discharge multiple responsibilities (multitasking), along with dissatisfaction regarding the amount of honorarium (no wages), working conditions and lack of motivation and support from the supervisors which may lead to stress and decrease their efficiency (leading to reducing program effectiveness).[10,11] They are responsible to take care of health of the community, but their own health has been neglected. Against this background, the primary aim of the present study was to estimate the prevalence of burnout among Anganwadi workers in Coimbatore, Tamil Nadu. We also determined the factors associated with burnout among Anganwadi workers (disaggregated by personal, work-related, and client-related burnout).

Methods

This was an analytical cross-sectional study conducted among Anganwadi workers in the Anganwadi centres (AWC) of Coimbatore district, Tamil Nadu. Coimbatore

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district is subdivided into 18 administrative blocks and is served by a total of 1697 Anganwadi centres. The study included all the Anganwadi workers from any Anganwadi centre within the limits of Coimbatore district providing an informed written consent to participate. However, we excluded Anganwadi workers not available during the monthly block meetings (three attempts were made) plus not responding to calls (three attempts were made on different dates and at different times).

We resorted to complete enumeration of all AWWs in the district. However, we estimated the minimum required sample size to be 376 at 95% confidence; using a prevalence of 71.5%,[12] an absolute error of 5.0%, with 80.0% power and 20.0% non-response rate. A purpose predesigned, semi structured, and pretested questionnaire was used to collect socio-demographic characteristics, family factors, work-related factors, medical and lifestyle factors from Anganwadi workers through Google Forms. The outcome of the present study burnout was assessed using Copenhagen Burnout Inventory (CBI).[13] CBI consists of three scales measuring personal burnout, work-related burnout, and client-related (beneficiaries of ICDS) burnout – with higher internal reliability (Cronbach's alpha = 0.85 to 0.87), lower non-response rates and differentiating well between occupational groups in the human service sector (includes Anganwadi workers).[14] The scale in English was translated into Tamil (local language) by two bilingual persons independently. Both the versions were then matched, discussed in the presence of a third bilingual person, and with consensus, a Tamil translated version was made. This version was then translated back to English by two bilingual personals independently. Following further discussions and matching, a final back-translated version was arrived at in consultation with the third bilingual person. This back-translated version was matched with the original version.

The CBI was scored separately for its three domains: personal burnout, work-related burnout, and client-related burnout. Each domain score was transformed to a 0–100 scale, with higher scores indicating greater burnout. For overall burnout, the mean of the three domain scores was calculated for each participant. The overall and domain-wise burnout scores were categorized as no/low burnout (< 50), moderate burnout (50–74), high burnout (75–99), and severe burnout (100).

Statistical Analysis

The data obtained using Google forms were downloaded in Microsoft Excel format, coded, recoded, and analysed using Stata v14. Descriptive analysis was presented as numbers and percentages (for categorical variables); mean (standard deviation (SD)) for continuous variables. To determine the factors associated with burnout among Anganwadi workers two models were used – in the first model (Basic model), univariate analysis was done using independent 't' test to estimate the mean difference (MD) with 95% confidence interval (95% CI). In the second model (Adjusted model), with variables statistically significant ($P < 0.05$ or CI of MD not including 0) in the basic model, General Linear Model (GLM) was used for the univariate dependent outcome to adjust for covariates – factors significant at $P < 0.05$ were considered to be statistically associated with burnout among Anganwadi workers. Pearson correlation coefficients (r) were estimated for continuous study variables and CBI scores – statistical significance was considered at $P < 0.05$.

Ethical Considerations

The study was approved by the Institutional Human Ethics Committee (IHEC), KMCH Institute of Health Sciences and Research, Coimbatore, Tamil Nadu, India (Reference number 48/1HEC2022). The content of Participant Information Sheet (PIS) in local language was provided to the study subjects and contents were read to them in their own language to their satisfaction. The study subjects were enrolled in the study after obtaining written informed consent. The study was conducted in accordance with the Declaration of Helsinki.

