

Linking decent work-derived general health well-being and workers' participation in health care practices: a SEM-LOGIT model on brickfield, West Bengal

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Abstract

Purpose – This paper aims at making modest attempts to find out the relationship between (1) workplace decent work environmental components and workers' general health well-being and (2) decent work-derived general health well-being of the workers and their chance of participating in occupational health care practice at the workplace.

Design/methodology/approach – The present cross-sectional study purposively chose the brickfield manufacturing sector of the Bankura and Hooghly districts of West Bengal, where 210 individuals of 12 units were selected randomly for the primary survey. The questionnaire was designed on the established scale of "The National Institute for Occupational Safety and Health Worker Well-Being Questionnaire" (NIOSH WellBQ, 2021). For analysis, the study applied Structural Equation Modelling (SEM) through SPSS-AMOS (Version 23) and Binary Logistic Regression in two steps.

Findings – The study detected that the brickfield workers responded maximum in favour of safety equipment at the workplace to ensure their general health well-being. Further, it traced out a 21% change in workers' general health well-being due to a 1% change in "workplace safety measures". In this regard, workers' participation in occupational health care practice at the enterprise found a relationship with their general health well-being, derived from workplace health-hygiene practice, a component of decent work.

Research limitations/implications – The study has found its limitation due to the intervention of the employers in employees' responses, for which it cannot avoid subjectivity. Additionally, the restricted number of samples with additional focus on only one sector due to time and resource constraints, though considered as representative, is also considered as another limitation of the study.

Practical implications – The study evidences its significance in front of the policymakers, lawmakers, entrepreneurs and academicians to access the voice of the workforce community facing occupational risks and hazards. Moreover, it is based on primary micro-empirical analysis, which seems very effective in framing any theoretical structure.

Social implications – The study may assist in identifying, preventing and reducing indecent work environment associated with health-related risks in the workplace and also in providing proper insight into the major components of the workplace related to general health well-being at the workplace.

Originality/value – The present study confirms a unique attempt to explore the relationship between decent work-derived general health well-being and workers' participation in health-hygiene practice at enterprises where brickfield manufacturing units of the two districts of West Bengal, i.e. Bankura and Hooghly, were taken for a microempirical cross-sectional study.

Keywords Decent work, General health well-being, Occupational health care, SEM-LOGIT

Paper type Research article



1. Introduction

Work and health have a two-way relationship that concerns occupational health-related well-being and confers decent work conditions (Sustainable Development Goal: 8) i.e. (1) sanctioning fair payment; (2) confirming safety-security in employment and working conditions; (3) assuring equal opportunities and treatment for all; (4) integrating social protection for the workers and their families; (5) offering prospects for personal development with social integration and (6) permitting workers' discussion for solidarity (ILO, 1999). Despite this, very few organizations, mainly organized ones, are concerned about arranging decent working environment and welfare facilities for their employees (Rajan, 2022). Besides, the lack of participants' awareness of health-hygiene promotion is found responsible for their occupational health hazards and related workplace ill-being in the form of accidents, illness, stress, excessive hours of work, etc. (<https://www.ilo.org/>). This can be echoed in the recent report of the ILO (2023), where it can be found that 2.3 million people around the world surrender to work-related accidents or diseases every year, and this links to over 6,000 deaths every single day (www.ilo.org). Subsequently, there are around 340 million occupational accidents, where 160 million are victims of work-related illnesses annually in the world. People in developing countries bear more than 80% of the global burden of occupational disease and injury, and India is found at high risk (The World Bank, 2007; Das, 2020).

In this regard, along with mining and construction workers, the brickfield workers are found as the most vulnerable unorganized working class, where work-related injuries are frequently found due to the indecent working environment and also the unhygienic living atmosphere (Das, 2015; Kumari, 2018). Hence, the concerned workers are found to suffer from respiratory problems, body aches, hearing loss etc. (Pangtey *et al.*, 2004; Das, 2015; Kumari, 2018; Saha *et al.*, 2020; Percy, 2021; Bajracharya *et al.*, 2021; Bansal *et al.*, 2022). Women brickfield workers, in addition thereto, are facing significant physical health discomforts and morbidity compared to their male counterparts due to their additional safety-security requirements, which may not be organized by the concerned enterprises due to some endogenous and exogenous issues (Khan and More, 2015; Kumari, 2018; Das, 2015, 2019). Moreover, as the sector is not regulated by any agency, the workers are deprived of different health security-related benefits (Ministry of Law and Justice, 2020). This conversely affects the workers, and out of depression, they feel demotivated to take part in any organizational initiative, mainly in health promotion.

