

ORIGINAL ARTICLE

Gauging the Motivation Level of Health Personnel of a Tertiary Care Hospital in District Dehradun

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Abstract	Introduction	Methodology	Results	Conclusion	References	Citation	Tables / Figures
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Abstract

Background- Healthcare providers serve as the backbone of the healthcare delivery system, and motivating them is crucial for its enhancement, which is often a challenging task. Understanding the motivational factors that keep employees engaged is a pressing concern for leaders and senior personnel. **Aims & Objectives:** This study aimed to assess the motivation levels of healthcare personnel working in a tertiary healthcare institution in Dehradun, Uttarakhand. It sought to explore the various factors influencing employee motivation in the healthcare sector. **Methodology:** A cross-sectional study involved 150 healthcare personnel, and data analysis was conducted using Statistical Package for Social Sciences (SPSS) software and Microsoft Excel. Frequency percentages and mean standard deviations were used for categorical and continuous data, respectively. The Chi-Square test and Fischer Exact test were employed to assess relationships between categorical variables. **Results:** Among the study groups, technicians displayed the highest motivation levels, while doctors exhibited lower motivational indices. Across doctors, nurses, and technicians, "rewards" ranked as the top motivating factor. Health personnel identified monetary support, incentives, promotion, resource improvement, appreciation, feedback, communication, job security, training, teamwork, and effective management as significant motivational factors. **Conclusion:** Satisfied healthcare workers not only inspire their colleagues but also foster a positive work environment, enhancing the overall functioning of the institution. Employee motivation directly impacts the performance of healthcare organizations. Recognizing non-financial motivators, such as appreciation, teamwork, professional growth, and training, alongside financial incentives, is essential to maintaining a motivated and efficient healthcare workforce.

Keywords

Motivation; Health Personnel; Tertiary Healthcare; Health Care Sector

Introduction

Introduction: Motivation is the driving force behind an individual's willingness, intensity, and persistence in pursuing goals.(1) It often stems from the need to fulfill specific requirements and leads to intrinsic or extrinsic rewards.(2) Intrinsic rewards come from within, while extrinsic ones rely on external recognition or compensation. Job satisfaction, on the other hand, results

from the assessment of one's job experiences and activities.(3) The challenge for managers, leaders, and department heads is to understand and leverage the motivational factors that keep employees engaged.(4) Research by Bennett and Franco in 1999 highlighted that employee motivation is not solely reliant on monetary incentives but extends to broader health sector reforms impacting behavior and performance.(5) In the healthcare sector, nonfinancial human resource management tools

have emerged as significant drivers of motivation.(6) Scholars have moved beyond financial incentives, drawing inspiration from the Hawthorne effect, and have identified both intrinsic and extrinsic motivators. While extrinsic elements affect task performance, intrinsic factors determine an individual's interest and happiness in their work.(7) Motivational theories encompass content, process, and reinforcement aspects.(8,9,10) Given the limited literature on this topic, particularly in developing countries such as India, The study seeks to address the unique challenges faced by healthcare workers in a region grappling with a shortage of medical personnel and a high disease burden.

Aims & Objectives

1. To assess the level of motivation among the health personnel's working in a tertiary health care institution.
2. To find out the motivational factors among the health personnel's working in a tertiary health care institution.
3. To find out the association between the socio-demographic factors, and job satisfaction with the level of motivation among the health personnel of tertiary care hospital.
4. To suggest actions for improving the level of satisfaction among the health personnel.

Material & Methods

Study Location- Tertiary Care Hospital (Himalayan Institute of Medical Sciences, SRHU, Dehradun).

Study Population- Doctors, Nurses and Technicians (Health personnel's)

Study Design- Cross-sectional study

Type of Study- Observational Study

Data Collection Tools- Semi-structured Questionnaire and Motivational Questionnaire.

Section I- Respondents identification and sociodemographic details.

Section II- Job related factors of the study participants which consisted of five statements and was assessed on four-point Likert scale, 4-Always, 3-Often, 2-Sometimes and 1-None.