Results

The present study included a total of 1,333 AWWs; 55.4% were > 40 years of age and 0.8% were unmarried. Three in four (74.4%) AWWs were living with their husband and 25.6% were either widowed or divorced or separated. Majority of the AWWs were from middle or upper socioeconomic class (88.3%), followed by 11.7% from lower socioeconomic class. More than half (56.0%) the AWWs had completed higher secondary education or above. The results showed that 49.4% AWWs were from rural Anganwadi centres, 48.8% were from urban, and 1.8% AWWs were from tribal AWCs.

Prevalence of Burnout Among Anganwadi Workers

The results showed that 44.0% AWWs had no or low burnout – 21.9% had no or low personal burnout, 39.2% AWWs had no or low work-related burnout, and 56.0% AWWs had no or low client-related burnout. However, 50.9%, 25.1% and 2.2% AWWs had moderate, high and severe personal burnout; 42.6%, 17.4%, and 0.8% AWWs had moderate, high and severe work-related burnout; and 33.7%, 8.6%, and 1.7% AWWs had moderate, high and severe client-related burnout (Table 1).

Factors Associated with Burnout Among Anganwadi Workers

The results showed that the mean (SD) burnout scores among AWWs less than or equal to 40 years was significantly higher than those more than 40 years of age – a statistically significant difference (MD -4.48, 95% CI -6.34 to -2.61; adjusted P value = 0.006). The non-Hindu religion AWWs had a significantly higher burnout score in comparison with their counterparts (MD -4.21, 95% CI -7.58 to -0.83; adjusted P value = 0.031) (Table 2). The adjusted analysis also showed that presence of additional tasks (MD 15.48, 95% CI 6.35 to 24.60), perceived burden with additional tasks (MD 17.53, 95% CI 12.47 to 22.59), lack of timely renumeration for additional tasks (MD

Table 1. Prevalence of burnout among Anganwadi workers

Scale/Subscale	Prevalence cutoff	N (%)
Copenhagen Burnout Inventory – Overall	No/low (<50)	587 (44.0)
	Moderate (50 to 74)	599 (44.9)
	High (75 to 99)	144 (10.9)
	Severe (100)	3 (0.2)
Personal burnout	No/low (<50)	292 (21.9)
	Moderate (50 to 74)	678 (50.9)
	High (75 to 99)	334 (25.1)
	Severe (100)	29 (2.2)
Work-related burnout	No/low (<50)	523 (39.2)
	Moderate (50 to 74)	568 (42.6)
	High (75 to 99)	232 (17.4)
	Severe (100)	10 (0.8)
Client-related burnout	No/low (<50)	747 (56.0)
	Moderate (50 to 74)	449 (33.7)
	High (75 to 99)	115 (8.6)
	Severe (100)	22 (1.7)

-7.13, 95% CI -9.14 to -5.12), presence of leaves related to stress at work in the past month (MD 9.17, 95% CI 7.37 to 10.97), and presence of feelings towards quitting the job (MD 17.33, 95% CI 15.69 to 18.97) were significantly associated with burnout among AWWs ($P<0.05$) (Table 3). The lifestyle and/or medical factors associated with burnout among AWWs were lack of sound sleep (MD -12.05, 95% CI -14.23 to -9.87), lack of regular exercise (MD -7.48, 95% CI -9.71 to -5.24), and presence of active complaints (MD 9.34, 95% CI 7.53 to 11.15) (Table 4).

The results of correlation analysis showed that the duration of stay in Coimbatore had a negative significant correlation (r = -0.122); number of years of marriage had a negative significant correlation (r = -0.134); number of years of experience had a negative significant correlation (r = -0.108); distance to AWC had a positive significant correlation (r = 0.092); number of working hours per day (r = 0.203), per week (r = 0.154) had a positive significant correlation; number of leaves availed (r = 0.078), availed because of stress/burnout (r = 0.234) had a positive significant correlation; and the number of records

Table 2. Sociodemographic and family factors associated with burnout among Anganwadi workers