Therefore, the study would like to find the answers to the research questions, like what is the relationship between (1) a decent work environment and workers' general health well-being in the brickfield sector? And (2) decent work-derived general health well-being, and the chance of brickfield workers to participate in occupational health care practice organized by the enterprise?

From the literature studies reviewed, it can be spotted that several studies (Doyal, 1990; Wooden *et al.*, 2009; Hasle *et al.*, 2010; McCaughey *et al.*, 2013; Pirani and Salvini, 2015; Hessels *et al.*, 2017; Jones *et al.*, 2019; Martins-Silva *et al.*, 2020; Uddin, 2021; Greiner *et al.*, 2022; Bentley *et al.*, 2023) stretched their efforts in the domain of health-related well-being. But, though, many studies (Jones *et al.*, 2019; Martins-Silva *et al.*, 2020; Su and Chan, 2023) carefully considered the decent work-related issues, very nominal (Shuck and Reio, 2014; Saks, 2022) till reviewed, were found to focus on the relationship between decent work and health-related well-being of the workforce and also its relationship with workers' participation in occupational health care practice. Additionally, no study reviewed, extended its effort to "brickfield", which is considered significant due to its risk-prone working environment.

Hence, to justify the research questions and to fill up the knowledge gap, the study primarily aims at (1) detecting the relationship between workplace decent work environment and workers' general health well-being in the brickfield sector and (2) assessing the relationship between decent work-derived general health well-being of the workers and their chance of taking participation in occupational health care practice at the workplace. More specifically, the study makes its effort to (1) assess the relationship between the workplace

policies and culture (decent work component) with workers' general health and well-being, (2) validate the relationship between workplace safety measures (decent work component) with workers' general health well-being, and (3) detect the relationship between workplace health and hygiene practices (decent work component) with workers' general health well-being.

The study in this regard has made its effort to extend an in-depth micro-empirical analysis in the "Bankura" and "Hooghly" districts of West Bengal, which are found to hold prestigious positions in brick manufacturing in the state but simultaneously are found to be severely affected by the occupational hazards.

Keeping in view the background of the study, four more sections can be framed. In [Section 2](#), it highlights the literature review and hypothesis formation. In [Section 3](#), the methodology is addressed, while in [Section 4](#), the results and discussion parts are highlighted. [Section 5](#) discloses the conclusion and recommendations of the study.

2. Literature review and hypothesis formation

[WHO \(2010\)](#) confers that a healthy workplace is one in which workers and managers work together to use a continual enhancement process to protect and promote all workers' health, safety and well-being. On account of a decent workplace environment, [WHO \(2010\)](#) provides four key areas that can have an influence on a healthy workplace, like (1) the physical work environment, (2) the psychosocial work environment, (3) personal health resources and (4) enterprise involvement in the community. Subsequently, the physical work environment influences employees' health and determines accidents and diseases. Thus, a healthy workplace means a sound physical environment that may lead to a decent life (ILO, WHO; WASH, 2018–2025 Agenda). Some major aspects of workplace physical environmental components are workplace design; basic services; guarding of machines and moving parts; housekeeping; material handling; pure drinking water; sanitation; hygiene services; restrooms; electricity; ergonomics; control of dust, managing sound and air pollution; ventilation; heat; waste management; toxic chemicals; hazardous waste handling; safety guidelines etc. The qualitative standard maintenance of these physical environmental components, hence is required to ensure decent work conditions [1] ([Díaz-Carrión and Romero, 2020](#)). Therefore, meaningful work with a set of favourable decent work environmental conditions positively influences people's holistic well-being ([Su and Chan, 2023](#)) and describes physical working conditions, living conditions, health-safety issues, social justice, equality, etc. ([Chant, 2013](#); [Webster et al., 2016](#); [Dery and Bisung, 2022](#)).

The workplace physical environment should be empty of hazards as much as possible to provide healthy and decent work for the workforce ([Asumeng et al., 2015](#)). Several studies ([Hafee et al., 2019](#); [Bayram, 2019](#); [Alam et al., 2022a, b](#)) have shown that a decent work environment, like (1) workplace culture, workplace respect, job recognition, employer trust, superior support, work values, earning satisfaction, i.e. Workplace Policy and Culture, (2) safety training, work safety resources, safety audit, safety equipment, safety climate, i.e. Safety Measures and (3) safe drinking water, first aid, sanitization, namely, Clean toilet and bathroom, clean basin and toilet soap and rest room, i.e. Health and Hygiene Practices have significant relation with the workers' health-related well-being.