Section III- Validated "Motivational Questionnaire" by John Smith. (11) In this questionnaire, motivation was measured as the degree to which an individual possessed under domains of motivation like Drive, Control, Challenge, Relationship, and Rewards. The respondent's level of agreement or disagreement for all the questions was measured using four-point Likert scale having score weightage of 4,3,2 and 1 for scale strongly agree, agree, disagree, and strongly disagree, respectively. The questionnaire consisted of twenty motivation dimensions that covers three areas:

Autonomy- Interest, Ethics, Growth, Flexibility, Independence, Achievement, Work.

Relatedness- Pressure, Patients, Activity, Management, Competition, Teamwork.

Competence- Power, Status, Progression, Recognition, Fear of Failure, Remuneration, Job security.

Section IV- Open ended question to find out the motivational factors among the study participants.

Study Period- March 2020 till September 2020 (6 months)

Sample Size – Taking into consideration the feasibility issues without compromising on validity, 50 Doctors, 50 Nurses and 50 Technicians were enrolled in the study.

Mode of Sample selection- Non-probability sampling technique- Convenient sampling was used. A list of all doctors, nurses and technicians working in the Himalayan Institute of Medical Sciences for at least six months was obtained from the HR Department of the hospital. Through simple random sampling 50 Doctors, 50 Nurses and 50 Technicians were enrolled in the study from the hospital.

Inclusion Criteria-

1. Respondent who was working in the HIMS for last 6 months
2. Respondent who was a social media user.
3. Respondent who gave consent to participate in the study.

Exclusion Criteria-

1. If >20% of the data was missing in the form.

Pre-testing and validation- Before starting the data collection, a pilot study was conducted on 10 health personnel for clarity and comprehension. With all the necessary instructions, google forms were forwarded via WhatsApp, Facebook, and e-mails. Based on the responses from the pilot study, necessary changes were done before commencing the study. For the responses that were collected from the pilot study, Cronbach's alpha the for "motivational questionnaire" was calculated which was 0.782 which is "acceptable" internal consistency.

Ethical Consideration- Owing to the ethical consideration, permission was obtained from the Institutional Ethical Committee before commencing the study (SRHU/HIMS/RC/2020/212). Permission from the Medical Superintendent, Head of the Department was obtained. As the data was collected through Google Forms, study participants were requested to give confirmation through consent before filling up the form. Privacy and confidentiality of the collected information were ensured.

Statistical Analysis- For data analysis, Statistical Package for Social Sciences (SPSS) software (version 23) and Microsoft Excel were used. To calculate the "Motivational index" the following formula was used:

Motivational index= Σ Mean score ((drive) + (control) + (challenge) + (relationship) + (reward))/5.

To determine the level of motivation among the study participants, the mean scores of the

respondents were classified into three groups namely:

- **Low- 2.70-3.20**
- **Moderate- 3.20-3.45**
- **High- 3.45-3.95**

Based on the minimum and maximum motivational index scores of the relevant individuals, the class intervals were created. For descriptive statistics, mean SD was utilised for continuous variables and frequency with percentages for categorical data. Graphs were also used to present the results. To analyse relationships between categorical variables, the Chi-Square test was used, and the Fischer Exact test was used if the expected frequency in a particular cell was found to be less than 5. A p-value of 0.05 with a minimum two-sided 95% confidence interval was considered statistically significant.

Results

Mean age of doctors was nearly 31 years with a standard deviation of 7.6 years, while that of nurses mean age was 29 years with a standard deviation of 6.3 years. There were 48.7 percent males and 51.3 percent females, the majority (86.0%) of them belonged to the Hindu religion followed by Sikhs (8%). 86.0 percent of the study participants belonged to the general category and most (64.0%) were residing in the nuclear family. Only 12.0 percent of the study participants were living alone. The marital status of study participants depicted that 51.3 percent of the study participants were married followed by 43.3 percent who were unmarried. Most (75.3%) of the study participants had small family sizes ([Table-1](#)). Around 80.0 percent of the doctors had postgraduate degrees followed by 18.0 percent who just had a graduation degree. Among nursing staff and technicians, most of them (82.0% & 92.0%) were graduates. [Table 2](#) shows that the majority of nurses always received the right amount of support and guidance from their direct supervisors, all the necessary training for performing the job, appropriate recognition for performing well at regular work duties, and worked together well with co-workers and were also able to easily communicate with members from all levels of this organization. [Table 3](#) depicts the mean and median scores with standard deviation and inter-quartile range for all the five components of motivation as well as their respective ranks It is deduced that “rewards” assumed first rank among all the groups of study participants i.e., doctors (3.53), nurses (3.39), and technicians (3.46). “Challenge” was observed as the next rank for doctors (3.38), nurses (3.31), and technicians (3.40). On least priority, the “Control” component was for doctors (3.07), “relationship” for nurses (3.23), and “drive” for technicians (3.02). A comparison of the overall motivation index (mean