		Burnout	MD (95% CI)	Adjusted analysis (Univariate GLM) *P* value
		Mean (SD)		
Age (in years)	>40	50.44 (17.92)	-4.48 (-6.34 to -2.61)	0.006*
	≤40	54.91 (16.34)		
Religion	Hindu	52.08 (17.37)	-4.21 (-7.58 to -0.83)	0.031*
	Others	56.29 (17.03)		
Marital status	Married	52.51 (17.34)	10.97 (0.16 to 21.77)	0.127
	Unmarried	41.55 (19.34)		
Living status (N = 1323)	With husband	52.41 (17.11)	-0.41 (-2.55 to 1.74)	_
	Others[$]	52.81 (18.02)		
Family members	≥5	51.95 (17.53)	-0.69 (-2.72 to 1.35)	_
	≤4	52.64 (17.31)		
Number of children (N = 1323)	≤1	52.21 (17.16)	-0.41 (-2.52 to 1.70)	_
	≥2	52.62 (17.41)		
Family – <15 years of age	Present	54.49 (17.35)	4.22 (2.36 to 6.07)	0.053
	Absent	50.27 (17.14)		
Family – >65 years of age	Present	52.95 (17.81)	0.79 (-0.17 to 2.75)	_
	Absent	52.16 (17.14)		
Family type	Nuclear or single parent	52.47 (17.39)	0.13 (-1.85 to 2.11)	_
	Joint or extended	52.35 (17.36)		
Head of family	AWW	52.38 (18.65)	-0.09 (-1.99 to 1.82)	_
	Not AWW	53.47 (16.49)		
Socioeconomic status[@]	Lower	50.49 (18.98)	-2.19 (-5.34 to 0.96)	_
	Middle or Upper	52.69 (17.14)		
Sterilization (N = 1323)	Done	52.34 (17.60)	-0.62 (-2.69 to 1.45)	_
	Not done	52.96 (16.68)		
Native of Coimbatore	Yes	52.48 (17.37)	0.32 (-2.21 to 2.85)	_
	No	52.16 (17.39)		

[$]Widowed or divorced or separated. [@]Socioeconomic status was based on Modified Kuppuswamy scale updated for the year 2018 (I, upper; II, upper middle; III, lower middle; IV, upper lower; V, lower). *Statistically significant at $P<0.05$.

Table 3. Work-related factors associated with burnout among Anganwadi workers

		Burnout	MD (95% CI)	Adjusted analysis (Univariate GLM) *P* value
		Mean (SD)		
Education of AWW	Up to high school	51.11 (17.13)	-2.36 (-4.24 to -0.49)	0.944
	Higher secondary and above	53.47 (17.50)		
Location of AWC	Urban	52.80 (16.49)	1	_
	Rural	52.12 (18.19)	0.68 (-1.63 to 2.98)	
	Tribal	50.84 (17.92)	1.96 (-6.70 to 10.62)	
Additional tasks	Present	52.59 (17.29)	15.48 (6.35 to 24.60)	0.003*
	Absent	37.12 (18.48)		
Perception of burden with additional tasks (N=1319)	Present	53.19 (17.03)	17.53 (12.47 to 22.59)	<0.001*
	Absent	35.66 (16.28)		
Timely renumeration for additional tasks (N=1319)	Yes	47.58 (16.86)	-7.13 (-9.14 to -5.12)	<0.001*
	No	54.71 (17.05)		
Satisfaction with renumeration (N=1319)	Present	42.28 (18.06)	-10.67 (-15.84 to -5.50)	0.216
	Absent	52.95 (17.16)		
Stress at work related leaves in the past month	Yes	56.87 (15.58)	9.17 (7.37 to 10.97)	<0.001*
	No	47.71 (17.93)		
Ever felt like quitting the job	Yes	59.80 (14.97)	17.33 (15.69 to 18.97)	<0.001*
	No	42.47 (15.32)		

*Statistically significant at $P<0.05$. AWC, Anganwadi centre; AWW, Anganwadi worker.

Table 4. Lifestyle and medical factors associated with burnout among Anganwadi workers

		Burnout	MD (95% CI)	Adjusted analysis (Univariate GLM) *P* value
		Mean (SD)		
Sound sleep	Present	42.98 (17.63)	-12.05 (-14.23 to -9.87)	<0.001*
	Absent	55.03 (16.38)		
Regular exercise	Present	46.57 (18.03)	-7.48 (-9.71 to -5.24)	0.029*
	Absent	54.05 (16.84)		
Regular Yoga	Present	46.54 (18.39)	-7.29 (-9.63 to -4.95)	0.345
	Absent	53.82 (16.83)		
Active complaints	Present	57.59 (16.98)	9.34 (7.53 to 11.15)	0.001*
	Absent	48.26 (16.55)		
Chronic conditions	Present	56.57 (17.64)	6.58 (4.68 to 8.48)	0.137
	Absent	49.99 (16.75)		

*Statistically significant at $P<0.05$

maintained had a positive significant correlation (r = 0.074) with the burnout scores estimated using CBI. The overall satisfaction of AWWs with the job had a negative significant correlation with burnout scores (r = -0.292).

