




Development of a character-strengths based coaching program for rural community health workers to address their work stress in Madhya Pradesh, India

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Abstract

While rural ‘Accredited Social Health Activists (ASHAs)’ delivering primary care at the village-level in India experience high levels of work stress and burnout, little is known about the potential of positive psychology interventions in helping them respond to stressful situations. We aim to describe a systematic approach to designing and developing a ‘character-strengths based’ coaching program for rural ASHAs to help reduce their work-stress and improve their delivery of routine primary care. The development of the coaching program involved: (1) formative work, (2) blueprint development, (3) content development, (4) content-testing, and focus groups discussions to evaluate the feasibility and acceptability of the intervention, specifically the coaching workshop. This was followed by thematic qualitative analysis of ASHA perspectives/feedback to inform further modifications to the workshop. Intervention development occurred over 11 months, and the final coaching material consisted of a ‘content manual’ (for ASHAs) with four modules including character-strengths based ‘strategies’ to address challenges/stressors arising at health facilities, village communities and homes. Coaching material also included a workshop ‘facilitator’s manual’ having session-wise detailed instructions, a list of ‘energizers’ and plans for the coaching workshop. Consistent efforts were made to tailor the case-examples and workshop activities (e.g., roleplays, videos and reflections or discussion-based activities) to the local culture and context. This study illustrates a step-wise approach to contextually adapt the evidence-based character-strengths intervention approaches with iterative feedback from stakeholders (ASHAs), to develop a face-to-face coaching program aiming to reduce work stress, tailored to the context of a rural low-resource setting.

Keywords Intervention development · Positive psychology · Character strengths · Burnout · Focus groups · Community health workers

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Introduction

Community Health Workers (CHWs) in low- and middle-income countries are experiencing a substantial amount of stress due to high work demands and low compensation, within the larger context of poverty, gender inequality, and functioning in roles often at the bottom of system hierarchies (Dugani et al., 2018; Li et al., 2014; Selamu et al., 2017, 2019). These factors apply to the female lay health care providers called ‘Accredited Social Health Activists (ASHAs)’, numbering more than a million (each serving a village of ~ 1000 people), who deliver primary care services at the village-level in India (Scott et al., 2019). A number of studies have highlighted the issues of work stress and burnout among ASHAs: for example, about 70% of ASHAs and other CHWs in a district in Karnataka experienced mental stress due to low socioeconomic status, beginning of their child’s school, past history of mental illness, and marital conflict (Mannapur et al., 2014); while another study pointed to high levels of mild to moderate anxiety (45%) and personal burnout (23%) in relation to low incentives, long working hours and the need for physical travel (walking, without the provision of a vehicle) almost on a daily basis to provide services (Pulagam & Satyanarayana, 2021). Studies have also emphasized the ‘emotional labour’ incurred by ASHAs (Pandey & Singh, 2015) due to their dual roles of a ‘nurse and counsellor’, where the job involves managing emotions in response to changing work-demands and engagement with multiple community members and health system officials (Pandey & Manjari, 2016). The underlying emotional labour may generate feelings of inadequacy, perceptions of lack of support, and unhealthy coping strategies, which can reduce emotional wellbeing (Mollart et al., 2009).

In this respect, the personal attributes of an individual may influence the negotiation with work-stress. There is some evidence in higher-income settings that points to the role of attributes such as resilience, or coping with adversity and changes in the workplace (Ablett & Jones, 2006; McDonald et al., 2016; Warren & Hunter, 2014), self-determination and ability to self-care (Crowther et al., 2016), ‘sense of coherence’ or a person’s view of life and capacity to respond to stressful situations – composed of comprehensibility, manageability, and meaningfulness (Gebri ne et al., 2019; Lindstr m & Eriksson, 2005), and ‘work values’ such as altruism, perceptions of economic returns and relations with supervisors (Gebri ne et al., 2019), in coping with work stress. However, little is known about the roles played by these variables in the ASHA’s experience of stress in India.

The Values in Action (VIA) inventory proposed by Peterson and Seligman (2004) provides a framework for

analysing the role of personal value-systems, referred to as ‘virtues’, and their underlying strengths from the perspective of positive psychology (Garc a-Castro et al., 2021; Peterson & Seligman, 2004). It identifies several ‘character-strengths’ or positive personality traits that determine how individuals think, feel and behave, which are measurable and relatively stable over time, but also adequately flexible to be developed as part of interventions (Peterson & Seligman, 2004). Cross-sectional studies conducted among the nursing cadres, who may have closely related work stressors as ASHAs, indicate a direct and positive association between specific character-strengths (e.g., inquisitiveness or gratitude) and psychological well-being (Burke et al., 2009; Xie et al., 2020), with the mediating effects of social support and self-efficacy (Xie et al., 2020) or work engagement (Ding et al., 2022).

There is demonstrable evidence that ‘strengths-based’ interventions achieve success in generating positive work outcomes for various target groups such as (non-healthcare) workplace employees (Harzer & Ruch, 2012; MacKie, 2014; Meyers & Van Woerkom, 2017), nurses (Monzani et al., 2021) and community health workers (Mathias et al., 2018; Sundar et al., 2016) - the latter cited in the Indian context. To mention a few strengths-based interventions for general workplace employees, the VIA framework has been shown to increase ‘calling’ in the workplace (Harzer & Ruch, 2012), the ‘positive-activity model’ (process of undertaking positive activities like working on one’s own strengths, or experiencing emotions like joy, pride or gratitude) significantly increased work engagement and decreased burnout (Meyers & Van Woerkom, 2017), and the ‘manualized’ strengths-based coaching intervention (ensuring methodological consistency in the processes of coaching) significantly improved other-rater feedback on transformational leadership (MacKie, 2014). Employee strengths interventions typically include a strengths-identification assessment of the participant, followed by a training session on how to incorporate strengths to navigate various workplace situations. For example, Harzer and Ruch used the same framework to educate their participants (German adults in various occupations such as medical doctors, lawyers, mechanists and office workers) on their four highest or ‘signature’ strengths (Harzer & Ruch, 2012). Thereafter, the participants were asked to think about their daily work activities, and how their strengths played out in those activities. The last step challenged the employees to use their signature strengths in new and meaningful ways at work. This strengths-based approach has been combined with mindfulness practices, for example, Pang and Ruch used a mindfulness-based strengths intervention with employees working in different sectors (nearly 70% female) to show improved well-being, job satisfaction (effect sustained for up to 6 months) and

task performance (effect lasted till the immediate post-intervention period) (Pang & Ruch, 2019). With reference to nurses, recent experimental evidence has shown that such interventions, combining mindful meditation, mindful living and character-strengths usage, reported higher absolute scores of hedonic and eudaimonic well-being among nurses in Spain, than an intervention exclusively focused on mindfulness practices (Monzani et al., 2021).

Keeping rural ASHAs in mind, we can also refer to a few Indian studies reporting preliminary data on character-strengths interventions delivered in low-income communities. For example, the Hero Lab's curriculum (Sundar et al., 2016) was a 6-month interactive program focused on strengths (not necessarily adhering to the VIA framework) that promoted well-being. This pilot program was delivered by local traditional Hindu community leaders to a low-income migratory slum population comprising of 50 young participants (8–14 years of age) at-risk of mental health disorders. The leaders combined faith-based approaches with principles of strengths usage, to show statistical improvements in happiness, grit, empathy, and gratitude. Another quasi-experimental study looked at the outcomes of a brief mental health and resilience-building pilot intervention for young urban slum women in North India (Mathias et al., 2018). 'Group facilitators,' who were locally recruited women, having completed 12th grade and aged 20–30 years, delivered this intervention to young women residing in slums over 15 weeks. Building resilience as a human strength to navigate routine psychosocial stressors was a key aspect of this intervention, which led to sustained improvements in anxiety and depression among the young women. While the target groups are different in both these studies i.e., end-users as opposed to CHWs in the current study, the studies illustrate the potential role of strengths-based interventions to improve wellbeing within rural/low-income contexts in India.

The early evidence on strengths-based interventions reveals some prominent gaps: First, there is scarce knowledge of the use of such intervention models through experimental designs for improving wellbeing of various target groups in India and in particular, for work-stressed female CHWs such as ASHAs, and there is an absence of longitudinal studies and randomized controlled trials in this group (Ghosh & Deb, 2016). Second, there is little evidence on the use of strengths-based interventions to enable them for addressing, coping, or negotiating with work-stress. Third, the typical '*identify the strengths and use them in challenging situations*' is an approach that would need substantial contextual adaptation for CHWs such as ASHAs. For instance, specific strengths such as 'social intelligence' may possibly function as levers (Verbeke et al., 2008) for other strengths (such as decision-making) and can be used

to build an ASHA's own persuasiveness during her potentially distressing informational or counselling session with a beneficiary. An ASHA's social intelligence would help her understand another's emotional state and use her cognitive ability and knowledge of all possible aspects of the training given to her, more effectively. Such aspects need to be incorporated into a strengths-based program to reduce feelings of work-distress owing to the emotional labour of their interactions with the beneficiaries.