score) revealed that technicians (3.29) had the highest while doctors (3.26) had the lowest motivational index. On comparing the motivational index among the study participants, the majority (48.0%) of the technicians had a high motivational index, followed by nurses (44.0%) and doctors (34.0%). 60.0 percent of the doctors had a motivational index in the moderate category followed by nurses and technicians (52.0% & 50.0%) respectively. Maximum (6.0%) doctors had a low motivational index followed by nurses (4.0%). It is observed from the table that on applying the Kruskal-Wallis test for comparison of mean score between different components of motivation with the designation of the study participants, none was found to be statistically significant ($p>0.05$). On comparing the association between the motivation level of study participants with the job-related variables like “receiving the right amount of support and guidance from direct supervisors”, “receiving all the training necessary to perform the job”, “working well with co-workers together” and “easy communication with members from all levels of organization” all these factors were found to be statistically significant ($p=0.001$, $p=0.038$, $p=0.026$, $p=0.022$). “Appropriate recognition on performing well at regular work duties” was not significantly associated with the level of motivation among health personnel ($p=0.115$) ([Table-4](#)). The analysis regarding the association between socio-demographic variables and motivation level among health personnel showed that none of them was found to be statistically significant ($p>0.05$) ([Table-5](#)).

[Figure-1](#) shows suggestions given by the study participants for increasing motivation levels, where the majority (36%) of study participants responded that monetary support, incentives, and promotion are the most important factor for motivation followed by the provision of better resources (26.7%).

Discussion

The present study was conducted on 150 health personnel of a tertiary care institution of Dehradun district with the aim to assess the level of motivation and find out the motivational factors among the health personnel’s working in a tertiary health care institution. The study also aimed to find out the association between the socio-demographic factors, and job satisfaction with the level of motivation among the health personnel of tertiary care hospital. There are many intrinsic and extrinsic factors that play an important role in motivating any health personnel. Research into this area throws light on such factors that can be worked upon for the upliftment of the health staff and ultimately betterment of any health institution or organization. The results of this study showed that the sex ratio was extremely skewed in favor of females among nursing staff (5:45). However, among doctors (30:20) and technicians (38:12), there was a reversely skewed sex ratio showing male preponderance.

Most of the doctors were post-graduates, and nurses had general nurse midwifery qualifications while most of the technicians were graduates.

The results of this study indicated that the overall motivation index (mean scores) among technicians was the highest followed by nurses while doctors had the lowest motivational index. The values were slightly low as compared to the study done by Jaiswal et al. (12) Moreover, their results were in contrast as they reported the highest motivation index among nurses followed by doctors and technicians. The difference is perhaps as they had also included supporting staff in their study, with varied mean motivational index scores cut-off and it was conducted in a government institution. On comparing all the components of motivation, “rewards” assumed the first rank among doctors, nurses, and technicians. However, Jaiswal et al reported, “relationship” as the first rank followed by “control”. “Rewards” in their study held the third rank. For any individual, remuneration, and growth always come as one of the topmost priorities. Many previous research has also shown that reward promotes motivation. (13-16) “Challenge” was observed as the next rank for doctors, nurses, and technicians. Nikic et al., perceived and reported that interesting work and challenges enhance the qualification.(15) “Challenge” in Jaiswal et al study assumed the lowest rank, they cited the lack of intellectual stimulation, the repetitive and monotonous nature of the work, insufficient flexibility, and lower levels of official work pressure as the causes. The interesting reason (17) for this difference could be that working in a private institution, by default increases the competition level among the health personnel may be for job security or incentive, or recognition.