The factors associated with personal burnout among AWWs were religion, presence of additional tasks, perceived burden with additional tasks, lack of timely renumeration for additional tasks, presence of leaves related to stress at work in the past month, and presence of feelings towards quitting the job, lack of sound sleep, lack of regular exercise, and presence of active complaints. It was noted that the factors associated with overall burnout among AWWs were associated with personal burnout among them, except for age (Supplementary file Tables 1-3). The factors associated with work-related burnout among AWWs were age, religion, presence of dependents in the family, presence of additional tasks, perceived burden with additional tasks, lack of timely renumeration for additional tasks, presence of leaves related to stress at work in the past month, and presence of feelings towards quitting the job, lack of sound sleep, and presence of active complaints. It was noted that the factors associated with overall burnout among AWWs were associated with work-related burnout among them, except for regular exercise. Additionally, presence of dependents (children < 15 years of age) was associated with work-related burnout (Supplementary file Tables 4-6). The factors associated with client-related burnout among AWWs were age, presence of additional tasks, perceived burden with additional tasks, lack of timely renumeration for additional tasks, presence of leaves related to stress at work in the past month, and presence of feelings towards quitting the job, and lack of sound sleep. It was noted that

the factors associated with overall burnout among AWWs were associated with client-related burnout among them, except for religion, regular exercise and active complaints ($P > 0.05$) (Supplementary file Tables 7-9).

Discussion

The present study was conducted with the purpose of estimating the prevalence of burnout among AWWs in Coimbatore, Tamil Nadu and to determine the factors associated. The results showed that more than half the AWWs had moderate to severe levels of burnout (56.0%). Sociodemographic factors (age less than or equal to 40, non-Hindu religion), work-related factors (presence of additional tasks, perceived burden with additional tasks, lack of timely renumeration for additional tasks, presence of leaves related to stress at work in the past month, presence of feelings towards quitting the job), lifestyle and medical factors (lack of sound sleep, lack of regular exercise, presence of active complaints) were found to be significantly associated with burnout among AWWs. Additionally, it was found that presence of dependents in the family (less than 15 years of age) was associated with work-related burnout among AWWs. While interpreting these associations, both statistical significance and practical relevance were considered. Some estimates, particularly for variables with small subgroup sizes such as marital status, showed wide confidence intervals, indicating imprecision and limited certainty regarding the magnitude of association. Therefore, such findings were interpreted cautiously and were not considered clinically or programmatically meaningful unless they showed consistent direction, adequate precision, and statistical significance after adjustment. In contrast, work-related factors such as additional tasks, perceived burden of additional tasks, delayed renumeration, stress-related leave, and intention to quit were considered more practically relevant because of their larger and consistent associations with burnout and their direct relevance to workplace policy and support systems.

