Brief Research Article

Development of a Tool for the Assessment of Job Satisfaction amongst the Community Health Workers

Abstract

Introduction: Amongst the various factors influencing the performance of community health workers (CHWs), job satisfaction serves as a potential drive to perform better. This study aimed at developing a tool to measure how well the CHWs are satisfied pertaining to individual, community and health system determinants.

Methodology: This cross-sectional study was conducted in a rural block of Madhya Pradesh (Central India). The CHWs were administered a self-reported questionnaire that contained individual, health system and community level determinants of job satisfaction with a 5-point Likert scale to mark their perception.

Results: The job satisfaction scale of 15 items was initially administered to the 92 CHWs. Their scale content validity index (average) was 0.83. The finalised tool consisted of 13 items under three factors following the exploratory factor analysis namely, health system, supervision and peer support and intrinsic job satisfaction. Their overall Cronbach's alpha was 0.81, with the median (interquartile range) score of job satisfaction for both the Relatively Low Performing and Relatively High Performing Community Health Workers being 4 (4–5).

Conclusion: The CHWs in this study were satisfied with their performance as voluntary village health workers following the assessment using a complex job satisfaction scale.

Keywords: Community health workers, job satisfaction, India

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Introduction

Community health workers (CHWs) are those who play a defined role in the community and health system, thereby acting as a bridge in providing primary healthcare services to the community.[1] One of the key components of the National Health Mission in India was to provide every village in the country with a trained female community health activist known as ASHA, i.e., Accredited Social Health Activist.[2] There are 1.04 million ASHAs in India and 0.1 million in Madhya Pradesh as of 2023.[3] ASHAs receive incentives based on the nature of activities they perform (as described below), which are popularly known as performance-based incentives (PBIs) that differ widely across the states of India. ASHAs play a multidimensional role in the community such as creating awareness about health problems and conducting demographic surveys. ASHAs were also trained to provide primary medical care for minor ailments and report the vital events to the higher officials. ASHAs mainly focus on the promotion of maternal and child health services in order to enhance its utilisation, thereby leading to the improvements in the maternal and child health indicators in the health management information system.[4]

As CHWs are volunteers from the community, their job plays a very important role in their livelihood in terms of providing incentives and recognition from the community.[5] Satisfaction refers to which the CHWs derive personal satisfaction from serving the community by providing good-quality services.[5] In India, the performance of CHWs depends on factors such as incentives, education, training, job security, working conditions, interpersonal relationships, recognition, structure of organisation and

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infrastructure.[6,7] There has been a dearth of evidence to assess 'job satisfaction' amongst the CHWs in India due to the wide heterogeneity in the socio-economic context across the country. Madhya Pradesh being a high focus state with predominant tribal population, evaluation of job satisfaction of ASHAs would be promising to devise strategies that might enhance their performance and prevent attrition. Hence, this study was conducted to develop a job satisfaction tool taking into account the various individual, workplace and community influencers, and we assessed how satisfied the CHWs are irrespective of the incentives received over a year.

Materials and Methods

Study design and settings

This cross-sectional study was conducted with CHWs as study participants in a rural setting (Obedullaganj block) of Madhya Pradesh. The Obedullaganj block included three primary health centres (PHCs) and three community health centres. There were 214 villages and 189 ASHAs (CHWs) who provided various health services under national health programmes.

Study participants

Out of 189 CHWs in the block, all those who received above the 75th percentile (were arbitrarily termed as relatively high performing, i.e., RHP) and below the 25th percentile (termed as relatively low performing, i.e., RLP) of annual PBIs (March 2017–April 2018) were purposively included and those CHWs from urban area of Obedullaganj block were excluded. This stratification was attempted to understand the concurrent/discriminant validity measure of job satisfaction between RHP and RLP CHWs.