Based on the responses by the study participants, monetary support/incentives are assumed the most common factor for motivation among the health personnel. A systematic review by Afolabi et al., also reported that in their nine studies salaries and performance-related pay plays a major role, especially in developing countries, while 5 studies stated that though financial incentives matter they are not enough for motivation. (18) According to Bratton et al., Armstrong et al; Sullivan and Garland et al financial incentives should not be given separately and must be given as a part of group incentives. (17,19,20) In the present study, promotions were also one of the strong motivators. According to theories by Alderfer, Herzberg, and Maslow Promotions play a significant role in motivation as it increases confidence, and the worker feels professional growth is on the rise. However, delayed promotions can be strongly demotivating as reported by Ibeziako et al., Ojaka et al., and Bandyopadhyay et al. (21-23) The second most common factor which health personnel felt motivated them was the “provision of better resources”. As this study was conducted during the COVID-19 pandemic and the availability of proper personal

protective equipment (PPE) has been one of the major issues, the effect of this could have prompted the study participants to give this reason. However, previous research by Ibeziako et al., Marinucciet a.l, Chimwaza et al., Ojaka et al., (2 did extensive efforts to discuss the working conditions in the health sector. (21-22, 24-25) They all quoted that if the person is not having a conducive working environment, for example, lack of equipment like microscopes, sphygmomanometers, changing areas, and separate duty rooms, it plays a major demoralizing effect on the workers. Appreciation, feedback, and communication with higher officials were found to be the third most common motivating factors among the study participants in this study. Health personnel does feel that they get encouraged by the nature of their work and recognition. Herzberg also identified ‘recognition of work’ as one of the extraordinarily strong motivators. A comparative study done at Andhra Pradesh and Uttar Pradesh also reported that seniors who recognized the work of their subordinates were a major motivator for health personnel. Chandler et al., Ibeziako et al, Chimwaza et al., also explored these areas and concluded that recognition, appreciation, and rewards greatly motivate healthcare personnel. (21, 24,26)

Higher opportunities and training were also found to be a motivating factor in this present study. Previous researchers also reported that professional development of any sort in service enhances the self-esteem of healthcare personnel and in turn, they perform their duties to the mark. (21,23-25) In this study “proper management” and “good teamwork” were also found to be the motivating factors for health personnel. Previous research also stated that the openness of the management with the staff plays a positive role in motivation. Previous researchers also found that poor management, lack of support from supervisors, and lack of teamwork were strong demotivating factors in their studies. (21, 24)

This study also revealed that at the workplace most of the nurses and technicians always “received support and guidance from their direct supervisors” and “received the necessary training for them to perform their Job”. On being “appropriately recognized when they perform well at their work duties” the percentage of doctors that responded always was lower than nurses and technicians. A nearly similar response was for “Working well together with their Coworkers”. Most of the nurses responded that they could always “easily communicate with the members from all levels of the Organization”. Our results are in line with findings of Peters et al., who employed different data collection methods but reported: “good working relationships with colleagues”, “training opportunities” and environmental factors like “tools to use skills” and “good physical conditions” as strong motivators and more important than income. (27) None of the socio-demographic parameters that were used to cross-relate

the level of motivation among healthcare workers were found to be statistically significant. The findings were in contrast with the study done by Sato et al (2017). (28)

On looking at the level of motivation with job-related factors which were assessed through a four-point response scale. The findings were statistically significant for variables like “receiving the right amount of support and guidance from direct supervisors”, “receiving all the training necessary to perform the job”, “on working well with co-workers together” and “easy communication with members from all levels of organization”. It was seen that the response (22) for “appropriate recognition on performing well at regular work duties” was found to be statistically insignificant when associated with the level of motivation among health personnel. An effort was made to connect the motivational elements mentioned by the study participants to motivational theories in order to further explain them. Monetary support/incentives, promotion, security, and job assurance can be linked to the lower levels (that have physiological and safety) of Maslow’s needs pyramid. Good teamwork, communication, feedback, and appreciation are equivalent to the third level (love and belonging) of Maslow’s pyramid. Higher opportunities and training have an apparent association with the fourth level (self-esteem). Can be linked to the top-level (self-actualization). In comparison with Herzberg’s two-factor theory, Monetary support/incentives, and the promotion of good teamwork are hygiene factors, while higher opportunities and training are motivation factors that fulfill the criteria of an individual’s higher needs. Therefore, improving the level of motivation among health professionals requires more than just monetary incentives. Non-financial incentives are as important. Although motivating factors are country-specific, Willis-Shattuck et al. found that financial incentives are one of the key determinants for health workers in developing nations. (16) Nevertheless, alone it is not enough to motivate health personnel. Recognition, adequate resources, and infrastructure improve the morale of the health personnel automatically.