Despite the need to address work stress among frontline cadres to better improve their service delivery for the vast majority of rural populations that depend on their services, there remain gaps in understanding the processes to develop a work-stress reduction program for these cadres in low-resource settings by leveraging their personal strengths. Specifically, there has been limited emphasis in the literature on the systematic approach for developing a character-strengths based coaching program for rural ASHAs, as well as the steps required to adapt typical strengths-based interventions to the local context, culture, and language. Therefore, the purpose of this study is to describe the process of the design and development of a character-strengths based intervention to address work stress among ASHAs to improve their mental well-being (primary outcome) with consequent effects on the delivery of their services.

Methods

Setting

Development of the character-strengths based coaching program was conducted in the rural blocks of Sehore and Raisen districts of Madhya Pradesh in central India. The research team conducted formative work to understand the ASHAs' experiences of work stress and burnout in Sehore, and the development of intervention content and its contextualisation was conducted in the adjacent district of Raisen. As the study is nested within an intervention trial (discussed below), we selected an adjacent non-trial district (Sehore) for formative work, but comparable in its socio-economic and demographic characteristics, as we did not want to conduct formative activities in the trial district (Raisen) and inadvertently prime the ASHAs to potential intervention content or plans for developing such content for addressing work-stress.

Madhya Pradesh (MP) is one of the largest states of India, but also one of the lowest-resourced states with a largely rural population (P. Menon et al., 2008; *National Health Mission (M.P)*, 2018; Suryanarayana et al., 2016). Studies reported in the media have cited burnout among ASHAs in this state of India, particularly due to increased workload in the pandemic (Rao & Chowdhury, 2021).

Our participant profile to conduct intervention development activities included the ASHAs—all women, selected by community-level governance mechanisms and trained and supported by the health system under the aegis of the National Health Mission (NHM). Each ASHA typically serves key responsibilities pertaining to maternal and child health and immunization services, but also additional work such as encouraging positive behaviours in breastfeeding, birth spacing, and postnatal care; in addition to household surveys and screening of non-communicable diseases. The ASHA cadre was launched in 2005 and since then, has functioned as a ‘bridge’ between the rural community and the primary health care centers in India (Scott et al., 2019; Ved et al., 2019; Waskel et al., 2014).

Research design

This study is nested within a randomized controlled trial aiming to evaluate the effectiveness of a positive-psychology (character-strengths) based coaching intervention to reduce work stress among ASHAs. The proposed intervention will include a five days residential ‘coaching workshop’ for ASHAs, followed by ‘telephonic coaching support’ to enable ASHAs to use the learnings from the workshop to address stressful situations arising in the field during their routine work. As part of the design, we expect the residential workshop to be led by 1–2 ‘facilitators’ for batches of 10–15 ASHAs each, and the telephonic coaching to include phone calls between the coach and the ASHA, every week/every 10 days, lasting for 8–10 weeks. These proposed formats of the intervention activities were further validated through the steps of intervention development and the pilot (ongoing). The present paper focuses on the development and feasibility and acceptability testing of the coaching workshop component, before its formal pilot.

All parent study procedures including intervention development, were approved by the institutional review board at Sangath, India. For intervention development, we have referred the broader instructional design literature (Torre et al., 2006) – specifically, the cognitivist approach was found most suitable to ‘coach’ the ASHAs on strategies to better respond to work-stress. This approach is characterized by the learners seeking to understand the structure of knowledge in order to facilitate meaningful learning. The locus of learning is on the individual learners themselves, or their thought processes, rather than the external environment. The coach’s role is to facilitate the learner to “learn how to learn” (Novak et al., 1984). The instructional design provided the theoretical basis of learning, which led us to develop the concepts and methods of instruction within our coaching environment. Activities such as reflective thinking or case scenario-based simulation and reinforcements were included, as part of the cognitivist approach, to facilitate

self-directed learning (refer supplemental files on intervention blueprint).

Apart from the instructional approach, we equally examined the factors relevant to the target group i.e., the background of the ASHA, her learning capacities, her learning environment (coaching workshop setting, home, health facility and other work situations), approaches for cultural and contextual adaptation, and strategies to support her engagement in coaching. We have also considered the structure and content of her induction and routine technical trainings conducted by the National Health Mission (NHM) through a desk review of the ASHA training material (*Induction Training Module for ASHAs*, n.d.).

Importantly, we have considered the following three strands of formative work to guide the intervention ‘blueprint’ development and the subsequent steps of content development, as shown in the Fig. 1 ([Steps of intervention program development](#)).

Steps of intervention program development (Fig. 1)

The protocol of our strengths-based coaching program was based on prior studies on training program development for ASHAs conducted in the same context (Khan et al., 2020). For the development of the coaching program blueprint, a critical step in the development process, we referred to prior guidelines on blueprint development (Coderre et al., 2009). The steps of coaching program development, arrived after referring to these studies and internal team consensus, included:

1. **Conducting Formative work** – to explore work stress perceptions and experiences among ASHAs; to assess character-strengths (quantitatively) to arrive at a profile of existing strengths of ASHAs; and to conduct a desk narrative review of positive psychology intervention studies delivered to healthcare workers.
2. **Developing coaching program blueprint** – informed by formative work, a blueprint was developed through deliberations among team members and study collaborators over a 3-day workshop in Bhopal, India
3. **Developing coaching program content** – informed by the blueprint, the goal of this activity was to draft the content of various modules of the residential coaching workshop, and in parallel, develop the material for the workshop facilitator’s manual
4. **Testing the coaching program content** – with a group of ASHAs over 5 workshop days, followed by focus group discussions for feedback and revisions in the content
5. **Piloting the intervention** – with a minimum of 60 targeted ASHAs randomized to two arms (interven-

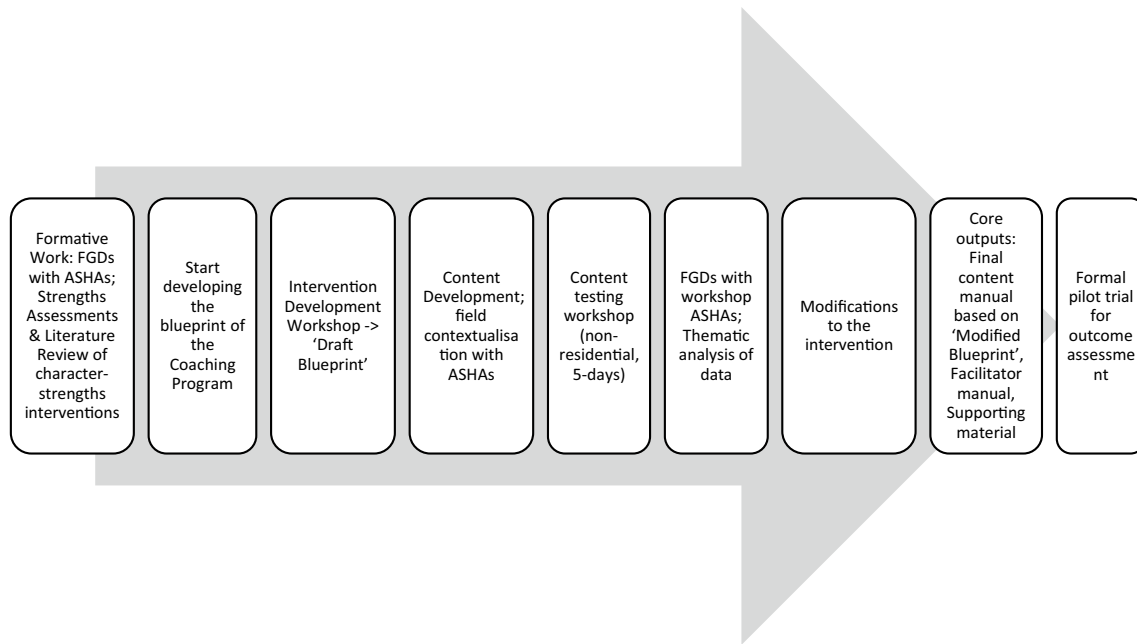


Fig. 1 Flow diagram for the process of intervention development. The chart shows the stages of development from formative work, blueprint development, content development and its testing, to arrive at the core development outputs and leading to the formal pilot study (November 2022 onwards). This manuscript covers the stages from

formative work to the focus groups conducted after content testing, to lead to the core development outputs (Note: Step 1: Formative work; Step 2: Developing draft blueprint; Step 3: Content development; Step 4: Content testing and follow-up focus groups with ASHAs)

tion arm – including 5-day residential workshop and remote telephonic coaching (added to routine [health system] supervision of ASHAs); and control arm – routine supervision alone)

6. **Post-pilot focus group discussions** – with a purposively drawn sub-sample ($n = 15$) of the total intervention arm ASHAs ($n = 30$) for obtaining their perspectives on the workshops as well as the 10-week remote telephonic coaching experiences
7. **Revising and finalizing the intervention** – over a 2-day (remote) ‘Intervention Review’ workshop planned in June 2023

The scope of the present paper includes *steps 1 to 4*.