Data collection

The finalised questionnaire in the Excel spreadsheet form was entered into Organizational Network Analysis (ONA) software in Hindi (vernacular language) and integrated into the mobile-based Open Data Kit app. This self-administered questionnaire included demographic details and an audio recording of how to fill Likert scale of job satisfaction questionnaire. Amongst the 189 CHWs, the 92 CHWs who fulfilled the criteria, i.e., 46 RLP and 46 RHP CHWs, agreed to participate and responded to the questionnaire. The selected CHWs were approached during their monthly meetings at their respective PHCs and village health and nutrition days (once or twice a month) through their facilitators and were briefed about the study questionnaire and their consent was obtained.

Tool development

The development of the job satisfaction questionnaire for administering the CHWs involved a five-step process.[8] Primarily, those variables which influence job satisfaction[9] were reviewed from the literature and enlisted. Second, the internal validity of the questionnaire[10] followed by pilot testing of the questionnaire, exploratory factor analysis and finally reliability analysis using internal consistency was done.

Ethical approval

This study was reviewed and approved by the institutional human ethics committee (IHEC-LOP/2018/MD0027). Permissions were also obtained from Chief Medical Health Officer, Raisen and Block Medical Officer, Obedullaganj for data retrieval.

Statistical analysis

The data collected was exported as Microsoft excel sheet from the ONA software and following data cleaning, analysis was done using IBM SPSS version 24 (IBM Corp, Armonk, NY, USA). Nominal or categorical variables were summarised as frequency (percentage) and continuous variables as the median and interquartile range (IQR). For each determinant, association of numerical variable with binary dependent outcome (RHP/RLP) was done using Mann–Whitney test. Job satisfaction scale was validated initially by content validity index (CVI) and then by exploratory factor analysis (principal component analysis [PCA] method of extraction). $P < 0.05$ was considered statistically significant.

Results

The socio-demographic details of the 92 CHWs are described in Table 1, amongst whom the median (IQR) age of the CHWs

Table 1: Distribution of socio-demographic characteristics of community health workers (*n*=92)

Variables	RLP (*n*=46), *n* (%)	RHP (*n*=46), *n* (%)	Total (*n*=92)
Age			
≤25	13 (28.3)	0	13
>25	33 (71.7)	46 (100)	79
Education			
Up to primary education	25 (54.3)	14 (30.4)	39
Others	21 (45.7)	32 (69.6)	53
Marital status			
Married	43 (93.5)	42 (91.3)	85
Others	3 (6.5)	4 (8.7)	7
Religion			
Hindu	46 (100)	41 (89.1)	87
Other religion	0	5 (10.9)	5
Caste			
General	13 (28.3)	6 (13)	19
OBC	17 (37)	17 (37)	34
Scheduled caste	10 (21.7)	6 (13)	16
Scheduled tribe	6 (13)	17 (37)	23
Socio-economic status			
Above poverty line	15 (32.6)	21 (45.7)	36
Below poverty line	31 (67.4)	25 (54.3)	56
Number of family members			
≤4 family members	13 (28.3)	20 (43.5)	33
>4 family members	33 (71.7)	26 (56.5)	59
Under 5 children			
≤2 children	36 (78.3)	43 (93.5)	79
>2 children	10 (21.7)	3 (6.5)	13
Years of experience			
≤5 years of experience	23 (50)	15 (32.6)	38
>5 years of experience	23 (50)	31 (67.4)	54
Number of trainings in last 1 year			
≤5	44 (95.7)	40 (87)	84
>5	2 (4.3)	6 (13)	8

RLP: Relatively low performing, RHP: Relatively high performing

was 30 (27–35) and the median (IQR) years of experience was 7 (5–11).

The five-step process of tool development is as follows:[8]

Step 1: Review of literature

From the review of the literature, 18 individual items in the job satisfaction scale were initially enlisted. Those items in each scale were first translated by three translators separately and then discrepancies were resolved and synthesised to a single job satisfaction questionnaire. It was reviewed again by the investigators and was distributed to the experts for content validation and translational errors through E-mails and as hard copies to the experts for their ratings.