Conclusion

The goal of this study was to determine the motivational elements of healthcare workers and their level of motivation. The present study showed that not only financial but non-financial incentives are equally important for motivating health personnel. Factors like job-related, and health systems play a significant role in either motivating or demotivating any health personnel. Technicians were found to be highly motivated among all the study groups. The main motivating factors for the health personnel as stated by them was monetary support, incentives, and promotion followed by the provision of better resources and appreciation, feedback, and communication by seniors. Security, job assurance,

training, good teamwork, and proper management were also motivating factors for the study participants.

Thus, it should be emphasized once more that financial incentives alone do not serve as strong motivators. When human resource strategies are developed, non-financial incentives should also be considered. A job-satisfied health worker not only encourages his/her colleagues but also maintains a positive environment for the smooth functioning of all activities. When the health staff is not motivated and dissatisfied this directly affects the working of the institution or any health organization. Pleased and satisfied health personnel render excellent services not only to their patients but also to create a good working culture with their fellows.

Recommendation

Motivation is an ongoing continuous process that has to be sustained for organizational as well as individual growth. There should be good human resource management that has detailed knowledge about health personnel needs, wants, and areas of satisfaction. The pressure of attaining organizational goals should not be imposed on health personnel all the time, instead ways to motivate the workforce in an organization will help in enhancing the efficiency of health personnel which in turn will help in providing quality services to the patients that will automatically aid in achieving vision and mission of an organization/institution. Non-financial motivators like appreciation, teamwork, opportunities, feedback, professional growth, and training are equally important motivating reasons for health personnel. Providing the health staff with training opportunities for skill development, and providing them with adequate resources like equipment, and instruments will surely increase their satisfaction level. Words of appreciation by seniors and recognition of good work will also act as a strong motivator. Frequent brainstorming sessions and counselling of health personnel should be conducted for making them mentally strong and this may possibly aid in enhancing motivation. The management should make sure to provide a sense of belonging and connectedness to the health personnel.

Limitation of the study

Although attempts were made in the current study to ensure the quality of the data, the study's conclusions should nevertheless be interpreted considering the following constraints. The results of the current study have limitations because it used a limited sample size and was done at only one tertiary care facility. A multi-centric study should, if possible, be conducted in order to further analyze the results using a larger sample of healthcare experts. Since a self-reporting questionnaire was used in the study, biases such as misinformation and acquiescence could not be eliminated.

Relevance of the study

This study is highly relevant in the context of healthcare management, as it highlights the significance of both financial and non-financial incentives in motivating healthcare workers. Understanding the motivational factors for health personnel is essential for optimizing their performance and job satisfaction. It emphasizes the need for a holistic approach to human resource strategies in healthcare organizations.

Authors Contribution

All authors contributed equally in drafting the manuscript, critical review, and approving the final version to be published.

