Social Science & Medicine 336 (2023) 116234

Contents lists available at ScienceDirect

Social Science & Medicine

journal homepage: www.elsevier.com/locate/socscimed

"We are everyone's ASHAs but who's there for us?" a qualitative exploration of perceptions of work stress and coping among rural frontline workers in Madhya Pradesh, India

Ritu Shrivastava [a,*], Lochan Sharma [a], Mehak Jolly [a], Romi Ahuja [a], Radhika Sharma [a], John A. Naslund [b], Jyotsna Agrawal [c], Rahul Shidhaye [d], Seema Mehrotra [c], Steve D. Hollon [e], Vikram Patel [b], Deepak Tugnawat [a], Ananth Kumar [f], Anant Bhan [a], Ameya P. Bondre [a]

[a] Sangath, 106, Good Shepherd Colony, Kolar Road, Bhopal, Madhya Pradesh, 462042, India
[b] Department of Global Health and Social Medicine, Harvard Medical School, 25 Shattuck St, Boston, MA, 02115, United States
[c] National Institute of Mental Health and Neurosciences, Hosur Road, Lakkasandra, Wilson Garden, Bengaluru, Karnataka, 560029, India
[d] Pravara Institute of Medical Sciences, Tal: Rahata, Dist: Ahmednagar, Maharashtra, 413736, India
[e] Vanderbilt University, Brentwood, TN, 37027, United States
[f] National Health Systems Resource Centre, National Institute of Health & Family Welfare Campus, Baba Gang Nath Marg, Block F, Munirka, New Delhi, Delhi, 110067, India

ARTICLE INFO

Handling editor: Blair T. Johnson

Keywords:
Community health workers
Burnout
ASHAs
LMIC
Qualitative
Focus groups
Grounded theory approach

ABSTRACT

Objective: More than a million female village-level lay providers called 'Accredited Social Health Activists (ASHAs)', who deliver primary care, face high levels of stress due to work demands and low compensation, within the context of poverty and gender inequality. Evidence on ASHAs has focused on workplace challenges from a system perspective, without sufficient probing into individual-level stress. This study aims to gain perspectives into the experiences of work stress, the related health symptoms, and the responses to stress among ASHAs in India.

Methods: Focus group discussions (FGDs) conducted with ASHAs in Sehore district, Madhya Pradesh, were audio-recorded and transcribed. Grounded theory was used to generate themes under the various domains of ASHAs' work and domestic life. We identified pathways between the conditions that trigger stressful events, experiences of these events, resulting perceptions, effects on health and wellbeing, and approaches used by ASHAs to respond to stress.

Results: Six FGDs with 59 ASHAs generated the following themes: (a) *Facility*: Workload, undue pressures, unstructured work; ASHAs' relationships with seniors (e.g., feelings of being disrespected, blamed, or targeted), and low access to physical and administrative resources; (b) *Home:* Feelings of guilt for putting less time for family/child care; disrespect by the elderly for a poorly incentivised job; (c) *Community:* Low acceptance by the villagers; caste- and gender-bias; difficult community-level relationships (emotional labour, fear/stigma towards her services); (d) *Somatic and psychological symptoms*: headache, exhaustion, depressive symptoms (to cite a few); and (e) *Responses to* stress: Motivation (support from peers, family, a sense of identity/pride, incentives), Individual strengths (e.g., social responsibility), and spiritual recourse mechanisms.

Conclusions: This study will inform the development of a strengths-based coaching intervention to address work stress among ASHAs. The findings are relevant to building the evidence on alleviation of work stress among female frontline cadres in low-resource settings globally.

1. Introduction

More than a million female lay providers called Accredited Social Health Activists (ASHAs; the word 'ASHA' means 'hope' in Hindi) deliver primary care services in India (Scott et al., 2019), with one ASHA serving a village of ~1000 people. Introduced as part of the National

* Corresponding author. Sangath, 106, Good Shepherd Colony, Kolar Road, Bhopal, Madhya Pradesh, 462042, India.
E-mail address: ritu.shrivastava@sangath.in (R. Shrivastava).

https://doi.org/10.1016/j.socscimed.2023.116234
Received 17 October 2022; Received in revised form 23 August 2023; Accepted 9 September 2023
Available online 15 September 2023

Rural Health Mission (2005), the ASHAs, although a 'volunteer' (incentivised) cadre, shoulder a range of responsibilities: awareness on infectious disease control and sanitation; antenatal, intrapartum and postnatal services; counselling on family planning and safe abortion services; child immunization and vitamin A supplementation; encouraging positive behaviours in breastfeeding, birth spacing, and postnatal care; in addition to household surveys, and screening of non-communicable diseases. ASHAs act as a 'bridge' between the rural community and formal health service outlets (e.g., sub-health centres and primary health centres), and their appointment is related to inadequate doctors and nurses at the village-level to meet the various needs of the community.

Community Health Workers (CHWs) in low- and middle-income countries (LMICs) are facing high levels of stress due to work demands and low compensation, within the larger context of poverty, gender inequality, and working at the bottom of system hierarchies (Dugani et al., 2018; Li et al., 2014; Selamu et al., 2019). These factors apply to ASHAs, further worsened by situations such as loans or debts, loss of job or unemployment of a family member, the beginning of their child's schooling, history of mental illness, and marital conflict (Mannapur et al., 2019). In addition, the ASHA has to manage her emotions in response to the demands of her work, and engagement with various members of her community and the health system. ASHAs interact with individuals and families in the 'dual role of a nurse and counselor (Pandey and Singh, 2016). They may display a wide range of emotions from joy (e.g., in case of childbirth) to sorrow (e.g., in case of chronic illness), regardless of their own felt emotions that may be contrary to what is expected of them (Pandey and Singh, 2016). The ASHA's beneficiaries are underserved and indigenous to their community like most CHWs (Love et al., 1997); therefore, they expect her to display appropriate emotions (e.g., empathy (Smollan, 2006)) and suppress improper expressions (e.g., irritation (Groth et al., 2009)). Most published evidence on ASHAs has focused on their workplace challenges, without sufficient probing into the nature of individual-level work stress and their responses to stress. A review of 122 articles taking stock of 10 years of research on ASHAs' work included over half of the articles from a health system perspective (Scott et al., 2019). The extensively studied topics were ASHA performance and training and capacity-building, with little research on aspects such as grievance redressal or peer communication (Scott et al., 2019). ASHAs' work stress has also been underrepresented in systematic reviews - for example, a 2020 review on factors associated with work stress among healthcare professionals in India has not included studies on ASHAs (Kesarwani et al., 2020), and another review examining burnout among primary care providers in several low- and middle-income countries included only one Indian study on ASHAs (Dugani et al., 2018). The COVID-19 pandemic brought additional responsibilities of infection control and awareness-building for this cadre, generating more cross-sectional data on psychological distress (Menon et al., 2022).

Detailed qualitative narratives at the individual ASHA-level, on the perceptions, experiences, consequences, and responses to work stress are scarcely available. Information on these pieces is critical to developing structured interventions for strengthening ASHAs' abilities to respond to or negotiate with stress. While their professional and social constraints persist, ASHAs could potentially be coached to use strategies, including coping mechanisms, the use of personal strengths, and/or spiritual recourse mechanisms to manage stress. The present study is positioned within a larger randomized controlled trial (Khan et al., 2023), which aims to evaluate the effectiveness of such a coaching program, to improve the mental well-being of ASHAs, as measured by the authentic happiness inventory (AHI) (Proyer et al., 2017).

2. Methods

This study was conducted as part of formative work for an intervention trial (Khan et al., 2023), which aims to develop and measure the effectiveness of a positive psychology-based coaching program to improve mental well-being among ASHAs. This study aims to gain perspectives into the sources, nature, experiences, consequences, and responses to stress, among rural ASHAs in Sehore district, Madhya Pradesh (Table-1), to inform the subsequent process of intervention development. Anecdotal evidence of burnout among ASHAs in Madhya Pradesh has been published, particularly due to their increased workload during the COVID-19 pandemic (Rao B., 2020). The research team has contextual familiarity with the district due to prior studies with ASHAs (Naslund et al., 2021). Ethical approval was obtained from Sangath Institutional Review Board, Goa, India.