Step 2: Internal validity of the questionnaire

In this study, the content validation technique[11] (CVI) was adopted to ensure that each of the items intended to measure and is representative of the main objective, i.e., job satisfaction. The CVI assesses the relevancy of individual items-CVI (I-CVI) or the whole scale-CVI (S-CVI) content validity.[12] S-CVI can be obtained using 1. S-CVI/Universal agreement (UA) approach: where we assess in how many items of the tool, there was universal agreement (UA) based on the all the experts scores. Another approach was 2.S-CVI/Average (Avg) approach where the I-CVIs for all the items were summed up and divided by the total number of items in the tool.[10,13]

Here, content validation was performed by an expert of five academic community medicine professionals and two senior residents of community and family medicine. Each expert was asked to rate each item in a scale of 1 - not relevant to 4 - strongly relevant. Those items which received a score of 3 or 4 were indicated as relevant.[12] Items with individual content validity I-CVI of ≥0.83 for 6 or more experts were considered valid.[14] The I-CVI was considered as follows: <70% (to be eliminated), 70%–79% (needing revision) and >79% (appropriate).[14] In this study, the S-CVI/Avg approach was applied and the job satisfaction was found to be 0.82. However, to establish the relevancy of the overall items of new tool for both approaches, the index had to be ≥80%.[15]

Step 3: Pilot testing

A pilot study was conducted in 5% of 92 CHWs excluding our study area (Raisen). The questionnaire was administered to the CHWs. Based on the feedback and the opinion of the participants and the investigators, the questions were further modified, added or removed and the repeat S-CVI/Avg was found to be 0.83 for the job satisfaction scale. The job satisfaction questionnaire was shortlisted from 18 to 15.

Step 4: Exploratory factor analysis

EFA uncovers the latent factor that exerts influence on the observed group of variables within a construct. This method was adopted to group the intercorrelated variables under a separate component or a construct. The sample size was estimated using a rule of thumb where there should be at least five participants for every item. According to this rule, for 15 items of the job satisfaction questionnaire, there must be 75 samples which were met.

Principal component analysis

Before the factor analysis, a correlation matrix was constructed between the items of questionnaire to check the suitability of the data for factor analysis with the accepted value ranging from 0.30 to 0.85.

Kaiser–Meyer–Olkin (KMO) test, a test of sampling adequacy had a value of 0.820 for job satisfaction, indicating that the sample is adequate. However, Bartlett's test of sphericity had $P < 0.001$ for job satisfaction indicating further analysis.

For job satisfaction questionnaire

Using the extraction method of PCA, only four components amongst the 15 had eigenvalues over 1.00, and together these explained over 65.2% of the total variability in the data. As the factors in this study were correlated with each other, the oblimin method of rotation was considered.

The factor loadings of all the 15 variables of the job satisfaction questionnaire resulting from oblimin rotation. For those variables which had occupied more than one component, they were allotted the respective components where the partial standardised regression coefficient was comparatively greater (in this study, it was minimum beyond 0.5).

Step 5: Reliability analysis

Cronbach's alpha was used to measure consistency where a value ≥0.60 was considered reliable and acceptable.[8] Components 1, 2 and 4 of the job questionnaire were accepted as their Cronbach's was >0.60. Furthermore, component 3 was not included as it had included only 2 items that cannot be further deleted the tools used in this study & other information is available on request from corresponding author.

The finalised components of job satisfaction included 13 questions under three components renamed as:

1. Health System component with four questions
2. Supervision and peer support component with six questions
3. Intrinsic job satisfaction component with three questions as displayed in Table 2.

Table 2 shows that CHWs were satisfied with their performance with individual average scores for each of the 13 questions above or equal to 4. The overall median score was 4 (4–5) amongst RLP CHWs and 4 (4–5) amongst RHP CHWs. The responses for certain item like '*I have learnt many new job skills in this position*' ($P = 0.004$) was found to be significantly associated on Mann–Whitney test. It is to be noted that one item amongst 13 items, i.e., 'I have too much paperwork,' has been reverse coded (1 - strong agreement to 5 - strong disagreement) to minimise ascertainment bias.