Step 1: conduct formative work

Apart from the gaps in literature with respect to strengths-based interventions for alleviating work stress among CHWs, there is also scarce evidence on the detailed narratives of work stress and burnout among ASHAs. Most of the studies have used a ‘motivation-demotivation’ lens to touch upon a few issues (Gopalan et al., 2012; Tripathi et al., 2016). For instance, in-depth interviews with 18 CHWs in Haryana (Tripathi et al., 2016) found that workload-related issues, particularly meetings and surveys that are perceived as additional and needless, contribute

to demotivation, in addition to the mismatch between heavy workloads and low incentives, less time for family, security concerns in remote hard-to-reach areas, and less support from supervisors. However, we know little about the ‘intrinsic factors’ – ASHAs’ perceptions towards a multitude of conditions in their work environment that trigger stressful events, the detailed nature of the ensuing experiences of these events, the consequences on mental wellbeing, and the range of their existing response mechanisms towards work stress.

With respect to intrinsic factors, there is also little evidence on identifying character strength ‘profiles’ among ASHAs in India, in order to design interventions to build their capacities to address their mental wellbeing. From a general sense of the nature of their work-challenges, one may think that ASHAs could be using or leveraging certain strengths such as ‘persistence’ (taking up new challenges with multiple workloads and priorities), ‘social responsibility’ (addressing the health needs of their village community, being a resident and feeling the resulting obligation) or ‘self-control’ (handling difficult situations due to hierarchical relationships or less cooperative service beneficiaries).

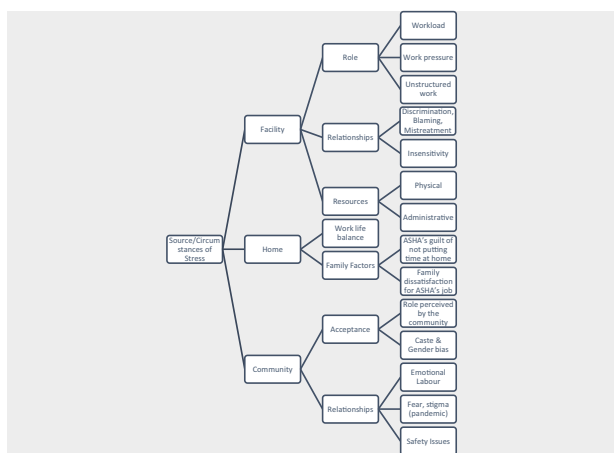
Therefore our formative work aimed to gather qualitative insights on the perceptions and experiences of ASHAs with respect to work stress, and quantitatively assess character-strengths to arrive at a ‘strengths profile’ (a and b, discussed below).

a. Focus group discussions:

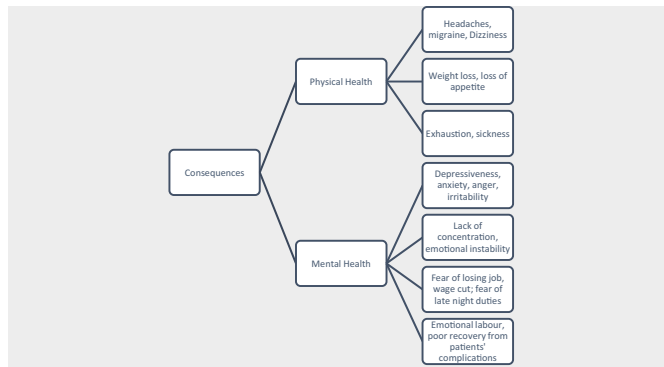
We used non-probabilistic sampling to recruit a maximum variation purposive sample for conducting the focus group discussions (FGDs) with ASHAs (Acocella, 2012; Krueger, 2014), and planned to continue FGDs till data saturation (Saunders et al, 2018). The final sample included six FGDs with 59 ASHAs. We used a flexible, semi-structured topic guide based on a review of literature, and informed by prior guidelines on FGDs (Acocella, 2012; Krueger, 2014; Saunders et al., 2018). The topic guide aimed to explore the following themes of 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. We used the Grounded theory approach (Glaser & Strauss, 1967; Strauss & Corbin, 1990) to generate themes under the various domains of work and domestic life. We identified pathways between the conditions that triggered stressful events, the experiences of these events, resulting perceptions, consequences on wellbeing, and approaches used by ASHAs to respond to stress. Figure 2 represents the identified themes and sub-themes, which guided our understanding of the experience of an ASHA’s work stress and long-standing burnout.

A) Pathways to stress and burnout



B) Consequences



C) Responses to stress and burnout

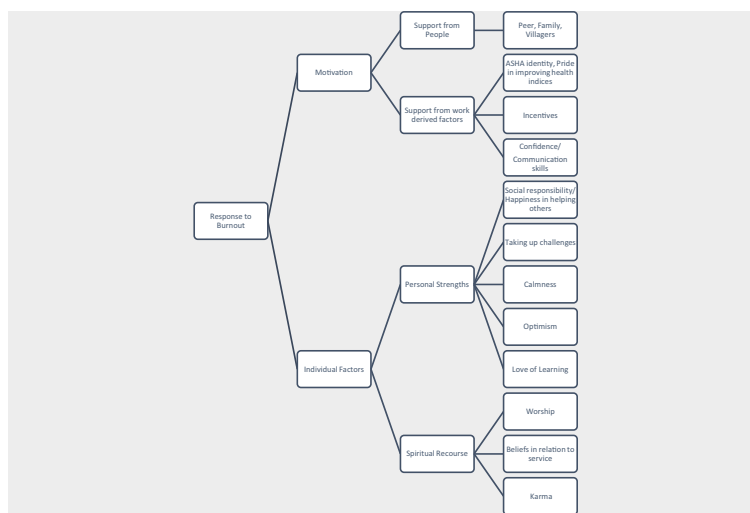


Fig. 2 Framework of themes and subthemes. The themes and subthemes were arrived as a result of qualitative analysis of data from formative focus group discussions with the aim to explore work stress narratives among ASHAs. Analysis was conducted using the Grounded Theory Approach. Three sections of themes and subthemes were identified i.e., pathways to stress and burnout (source of stress,

contributing factors and ASHA’s perception of stress); physical and mental health consequences of stress, and ASHAs’ response mechanisms to stress. The full description of themes and subthemes is outside the scope of this paper and has been discussed in a separate manuscript (currently under peer review)

b. Self-perceived strengths assessments:

We aimed to conduct character-strengths assessments in a sample of ASHAs equivalent to the targeted sample size of the main trial, to increase the internal reliability of the strengths profile for informing the intervention development. The trial sample size is calculated as follows: Based on prior studies with similar interventions (Proyer et al. 2016), we assume a significant between-group difference of 0.19 (effect size: 0.42) for the mean authentic happiness score at 3-month follow-up (3.35 for strengths-based intervention arm and 3.16 for routine supervision/control arm; maximum score: 5). With 90% power and a two-sided α of 0.05, 122 ASHAs per arm are required to show the between-group difference by the independent group t-test. We will then assume a 10% drop-out rate modelled on the ESSENCE Training Trial’s residential 6-day training (Naslund et al. 2021), and recruit a total of ~ 270 ASHAs.

Since the original VIA inventory of strengths is a 240-item measure (Park et al., 2006), which is an established tool for the evaluation of the 24-character strengths (10 items per strength), it would have had low feasibility with our sample population. Hence, we employed the Self-Perceived Strengths (SPS) scale, which builds on the VIA taxonomy. SPS is a brief 24-item self-administered (English) vignette-based measure of character strengths developed and validated for the Indian population (Tripathi et al., 2015). The 24 items have the six-point Likert-type rating (responses ranging from “very different from me” (1) to “very much like me” (6)). Each vignette describes a hypothetical individual having the cognitive and behavioral characteristics of a particular character strength, without specifying the name of the strength. Participants are required to specify the degree of similarity-dissimilarity (“very different from me”-> “very much like me”) with the hypothetical person. Test-retest reliability ranges between 0.43–0.8 and strength coefficients are reported to be significant at 0.01 level. Concurrent validity was found to be between 0.39–0.67 ($p < 0.01$). We first computed the group-level ‘signature strengths’ (Seligman et al., 2005) or items with highest mean scores; followed by ‘factors’ with their component strengths to profile the ASHAs’ strengths through an Exploratory Factor Analysis (Alavi et al., 2020; Patil et al., 2010). Please refer Tables 1 and 2 for further explanation. Thereafter, Confirmatory Factor Analysis (CFA) was used to test the hypothesis that there was a relationship between the underlying latent construct(s) or factors identified in the exploratory factor analysis, and the data, or, the hypothesized factor structure adequately fitted with the observed data (Brown & Moore, 2012). Table 1 summarizes the list of signature strengths and Table 2 shows the profile of strengths for ASHAs, including the ‘factors’ that showed a fit using CFA.