We conducted focus group discussions (FGDs) to explore ASHAs' perceptions and experiences of work stress and individual-level responses to stress, to tap into their group dynamics in naturalistic conversations, and reduce moderator bias, compared to in-depth interviews (R.A. Krueger, 2014). FGDs were conducted between December 2021 and March 2022 at neutral locations (e.g., Sangath project office, other block-level offices) to elicit maximum open responses. Ongoing reviews of FGD observations through field notes were conducted through debriefing meetings, which determined the point of theoretical data saturation. Overall, six FGDs (each with ~10 ASHAs) averaging 60 min were conducted by experienced facilitators (RS-1 and LS) through an iterative and inductive process.

We used a flexible, semi-structured topic guide based on a review of literature, and informed by prior guidelines on FGDs (Acocella, 2012; Bucci et al., 2019; R.A. Krueger, 2014; Saunders et al., 2018). The topic guide aimed to explore work stress concerning the following themes: a) Challenges in time- and task management; b) Extent and nature of workload; c) Perspectives on workplace environments (facility, community); d) Expectations of seniors and workplace relationships; e) Emotional engagement (and labour) in work; f) Work-life balance (domestic stressors), and g) Response to work stress: coping strategies, use of individual strengths, and spiritual recourse mechanisms.

All working ASHAs in the Sehore district were eligible for participation. The supervisors of ASHAs were excluded to avoid biased responses in the group (due to power dynamics). Non-probabilistic sampling approach was used to recruit a maximum-variation purposive sample. We first obtained a database of ASHAs from our local district team to review a range of their social and demographic characteristics such as age, years of experience, education level, caste, family type, and others (refer to Table 3). We then prepared lists of ASHAs (FGD-wise or having approximately 10 participants in a group) showing diverse characteristics and coordinated with the district team to contact these ASHAs telephonically, for invitation to participate in the focus groups. FGDs were scheduled based on mutually convenient dates and times, for which, we provided travel and daily allowance to ASHAs as per the standardised norms of the National Health Mission, Government of Madhya Pradesh. COVID-19 safety protocols were administered at the venues. As ASHAs represent a vulnerable group, given their work stress and the social and cultural disadvantages (rural traditional women), the FGDs were conducted by trained researchers (RS-1, LS), and supportive referral protocols were put in place for any potential mental health emergency (e.g., feelings of distress).

Table 1
Study district profile.

Social/Demographic characteristic	Data
Total population	~1,311,000
Male and Female literacy rate	80.8% and 58.8% respectively
Sex ratio	918 females per 1000 males
Number of blocks	5
Health facilities	15 primary health centres 9 civil hospitals 1 district hospital
Number of ASHAs	~1524

Note. Census (2011) District Handbook Sehore, n.d.; NRHM (2013).

We obtained written informed consent from ASHAs. Inclusion in the FGDs did not have any bearing on the ASHA's work or roles within the community setting. All ASHAs had the right to decline providing any information or leave the study at any point, without any consequence. FGDs were moderated using the topic guide (used flexibly) with consistent support offered by the moderators to the ASHAs, for the latter to freely express their views. The notes on ASHAs' non-verbal cues and overall behaviour supplemented the analysis. FGDs were conducted in Hindi and audio-recorded with consent.

The audio files were saved in password-protected computers and sent to an independent experienced transcriber on the same day who is familiar with regional Hindi. The standard operating procedures of transcriptions and translations were sent in advance to the transcriber. Transcription was checked by one of the researchers (RS-1 or LS) to ensure the usage of correct Hindi terms and fill the missing gaps in data. Checked transcripts were sent back to the transcriber for translation into English, which was also checked by the researchers for clarity and quality. Any queries on ASHAs' responses or audio clarity issues were discussed between the researchers (RS-1, LS, and APB) and resolved, to maintain coherence of the transcribed and translated information.

After a thorough familiarisation with the translated content, preliminary 'open-text categorizing' was done to generate the initial themes and sub-themes. Thereafter, we used the Grounded Theory technique (Glaser and Strauss, 1999) to classify and categorize text data segments into a set of codes (concepts), categories (constructs), and relationships (Strauss and Corbin, 2014; Glaser and Strauss, 1999). We used MS Excel and Word 2019 to aid this process. Therefore, we did not restrict to the 'deductive' themes already present in the FGD guide, given the nature of ASHA work-stress experiences. We had to suspend any pre-existing theoretical biases before analysis and let the data dictate the formulation of our theory. We employed the following sequential techniques:

a) Open coding: First, we examined raw textual data to identify discrete events, incidents, ideas, actions, perceptions, and interactions of relevance. These were coded as "concepts" related to various phenomena of interest using a set of guiding questions (Table-2). Each concept was linked to specific portions of the text (coding unit) for later validation. We simultaneously looked for new concepts and refined old concepts, while coding the remaining data.
b) Categorization: We formed broader categories and sub-categories, using the open codes generated by each of the three coders (MJ, RS-2, RA) to reduce the number of concepts we needed to work with and build a "big picture" of the issues.
c) Axial coding: We assembled the categories into relationships or pathways to plausibly explain the phenomena of interest. We used categories to represent conditions or circumstances in which a particular phenomenon was embedded (e.g., the hierarchical difference between a medical officer and the ASHA, creating grounds for disrespectful behaviour), the events under these conditions (e.g., disrespectful behaviour), ASHAs' perceptions and experiences of the events (e.g., her feelings or interpretation), effects on health (e.g., poor mental wellbeing, or somatic symptoms), and responses (e.g., coping, use of personal strengths). Therefore, we could explain why a phenomenon occurs, under what conditions, and entailing which health-related symptoms (pathways of interest).
d) Selective coding: We identified central categories or core variables such as workplace, community-level, and domestic stress, and logically related these core categories to their respective subcategories and the aforementioned pathways (e.g., between the experience and perception of stress, or between the perception of stress and the coping mechanism).

With continuous discussions among the research team members (RS-1, MJ, RA, RS-2, APB), agreement and disagreement of codes and categories, a final consensus framework was developed for the presentation of results (refer Fig. 1, panels A, B, and C).

3. Results

A range of socio-demographic characteristics of ASHA (Table-3) were considered to ensure diversity within the focus groups. Based on the stages of coding, the data showed ASHAs' experience of stress in three different settings (Fig. 1A): in relation to the health 'facility' (where ASHAs visit for regular work), the village 'community' (where the ASHAs reside and conduct home visits), and the domestic 'home' setting (being a home-maker, taking care of children and elderly).

3.1. Facility

Within the facility, we have categorised the pre-requisite 'conditions' or 'circumstances' that embed potential stressful events, which impact the ASHA's mental well-being. These circumstances are related to the ASHA's role, relationships with other cadres, and interface with facility resources.

3.1.1. Role

Within the ASHA's role, we have discussed sub-themes related to desk workload, pressure of achieving deliverables, and unstructured work.

3.1.1.1. Workload. The majority of ASHAs reported heavy workloads. Besides their routine responsibilities, they are assigned duties at the *panchayat* (village-level governance) or the *Anganwadi* centre (nutrition and creche services for children under-5) or at times, in the education department and other units, which is unrelated to their responsibilities.

> "Now you tell us - one person is getting a bottle/drip at the PHC (health facility), one person is delivering a baby elsewhere, and there is vaccination also going on simultaneously. How can one ASHA be at three different places, at the same time?"

3.1.1.2. Work pressure. ASHAs have to complete certain tasks in a limited time frame. Sometimes they are assigned multiple tasks by higher officials and pressurized to complete these tasks on priority. Due to their hierarchical position, it is difficult to set such priorities as every task seems equally urgent.

> "If any work comes at the Panchayat level, Secretary Sir would say, 'Don't do this (her routine work), do that (his work)' So what has the government thought of ASHAs as?"

Work pressures not only stem from officials but also from patients

Table 2
Guiding questions for open coding.