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References

- Robbins SP. Organizational Behavior. 9th edition. New Jersey: Prentice Hall; 2001. [https://www.scirp.org/\(S\(351jmbntvnsjt1aadkposzje\)\)/reference/ReferencesPapers.aspx?ReferenceID=1438505](https://www.scirp.org/(S(351jmbntvnsjt1aadkposzje))/reference/ReferencesPapers.aspx?ReferenceID=1438505)
- Buchbinder S, Shanks N. Introduction to Health Care Management. Sudbury, MA: Jones and Bartlett; 2007. https://samples.jbpub.com/9780763790868/90868_fmxx_final_withoutcropmark.pdf
- Lambrou, P., Kontodimopoulos, N., & Niakas, D. (2010). Motivation and job satisfaction among medical and nursing staff in a Cyprus public general hospital. *Human resources for health*, 2010; 8(26):1-9. <https://doi.org/10.1186/1478-4491-8-26>
- Ssengooba FR, Rahman SA, Hongoro C, et al. Health sector reforms and human resources for health in Uganda and Bangladesh: mechanism of effect. *Hum Resour Health*. 2007;5(3):1-13.
- Bennett S, Franco LM. Public sector reform and public sector health worker motivation: A conceptual framework. *Soc Sci Med*. 1999;54:1255–66.
- Weldegebriel Z, Ejigu Y, Weldegebriel F, Woldie M. Motivation of health workers and associated factors in public hospitals of West Amhara, Northwest Ethiopia. *Patient Prefer Adherence*. 2016;10:159–69.
- Leonard, K.L.; Masatu, M.C. Using the Hawthorne effect to examine the gap between a doctor's best possible practice and actual performance. *J. Dev. Econ*. 2010, 93, 226–234.
- George MS, Pant S, Devasenapathy N, Ghosh-Jerath S, Zodpey SP. What motivates and demotivates community health workers in urban settings: a qualitative study in the urban slums of Delhi, India. *WHO South-East Asia J Public Health*. 2017;6(1):82–89.
- Pattarine P. The assessment of motivation in the saint Paul hotel employees. Graduate School University of Wisconsin-Stout May. Available from: http://www2.uwstout.edu/content/lib/thesis/2002/2002p_etcharakp.pdf.
- Abiodun FT, Odumade AO. Effects of the external consequences of organizational activities on employee motivation. Ronneby: Blekinge Institute of Technology; 2007.
- Smith J. Motivational Questionnaire, 2017 @ My Skills Profile.
- Jaiswal P, Singhal AK, Gadpayle AK, Sachdeva S, Padaria R. Level of motivation amongst health personnel working in a Tertiary care Government Hospital of New Delhi, India. *Indian J Community Med*. 2014;39:235-40.
- Agepong IA, Anafi P, Asiamah E, Ansah EK, Ashon DA, Narh-Dometey C. Health worker (internal customer) satisfaction and motivation in the public sector in Ghana. *Int J Health Plann Manage*. 2004;19:319–36.
- Manongi RN, Marchant TC, Bygbjerg IC. Improving motivation among primary health care workers in Tanzania: A health worker perspective. *Hum Res Health*. 2006;4:6.
- Nikic D, Arandjelovic M, Nikolic M, Stankovic A. Job satisfaction in health care workers. *Acta Medica Medianae*. 2008;47:9–12.
- Willis-Shattuck M, Bidwell P, Thomas S, Wyness L, Blaauw D, et al. Motivation and retention of health workers in developing countries: A systematic review. *BMC Health Serv Res*. 2008;8:247.
- Armstrong M. Armstrong's handbook of human resource management practice. 12th edn. Kogan Page: London; 2012.
- Afolabi A, Fernando S, Bottiglieri T. The effect of organizational factors in motivating healthcare employees: a systematic review. *British Journal of Healthcare Management*. 2018;24(12).
- Bratton J, Sawchuk P, Forshaw C, et al. Work and organizational behavior. 2nd edn. Palgrave Macmillan: Basingstoke; 2010.
- Sullivan EJ, Garland G. Practical leadership and management in healthcare. 2nd edition. Pearson Education Ltd: Harlow; 2013.
- Ibeziako OJ, Chabikuli ON, Olorunju S. Hospital reform and staff morale in South Africa: a case study of Dr. Yusuf Dadoo Hospital. *South Africa Family Practice*. 2013;55(2):180–185.
- Ojaka D, Olango S, Jarvis J. Factors affecting motivation and retention of primary health care workers in three disparate regions in Kenya. *Hum Resour Health*. 2014;12:33.
- Purohit B, Bandyopadhyay T. Beyond job security and money: driving factors of motivation for government doctors in India. *Hum Resour Health*. 2014;12:125.
- Chimwaza et al. What makes staff consider leaving the health service in Malawi? *Human Resources for Health*. 2014;12:17.
- Marinucci F, Majigo M, Wattleworth M, et al. Factors affecting job satisfaction and retention of medical laboratory professionals in seven countries of Sub-Saharan Africa. *Hum Resour Health*. 2013;11:38.
- Chandler CIR, Chonya S, Mtei F, et al. Motivation, money, and respect: a mixed-method study of Tanzanian non-physician clinicians. 2009;68(11):2078–2088.
- Peters et al. *Human Resources for Health* 2010, 8:27.
- Sato M, Maufi D, Mwingira UJ, Leshabari MT, Ohnishi M, Honda S (2017) Measuring three aspects of motivation among health workers at primary level health facilities in rural Tanzania. *PLoS ONE*. 2017;12(5): e0176973.