Table 1 Group signature strengths for the participant ASHAs. Each item of the Self-Perceived Strengths Assessment scale is of 6-point Likert-type rating (or a maximum score of 6). For each ASHA, the total score across all 24 items (24-character strengths) is calculated and averaged across the total number of items. This is the mean score for each ASHA. Thereafter, the average score for the entire group of ASHAs for each strength is calculated, to arrive at the mean score for each strength, which reveals the high-scoring or ‘signature’ strengths at the group-level

#	Strength	Mean Score (Maximum: 6)
1	Love to Learn New Things	4.8
2	Hope	4.7
3	Practical and Far-Sightedness	4.7
4	Social Responsibility	4.7
5	Social Skilfulness	4.6
6	Persistence	4.6
7	Genuineness and Honesty	4.6
8	Energetic and Lively	4.6

c. Literature review:

In parallel to separate research teams conducting focus groups (a) and strengths assessments (b), we examined the literature on the effectiveness of Positive Psychology Interventions (PPI) on mental wellbeing and related outcomes among ‘healthcare workers’ (i.e., doctors and nurses [excluding those in specialized settings such as critical care staff], facility-level or community-level health workers, and front-line support staff). Our goal was to synthesise the available evidence, reporting broadly on the intervention structure and content, and its effectiveness on outcomes such as mental wellbeing/happiness (the primary outcome of the parent trial). We conducted the review from 28th December 2021 to 31st January 2022. We included studies with PPIs such as coaching for improving wellbeing, resilience-building, use of character strengths, building meaning and engagement, effective goal-setting and building positive relationships, and interventions in combination with mindfulness (e.g., mindfulness-based strengths practice). We included online, telephonic, and in-person interventions to derive learnings from various modalities. We also considered the outcomes *related to* wellbeing to broaden our insights, such as burn-out, motivation, psychological capital, work satisfaction, stress-reduction, affect, self-efficacy and work performance measures. Finally, to focus on effectiveness, we included studies that recruited participants as part of an experimental design (e.g., Randomized Controlled Trial (RCT), quasi-experimental). Figure 3 includes a flow diagram to show the process that helped us arrive at the selected studies for a full-text review.

Table 2 Factors, component strengths and reliabilities. Exploratory factor analysis was conducted to identify the nature of the constructs, which underlie the responses to items of a strengths-based questionnaire, and to determine the sets of items that “hang together” in the questionnaire. Each factor represents a group of strengths that can explain an underlying construct, relevant to the ASHAs. For example,

ASHAs that have more social-pragmatic attributes, scored in similar patterns for items that denoted these strengths: open-mindedness, leadership, persistence, curiosity, practicality, social responsibility, wisdom, and social skilfulness. Note that, in the questionnaire, each item has a vignette of a hypothetical person showing a particular strength, without naming the strength

Factor (# of items of SPS)	Variables (component items/strengths)	Cronbach's Alpha
Social-Pragmatic ($n=8$) *	Open-Mindedness, Leadership, Persistence, Curiosity, Practicality, Social Responsibility, Wisdom, Social Skilfulness	0.7763
Spiritual ($n=6$) *	Hope, Spirituality, Creativity, Justice and Fairness, Kindness, Courage	0.7084
Modest ($n=5$)	Modesty, Being Energetic, Genuineness, Appreciation of Beauty, Close and Loving Relationships	0.6631
Dynamic ($n=3$)	Forgiveness, Love to Learn, Sense of Humour	0.5223

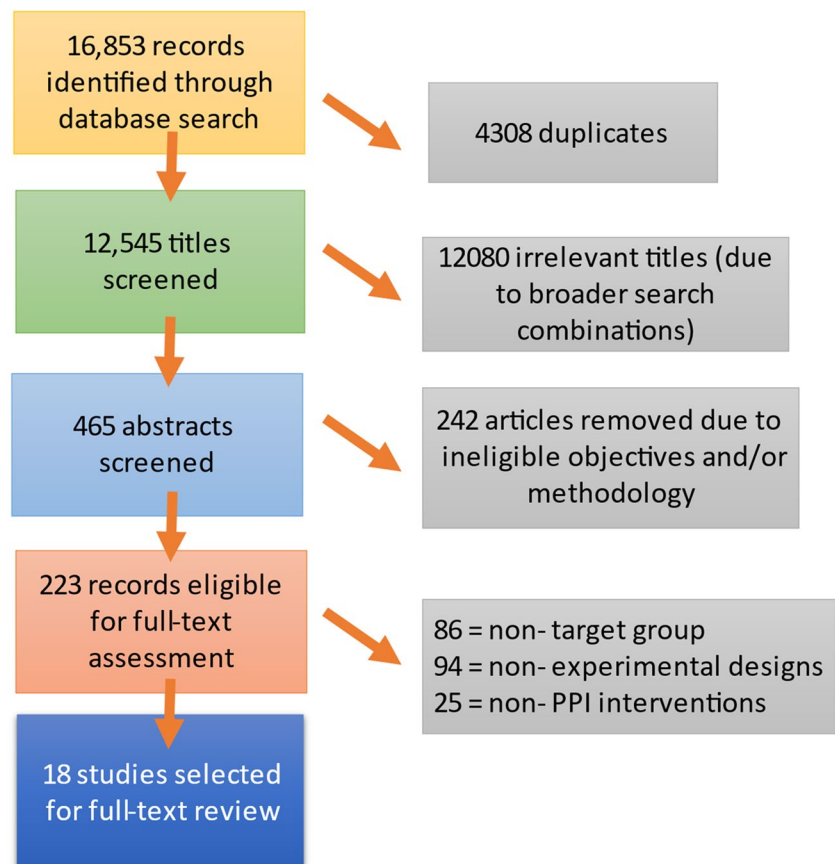
*‘Social-Pragmatic’ and ‘Spiritual’ showed model fit with the observed data; 22 out of 24 strengths explained the full variability between ASHAs’ responses (addition of the numbers of strengths, factor-wise)

The 18 included studies covered a sample of ~3122 individuals from 11 countries [USA ($n=5$), Netherlands, Poland, Germany ($n=2$ each), Spain, Canada, China, Hong Kong, Japan, Korea and Switzerland ($n=1$ each)]; mostly including nurses as a target group, closer to the ASHA’s context (Pandey & Manjari, 2016). Examples of salient interventions included: PPI-coaching, gratitude-based,

self-compassion based, self-efficacy enhancing, mental health promotion, spiritual training, and mindfulness-strengths based interventions.

To have a closer-look at the intervention practices used in the included nurse-based studies ($n=8$), we used the ‘Distillation and Matching Model’ (Chorpita et al., 2005). While the original model is complex and applies for various kinds

Fig. 3 Flow diagram of literature review. Narrative desk review of positive psychology intervention studies was conducted to supplement the formative work (qualitative focus groups with ASHAs and quantitative assessment of character strengths) before the intervention development workshop. Eighteen studies were selected for full-text review and eight of these studies, with target groups of nurses, were included in the ‘distillation and matching’ process (Table 3)



of interventions to be analysed and synthesized, it does provide a step-wise process of first arriving at a database of ‘practice elements’ (i.e., components of intervention packages with specified outcomes) and a corresponding database of studies, followed by *matching* the practice elements with

‘contextual factors’ (e.g., an ASHA’s ability to comprehend, practice or adopt a particular intervention strategy). Using this model, we arrived at the practice elements and their specific outcomes for the 8 nurse-based experimental studies (Table 3).