#	Guiding question	Explanation
1.	What is the phenomenon?	Sources of stress and interaction with stressors
2.	Who is involved?	People at the facility, home, or community
3.	When, how (underlying aspects) and/or where?	At the facility-level, due to the nature of her role, relationships and/or resources
4.	What are the consequences?	Physical health problems, poor emotional engagement in work
5.	What are the strategies used?	Intrinsic motivation, use of strengths, spiritual recourse

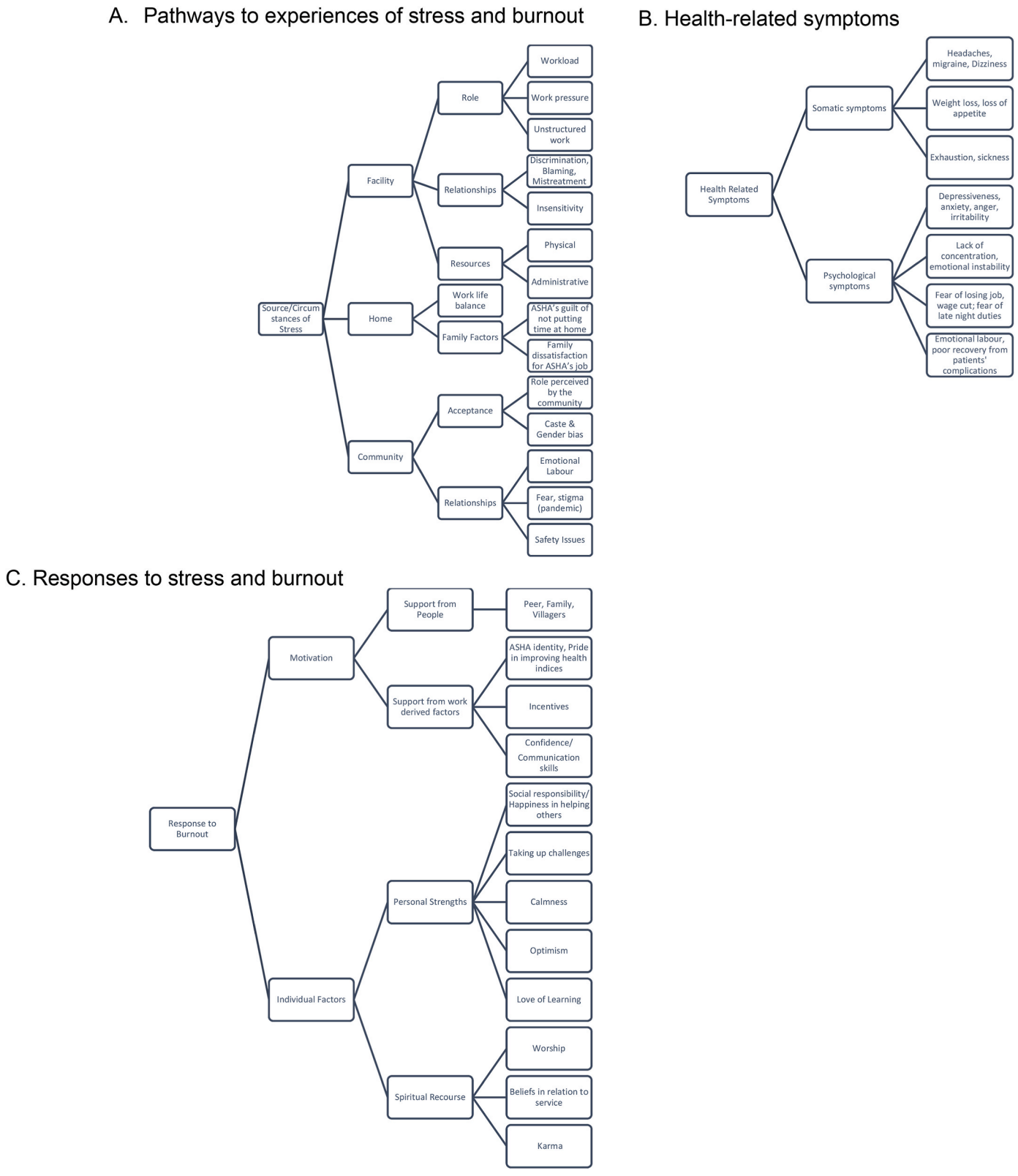

Fig. 1. Framework of themes and subthemes.

and their family members. The latter want ASHAs to stay with them during their emotionally difficult time (e.g., the process of childbirth or a surgical procedure).

> "The family says that 'No, the ASHA will stay at the hospital for as long as the delivery does not happen, we will not let you go unless our daughter delivers the baby.' How do we stay there - for a day, two days? If we come home before the delivery, the family members will say "What card? What voucher? You did not stay; you cannot get it (a family member's signature is needed on the incentive slip to confirm the receipt of the service)."

Table 3
Socio-demographic characteristics of ASHAs (n = 59).

Characteristic	Data
Age Range	
18– <30	15
30–40	34
40–50	9
50 Above	1
Education Level	
Below 8th	5
8th¯ 10th	35
12th to diploma	9
Graduate and above	10
Caste (Azam, 2012; Deshpande, 2001; Mosse, 2018)	
OBC (higher socio-economically)	29
SC	17
ST	5
General	8
Years of Experience	
0– <5 Years	7
5–10 years	19
10 years & above	33
Distance Between Home to Work Place	
0– <1 km	14
1–5 km	24
>=5 km	21
Family Structure*	
Nuclear	36
Joint	23
Type of House	
Kuccha (thatched)	22
Pucca (concrete)	18
Semi pucca (partially concrete)	19

***Note:** Nuclear implies parents and children staying in the same household, and a joint family implies parents, children along with the in-laws or parents of the father staying in the same household.

A few ASHAs also mentioned the pressure from their 'supervisors,' a cadre created to support them:

> "My village is larger, there is a population of 3000, but it has never happened that she (supervisor) will say 'xyz (ASHA) has a bigger village, so I will help her out for three or four days, or help her with the duty".

3.1.1.3. Unstructured work. Some ASHAs complained about their undefined roles or showed limited role clarity. They are not clear about who they report to, and on occasion, have conflicts in following a senior official's order.

> "The Supervisor also puts us on vaccination duty. There are patients as well, and we have to help them with their check-ups; it becomes hard to figure out whether we should go for the vaccination, or stay with the patients for check-ups. Then, ANM (nurse midwife) calls us to tell that she is sitting there, and asks us to come soon for her work!"

3.1.2. Relationships

Most ASHAs have described their working experience with the ASHA supervisor, ANM (auxiliary nurse midwife), Medical Officer (MO), and even with the supporting hospital staff, as unhealthy. We have identified the following behaviours and attitudes (via quotes) shown by these personnel towards the ASHAs:

Discriminatory behaviour:

> "She (medical officer) does not allow us to enter even the facility gate. We are from a village, so they consider us fools, but ASHAs from urban areas are allowed, even inside the OT (operation theatre), in front of us. They follow their preconceived notion that we are like this and we are absolute illiterates."

Blaming/easy targeting:

> "The BCM (senior system official) told me, "I have a friend who confirmed that the ASHA who is posted at this village has not done anything." So, he (BCM) listened to his friend, but did not come and confirm by himself… I said that – 'Sir, you can come here and see, you can ask anyone, all the ASHAs have worked together.'"

> "The ANM asked me why a patient stayed for a night in a hotel. The bed was not available (in the hospital), the hotel was nearby. But she did not care to listen to me, and filed a police complaint. The lady officer asked me to explain, but ANM kept on accusing that I did not bring the patient to the health facility - when in fact, I took them to a more suitable place."

Insensitivity:

> "I told Ma'am (supervisor) that I am sick, and will not be able to come. She responded that I will have to come to the PHC and write down the reason why I cannot perform the day's duties … If I can come to the PHC to write about my illness, can't I come to perform my duties? I went there, caught fever, and fainted! But she did not come inside to check on me." ASHAs also pointed out that they do not get any praise or words of appreciation from their seniors, and (far from an acknowledgement) they are told that they "don't do (any) good work (or work that makes any difference) and make things (e.g.,routine operations) difficult (for seniors, e.g., medical officer, or other colleagues such as midwife/nurse)."

Mistreatment/misconduct:

> "They (hospital staff) do not have any manners. The people who remain stationed at the gate, even they say – 'Hey, where are you going? Stay outside!' *What are we* (angrily)*?* When our villagers go with us (e.g., for deliveries), and these people speak like this, in front of them, what will they think?"