Tables

TABLE 1 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE STUDY PARTICIPANTS

Characteristics	Study Participants (N-150)	
	Number n	Percentages
Gender		
Male	73	48.7
Female	77	51.3
Religion		
Hindu	129	86
Muslim	5	3.3
Sikh	12	8
Christian	4	2.7
Social Group		
General	129	86
OBC	21	14
Type of Family		
Nuclear	96	64
Joint	36	24
Living alone	18	12
Marital Status		
Living Together	77	51.3
Not living together	6	4
Widow/Widower	2	1.3
Unmarried	65	43.3
Total no. of family members		
Large (>6)	37	24.7
Small (<6)	113	75.3

TABLE 2: RESPONSE BY THE STUDY PARTICIPANTS TO JOB RELATED FACTORS

Job related factors	Study Participants		
	Doctors n (%)	Nurses n (%)	Technicians n (%)
Received the right amount of support and guidance from your direct supervisors			
Always	16 (32.0)	38 (76.0)	25(50.0)
Often	20 (40.0)	7 (14.0)	21 (42.0)
Sometimes	12 (24.0)	4 (8.0)	4 (8.0)
Never	2 (4.0)	1 (2.0)	0 (0.0)
Received all the necessary trainings for performing job			
Always	15 (30.0)	39 (78.0)	26 (52.0)
Often	22 (44.0)	7 (14.0)	13 (26.0)
Sometimes	12 (24.0)	3 (6.0)	11 (22.0)
Never	1 (2.0)	1 (2.0)	0 (0.0)
Received appropriate recognition on performing well at regular work duties			
Always	11 (22.0)	33 (66.0)	20 (40.0)
Often	19 (38.0)	9 (18.0)	20 (40.0)
Sometimes	19 (38.0)	4 (8.0)	10 (20.0)
Never	1 (2.0)	4 (8.0)	0 (0.0)
Working together well with co-workers			
Always	16 (32.0)	40 (80.0)	34 (68.0)
Often	30 (60.0)	9 (18.0)	10 (20.0)
Sometimes	3 (6.0)	1 (2.0)	6 (12.0)
Never	1 (2.0)	0 (0.0)	0 (0.0)
Able to easily communicate with members from all levels of this organization			
Always	16 (32.0)	31 (62.0)	17 (34.0)
Often	22 (44.0)	10 (20.0)	23 (46.0)
Sometimes	11 (22.0)	6 (12.0)	9 (18.0)
Never	1 (2.0)	3 (6.0)	1 (2.0)

TABLE 3: RANKING OF MOTIVATION COMPONENTS AMONG DIFFERENT GROUPS OF STUDY PARTICIPANTS

Components of Motivation	Study Participants								
	Doctors (n-50)			Nurses (n-50)			Technicians (n-50)		
	Mean (±SD)	Median (IQR)	Ranks	Mean (±SD)	Median (IQR)	Ranks	Mean (±SD)	Median (IQR)	Ranks
Drive	3.14 (±.53)	3.25 (0.75)	IV	3.25 (±.55)	3.25 (0.50)	III	3.02 (±.52)	3 -1	V
Control	3.07 (±.54)	3 -0.75	V	3.24 (±.44)	3.25 (0.50)	IV	3.28 (±.36)	3.25 (0.50)	III
Challenge	3.38 (±.41)	3.33 (0.33)	II	3.31 (±.46)	3.33 (0.67)	II	3.4 (±.38)	3.33 (0.67)	II
Relationship	3.18 (±.41)	3.2 -0.5	III	3.23 (±.47)	3.2 -0.6	V	3.27 (±.37)	3.4 -0.6	IV
Rewards	3.53 (±.38)	3.50 (0.50)	I	3.39 (±.46)	3.5 -0.56	I	3.46 (±.46)	3.5 -1	I
Motivational Index	3.26 (3.17-3.35)			3.28 (3.17-3.39)			3.29 (3.21-3.36)		