Table 3 Intervention Practice Elements. According to the Distillation and Matching Model by Chorpita BF et al. (2005), a practice element is “a discrete clinical technique or strategy (e.g., “time out,” “relaxation”) used as part of a larger intervention plan (e.g., a manualized treatment program for youth depression), based on the assumptions that (a) it can be explicitly defined (e.g., using a definition or coding manual), (b) its presence within various interventions can be reliably coded, and (c) different treatments may share the practice element in

common”. It was important for the team, as part of literature review to segregate the practice elements and corresponding outcomes impacted, across the individual studies (study ID serves the purpose of linking to the source study). This helped to map the practice element (‘distil’) and then assess its ‘match’ (contextual fit) with our target group (e.g., feasibility of doing or adopting a practice element by an ASHA)

Study ID	Practice elements	Outcomes impacted
2	Psychoeducation on positive emotion Discovering and using strengths Building optimism Building self-compassion Building resilience Building positive relations	Job satisfaction
4	Writing compassionate note Facilitator-led 'finding a supportive gesture' Facilitator-led 'moments of mindfulness' Facilitator-led 'self-compassion break'	Self-compassion Compassion to others Compassion satisfaction Resilience Burnout Anxiety
5	Introduction to spiritual care and choice of a holy word, holy word repetition, 'slowing down', one-pointed attention	Spiritual wellbeing Spiritual integrity Leadership practice Burnout
8	What are the '3 good things', why they happened and participant's role	Self-efficacy Job performance
10	Mindfulness exercises as part of strengths intervention (e.g., mindful breathing, body scan exercise, mindful hug exercise, mindful smelling) 360-VIA Use of 'super strengths' Guided meditation	Positive affect Psychological wellbeing
15	Participatory action planning to improve work environment (best practices, obstacle analysis, goal setting)	Psychosocial work environment measures (e.g., co-worker support, job support)
16	Psychoeducation on work-related problem solving Relaxation techniques Emotional regulation techniques Cognitive strategies Conflict management at work Getting feedback on one's performance Improving communication with seniors, peers, and patients Dealing with mistakes of peers and reporting mistakes How to use social support during work	Perceived job stress Quality of nurse-patient relationship Emotional regulation skills Resilience Self-efficacy
17	Building coping skills for stress Mindfulness activities SOC [Selection, Optimization and Compensation] model: Available resources can be used more efficiently by selecting fewer but carefully chosen goals (S), pursuing these goals optimally (O), and addressing barriers through compensatory means (C)	Psychological health related quality of life Work related mental strain

Finally, during our review of evidence, we also referred to other sources (books, gray literature) and focused more on intervention types and approaches, than a sole focus on effectiveness. An important example in this respect was Niemiec's field guide (2017) based on an extensive review of 70 studies of Character Strengths Interventions for various target groups, under 8 domains as follows: 'character strengths awareness', 'character strengths use', 'meaning and engagement', 'specific character strengths', 'positive relationships', 'resilience', 'goal setting' and 'mindfulness'(Niemiec, 2017).

Step 2: develop blueprint of the intervention coaching program (the workshop component)

The design process started by a synthesis of findings from the focus groups, strengths assessments and review of literature, which was led by the intervention development lead (AK) and intervention coordinator (LS) under the supervision of senior research team members (APB, AS, DT, AB). This involved a number of internal team discussions at Sangath Bhopal Hub, with the overarching goal of informing a draft 'blueprint'(Coderre et al., 2009; Khan et al., 2020) of the coaching intervention 'modules'. The blueprint consisted of a tabular guideline demonstrating each module's learning objectives, appropriate strategies/approaches, methods of content delivery and learning outcomes, which served as a road map for developing the intervention. The draft blueprint ensured an alignment between the learning objectives of the individual modules and the content of the resulting 'content manual' for ASHAs (refer 'core development outputs' under Results). At this stage, the specific strategies for addressing work stress, which were selected to be a part of the blueprint, were informed by our formative work (Step 1) and could be used by ASHAs in stress-inducing situations in the health facilities, village-community, and domestic life. During the later stages of intervention development, we had opportunities to test these strategies with ASHAs (e.g., 'contextualisation' and the content-testing workshop discussed subsequently).

The blueprint aimed to guide the development of the coaching course content and learning experiences as demonstrated in earlier contextual research (Khan et al., 2020). Based on internal team discussions, the intervention lead (AK) and the intervention coordinator (LS) reviewed the evidence and insights gathered during formative work to create one comprehensive draft blueprint. To ensure that the choice of strategies to cope with work-stress adhered to the learning objectives and for an overall expert review, we had multiple rounds of reviews by senior psychologists with extensive years of experience in community mental health ($n=3$), positive psychology experts based in India ($n=3$), government officials with substantial expertise in training

ASHAs ($n=2$) and senior researchers in Sangath Bhopal Hub ($n=4$). Several of these experts were also involved in the initial conceptualization and development of the parent study design. These expert reviews commenced two weeks prior to the first Intervention Development workshop, convened in Bhopal in March 2022. The findings of formative work and the draft blueprint were discussed with these experts who attended the 3-day workshop and approved the blueprint for the purposes of content development. It was agreed upon that the intervention content should focus on the use of ASHAs' character-strengths to cope with/respond to work stress, and the specific strategies to do so may be influenced by subsequent intervention development steps (Steps 3 and 4). Please find the version of the draft blueprint that emerged from the workshop as a supplemental file (S1).

The draft blueprint included five modules with specific learning objectives: Module-1 was embedded in the concepts around character-strengths such as the natural use of strengths that ASHAs tend to do during the course of their work, and realised and unrealised strengths (MacKie, 2014); Module-2 included an understanding of workplace (health facility) problems, and their consequences on ASHAs' physical and mental health and suggested strategies; Module-3 included rural community-level challenges and potential strategies; Module-4 included dealing with workload and suggested strategies; and the last Module-5 covered family-level problems, work-family conflicts and corresponding strategies.

These developed modules were then tested with ASHAs (Step-4) to bring forth the changes and refinements in the choices of strategies and the arrangement of module structure (Enclosed: Supplemental file-2/S2: modified blueprint). After the content testing workshop (Step-4), the intervention packages were finalized with internal team discussion. The packages included 'participant's (ASHA's) content manual', 'facilitator manual' to conduct the 5 days of residential coaching, including PowerPoint presentations, workshop plans, detailed methodologies and workshop activities; and 'remote-coaching protocol', which guides the coaches to schedule and deliver the telephonic coaching support calls to ASHAs (not within the scope of this paper).

Step 3: develop intervention content

Content development started with including more members to the intervention team: three research assistants with backgrounds of psychology and public health; one ASHA trainer and one district coordinator, who were experienced in community work with ASHAs and fluent in the local language. We also referred to other training manuals for ASHAs including those published under the National Health Mission (*Induction Training Module for ASHAs*, n.d.) and the research team's prior work on the manual for delivery

of community-based brief psychological care (Khan et al., 2020), contextualised in the same region, which guided us in structuring the content of our modules and designing the activities. The draft blueprint guided the content development over a series of activities, starting from reviewing relevant literature, developing key concepts to simplify their understanding for the lay ASHA (e.g., ‘character strengths’ or their ‘usage’), identifying relevant information to support the explanation of key concepts, confirming the language or style of communication to suit local sensibilities, identifying culturally-relevant examples to illustrate the concepts, and revisions of the content. The discussion on content development of each module started with outlining the content, brainstorming on the practice exercises, and obtaining the required details for the case-examples. Content was developed in English by three members (LS, SA, SRN) under the guidance of the intervention lead (AK) and internally reviewed (AK, APB) before sharing it with the experts/project collaborators. Content was finalised by incorporating expert feedback ($N=5$), which emphasised on improving case vignettes or the selected examples to convey our messages on strengths usage, the language and grammar, the detailing of certain strategies and simplification of technical terms. The revised modules were then submitted to an in-house translator (KK), having experience in community mental health and training in psychology. The first draft of the translation involved converting complex messages into simple and short Hindi sentences and using Hindi words derived from daily, colloquial conversations. Feedback on Hindi translations of the terms denoting the 24-character strengths and the quality of the case-vignettes was received from the psychologists, public health professionals, and a communication expert within the project team, who ensured the contextual relevance of the language. Intervention team members (LS, SRN, SA) revised the Hindi draft, which was finalized by the intervention lead (AK). A template for the PowerPoint slides and the residential workshop ‘facilitator manual’ was finalized – this manual covered session-wise detailed instructions, list of ‘energizers,’ with a detailed plan for the proposed five days of workshop.

Content testing and its simplification by closely involving the target group was conducted with a batch of ~15 ASHAs in Vidisha district, Madhya Pradesh, for 2 days. The content was delivered by the intervention lead (AK), while the rest of the team participated in group discussions with ASHAs (to make them read, comprehend, and elicit their suggestions or edits) and recording their experiences. At the end of this visit, the team’s observations and ASHAs’ feedback were discussed and our learnings were reflected in the revised content, where language, examples and methodologies were improved.

This was the first ‘contextualisation’ visit ($n=15$ ASHAs), and we followed it up with a content testing

workshop (Step-4, $n=15$ ASHAs) and a formal pilot of the intervention ($n=30$ ASHAs in the intervention arm; not within the scope of this paper as the pilot is ongoing).

Step 4: content testing workshop with ASHAs

The intervention packages (content manual for ASHAs, facilitator manual, PowerPoint slides, and other supporting materials for activities) finalized in Step-3, were tested (initial feasibility testing for proof-of-concept) with ASHAs in a *non-residential* 5-day workshop at Sehore district office (Sangath). Thus, Sehore served as the site for testing the content (non-trial), while the pilot of the intervention (November 2022 to April 2023) was planned to be delivered in Raisen district-also the district for the main trial to be rolled out in October 2023. In Sehore, we recruited a batch of 15 ASHAs with mean age of 33 years (27–40 years), mean work experience of 10 years (7–13 years) and varying education levels (4 were graduates, 6 studied till the 12th grade and 5 up to 10th grade). The content was delivered by two members (AK and LS) throughout the workshop, while SRN assisted in organising the activities and coordination among ASHAs. A dedicated intervention team member (SA) recorded ASHAs’ feedback/comments on the workshop’s content and coaching methods at the end of each day, and the time designated and taken to complete each session and its activities. This helped design the day-wise session plan with specific allotment of each session-activities, ahead of the formal pilot of the intervention packages.