> "The hospital does not have great facilities. First of all, if we go, then… they ask us to get a form, and ask us to give it to the pregnant woman and wait in the OPD (outpatient department) queue. She then goes away, and we are not allowed to go inside… What will we do by sitting outside? What do they mean – do we go there only for a form?"

3.1.3. Resources

ASHAs experience an increase in work stress, and at times, fears of working in health facilities due to a resource-crunched environment.

3.1.3.1. Physical resources. Some ASHAs mentioned that on occasions when they have to stay at a hospital at night during emergency deliveries, there is no arrangement for them to stay, which other (salaried) cadres get to have.

> "Sometimes we sleep on the patient's (ward) bed during the night. There is also no vehicle and sometimes the hospital is far away (from their village)".

Some of the ASHAs also mentioned that despite their hectic schedules, they do not get any refreshments or food, unlike the salaried cadres -

> "The vaccine duty starts at 8 am, until 5–6 or even late and we cannot leave in between to have lunch. So, they should at least give us some snacks, or money to get it ourselves."

> "We work for the malnourished, but we will become malnourished ourselves!"

ASHAs also pointed out an absence of adequate safety kits and gear during the pandemic -

"We visit every home, door-to-door, all day, and yet they haven't provided anything for our safety, and asked us to visit COVID-19 positive houses. We have visited them too!"

"We buy sanitizers and masks from our money. We never get compensated for it."

ASHAs also expressed work stress due to the need to walk long distances from their homes to the health facilities (with seasonal hazards), without adequate public transport or the *"provision of a bike"* (by the system).

3.1.3.2. Administrative resources. Most of the ASHAs reported that low and untimely incentives, with uncertain work timings and schedules, contributed to personal stress. They are supposed to get ₹7000 (Kadam et al., 2022) in most states of India as a fixed monthly incentive for delivering a range of services as per the norms of the National Health Mission (in practice, they receive much lesser), with the possibility of additional incentives based on their performance under various government health programmes. They have to work extensively for long hours, sometimes odd hours like late nights and early mornings, but the incentives are unjustifiably low.

"If we would have been getting a higher payment, then our family members would also have been happy. If we are getting less money, and if we tell anyone that we get 2000 rupees, people would say that we are lying and laugh at us!"

Given their 'volunteer' profile, ASHAs do not get typical leave provisions:

"… I was unwell but she (Supervisor) calls me in the evening and says that she ran out of syringes for a patient. I should go, get her syringes within 15 minutes. I told her that they are at the Anganwadi center (local creche) … She asked me to get them from the PHC (clinic). She said if you cannot get them, ask someone to get it for me."

"… a full-term pregnant ASHA was assigned COVID-duty, so I (ASHA) stood for her and fought with the 'sister' (midwife) over the phone (saying) that will you be responsible if something happens to her."

3.2. Home

Given the close physical and mental proximity to her area of work (village and nearby facility), an ASHA tends to bring her *work back home*. Further, the gender roles and the social-cultural disadvantage of being a woman in a patriarchal family, well apply to her situation.

3.2.1. Work-life balance (conflicts)

It can be argued that traditional gender roles and meeting everyone's expectations at home have socially conditioned the ASHA to handle multiple conflicting work tasks, particularly when they involve serving people. Ultimately, these expectations make an ASHA unhealthily accustomed to the dual nature of work stress and domestic stress.

"Family members say that you looking after the entire village… but if you cannot take out time for your family, then what is the meaning of working in the health department?"

Many ASHAs reported conflicts at home; some even quoted *"divorce-like situations"*:

"My mother-in-law told me that we don't need such a daughter-in law who cannot take care of her own child, or the household. I felt confused and pressurized of what I should do - work, or care for the household, or deal with this problem. She asked me to divorce my husband; they said 'we have married you to this family, not to the village'."

3.2.2. Family-level factors

ASHAs have expressed that they often must stay away from personal events such as family gatherings. ASHAs have felt guilt for not being able to spend time with their kids. ASHAs have described how they must work for almost the whole day, leaving their children behind. They feel bad because, on occasion, their husbands must go the extra mile to support them. Some of them stated that their family members are dissatisfied due to their low incentives – especially when the ASHA is the sole earner in the family.

"… I could not go to my grandfather's memorial service either (due to a work assignment). So, these are the things about which the government should think a little."

"… If an ASHA has been posted in a village different from hers, her husband would not just drop her and come back (he would wait). Our husbands have also performed these duties."

"People at home say why you are doing such a small work; you don't even have any respect in the village. Why are you doing this… ?"

3.3. Community

We have explained the circumstances and resulting stressors at the community-level *via* two sub-themes: ASHA's 'Acceptance' and 'Relationships' with the community (village) members.

3.3.1. Acceptance

3.3.1.1. Role. Although the ASHA is selected from the community itself, her acceptance is a gradual process, partly contributed by the recognition of her visible work (as she perceives) to serve the village. A few ASHAs reported initial identity threats from traditional birth attendants who had conservative child-birthing beliefs, while ASHAs are incentivised for institutional delivery. In other instances, there is a misunderstood scope of the ASHA's role.

"She (the traditional birth attendant) said, 'If there is a delivery in the village, I will not be there to support'. She instigated villagers against me, that if they go to the ASHA, she will not assist with any kind of help during labor. My husband went to her home and said that you can take all our money, but do not fight in front of our house. She annoyed us for 3 years."

"The government has started all kinds of schemes, but all the problems come to us! They ask us that their daughter-in-law had not yet gotten the money, like she did not get 4000, or 5000 rupees (from a scheme). But Ma'am they will call us even at 10 in the night, that our money has not come yet. But what can we say?"

3.3.1.2. Caste and gender. ASHAs narrated episodes of caste-based discrimination, such as an instance where an ASHA was not allowed to enter the house of people belonging to a higher social caste (relative to hers). Another ASHA described a similar instance where she *could* enter such a house but was not allowed to sit on the bed or chair.

ASHAs have expressed that a rural married woman is still perceived as a daughter-in-law of a family *"who should stay in the house, under a veil to safeguard the family's reputation."* Working ASHAs, who step out of the house, must interact with a range of beneficiaries, both men and women, young and old, from different social strata. ASHAs have reported disrespectful behavior on the part of the community members, for example, they are questioned on their *"character"* when they are seen with men (who are not family members), who could be male relatives of a patient, or when they counsel families, especially male clients, on reproductive health/family planning.

"Being a woman, some people laugh at us and say that we provide condoms to people, to which we say - it is our work."

"… When I come back to the village at odd hours, a group of men keep asking my reason for coming late and seek all minor details, pass derogatory statements on me and my work. But if I return with a male member (patient's relative), I don't understand what is wrong with it?"

3.3.2. Relationships

ASHAs narrated instances reflecting their emotional labor, for example, once an ASHA was blamed for a bad outcome (infant death), which made her ruminate incessantly - *"… we can never stop thinking about it. The sadness haunts us, as a family has lost someone."*

A few ASHAs also said that despite having personal disputes with some families where they were not allowed to enter the house, they would still have to maintain good relationships, for performing the home visits. These visits posed an opportunity to continue building rapport and acceptance, they were crucial for better health outcomes for the family, and they were duties (targets) to be completed as part of her job.

The ASHA-community member relationship was particularly complicated by the fear and stigma induced by the spread of infection during the pandemic, and ASHAs have quoted that the villagers *"closed their doors on seeing the ASHAs."*

"When we say that the vaccine is available to all the people, they will say – 'We are not sick. If we die (due to the vaccine) will you look after the children of our house?' And now that we are making phone calls (for reminders), some people talk to us very rudely."

Some ASHAs also reported safety issues and conflicts within the larger ambit of their social connections with fellow villagers or local people. On occasions, ASHAs were visited by men staying in the village, during late night hours, for unnecessary reasons (e.g., requesting condoms or ask family planning advice). They mentioned incidents of people saving their phone number (which they could have shared in the course of her work, with a patient/patient's family) and messaging or calling late at night, which troubled them.

"Once when I was returning from work, I encountered a fraud man who falsely gave me a lift to my village … and I believed and went along. As I realized he was going in a different and secluded direction, I jumped off the bike and called for help."

3.4. Health-related symptoms

As part of the sequential coding process, the 'circumstances' or 'conditions' that embed stressful 'events', result in ASHAs' perceptions, feelings, and experiences of stress (discussed earlier). The present section summarises the effects of chronic and accumulated stressful events (Fig. 1B).