Discussion

Certain cross-cultural adaptations were made in the job satisfaction literature review as per the commonly used process of Beaton *et al*.,[16] comprising idiomatic and experiential equivalence.[17] Furthermore, the description of domains and the identification of items under each domain were based on the deductive method or 'logical partitioning' as explained by Boateng *et al*.,[18] where existing scales were assessed and grouped into a final questionnaire, unlike the inductive method that involves the generation of items from the individuals' responses. The I-CVI of 0.83 for job satisfaction could be considered for 6–10 experts.[8] Some authors use the KMO sampling adequacy test to ensure adequate sample size.[17] However, researchers use a minimum of 2 to a maximum of 20 people per item to estimate the sample size as arbitrary.[17] It

Table 2: Finalised components of job satisfaction scale with distribution of community health workers job satisfaction score stratified by performance (*n*=92)

Variables	RLP, median (IQR)	RHP, median (IQR)	Total	*P* (Mann–Whitney)
Health system component				
The set rules and regulations make it easy for me to do good job	4 (4–5)	4 (4–5)	4 (4–5)	0.925
I have adequate opportunities to develop my professional skills	4 (3.75–5)	4 (4–5)	4 (4–5)	0.956
My work assignments are always clearly explained to me	4 (4–5)	4 (4–5)	4 (4–5)	0.804
I receive the right amount of support and guidance from my direct supervisor	4 (4–5)	4 (4–5)	4 (4–5)	0.126
I am provided with all trainings necessary for me to perform my job	4 (4–5)	4 (4–5)	4 (4–5)	0.975
I have too much paperwork (reverse-coded)	2 (1–3)	2 (1–2)	1 (1–2)	0.303
Supervision and the peer group component				
I feel encouraged by my supervisor to offer suggestions and improvements	4 (4–5)	4 (4–5)	4 (4–5)	0.852
My co-workers and I work well together	4.5 (4–5)	4 (4–5)	4 (4–5)	0.210
I have an accurate written job prescription	4 (4–4)	4 (4–5)	4 (4–5)	0.410
I am appropriately recognised when I perform well at my regular work duties	4 (4–5)	4 (4–5)	4 (4–5)	0.400
Intrinsic job satisfaction				
I am satisfied with my chances for promotion	4 (4–5)	4 (4–5)	4 (4–5)	0.066
My department provides all the equipment, supplies and resources necessary for me to perform my duties	4 (4–5)	4 (4–5)	4 (4–5)	0.391
I have learnt many new job skills in this position	4 (3–4)	4 (4–5)	4 (4–5)	0.004
Overall score	4 (4–5)	4 (4–5)	4 (4–5)	

RLP: Relatively low performing, RHP: Relatively high performing, IQR: Interquartile range

is said that the larger the sample size, the more stable would be the factor loadings and replicable factors to generalise the results.[17]

There were different studies amongst healthcare workers that lacked information on either validity or consistency or factor derivation of the administered questionnaires. A study amongst CHWs[19] done in Orissa, with a 16-item questionnaire of performance motivation, lacked information on the validity, reliability and factor analysis. Another study[20] in Haryana included a 23-item questionnaire which was pretested in the field amongst CHWs but lacked information on the validity and consistency of the questionnaire with unclear information on the conclusion of the constructs. Another study[21] on job satisfaction in Iran included a questionnaire that contained 8 aspects of questions, lacked inadequate validation with no mention on factor analysis.

The exploratory factor analysis in this study extracted three factors in the job satisfaction scale consisting of 13 items. The constructs showed good internal consistency with Cronbach's alpha ranging from 0.63 to 0.81. The findings from another study[10] conducted in low-income settings like India using a 20-component questionnaire included information on convergent validity with good consistency of >0.70 and extraction of three factors by factor analysis. In a study from Malaysia,[22] similar results were obtained with Cronbach's alpha of 0.75 and corrected item-total correlation of 0.5 for the final questionnaire (the study setting was amongst government hospital staff and community nursing staff).