As we are currently piloting the intervention, we have data for the socio-demographic characteristics of ASHAs in Raisen ($n=70$ at baseline): Mean age of 36.5 years (24–52 years), mean work experience of 10 years (6–15 years) and varying education levels (6 are graduate-level or higher, 13 are above 10th grade but not graduate, 23 have studied till 10th grade and 28 have studied till less than 10th grade). Thus, certain socio-demographic variables (age and years of experience) are comparable between the two groups of ASHAs (content testing group in Sehore and pilot group in Raisen), but the pilot cohort seems to have a greater proportion of ASHAs with lower educational levels (e.g., those under 10th grade). This reinforces the need to have the processes of contextual adaptation of intervention content (Steps-3 and 4; and post-pilot refinement of content).

Focus groups with ASHAs to evaluate the feasibility and acceptability of the content testing workshop

To avoid the risk of the intervention development team’s biases or influences on the participants’ responses, an independent research team (RS, RA, PP), who were not a part of the intervention development process, with no previous exposure to the content, conducted two focused

group discussions (FGDs) with ASHAs. The 15 ASHAs who attended the content testing workshop and provided consent to participate, were included in these FGDs. They were divided into two separate focus groups ($n=8$ and $n=7$). Each FGD was conducted at different times of the day, to obtain their reflections on the experiences of the workshop, and suggestions for specific aspects of the workshop, highlighted in the topic guide i.e., the workshop approach, content, structure, and format of delivery, which also included feedback for the skills/abilities of the facilitators. FGDs were recorded, transcribed, and translated (Hindi to English).

We used thematic analysis with a mix of deductive and inductive approaches for coding the transcribed data and generating the themes (Braun & Clarke, 2006). Thematic analysis flexibly allowed us to include both *a priori* themes, or ‘deductive,’ pre-existing themes from the topic guide, as well as themes that emerged during the analysis or ‘inductive’ themes. The independent research team developed the initial codes reflecting important areas that we aimed to explore, before reviewing the transcripts and further developing the codes. The topic guide essentially informed the *a priori* codes. After independently coding the transcripts (RA and PP), the researchers refined the codes using inductive/emerging themes, and after consultation with the wider team comprising of academic researchers with expertise in qualitative methods (RS, APB, JN), subsequent iterations were made to the coding structure i.e., by adding new codes, deleting redundant codes, and integrating the overlapping codes. RS, RA, PP and APB held consensus meetings to resolve disagreements mainly on the classification of themes, for instance, segregating general feedback given on the content as opposed to the type of content or the mode of its delivery, through a careful review of the participants’ responses.

Results

The process of intervention development was completed over ~ 11–12 months to result in the formation of a coaching program, ready for formal pilot testing to determine preliminary effectiveness (planned during November 2022 to April–May 2023, including 1-month, 3-month and 6-month outcome assessments). The process of development generated a ‘Content Manual’ including four modules, a detailed 5-day comprehensive plan for content delivery using a workshop ‘Facilitator’s Manual and other additional facilitation-related supporting materials (e.g., exercise sheets, charts, energizers, and PowerPoint slides). Timeliness and quality of outputs were ensured by efficient inter-personal coordination and planned work distribution within the project team. The engagements with ASHAs

during the field visits and content-testing sessions were strengthened through detailed discussions, feedback, and tracking the progress of content development based on field learnings.

Core development outputs

Content manual

The content manual is a self-directed learning-based booklet for ASHAs consisting of 4 modules. The modules have been designed in adherence to the revised intervention blueprint (S2). The modules consist of topic-wise information on the understanding of character-strengths; personal, professional (workplace) and community-level challenges faced by ASHAs; their effects on physical and mental health; the ways to evaluate the challenging and potentially stress-inducing situations; and evidence-based stress-response strategies, in addition to reflective practice-exercises as mentioned in the blueprint (S2). While a detailed discussion on the individual objectives of the stress-response strategies, their description, supporting literature and ways of execution (practice exercises) is beyond the scope of the objectives of the present paper, the supplemental files S1 (draft blueprint) and S2 (modified blueprint) provide an overview of the selected strategies.

Facilitator manual

The Facilitator Manual provides the general guidelines for delivering the workshop, and detailed instructions/plans for each module, to deliver the workshop content, while ensuring a conducive learning environment. The manual ensures a standardised facilitation of the execution of coaching sessions across the intervention facilitators (AK and LS). It consists of day-wise agendas for the workshop, along with a list of additional activities to maintain active participation of the ASHAs.

Apart from these core development outputs, we will describe the results of the focus group discussions with ASHAs following the content testing workshop, and a summary of the modifications made to the intervention.

Results of the focus group discussions after the content testing workshop

This section discusses the findings of the thematic analysis of FGD data, which formed the last step of refining the intervention packages, before the planned pilot. Refer Table 4 for details and salient quotes.

Table 4 Themes and subthemes of post-content testing focus groups. The table includes the themes that emerged from thematic analysis of FGD data (perspectives/experiences/feedback of ASHAs) after the content testing workshop, with related salient quotes

Theme	Sub-themes	Salient quotes by ASHAs
Overall Impressions	The thought of 'improving <i>their</i> wellbeing' The new awareness on use of strengths A relaxed/enjoyable 'training'	<p>"Before training we were not aware about it (use of strengths) and how we can use it. This training taught us the ways to maintain self-control."</p> <p>"... this training was the funniest, the best and the easiest to learn. The whole year of burden will be reduced if we get this training."</p> <p>"We did not even know when the 5 days of training ended! For (routine technical) modules, there have been so many trainings, but this was the first training where we had so much fun and learning."</p>
Workshop Content	Nature	"You cannot remember all 24-character strengths but according to the situation we can take the decision. If someone is arguing or fighting with us, we have the strength to control our anger... we can handle the situation. Even though we have a lot of work to do, we can't behave badly with others, with children or with family members."
	Delivery	<p>(this workshop was) 'two-way, where each and every one was motivated to express and participate'</p> <p>"They (the facilitators) have explained so well-we felt that we don't need to read from the book as we can understand by learning from them. If we read the book (participant manual), we cannot remember the language of the book, as book language seems so difficult to remember, but sir and madam (facilitators) made it so easy for us to understand the content."</p> <p>"In our (technical) module trainings, there is too much pressure and such a tight atmosphere that those who remember, they also forget what to say in front of them (trainers)! But here, everyone gets a chance to speak. In this workshop, there was no pressure – Sir (facilitator) is jolly, he passes jokes, makes you comfortable-then we are able to talk well. But over there (module training), if sometimes we laugh, then they shout at us, in front of everyone."</p>
	Perceived utility	<p>"(once) I handled the situation after returning home from the training. There was a fight over distribution of wealth in the morning. I said, 'I am going for training (workshop), and my husband also wants to go on duty, so don't do anything right now. Whatever we will do, we will do in the evening.' So, I tried to prioritize the training over the argument. Then the people at home did not discuss anything during the day, and then in the evening, everyone comfortably discussed the issue, without a fight."</p> <p>"No, we were never told this before. It has been told in this training only. Because earlier we used to keep running (to complete work) and we used to get irritated. Now, at least after the training, it's good that we would not stress out immediately, and we would be able to manage our time"</p> <p>"When we go to the field, we meet all kinds of people and sometimes we get into an argument. So, at that time, we will remember the character strengths, and apply whatever we have been taught. We will adapt there... and keep control over ourself, and not argue with anyone unnecessarily."</p>
Suggestions	Workshop structure	<p>"If we can have a (morning) prayer (e.g., 'Saraswati Vandana' or prayer for the Goddess of Knowledge in Hinduism), and in the afternoon (post-lunch) if we can have one or two 'bhajans' (devotional songs) or songs for relaxation?"</p> <p>"When we had (routine) training (module-based), certain groups were made such that... these four people will stand and give the recap tomorrow, for today's learning. And they also asked us to prepare an assignment on a chart, to show during the recap session."</p>
	Residential format of the workshop*	"Someone (ASHA) comes at 11 o'clock, Someone comes before that. Then we have to leave from here at 4 pm. But if accommodation can be arranged, then five days are enough for this training."
	(Early impressions of) remote telephonic coaching	"It will be good if the call comes, we will also remember that Sir's (workshop facilitator) call has come!"

*Content testing workshop was non-residential but the pilot workshop was residential, as planned in the main trial

Overall impressions

The overall feedback for the intervention content, the role of facilitators and their approaches/methods has been positive. ASHAs liked the very idea of thinking about improving *their* wellbeing or developing a program for their mental health.