3.4.1. Somatic symptoms

ASHAs enumerated various signs and symptoms of physical illness which they had developed over some time -

"My body has also been affected. Earlier I was so fat (healthy), you can ask anyone how fat I was! I fell so sick that I became thin. My body has been affected and reduced a lot."

"Sometimes we are not able to eat as well; we fall sick, we feel dizzy, or some or the other thing. But who is looking after us?"

"I get a headache; it feels like my head will burst."

3.4.2. Psychological symptoms

ASHAs have also reported mental health concerns such as anger, frustration, anxiety, depression, emotional instability, and lack of concentration. Some of the ASHAs mentioned fears of losing their jobs (partly due to the strained workplace relationships and the targeting/blaming discussed earlier) or a cut in wages. A few ASHAs also spoke of occasions when they had to scream at their family members or children at home.

"I started feeling anger in my body, I started shouting at children, because I have to do household chores as well. I even have fights at home, as a result of what happens at work."

"Sometimes my mind gets frustrated, it feels tensed, that I should not work anymore and it's better to just leave it (the job)."

In addition, adverse events like threats, verbal abuse, late-night unwanted calls, and attention from men in the village, or "eve-teasing" (Eve-teasing refers to the culturally specific phenomenon in South Asia that entails sexual harassment in public spaces by men against women. It has also been described as staring, stalking, passing comments, and inappropriate physical touch (Talboys et al., 2016)), have contributed to longer-term trauma. ASHAs have reported these events as "haunting" or "disturbing." They fear going outside during the night, and some of them have started avoiding late-night duties.

Several ASHAs have reported that the workload and work pressure are beyond their capacity to handle. Some of them mentioned that they *"even cry due to work-related stress and feel suffocated."* Some of them want to quit the job and some of them can't see a way out of their stressful situation as they feel stuck in their work. A few ASHAs also got emotional during the FGDs while narrating their experiences. We have to note that ASHAs reside and work in the same village, so they have a personal connection with the villagers – so, if something bad happens to a mother/her child (e.g., complicated delivery, death), the ASHA assigned to the case would feel emotionally tormented and find it difficult to recover from the incident.

"I took a child for BCG injection. It got swollen due to some complications. Their family member put blame on me that our child is crying, our child is not eating, and our child is having fever, while I tried to take all the measures at my level. I constantly thought about this incident for 4–5 days."

"This is a government scheme that ASHAs have been recruited so that population of females could be decreased (she says in frustration and sarcasm). They (women) will go in tension, depression, and then because of the work pressure, they will automatically die out."

3.5. Responses to burnout

We observed that ASHAs are already using a range of strategies at their individual-level, to negotiate with work stress, as part of long-term acceptance and internalization of stressful events (Fig. 1C). We have delineated the themes of 'motivation,' 'personal strengths', and 'spiritual recourse'.

3.5.1. Motivation

ASHAs draw motivation from the support offered by their peers, family members, and the wider community members, or from other factors such as a work-acquired sense of identity (or independence), skills (confidence, communication), or monetary incentives.

With respect to peers, they emphasized the support of more experienced ASHAs to share work-issues to avoid discussing those and 'troubling' their family members –

"… with everything you do, you feel like quitting. Then senior ASHAs push us to face any situation in life and work. They say 'if you face the situation today, you will have a bright/successful tomorrow'. Seniors emphasize on our lows, saying that they are nothing in comparison to what they had faced in their lifetime (early career)."

ASHAs acknowledged that despite their domestic pressures, the long working hours they put outside their homes would not be possible without family support. The family support (for a positive change in their outlook towards their work) could be gradual – either by seeing the ASHA continue working, or the village community developing gradual respect for her.

> "My husband gives me hope, since I am not well educated; but he gives me his full support. He says that you keep on working, I will support you."

Other than people, ASHAs draw a sense of identity and pride in their work -

> "There were maternal deaths in the village that have also decreased to an extent, and neonatal deaths, which used to happen, have also decreased. So, I really like that."

ASHAs also seem to be motivated by the monetary incentives, despite the dissatisfaction with their amounts and delays in payment. Still, this can be interpreted as a financial need or compulsion (that they are receiving *some* incentive for their work).

Some of the ASHAs want to leave their job but cannot, as being the sole earners, they have a family to look after. One ASHA mentioned that she must work *"for her son"* as she is a single mother.

> "If I won't go one day, someone will easily replace me. It feels like we have accepted this habit of working - since we are working every day, we have gotten into that flow."

Finally, the felt changes in their confidence levels and communication skills (social intelligence) have substantially contributed to motivation.

> "Earlier I used to be in 'ghunghat' (veil), my legs used to shake out of fear while stepping out of the house. I used to think how would I go, what would I do? It (ASHA's job) helped me expose myself to the outer world. My fear has gone."

Individual factors:

3.5.2. *Personal strengths*

ASHAs tend to use a mix of realized (known and utilized) and unrealized (known and underutilized) strengths to negotiate with work stress (MacKie, 2014). Due to no prior coaching or training on the same, they are using strengths that they naturally have, or pick up due to the challenges on-the-job. Examples include social responsibility, taking up challenges, calmness, optimism, and a love of learning. We have illustrated a few below:

3.5.2.1. Social responsibility/happiness in helping others. ASHAs feel responsible towards the village community and do not want people in their village to be left behind.

> "I treat it as a responsibility to bring all children for routine immunization, repeating multiple times, even after they deny, until they agree to come. I don't sulk or get upset that they are denying."

> "These are our own people from our village; if we quit, who is going to be there for them? We can make them understand, we can take them with us."

On the other hand, ASHAs feel happy to be of service to the people in the community, for example, finding comfort if *"a dying person survives or if someone delivers a baby safely"*.

> "Women from well to do families can go to private facilities, and can burn all the money they want; so, we think that if we do something for the poor, we will feel good about ourselves, so we work even more…"

> "I keep working in all kind of tensions… but if someone is healthy and has delivered (a child) successfully, then I feel God made me do something great."

3.5.2.2. Calmness. ASHAs do realize that they cannot react to any difficult situation like a regular person would, partly because their beneficiaries are known, familiar people of the village. In the same vein, ASHAs have learned to handle situations of anger, with some amount of tact or technique.

> "When something makes you angry during a home visit, you gently ask them (family members) for a glass of water - then they will make you sit properly, fetch you a glass of water, and might even ask for a cup of tea… this is the trick used by older ASHAs (more experienced) who have been working for some time now…"

3.5.3. *Spiritual recourse mechanisms*

We tried to elicit responses on the spiritual outlook of ASHAs and their use of any spiritual mechanisms to cope with burnout.

While worship (predominantly idol worship in the case of Hinduism) may be regarded as a traditional religious practice, ASHAs sought peace, contentment, and comfort in this activity.

> "Yes, today I came to the meeting only after worshiping and joining my hands in front of God. I came here after putting incense sticks and worshiping." (Overt religiosity)

> "… Before every delivery, I pray in front of God - that the delivery must go well and there are no troubles. I pray to reach home on time and that all my family members stay fit." (Prayer)

ASHAs also shared their beliefs concerning community work:

> "One should believe in God. I mean, you can believe in anyone, but unless one believes in oneself and does something themselves… because Lord Krishna also said that God resides with the person who works hard."

> "They say that God helps those who help themselves, and if I do not do anything for others, what will happen with me?"

A few ASHAs stated the idea of 'Karma' (predestination), where the spiritual stream of thought could be an extension of the attribute of social responsibility:

> "I think that God has chosen me and my co-workers as being so capable… so I like serving people."