Component 1 in our job satisfaction scale contained those which were provided by the government under the CHW programme. The second component included items that were contributed by the peer groups, supervisors and the other workforce whom CHWs tend to work with. The final component was those intrinsic factors of CHWs which provides them job satisfaction. Thus, the job satisfaction of CHWs was a complex interplay of intrinsic factor which was influenced by the workplace factors and the amendments implemented at a national level for the CHW programme. Job satisfaction studied amongst CHWs[23] was strongly related to emotional labour with a limited focus on age, education and burnout. The findings of the former were similar to a study conducted amongst preventive medicine workers in Vietnam that included eight dimensions.[24] Another study[10] conducted in a low-income setting contained extraction of three factors about supervisors, co-workers and job satisfaction which were concordant with our study.

A study from Maharashtra showed that nearly 58% of ASHAs had low job satisfaction levels,[25] which was contrary to the findings. Unlike other studies[19,20] that focused on the overall mean score of job satisfaction and the association with their determinants, our study was novel in associating every finalised item of both the scales with their PBIs (RHP/RLP). Manpower is a pivotal part of the health system and has been consistently facing the problems of shortage of staff, poor job conditions, low remuneration and high turnover. This in turn reflects in the increased workload and unfavourable working conditions for the existing workforce, thereby causing low productivity.[26] A recent study from Kenya[27] suggests that their financial package should commensurate with the demands of the job, a number of hours worked, and the range of roles. Furthermore, this study was during the early inception stage of the health and wellness centre (HWC) in India. HWCs aim to strengthen primary healthcare

in India[28] and may potentially improve the working conditions of CHWs with respect to accessibility.

The strengths of the study were that it focused on the least explored yet critical determinants of CHW's performance. Unlike other studies, our study covered a wholesome picture from content validation up to reliability analysis. A self-administered questionnaire using mobile-based app was deployed to prevent interviewer bias. However, due to the purposive sampling technique, the generalisability of the results cannot be done. Further, we did not have enough sample size, i.e., an independent cluster of participants to partition the data for confirmatory analysis; thus, we were not able to validate the constructs generated. Furthermore, our tools lacked a number of reverse-coded questions, and therefore, the possibility of the ascertainment bias cannot be ruled out in the questionnaire.

Conclusion

The job satisfaction scale had SCI/Avg- whole scale content validity index (Average) of 0.83 and good internal consistency with Cronbach's alpha of 0.81 including constructs from various components. The overall median (IQR) score of job satisfaction for both RLP and RHP CHWs was 4 (4–5), suggesting that the CHWs were intrinsically satisfied with their performance.

Relevance to the preventive medicine:
This would help the policymakers and programme managers to explore further and address the barriers causing dissatisfaction for better retention of ASHAs. This performance could indeed translate into better outcome of health indicators and the ultimate health-seeking behaviour of the community.

Implications for clinical practice:
Job satisfaction of ASHAs reflects on the fulfilment of the tasks related to contact with the community, i.e., home-based newborn care, iron sucrose infusion, accompanying for delivery, treatment of minor ailments, etc.

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Conflicts of interest
There are no conflicts of interest.