Most of the ASHAs expressed that it was the first ‘training’ (used colloquially for all such classroom sessions) so far, which they enjoyed being a part of, and felt relaxed to the extent that after going home, they felt energetic and did not feel tired. A particular ASHA also mentioned that such a program should not end so soon and can be conducted quarterly to keep them motivated.

Workshop content

I. Nature:

They could connect well with the core content and especially the learning on character-strengths and their uses in ‘*solving big or small matters*’ related to work or family. They expressed the same in part because the content was delivered through videos, role plays and games, so the learning became easier and engaging. They liked to learn about the strategies to identify their problems, before dealing with stressful situations.

II. Delivery:

ASHAs liked the facilitators and their interactive methods, which made them participate in the process. They emphasized that this training was different from their regular (technical) module trainings (e.g., those on immunization or antenatal care), which they perceived as ‘one-way’ while the workshop in question was ‘*two-way, where each and every one was motivated to express and participate.*’

III. Perceived utility:

In terms of retention and utility of the content, they found the workshop relatable with regards to managing their routine work-life stressors. They noted that the content is not only useful for them but for others as well and started sharing their learnings with their family members.

They derived confidence to deal with difficult situations with positive thoughts. One of the them stated that the workshop enabled her to the extent that when she went back ‘*after the training, she could do household chores, (work) surveys, and many other tasks,*’ which she could have otherwise felt pressurizing and tiring at the end of the day. Majority of them expressed that they are going to apply the strategies to deal with their challenges and a few of them had already started doing so, during the 5-day non-residential workshop

(such as keeping calm, being polite, prioritizing work tasks, or controlling anger).

Suggestions for the workshop

I. Structure:

We have also received a few suggestions on the modification and improvement of the coaching sessions. ASHAs suggested to include additional activities such as a morning prayer on each day before starting the sessions, reflection/revision of the previous day’s learning through group activities-where a group can explain the learning and another group can correct them, in addition to having short breaks in between the activities, and playing music or songs at the start of the day (or light music in the background). They also said that they would like to have a few more real-life/case-based videos and/or role plays of them and their stories as part of the content-as opposed to more hypothetical or mock situations. Suggestions were given to make the typical classroom space calmer and learning-friendly, for example, putting up activity-chart boards and introducing music/songs as mentioned earlier.

II. Venue:

The project team had earlier considered to have the workshop in an outdoor place (like a retreat), given that it may have effects on mental wellbeing and absorption of content, instead of a typical classroom setting. However, ASHAs preferred the indoor workshop, or the setting of an office or a large room (as done in the content testing workshop). They mentioned that an outdoor place would introduce distractions, and could be more remote, so they had some anxieties about the far-off location of such a place from their homes (even with the format of residential coaching). This could be in part due to the potential anxieties of their family members, as also any family emergencies that may arise during the 5-days, which they may be required to attend.

III. Residential format:

They suggested that it would be convenient for them if accommodation arrangements were made for such a workshop, as they would come from far-away villages. ASHAs mentioned that ‘*they start to lose their attention when it is time for them to leave for their bus*’, and their mind gets diverted in non-residential formats (as in the content testing workshop). A residential program would offer the advantage that they would not have to go back home daily and manage their household chores, so they would be able to pay more attention and learn better. They suggested that five days of residential workshop will be adequate to cover the course

content, and 10–15 people per batch would be good; more than 15 people may get crowded and difficult for them to understand.

(Early impressions of) remote telephonic coaching

Although not within the scope of this paper, the FGDs introduced ASHAs to the overall intervention structure to gather their ideas on the prospective telephonic support component. To recall, the 8- to 10-week telephonic coaching (calls every 7–10 days) would reinforce the workshop learnings, and provide a means to discuss their experiences of stressful situations (as they resume work after the workshop), and discuss ways to respond to work-stress.

ASHAs liked the idea of getting weekly support calls after the workshop closure, ‘to refresh the content, and select and implement the strategies to manage stress.’ They suggested a flexible calling time to be set up with mutual agreement (between them and the remote coaches) and not have the calls on days when they have urgent work, for instance, the vaccination campaign days.

Modifications made to the intervention content

Based on the coaching team’s observations of the content testing workshop and findings of FGDs, modifications were made to the training packages, and shared with project experts who ensured that the changes did not deviate from the content that was internally finalised before the testing workshop.

It was observed that ASHAs were engaged across the different activities in the workshop, they asked questions and doubts, and communicated with the facilitators. In terms of specific activities, they found it difficult to practise the “if” and “then” step of the ‘implementation intention’ activity (Niemic, 2017) (*Note: Implementation intentions are ‘if-then’ plans aimed at forging a link between a critical, unconditional situation with a goal-directed behavioural response: (Gollwitzer, 1999; Gollwitzer & Sheeran, 2006). As against a focus on desired outcomes (Fishbein & Ajzen, 2010; Gallo et al., 2012), implementation intentions refer to the link between a specific cue and an intended behaviour or action. It makes a distinction between motivational and volitional phases of action. Intentions are formed before a volitional phase when individuals prepare for action. Implementation intentions aim to reduce the ‘gap’ between intentions and the attainment of a behavioural goal.*) ASHAs also faced difficulties in focusing on the senses, referred to as ‘5–4–3–2–1’ steps of the focused breathing activity, one of the mindfulness-based stress-response strategies.

In addition, the analysis of the FGD narratives helped us to refine our methodologies and content, for instance, introducing extra group activities as suggested by ASHAs, keeping the sessions discussion-based rather than using PowerPoint slides (reduce didactic approaches), introducing more real-life case examples, having more energizers (warm up/physical activities), and introducing meditation or slow music into the sessions.

Another aspect was the restructuring of the modules. With the original module design, ASHAs likely perceived that the strategies discussed under a header applied to a given kind of a problem, say, community (village)-related challenges could be dealt with strategies discussed under the ‘community’ header (see draft blueprint, S1). To avoid such perceptions, the content was restructured into four modules (see modified blueprint, S2), where module-2 discusses the various kinds of stressful situations (at health facility, village community, and home), module-3 discusses the consequences of these situations and module-4 discusses the list of possible strategies to deal with these situations (module-1, on character-strengths, remains unchanged). Simultaneous modifications were made to restructure the facilitator manual, and other supporting materials. The restructuring made the content more concise and cognitively easier to retain. Importantly, it provided scope for ASHAs to apply the learned strategies across a variety of stressful situations that cut across the ‘workplace,’ ‘community’ and ‘home’ settings, which are intimately connected in their context. Furthermore, the earlier expected session-durations were revised given the experience of the testing workshop, and the facilitator’s manual was also revised accordingly.

Discussion

We have described a step-wise approach to the design and development of a character-strengths based coaching intervention program for rural female community health workers to strengthen their abilities in addressing issues of work stress, or coping/negotiating with work stress. Our formative testing of the intervention content was aimed to establish its feasibility/acceptability through qualitative feedback, in order to make refinements to the intervention (the workshop component). Care was taken to tailor the coaching content to the context of the rural, traditional ASHAs in Madhya Pradesh and the associated social and cultural factors, especially those that were learned during formative field work ([Steps of intervention program development](#), Step 1a and 1b).

We are following this up by a larger pilot trial (November 2022 onwards) aimed at showing preliminary effectiveness, including qualitative feedback for the packages (both workshop and remote coaching components), and quantitative outcome evaluation with respect to the effects on wellbeing

and other secondary measures (e.g., burnout, motivation, self-efficacy). Thus, both the present study and the pilot trial would help prepare the team to deliver the intervention as part of a fully powered trial in late-2023.

The outputs of intervention development include the participant's/content manual (end user: ASHA), the facilitator's manual (end user: workshop facilitator) and the remote telephonic coaching protocol (end user: remote coach) – the latter will be the focus of a separate paper, as the team will have an opportunity to conduct remote telephonic coaching during the pilot trial.

The process of development had several strengths. First, we utilised three distinct inter-connected strands of formative research activities, following the intervention mapping approach (Bartholomew et al., 2011) to strengthen the documentation of findings that informed early blueprint development (prior to the intervention development workshop in March 2022). The focus group discussions (Step-1a) provided key opportunities to closely look at the ASHA's narrative of her perception, experience, consequences, and responses to work stress and therefore, the levels at which she incurred emotional labour and rumination. The quantitative strengths assessments (Step-1b) helped us deduce a factor-structure of high-level virtues at the group-level, as well as a distribution of individual-level top-order strengths, which guided the further discussions on choices of strengths-based strategies to be included in the blueprint. The desk review of evidence-based positive psychology interventions (Step-1c), including but not limited to those on strengths usage, provided a framework of interventions and their effects on the wellbeing of nurses, and a few of these tested in the context of Indian community-based cadres, which helped shape our thinking around the objectives of various intervention types, intended effects and possible fit with their respective contextual situations. Our tripartite approach did not place relative weight on one formative activity over the other, which was driven by the fact that there is scarce evidence to begin with, on the structured use of strengths to alleviate work stress among frontline health workers in India.