4. Discussion

4.1. *Theoretical evidence-base*

As discussed in the Introduction, ASHAs shoulder a range of village-level community health responsibilities, in their dual role of a 'nurse and counselor' (Pandey and Singh, 2016). Therefore, their situational work-stress narratives can be explained by the general characteristics of 'rural nursing' (Long and Weinert, 1989; Scharff, 2018). Some of these characteristics such as 'role diffusion,' include the expectation of nurses to have a wide range of knowledge and abilities to deliver services in multiple areas of community health, for people of varying ages, cultures, and pathophysiological states (Belden et al., 2012), the commitment in doing so, and independent decision-making (Koessl BD, 2009). Further, the Rural nursing theory (RNT) by Long and Weinert (1989) provides a format for explaining our findings (Lee and McDonagh, 2006). RNT discusses the lack of anonymity of rural care providers and greater role diffusion than their urban counterparts. Our themes show that these aspects underpin ASHAs' perception and experiences of work stress: First, ASHAs, with the pressure of serving people who they know

personally (including their families), incur emotional labour, and tend to ruminate on experiences of adverse medical outcomes faced by their fellow community members (refer 3.3.2, 3.4.2). The emotional labour is complicated by instances of mistreatment both in the facility (3.1.2) and community settings (3.3.1.2) given the larger patriarchal environment. Second, ASHAs are rural 'generalists' providing for individuals of all ages with a wide range of health problems (Koessl BD, 2009), at least some of which should be looked after by other specialists (e.g., fever with infection treated by a respiratory health provider). The role diffusion herein is reflected in the findings in 3.1.1. under 'workload', 'work pressure', and 'unstructured work'. In addition, they must adjust to 'what is available,' which pertains to resources or supplies for delivering care (Koessl BD, 2009), and can be extended to their available resources/supports to cope with stress (3.5).

4.2. Parallels and differences with other studies

Our findings on facility-, domestic-, and community-level 'circumstances' (3.1–3.3) leading to recurrent stressful 'events', with effects on ASHAs' health (3.4) and generating their 'responses' to stress (3.5), are in line with other CHW studies.

First, the relationship between general life stressors and work stressors played a critical role in overall ASHA well-being (e.g., the guilt of paying less attention to child care), which has been highlighted among rural CHWs in Ethiopia (Selamu et al., 2019), medical house officers in Pakistan (Kazmi et al., 2008), and other such cadres in south Asia and sub-Saharan Africa (Steege et al., 2018). Second, friendships and peer support offered information and instrumental support for nurses and hospital workers in other settings (Connors et al., 2020; Eagle et al., 2012), which was similar to ASHAs discussing their problems with peers to avoid 'troubling their family members' with work-related issues. These peer friendships are in contrast to their difficult relationships with senior cadres, as seen in other contexts (Shin and Lee, 2016). Third, there is an observed greater questioning of CHWs by patients, especially after fears and stigma induced by the pandemic (Shin and Lee, 2016), resulting in an asymmetry between their original motivations to take up the job (e.g., for community service) and the perceived loss of community respect. While this contributes to poor well-being, the feeling of social responsibility and finding well-being in the happiness of others have continued to motivate ASHAs (3.5). These findings are consistent with the value assigned to altruism but with the feeling of being under-equipped to provide for the needs of the community (Mohajer and Singh, 2018). From the gender perspective, the above findings substantiate prior evidence that female CHWs are compensating for the larger shortcomings of the system to the detriment of their health (somatic and emotional symptoms), but rather than recognizing these shortcomings as a systemic challenge, it is considered as concerns of a particular cadre of (female) workers (George, 2008). Fourth, traditional community beliefs (e.g., faith in home deliveries, attitudes towards contraception), poor sensitisation of the community viz. the CHW's actual roles, and ill-equipped primary health centres impede the health promotion activities undertaken by CHWs (Sarin and Lunsford, 2017), as also shown in this study, but more importantly, their efforts to build trust with the communities (Saprii et al., 2015). It is here that visible positive outcomes seem to play a role in motivating CHWs (Smittenaar et al., 2020), for instance, lesser maternal deaths as quoted by ASHAs (3.5.1.), as also their support systems such as husbands/family members (3.5.1.) (Dehingia et al., 2020). Fifth, the availability of physical resources in the working environment (3.1.3.) has influenced positive health worker outcomes such as well-being (Ratanawongsa et al., 2008; Selamu et al., 2017), and morale (Selamu et al., 2017; Totman et al., 2011) in other studies. This reinforces the need for a comprehensive systems approach for CHWs if village-level preventive and curative services have to be strengthened (Pfaffmann Zambruni et al., 2017).

We want to highlight a few key differences with other CHW studies. First, altruism, identified among ASHAs in spite of multiple stressors could differ with context – for example, Health Extension Workers (HEWs) in Ethiopia assigned more importance to personal accomplishment and recognition (Selamu et al., 2017). While HEWs are salaried, ASHAs have an incentive structure. Therefore, it could be argued that HEWs - and similar CHWs in India, have more scope for seeing a forward career trajectory, while ASHAs may feel stuck in their job and recourse to their village/community itself to find reasons to continue working. Second, these enabling factors could vary between the states of India – in Punjab, ASHAs emphasized more on the acquisition and sharing of health knowledge, which earned them community respect, freedom of movement, and an 'identity' separate from their husbands and fathers, as important enablers (Sarin and Lunsford, 2017). Third, while chronic work stress could lead to physical signs and symptoms (Burch et al., 2009; Felton, 1998), these expressions could be moderated by the framing of the questions in FGDs, as also individual work profiles of CHWs. Indeed, CHWs in other studies have put more emphasis on psychological and emotional symptoms (e.g., anger, irritation, hopelessness), than bodily concerns (Selamu et al., 2017).

4.3. Strengths and limitations

Unlike the 'motivation-demotivation' lens used in earlier mixed-methods studies with ASHAs (Gopalan et al., 2012; Tripathy et al., 2016) that touches upon a few work stress-related issues, our study is an early attempt to flesh out detailed narratives on the perceptions of ASHAs towards a multitude of conditions in their work environment that trigger stressful events, the nature of the ensuing experiences of these events, the effects on health, and the range of responses towards work stress. Therefore, we have centred on the individual (ASHA), and not only the inadequacies of the system in which she works. This is strengthened by our purposive sample to represent a wide range of views, trained moderators, and the systematic grounded theory approach, scarcely used in similar Indian studies.

Our study has a few limitations. First, it was difficult to segregate possible response biases of ASHAs within their work-stress narratives, for example, a situational lack of clarity on their job roles affecting their perceptions of workload and work stress and therefore, their responses towards the questions asked. It is possible that some ASHAs may have expressed high workload issues due to inadequate knowledge of what they should have done in a particular work-situation or the extent of completing a task, due to shared responsibilities between cadres (e.g., the many processes involved in a vaccination campaign, which also involve nurses and midwives). Second, we also faced difficulties in eliciting certain kinds of spiritual recourse mechanisms that were less associated to the religion being practised, especially in the initial FGDs, possibly due to a substantial influence of religious practices in 'shaping' their spiritual outlook. To give an example, praying before an idol to derive spiritual strength could be a religion-based spiritual recourse mechanism (e.g., due to the presence of an idol), unlike the feeling of duty to serve a village community, as a means to 'serve God'. Third, in spite of consensus meetings, the sequential coding stages could have incurred varying degrees of inter-coder subjectivity as they developed concepts and categories from raw textual data.

5. Conclusions

Since its inception in 2005, the ASHA cadre has been deprived of a structured, contextually-rooted intervention to strengthen their abilities in coping with recurrent work stress. We believe that, like mainstream employees in urban workplaces, ASHAs also function in a complex, hard-to-navigate work environment, with inherent emotional labour. This merits a tailored intervention building on their existing strengths and coping/response mechanisms. This study is a part of formative work, which has contributed to the development of a positive psychology intervention for addressing work stress among ASHAs in rural Madhya Pradesh (Khan et al., 2023). This intervention will aim to coach

ASHAs to use and leverage their existing personal strengths for responding to work stress. More broadly, our findings are relevant to building evidence on work stress among other cadres of female frontline health workers, to inform similar interventions in low-resource settings globally.