Considering burnout across all three dimensions (personal, work-related, and client-related), the present study found that 44.9% of AWWs experienced moderate levels of burnout. Furthermore, 10.9% reported high levels, indicating a significant proportion facing considerable challenges in maintaining their well-being. The number of studies documenting the levels of burnout among AWWs are limited. However, Yella et al. noted the prevalence of personal burnout to be 16.8% and work-related burnout to be 10.5% among community health workers including Accredited Social Health Activist (ASHAs) and Auxiliary Nurse Midwives (ANMs) (not AWWs).[15] Pulagam et al. documented the prevalence of moderate/high levels of personal burnout to be 38.0%, work-related burnout to be 33.4%, and client-related burnout to be 30.0% among ASHA workers.[16] Burnout among AWWs can be influenced by a variety of factors, both within and outside of their work environment. The sheer volume of tasks and responsibilities can lead to exhaustion and burnout. It includes their role in documentation (often duplication of work with online and offline entries; duplication of online entries using applications designed by the Central and State governments), assistance to Mahila Mandal and programs such as Kishori Shakti Yojana, involvement in registering births and deaths in their village, the need to accompany children during referrals, role in ensuring Aadhar card application and verification of residents in the village, and duties during national or State elections (including verification of line lists (house to house) and at election booths).[17] Desai et al. documented that AWWs are participating/serving in National Health Programmes apart from ICDS.[18] The study added that majority (80.0%) of the AWWs participated in other NHPs including Pulse Polio Immunization, periodic house to house survey, and identification/selection of patients for tubal ligation in family planning programme. More than 67.0% AWWs worked as DOTS provider for Tuberculosis patients.[18] The other reasons could be emotional labour – AWWs frequently engage in emotionally demanding interactions with community members, especially mothers and children often draining over time; insufficient resources and support systems, both within the workplace and from higher authorities, can leave AWWs feeling overwhelmed and unsupported; ambiguity regarding roles and responsibilities; unrealistic expectations or targets; dealing with challenging situations involving beneficiaries, such as health crises, family issues, or community disputes, can take a toll on the mental and emotional well-being; juggling work responsibilities with personal and family commitments; and lack of adequate recognition for their efforts can lead to a sense of disillusionment and burnout.[19]

The study finding that AWWs aged 40 years or younger experienced significantly higher burnout scores compared to those older than 40 years is an intriguing observation. While the relationship between age and burnout is complex and can vary across different professions, some studies suggest a U-shaped curve, with younger and older workers experiencing higher burnout.[20] Younger workers may face challenges related to career establishment owing to limited experience and fewer coping mechanisms, while older workers might encounter burnout due to factors like increased job demands and reduced resilience. The significant association between non-Hindu AWWs and higher burnout scores highlights the potential influence of religious factors on occupational well-being. While research on the intersection of religion and burnout is limited, studies in healthcare settings have explored the impact of religious coping strategies on stress and burnout.[21] Understanding the cultural and religious context is crucial for tailoring interventions and support systems. The presence of additional tasks significantly associated with higher burnout scores aligns with established literature on the impact of workload on burnout.[22] High workload can lead to exhaustion, a key component of burnout, emphasizing the need for workload management strategies. The strong association between perceived burden with additional tasks and burnout

underscores the subjective nature of workload. Subjective experiences, alongside objective workload, contribute to emotional exhaustion and burnout.[23] The lack of timely renumeration for additional tasks being significantly associated with burnout highlights the financial aspect of job satisfaction. Timely and fair compensation is a key factor in retaining a motivated and engaged workforce.[24] The associations between leaves related to stress and intentions to quit with burnout emphasize the impact of stress on both the physical and psychological aspects of well-being – burnout is not only a consequence of chronic stress but also a potential precursor to further stress and absenteeism.[25] This underscores the importance of stress management and retention strategies for AWWs. The strong association between the lack of sound sleep and higher burnout scores aligns with extensive research on the bidirectional relationship between sleep quality and mental well-being.[26] Poor sleep can contribute to burnout, and addressing sleep-related issues may be a crucial aspect of burnout prevention. The association between the lack of regular exercise and higher burnout scores is consistent with research highlighting the protective effects of exercise on mental health.[27] Encouraging physical activity among AWWs could serve as a preventive measure against burnout. The association between the presence of active complaints and burnout emphasizes the interconnectedness of physical and mental health. Addressing both mental and physical health concerns is essential for a holistic approach to burnout prevention.[28] Interventions aimed at workload management, fair compensation, stress reduction, and promoting a healthy lifestyle could contribute to the well-being of AWWs.