Second, we systematically engaged with various subject experts relevant to the themes of our intervention, namely, positive psychologists, clinical psychologists, public health researchers, ASHA trainers, behaviour change experts and implementation science researchers. Several of these experts have positions within the Sangath Bhopal Hub team and its collaborators, and to an extent, with the state and national government health departments. During the intervention development workshop that aimed to arrive at the draft blueprint (S1), we encouraged deliberations involving (expectedly) differing views of these experts to arrive at a blueprint that would fit with the diverse needs of ASHAs – the needs and issues represented by the experts during the

workshop. During the subsequent content development, we engaged with professionals based in Madhya Pradesh having extensive field experience of training ASHAs, particularly in view of their awareness of appropriate linguistic or culturally relevant aspects of training content. Finally, we engaged with the different groups of ASHAs themselves (Proctor et al., 2011) during the contextualization visits and the content testing workshop as discussed earlier. Throughout these engagements, it was critical for us to balance the a) fidelity to the core approach of *identifying and using strengths* (Park et al., 2006; Seligman et al., 2005) and enabling ASHAs to adopt this approach flexibly, and tailor it to various stressful situations and b) inclusion of the perspectives of ASHAs towards the developing and evolving content (Van Zyl et al., 2019) till the final refinements were made to the packages.

In particular, we involved experts from the central health ministry's National Health Systems Resource Centre (NHSRC) in the intervention development workshop to inform the draft blueprint, due to its experience in conducting evaluations of ASHA programs, even though these evaluations pertain to aspects of their technical performance. It was important to involve the NHSRC at an earlier stage to obtain their perspectives for our proposed work stress-addressing strategies, for instance, if any strategy had less potential to be usable in the long run due to the nature of ASHAs' evolving workload. We also wanted to keep them in the loop on the choices of our coaching strategies, given NHSRC's larger interest in strengthening human resources that deliver primary care and mobilize technical resources to the Indian states in doing so; and these resources could potentially include the know-how of strengths-based coaching strategies to reduce work stress (*National Health Systems Resource Centre, n.d.*).

Third, the nature of adaptation of strengths-based content originally derived from studies on character-strengths interventions from other global contexts (Niemiec, 2017), to suit the culture, temperament, knowledge, exposure levels and abilities of ASHAs, was a lingering question before and during the intervention development workshop. For instance, at one point, we had considered introducing concepts and models of Indian Psychology or spirituality into the content, to develop illustrative situations, stories, or activities, which we thought could better connect with the rural traditional ASHAs. However, in the course of the focus groups (Step 1a), we found it difficult to elicit responses that explained the spiritual recourse mechanisms (Bhangaokar & Kapadia, 2009) that ASHAs may be using to mitigate work-stress – except those mechanisms with religious connotations (e.g., prayers or rituals). Moreover, by using the already defined concepts and models from Indian Psychology (Dalal & Misra, 2010), we would have 'fitted' ideas (S. Menon, 2005), which although culturally familiar, were not grounded in our formative data. In such a scenario, ASHAs could have

appreciated the values imparted, but not necessarily found them practical enough to use in their daily coping mechanisms. Therefore, a consensus was made in the intervention development workshop to focus on strategies that would leverage the individual strengths and tune these strengths to the demands of their difficult situations, to minimize emotional labour. Yet, we saw overlaps between the culturally relevant stories/situations/examples/role-models or experiences that we used to develop our content, and the concepts of Indian Psychology—an example is the idea of ‘*Karma*’ (Dalal & Misra, 2010), reflected as a sense of duty (Marwah, 2021) among the ASHAs or social responsibility of serving the village communities (also a theme in our formative focus groups); or the fact that a situation/problem is a multifaceted event and not ‘caused’ by any one ‘agent’ (Dalal & Misra, 2010), which may relate to self-blame or feelings of guilt among ASHAs towards difficult work-situations.

Fourth, as successful intervention program design is characterised by the early and consistent involvement of the target user group (Lyon & Koerner, 2016; Maguire, 2001; O’Cathain et al., 2019), to contribute to better engagement and ensure that the content is relevant and relatable (Yardley et al., 2015), we began interacting with ASHAs after a part of the draft paper-based coaching modules were prepared (Steps of intervention program development-Step-3). Our contextualisation visits in a nutshell, involved their feedback specifically on the tone and language of the proposed workshop activities and underlying strategies. We used a mix of recording ASHAs’ feedback and documenting observations of each day of our visits, to have sufficient data for continuing with module revisions, till the testing of the content during the ‘pre-pilot’ workshop (step-4).

Finally, due to the limited cross-programmatic knowledge of delivering such strengths-based coaching workshops targeting the work-stress of the learner in India, our team was perhaps delivering a first-of-its-kind intervention to ASHAs. Before launching the formal pilot of the intervention (with two arms, random allocation and assessment of wellbeing outcomes), we realised it could be crucial to conduct a content-testing workshop (Van Zyl et al., 2019) to gain any additional learnings (Lyon & Koerner, 2016) or validate our assumptions made through successive stages of content development. The promising results of the follow-up focus groups (see Results and Table 4) built confidence in the coaches to plan the main pilot.

This study has several limitations. First, the sample size was small for a part of the development process (content-testing workshop) and convenience sampling may have introduced selection bias. Although ASHAs were called by district-level Sangath team members (not involved in content development) and asked to participate in the workshop based on their interest and availability, these ASHAs may have been interested (intrinsically) in being a part of such a program.

Therefore, they may not be representative of the broader cadre, especially, the segments of ASHAs with severe work stress who may have refrained from putting substantial time and effort in attending a 5-day workshop. Second, during the workshop, the duration of daily sessions had to be reduced than the planned schedule due to the need for ASHAs to return home and the less frequent transportation facilities (as the workshop was non-residential). The planned workshops, both in the pilot and the main trial would be residential, as also recommended by ASHAs during the focus groups, which would likely address this challenge. We have to keep in mind though that residential workshops could also incur challenges in terms of ASHAs’ availability to stay for the full 5-days (e.g., attending emergency situations at home) or the possible anxieties of their family members in relation to their 5-days stay (even after availing district health department permissions). Third, a qualitative assessment of the content-testing workshop was possible through the focus groups, but the team was constrained on time and resources to conduct quantitative wellbeing assessments, at least of the short-term (1-month) effects on wellbeing post-workshop, which could have vitally supplemented the qualitative narratives. As mentioned earlier, these assessments will form the focus of the pilot trial. Fourth, the research team could have influenced the development of the module content or introduced personal biases during the process. To minimize these, we regularly shared the content with external subject experts (study collaborators) and members of the National Health Systems Resource Centre (NHSRC), to validate our descriptions of individual module topics and activities, their alignment with learning objectives, and the fit with ASHAs’ context. Fifth, while ASHAs are a pan-India workforce and their work-stress issues could be similar due to the similar work structures (e.g., not salaried, low in hierarchy, unstructured work, multiple accountability, rural women/issues of gender equality), the intervention content would need multiple reviews and refinements before its pilot in different states of India (assuming its effectiveness on wellbeing in the study area) due to the differences of local language or cultural factors, or varying education- and experience-levels of ASHAs. Thus, a deep contextual adaptation, while a strength, can limit the generalizability of the content to wider regions. Sixth, this could probably be the first such strengths-based program for ASHAs specifically catering to work-stress, and we need further studies to use approaches other than strengths (e.g., acceptance-commitment therapy approaches) (Yang et al., 2021) to test their comparative effectiveness on mental wellbeing. Finally, strengths-usage coaching should be supplemented with observations of ASHAs’ applying the learned strategies to respond to routine stress, and provision of supportive guidance. We have planned the same through the remote telephonic support component. We could not test it due to time constraints, but would have an opportunity to do so during the pilot.

Conclusions

The systematic intervention development approach in this study can be referred as a potential template for guiding the development of similar positive psychology interventions to reduce work stress among frontline health workers, globally, particularly the rural women cadres. Our study critically contributes to the broader positive psychology literature on the use of character-strengths for building capacities to address work-stress among frontline workers in low-resource settings. The comprehensive intervention development process that we have discussed in this paper rested on an evidence-base of typical strengths-based interventions used for general workplace employees, and health cadres such as nurses. However, it accounted for a range of perspectives, experiences, and unique interests of our contextual ASHAs, to result in several adaptations to strengths-coaching and customisation of the program to the needs of this massive workforce, which is serving primary care needs of rural populations in India.

Supplementary information The online version contains supplementary material available at <https://doi.org/10.1007/s12144-023-04673-3>.

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Data availability The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethics declarations All study procedures including intervention development, the focus of the present study, were approved by the institutional review board at Sangath, India.

Informed consent Informed consent was obtained from all individual participants included in the study.

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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