Author contribution

Ritu Shrivastava: Conceptualization, Formal analysis, Data curation, Writing – original draft, Writing – review & editing, Supervision, Agreement & accountable for all aspects of the work Lochan Sharma: Design, Data curation Mehak Jolly: Data curation, Writing – original draft Romi Ahuja: Data curation, Writing – original draft, Radhika Sharma: Data curation, Writing – original draft John Naslund: Design, Data curation, Writing – review & editing, Supervision Jyotsna Agrawal Writing – review & editing Rahul Shidhaye: Writing – review & editing Seema Mehrotra: Writing – review & editing Steve D. Hollon Writing – review & editing Vikram Patel: Writing – review & editing, Deepak Tugnawat: Design, Writing – review & editing, Agreement & accountable for all aspects of the work Ananth Kumar: Writing – review & editing, Anant Bhan Design, Writing – review & editing, Agreement & accountable for all aspects of the work, Ameya Bondre Conceptualization, Formal analysis, Data curation, Writing – original draft, Writing – review & editing, Supervision, Agreement & accountable for all aspects of the work

Funding

This work was supported by the Templeton World Charity Foundation, Nassau, Bahamas (grant ID: TWCF0635). The funding source had no role in the study design; collection, analysis and interpretation of data; writing of the report; and the decision to submit the article.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

Acknowledgements

The authors acknowledge the ASHAs for their active participation in the focus group discussions; the Sehore district and block community mobilizers (government personnel) and our colleagues at Sangath Bhopal Hub (Sehore office), including Narendra Verma, Kamlesh Sharma and Dharmendra Rathore for their logistics support; and other research staff for note-taking during the focus groups. We thank our collaborators at the National Health Systems Resource Centre (NHSRC) and National Health Mission (NHM), Madhya Pradesh, for their active input and feedback.

References

Acocella, I., 2012. The focus groups in social research: advantages and disadvantages. In: Quality and Quantity, vol. 46. Springer, 4.

Azam, M., 2012. A distributional analysis of social group inequality in rural India. J. Int. Dev. 24, 415–432. https://doi.org/10.1002/jid.1706.

Belden, C., Leafman, J., Nehrenz, G., Miller, P., 2012. The effect of evidence based practice on workplace empowerment of rural registered nurses. Online J. Rural Nurs. Health Care 12, 64–76. https://doi.org/10.14574/ojrnhc.v12i2.87.

Bucci, S., Berry, N., Morris, R., Berry, K., Haddock, G., Lewis, S., Edge, D., 2019. "They are not hard-to-reach clients. We have just got hard-to-reach services." staff views of digital health tools in specialist mental health services. Front. Psychiatr. 10, 344. https://doi.org/10.3389/fpsyt.2019.00344.

Burch, J.B., Tom, J., Zhai, Y., Criswell, L., Leo, E., Ogoussan, K., 2009. Shiftwork impacts and adaptation among health care workers. Occup. Med. 59, 159–166. https://doi.org/10.1093/occmed/kqp015.

Census, 2011. District Handbook Sehore n.d. https://sehore.nic.in/en/document/census-2011-district-handbook-sehore/.

Connors, C.A., Dukhanin, V., March, A.L., Parks, J.A., Norvell, M., Wu, A.W., 2020. Peer support for nurses as second victims: resilience, burnout, and job satisfaction. J. Patient Saf. Risk Manag. 25, 22–28. https://doi.org/10.1177/2516043519882517.

Dehingia, N., Shakya, H., Chandurkar, D., Hay, K., Dey, A., Singh, K., Silverman, J.G., Raj, A., 2020. Family support and community respect for community health workers and the association of these with CHW productivity and clinic health care utilization. J. Glob. Health Rep. 4 https://doi.org/10.29392/001c.12314.

Deshpande, A., 2001. Caste at birth? Redefining disparity in India. Rev. Dev. Econ. 5, 130–144. https://doi.org/10.1111/1467-9361.00112.

Dugani, S., Afari, H., Hirschhorn, L.R., Ratcliffe, H., Veillard, J., Martin, G., Lagomarsino, G., Basu, L., Bitton, A., 2018. Prevalence and factors associated with burnout among frontline primary health care providers in low- and middle-income countries: a systematic review. Gates Open Res. 2, 4. https://doi.org/10.12688/gatesopenres.12779.3.

Eagle, S., Creel, A., Alexandrov, A., 2012. The effect of facilitated peer support sessions on burnout and grief management among health care providers in pediatric intensive care units: a pilot study. J. Palliat. Med. 15, 1178–1180. https://doi.org/10.1089/jpm.2012.0231.

Felton, J.S., 1998. Burnout as a clinical entity—its importance in health care workers. Occup. Med. 48, 237–250. https://doi.org/10.1093/occmed/48.4.237.

George, A., 2008. Nurses, community health workers, and home carers: gendered human resources compensating for skewed health systems. Glob. Public Health 3, 75–89. https://doi.org/10.1080/17441690801892240.

Glaser, B., Strauss, A., 1999. Discovery of Grounded Theory: Strategies for Qualitative Research, first ed. Routledge. https://doi.org/10.4324/9780203793206.

Gopalan, S.S., Mohanty, S., Das, A., 2012. Assessing community health workers' performance motivation: a mixed-methods approach on India's Accredited Social Health Activists (ASHA) programme. BMJ Open 2, e001557. https://doi.org/10.1136/bmjopen-2012-001557.

Groth, M., Hennig-Thurau, T., Walsh, G., 2009. Customer reactions to emotional labor: the roles of employee acting strategies and customer detection accuracy. Acad. Manage. J. 52, 958–974. https://doi.org/10.5465/amj.2009.44634116.

Kadam, S., Pani, S.R., Desaraju, S., Rout, S.K., Tiwari, R., Chokshi, M., Nallala, S., Zodpey, S., 2022. Analyzing the effect on performance and motivation of ASHA workers based on the incentive systems on the basis of geospatial context. (preprint). Rev. https://doi.org/10.21203/rs.3.rs-2068872/v1.

Kazmi, R., Amjad, S., Khan, D., 2008. Occupational stress and its effect on job performance. A case study of medical house officers of district Abbottabad. J. Ayub Med. Coll. Abbottabad JAMC 20, 135–139.

Kesarwani, V., Husaain, Z.G., George, J., 2020. Prevalence and factors associated with burnout among healthcare professionals in India: a systematic review and meta-analysis. Indian J. Psychol. Med. 42, 108–115. https://doi.org/10.4103/IJPSYM.IJPSYM_387_19.

Khan, A., Sharma, L., Agrawal, S., Rani Nayak, S., Shrivastava, R., Ahuja, R., Pandit, P., Singh, A., Singh, S., Naslund, J.A., Agarwal, J., Mehrotra, S., Shidhaye, R., Hollon, S., Kumar, A., Tugnawat, D., Bhan, A., Bondre, A., 2023. Development of a character-strengths based coaching program for rural community health workers to address their work stress and burnout in Madhya Pradesh, India. Curr. Psychol. 42, 1–20. https://doi.org/10.1007/s12144-023-04673-3.

Koessl, B., 2009. Factors Influencing Rural Nurses' Attitudes and Beliefs towards Evidenced Based Practice. Doctoral dissertation, Montana State University-Bozeman, College of Nursing).

Krueger, R.A., 2014. Focus Groups: A Practical Guide for Applied Research. Sage publications, New York.

Lee, H.J., McDonagh, M.K., 2006. Examining the rural nursing theory base. In: Rural Nursing Concepts, Theory, and Practice, second ed. Springer, New York, pp. 17–26 (Original work published 1998).

Li, L., Hu, H., Zhou, H., He, C., Fan, L., Liu, X., Zhang, Z., Li, H., Sun, T., 2014. Work stress, work motivation and their effects on job satisfaction in community health workers: a cross-sectional survey in China. BMJ Open 4, e004897–e004897. https://doi.org/10.1136/bmjopen-2014-004897.

Long, K.A., Weinert, C., 1989. Rural nursing: developing the theory base. Sch. Inq. Nurs. Pract. 3, 113–127.

Love, M.B., Gardner, K., Legion, V., 1997. Community Health Workers: who they are and what they do. Health Educ. Behav. 24, 510–522. https://doi.org/10.1177/109019819702400409.

MacKie, D., 2014. The effectiveness of strength-based executive coaching in enhancing full range leadership development: a controlled study. Consult. Psychol. J. Pract. Res. 66, 118–137. https://doi.org/10.1037/cpb0000005.

Mannapur, B.S., Dorle, A.S., Ghattargi, C.H., Ramadurg, U.Y., Kulkarni, K.R., Selvan, V., 2019. Psychological stress among grassroot level workers in a PHC of bagalkot district. Jan 1 Annals of Community Health 6 (4), 8–11.