The negative correlations with the duration of stay, years of marriage, and years of experience suggest that longer stays (AWWs who had spent more time in Coimbatore), more extended marital relationships (support and companionship provided by a spouse may contribute to reduced burnout), and greater work experience (AWWs may develop coping mechanisms, skills, and strategies to manage work-related stressors) are associated with lower burnout scores. This aligns with literature suggesting that stability and experience may contribute to better coping mechanisms and resilience against burnout.[29] This could be attributed to factors such as familiarity with the local culture, social support networks, and better adaptation to the work environment.[30] The positive correlations with the distance to the AWC, working hours per day and per week, leaves availed, and records maintained suggest that these factors are associated with higher burnout scores. Long commutes, extended working hours, higher leave utilization (especially due to stress/burnout), and increased administrative responsibilities may contribute to heightened burnout levels.[31-33] Excessive working hours can lead to physical and emotional exhaustion, reduced work-life balance, and increased job-related stress, all of which contribute to burnout. Messenger et al. showed that 40-hour week is now the most prevalent weekly hours standard.[34] The International Labour Organization (ILO) standardises 48 regular hours of work per week, with a maximum of eight hours per day.[35] In India, according to the Factories Act 1948, every adult (a person who has completed 18 years of age) cannot work for > 48 hours a week (similar to ILO recommendation) and not more than 9 hours a day (8 hours, as per ILO).[36] In the present study, the mean (SD) duration of work per day (time at work and time allotted at home for work related responsibilities (includes submission of reports requested, data entry, coordination with ANM, ASHA (or VHNs) and helpers at AWC)) was 11.1 hours (3.5); and the duration of work per week was 67.5 hours (17.9). Addressing the positive correlation with the distance to AWC might involve exploring options for reducing commuting time, such as providing support to AWWs for stay or transportation support.[37] The positive correlation with leaves availed, especially due to stress/burnout, signals the need for comprehensive leave policies and stress management interventions. Creating a supportive environment where workers feel comfortable availing leaves when needed is crucial. Strategies to enhance overall job satisfaction, such as recognizing and rewarding good performance, providing professional development opportunities, and fostering a positive work culture, could contribute to lower burnout levels.[38] Exploring ways to streamline administrative processes, avoiding duplication, and providing adequate support for paperwork could be considered.

To the best of our knowledge this is the first report documenting the levels of burnout among (particularly) AWWs in India (including AWWs in an entire district – administrative unit). However, it is not without limitations. Firstly, the study design limits the ability to establish causal relationships between variables. Secondly, the exclusion of workers not available during monthly block meetings and those not responding to calls may introduce selection bias, potentially affecting the generalizability of the findings. However, the response rate was 78.6%. Thirdly, the findings may not be directly generalizable to AWWs in other regions with different socio-cultural, economic, or organizational contexts. Fourthly, organizational factors, such as leadership support, organizational culture, and resource availability, were not extensively explored. These factors could significantly contribute to burnout and should be considered in future studies.

Conclusion

This study demonstrated that burnout was common among Anganwadi workers in Coimbatore, Tamil Nadu, with considerable variation across personal, work-related, and client-related burnout. Burnout was significantly associated with demographic and occupational factors, including age, religion, additional duties, perceived workload, delayed remuneration, stress-related leave, and intentions to quit. Lifestyle and health-related factors, such as poor sleep, inadequate exercise, and medical complaints, also influenced burnout. These findings highlight the need for focused interventions, including rational workload distribution, timely remuneration, stress-management

programmes, adequate leave, and supportive workplace practices. Such measures may improve worker well-being, job satisfaction, service delivery, and overall programme effectiveness.

Authors' Contribution

Conceptualization: Mohan Kumar, Seetharaman Narayanan.
Data Curation: Mohan Kumar, Seetharaman Narayanan.
Formal Analysis: Mohan Kumar, Seetharaman Narayanan.
Investigation: Mohan Kumar, Seetharaman Narayanan.
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Software: Mohan Kumar, Seetharaman Narayanan.
Supervision: Mohan Kumar, Seetharaman Narayanan.
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Visualization: Mohan Kumar, Seetharaman Narayanan.
Writing–Original Draft: Mohan Kumar.
Writing–Review & Editing: Mohan Kumar, Seetharaman Narayanan.

Competing Interests

None to declare.

Ethical Approval

The study was approved by the Institutional Human Ethics Committee (IHEC), KMCH Institute of Health Sciences and Research, Coimbatore, Tamil Nadu, India (Reference number 48/1HEC2022).

Consent to Participate

The content of Participant Information Sheet (PIS) in local language was provided to the study subjects and contents were read to them in their own language to their satisfaction. The study subjects were enrolled in the study after obtaining written informed consent. The study was conducted in accordance with the Declaration of Helsinki.

Funding

The study was non funded.

Supplementary Files

Supplementary file 1 contains Tables S1-S9.

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