References

1. Naimoli JF, Perry HB, Townsend JW, Frymus DE, McCaffery JA. Strategic partnering to improve community health worker programming and performance: Features of a community-health system integrated approach. Hum Resour Health 2015;13:46.
2. Maru RM. The community health volunteer scheme in India: An evaluation. Soc Sci Med 1983;17:1477-83.
3. Who are ASHA Workers, and What Do They Do? Available from: https://www.indianexpress.com/article/explained/explained-who-asha-workers-women-healthcare-volunteers-who-7932479/. [Last accessed on 2023 Aug 23].
4. National Rural Health Mission (M.P.). Available from: https://www.asha.mp.gov.in/. [Last accessed on 2023 Aug 23].
5. Naimoli JF, Frymus DE, Wuliji T, Franco LM, Newsome MH. A community health worker "logic model": Towards a theory of enhanced performance in low- and middle-income countries. Hum Resour Health 2014;12:56.
6. Zhu Y. A review of job satisfaction. Asian Soc Sci 2012;9:293.
7. Bempah BO. Determinants of job satisfaction among community health workers in the Volta region of Ghana. Public Policy Adm Res 2013;3:11. Available from: https://www.semanticscholar.org/paper/Determinants-of-Job-Satisfaction-among-Community-in-Bempah/cc8493bd80a5076588562bedaf8c48a5b73342e4. [Last accessed on 2023 Aug 23].
8. Cheong AT, Chinna K, Khoo EM, Liew SM. Determinants for cardiovascular disease health check questionnaire: A validation study. PLoS One 2017;12:e0188259.
9. Alpern R, Canavan ME, Thompson JT, McNatt Z, Tatek D, Lindfield T, *et al*. Development of a brief instrument for assessing healthcare employee satisfaction in a low-income setting. PLoS One 2013;8:e79053.
10. Polit DF, Beck CT. The content validity index: Are you sure you know what's being reported? Critique and recommendations. Res Nurs Health 2006;29:489-97.
11. Bolarinwa OA. Principles and methods of validity and reliability testing of questionnaires used in social and health science researches. Niger Postgrad Med J 2015;22:195-201.
12. Lynn MR. Determination and quantification of content validity. Nurs Res 1986;35:382-5.
13. Beck CT, Gable RK. Ensuring content validity: An illustration of the process. J Nurs Meas 2001;9:201-15.
14. Zamanzadeh V, Ghahramanian A, Rassouli M, Abbaszadeh A, Alavi-Majd H, Nikanfar AR. Design and implementation content validity study: Development of an instrument for measuring patient-centered communication. J Caring Sci 2015;4:165-78.
15. Davis LL. Instrument review: Getting the most from a panel of experts. Appl Nurs Res 1992;5:194-7.
16. Beaton DE, Bombardier C, Guillemin F, Ferraz MB. Guidelines for the process of cross-cultural adaptation of self-report measures. Spine (Phila Pa 1976) 2000;25:3186-91.
17. Arafat S, Chowdhury H, Qusar M, Hafez M. Cross cultural adaptation and psychometric validation of research instruments: A methodological review. J Behav Health 2016;5:129.
18. Boateng GO, Neilands TB, Frongillo EA, Melgar-Quiñonez HR, Young SL. Best practices for developing and validating scales for health, social, and behavioral research: A primer. Front Public Health 2018;6:149.
19. Gopalan SS, Mohanty S, Das A. Assessing community health workers' performance motivation: A mixed-methods approach on India's accredited social health activists (ASHA) programme. BMJ Open 2012;2:e001557.
20. Tripathy JP, Goel S, Kumar AM. Measuring and understanding motivation among community health workers in rural health facilities in India-a mixed method study. BMC Health Serv Res 2016;16:366.
21. Kebriaei A, Moteghedi MS. Job satisfaction among community health workers in Zahedan district, Islamic republic of Iran. East Mediterr Health J 2009;15:1156-63.
22. Ahmad NF, Ren Jye AK, Zulkifli Z, Bujang MA. The development and validation of job satisfaction questionnaire for health workforce. Malays J Med Sci 2020;27:128-43.
23. Pandey J, Singh M. Donning the mask: Effects of emotional labour strategies on burnout and job satisfaction in community healthcare. Health Policy Plan 2016;31:551-62.
24. Nguyen QA, Tran AD. Job satisfaction and turnover intention of preventive medicine workers in Northern Vietnam: Is there any relationship? Health Serv Insights 2021;14:11786329211995172.
25. Bidari R, Ray S. Job satisfaction of Accredited Social Health Activist (ASHA). 2021 Jan 2;2020.
26. Okech M, Okoroafor SC, Ojo O, Mohammed B. Causes of attrition among frontline health workers in rural areas of Bauchi and cross river states of Nigeria. J Public Health (Oxf) 2021;43:i20-6.
27. Riang'a RM, Nyanja N, Lusambili A, Mwangi EM, Ehrlich JR, Clyde P, *et al*. Implementation framework for income generating activities identified by community health volunteers (CHVs): A strategy to reduce attrition rate in Kilifi county, Kenya. BMC Health Serv Res 2024;24:132.
28. Lahariya C. 'Ayushman Bharat' program and universal health coverage in India. Indian Pediatr 2018;55:495-506.