Menon, G.R., Yadav, J., Aggarwal, S., Singh, R., Kaur, S., Chakma, T., Periyasamy, M., Venkateswaran, C., Singh, P.K., Balachandar, R., Kulkarni, R., Grover, A., Mishra, B. K., Viray, M., Devi, K.R., Singh, K.H.J., Saha, K.B., Barde, P.V., Thomas, B., Suresh, C., A, D., Watson, B., Selvaraj, P., Xavier, G., John, D., Menon, J., Philip, S., Mathew, G., David, A., Vaman, R.S., Sushan, A., Singh, S., Jakhar, K., Ketharam, A., Prusty, R., Kishore, J., Venkatesh, U., Kumar, S., Kanungo, S., Sahoo, K., Swain, S., Lyngdoh, A., Diengdoh, J., Syiemlieh, P., Sarkar, A., Velhal, G., Kharnare, S., Nandanwar, D., Rao, M.V.V., Panda, S., 2022. Psychological distress and burnout

among healthcare worker during COVID-19 pandemic in India—a cross-sectional study. PLoS One 17, e0264956. https://doi.org/10.1371/journal.pone.0264956.
Mohajer, N., Singh, D., 2018. Factors enabling community health workers and volunteers to overcome socio-cultural barriers to behaviour change: meta-synthesis using the concept of social capital. Hum. Resour. Health 16, 63. https://doi.org/10.1186/s12960-018-0331-7.
Mosse, D., 2018. Caste and development: contemporary perspectives on a structure of discrimination and advantage. World Dev. 110, 422–436. https://doi.org/10.1016/j.worlddev.2018.06.003.
Naslund, J.A., Tugnawat, D., Anand, A., Cooper, Z., Dimidjian, S., Fairburn, C.G., Hollon, S.D., Joshi, U., Khan, A., Lu, C., Mitchell, L.M., Muke, S., Nadkarni, A., Ramaswamy, R., Restivo, J.L., Shrivastava, R., Singh, A., Singla, D.R., Spiegelman, D., Bhan, A., Patel, V., 2021. Digital training for non-specialist health workers to deliver a brief psychological treatment for depression in India: protocol for a three-arm randomized controlled trial. Contemp. Clin. Trials 102, 106267. https://doi.org/10.1016/j.cct.2021.106267.
NRHM, 2013. ASHA Database, n.D. http://www.asha.mp.gov.in/ASHADatabase.aspx.
Pandey, J., Singh, M., 2016. Donning the mask: effects of emotional labour strategies on burnout and job satisfaction in community healthcare. Health Policy Plan 31, 551–562. https://doi.org/10.1093/heapol/czv102.
Pfaffmann Zambruni, J., Rasanathan, K., Hipgrave, D., Miller, N.P., Momanyi, M., Pearson, L., Rio, D., Romedenne, M., Singh, S., Young, M., Peterson, S., 2017. Community health systems: allowing community health workers to emerge from the shadows. Lancet Glob. Health 5, e866–e867. https://doi.org/10.1016/S2214-109X(17)30268-1.
Proyer, R.T., Gander, F., Wellenzohn, S., Ruch, W., 2017. The authentic happiness inventory revisited: addressing its psychometric properties, validity, and role in intervention studies. J. Well- Assess. 1, 77–96. https://doi.org/10.1007/s41543-018-0006-0.
Rao, B., 2020. Anger, Distress Among India's Frontline Workers In Fight Against Covid-19. https://behanbox.com/2020/06/12/anger-distress-among-indias-frontline-workers-in-fight-against-covid-19/.
Ratanawongsa, N., Roter, D., Beach, M.C., Laird, S.L., Larson, S.M., Carson, K.A., Cooper, L.A., 2008. Physician burnout and patient-physician communication during primary care encounters. J. Gen. Intern. Med. 23, 1581. https://doi.org/10.1007/s11606-008-0702-1.
Saprii, L., Richards, E., Kokho, P., Theobald, S., 2015. Community health workers in rural India: analysing the opportunities and challenges Accredited Social Health Activists (ASHAs) face in realising their multiple roles. Hum. Resour. Health 13, 95. https://doi.org/10.1186/s12960-015-0094-3.
Sarin, E., Lunsford, S.S., 2017. How female community health workers navigate work challenges and why there are still gaps in their performance: a look at female community health workers in maternal and child health in two Indian districts through a reciprocal determinism framework. Hum. Resour. Health 15, 44. https://doi.org/10.1186/s12960-017-0222-3.
Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., Burroughs, H., Jinks, C., 2018. Saturation in qualitative research: exploring its conceptualization and operationalization. Qual. Quant. 52, 1893–1907. https://doi.org/10.1007/s11135-017-0574-8.
Scharff, J.E., 2018. The distinctive nature and scope of rural nursing practice: philosophical bases. In: Winters, C.A., Lee, H.J. (Eds.), Rural Nursing. Springer Publishing Company, New York, NY. https://doi.org/10.1891/9780826161710.0008.
Scott, K., George, A.S., Ved, R.R., 2019. Taking stock of 10 years of published research on the ASHA programme: examining India's national community health worker programme from a health systems perspective. Health Res. Policy Syst. 17, 29. https://doi.org/10.1186/s12961-019-0427-0.
Selamu, M., Thornicroft, G., Fekadu, A., Hanlon, C., 2017. Conceptualisation of job-related wellbeing, stress and burnout among healthcare workers in rural Ethiopia: a qualitative study. BMC Health Serv. Res. 17, 412. https://doi.org/10.1186/s12913-017-2370-5.
Selamu, M., Hanlon, C., Medhin, G., Thornicroft, G., Fekadu, A., 2019. Burnout among primary healthcare workers during implementation of integrated mental healthcare in rural Ethiopia: a cohort study. Hum. Resour. Health 17, 58. https://doi.org/10.1186/s12960-019-0383-3.
Shin, S.Y., Lee, S.G., 2016. Effects of hospital workers' friendship networks on job stress. PLoS One 11, e0149428. https://doi.org/10.1371/journal.pone.0149428.
Smittenaar, P., Ramesh, B.M., Jain, M., Blanchard, J., Kemp, H., Engl, E., Isac, S., Anthony, J., Prakash, R., Gothalwal, V., Namasivayam, V., Kumar, P., Sgaier, S.K., 2020. Bringing greater precision to interactions between community health workers and households to improve maternal and newborn health outcomes in India. Glob. Health Sci. Pract. 8, 358–371. https://doi.org/10.9745/GHSP-D-20-00027.
Smollan, R.K., 2006. Running hot and cold: how acceptable is emotional expression at work? Int. J. Work Organ. Emot. 1, 215. https://doi.org/10.1504/IJWOE.2006.010789.
Steege, R., Taegtmeyer, M., McCollum, R., Hawkins, K., Ormel, H., Kok, M., Rashid, S., Otiso, L., Sidat, M., Chikaphupha, K., Datiko, D.G., Ahmed, R., Tolhurst, R., Gomez, W., Theobald, S., 2018. How do gender relations affect the working lives of close to community health service providers? Empirical research, a review and conceptual framework. Soc. Sci. Med. 209, 1–13. https://doi.org/10.1016/j.socscimed.2018.05.002.
Strauss, Anselm L., Corbin, Juliet M., 2014. Basics of Qualitative Research Techniques and Procedures for Developing Grounded Theory. Sage Publications.
Talboys, S., Kaur, M., VanDerslice, J., Gren, L.H., Bhattacharya, H., Sandhu, A.K., Alder, S.C., 2016. Is eve teasing a public health problem? Public sexual harassment in rural India and its association with common mental disorders and suicide ideation among young women ages 15-24. Ann. Glob. Health 82, 561. https://doi.org/10.1016/j.aogh.2016.04.508.
Totman, J., Hundt, G.L., Wearn, E., Paul, M., Johnson, S., 2011. Factors affecting staff morale on inpatient mental health wards in England: a qualitative investigation. BMC Psychiatr. 11, 68. https://doi.org/10.1186/1471-244X-11-68.
Tripathy, J.P., Goel, S., Kumar, A.M.V., 2016. Measuring and understanding motivation among community health workers in rural health facilities in India-a mixed method study. BMC Health Serv. Res. 16, 366. https://doi.org/10.1186/s12913-016-1614-0.