TABLE 4: ASSOCIATION BETWEEN LEVEL OF MOTIVATION & JOB-RELATED FACTORS

Job related Variables		Level of motivation among study participants			p value
		Low	Mod.	High	
Receive right amount of support and guidance from direct supervisors	Always	2(2.5) (33.3)	34(43.0) (42.0)	43(54.4) (68.3)	<0.001
	Never	2(66.7) (33.3)	1(33.3) (1.2)	0(0.0) (0.0)	
	Often	2(4.2) (33.3)	35(72.9) (43.2)	11(22.9) (17.5)	
	Sometimes	0(0.0) (0.0)	11(55.0) (13.6)	9(45.0) (14.3)	
Receive all the trainings necessary to perform job	Always	3(3.8) (50.0)	37(46.3) (45.7)	40(50.0) (63.5)	0.038
	Never	1(50.0) (16.7)	0(0.0) (0.0)	1(50.0) (1.6)	
	Often	2(4.8) (33.3)	26(61.9) (32.1)	14(33.3) (22.2)	
	Sometimes	0(0.0) (0.0)	18(69.2) (22.2)	8(30.8) (12.7)	
Appropriate recognition on performing well at regular work duties	Always	2(3.1) (33.3)	31(48.4) (38.3)	31(48.4) (49.2)	0.115
	Never	1(20.0) (16.7)	2(40.0) (2.5)	2(40.0) (3.2)	
	Often	1(2.1) (16.7)	25(52.1) (30.9)	22(45.8) (34.9)	
	Sometimes	2(6.1) (33.3)	23(69.7) (28.4)	8(24.2) (12.7)	
On working well with co-workers together	Always	2(2.2) (33.3)	41(45.6) (50.6)	47(52.2) (74.6)	0.026
	Never	0(0.0) (0.0)	1(100.0) (1.2)	0(0.0) (0.0)	
	Often	3(6.1) (50.0)	32(65.3) (39.5)	14(28.6) (22.2)	
	Sometimes	1(10.0) (16.7)	7(70.0) (8.6)	2(20.0) (3.2)	
Easy communication with members from all levels of organization	Always	1(1.6) (16.7)	29(45.3) (35.8)	34(53.1) (54.0)	0.022
	Never	1(20.0) (16.7)	2(40.0) (2.5)	2(40.0) (3.2)	
	Often	2(3.6) (33.3)	31(56.4) (38.3)	22(40.0) (34.9)	
	Sometimes	2(7.7)	19(73.1)	5(19.2)	

		(33.3)	(23.5)	(7.9)	
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TABLE 5: ASSOCIATION BETWEEN LEVEL OF MOTIVATION AND SOCIO-DEMOGRAPHIC FACTORS OF THE STUDY PARTICIPANTS

Socio- Demographic Variables		Level of motivation among study participants			p value
		Low	Mod.	High	
Gender	Male	3(4.1) (50.0)	41(56.2) (50.6)	29(39.7) (46.0)	0.878
	Female	3(3.9) (50.0)	40(51.9) (49.4)	34(44.2) (54.0)	
Religion	Hindu	5(3.9) (83.3)	69(53.5) (85.2)	55(42.6) (87.3)	0.849
	Others	1(4.8) (16.7)	12(57.1) (14.8)	8(38.1) (12.7)	
Caste	General	5(3.9) (83.3)	69(53.5) (85.2)	55(42.6) (87.3)	0.849
	OBC	1(4.8) (16.7)	12(57.1) (14.8)	8(38.1) (12.7)	
Marital status	Married	3(3.5) (50.0)	45(52.9) (55.6)	37(43.5) (58.7)	0.843
	Unmarried	3(4.6) (50.0)	36(55.4) (44.4)	26(40.0) (41.3)	
Family income	<50k	1(1.6) (16.7)	32(51.6) (39.5)	29(46.8) (46.0)	0.198
	50-1lac	0(0.0) (0.0)	23(60.5) (28.4)	15(39.5) (23.8)	
	1-5 lac	3(8.1) (50.0)	20(54.1) (24.7)	14(37.8) (22.2)	
	>5lac	2(15.4) (33.3)	6(46.2) (7.4)	5(38.5) (7.9)	
Level of education	Graduation	3(3.1) (50.0)	50(52.1) (61.7)	43(44.8) (68.3)	0.667
		3(5.7) (50.0)	30(56.6) (37.0)	20(37.7) (31.7)	
	Super-specialization	0(0.0) (0.0)	1(100.0) (1.2)	0(0.0) (0.0)	

Figures

FIGURE 1 SUGGESTIONS BY THE STUDY PARTICIPANTS FOR INCREASING MOTIVATION LEVEL