(1) Workplace culture, policies and health of workers

[Hafee et al. \(2019\)](#) claim that workplace culture and behavioural environmental factors can positively affect employees' health. Literature ([Mastroiann and Torberg-Walker, 2014](#)) endorsed that well-being is enhanced by work interactions with trust and collaboration where participants can enjoy respect and valuable positions. Thus, lack of interaction between well-being and health behaviour hampers justice and empathy towards the employees ([Mastroiann and Torberg-Walker, 2014](#)). Hence, a respectful workplace culture positively affects employee engagement and employee well-being, while leaders' interference at work is negatively

associated with occupational well-being (Willett *et al.*, 2023). Considering the gender perspective, literature (Peterson, 2004; Seymour and Dupre, 2008; Coduti *et al.*, 2015) supports that cultural and environmental aspects of work have a significant connection with women's health outcomes, while supervision and management factors of the organization have connectivity with men's health outcomes. *Circumstantially*, the income potential of an enterprise is related to health care and high life satisfaction for employees (Hubler, 2019).

(2) Workplace safety measures and workers' health

Literature (Bayram, 2019; Mujtaba *et al.*, 2023) claim that effective safety and health measures have a positive influence on workers' occupational health and safety. Likewise, labour inspection confirms improvement of working conditions of employees (*ibid*). Connecting this issue, training and occupational safety measures serve the aim of protecting employees' physical, psychological and social health (Sari, 2009; Oakman *et al.*, 2018; Iavicoli *et al.*, 2020).

(3) Workplace health and hygiene practices and workers' health

Overall, individual hygiene and first aid are some of the most effective ways to provide safety and health in working life, which can decrease health-related illness and risks (Sari, 2009). Earlier studies (WHO; Arbogast *et al.*, 2016; Abrampah *et al.*, 2017; Bahadur *et al.*, 2018; Zivich *et al.*, 2018; Alam *et al.*, 2022a, b) recognized the effectiveness of sanitization infrastructures and hygiene practices on the quality of employee health and occupational safety in workplaces. Hence, access to a clean toiletry system is an important occupational health measure (Ongonge and Ngeno, 2022; Johnson and Fujishiro, 2023). Additionally, a lack of purified water with sanitation has adverse effects on overall health and well-being-related issues (Schmitt *et al.*, 2018). Lack of sanitation and hygiene facilities in the unorganized sector is found to be worse than in the formal sector (Manimekalai, 2021), which makes the informal women workers more exposed to health-related risks than others (Kim and Kwak, 2017; Dery *et al.*, 2023).

(4) Decent work-derived general health, well-being and occupational health care practice

Participation in stress management and employee assistance programs reduces vulnerability to stress-related physical and mental health problems and improves the ability to cope with the stressors (Mackie *et al.*, 2001). High-engagement group employees demonstrate higher personal accomplishment (Shuck and Reio, 2014; Saks, 2022) and physical health outcomes (Cipriano *et al.*, 2024). But a toxic workplace environment negatively affects the employee engagement in health promotion programs (Rasool *et al.*, 2020). Literature (Ledikwe *et al.*, 2018; Sargent *et al.*, 2018; Lawani *et al.*, 2023) here interestingly detects the positive intention of women workers to participate in workplace health wellness programs more than men workers.

Considering the issue, the present study frames the following hypotheses.

- H01. Workplace policies do not have a significant relationship with the general health well-being of workers.
- H02. Workplace safety measures do not have a significant relationship with general health well-being of workers.
- H03. Workplace health and hygiene practices do not have a significant relationship with general health well-being of workers.
- H04. No significant relationship is found between decent work-derived general health well-being of the workers and their chance of participating in occupational health care practice at the workplace.

Figure 1 demonstrates the conceptual framework of the inter-relationship between workplace decent work environmental components and workers' general health well-being.

3. Data collection and methodology

3.1 Data collection

The present cross-sectional empirical study takes both primary and secondary sources of data. For primary data collection, it conveniently selects Kotulpur and Joypur Blocks of Bankura and Goghat and Arambagh Blocks of Hooghly Districts of West Bengal from September 2023 to October 2023, while for secondary data, it adopts information from government reports (Ministry of Law and Justice, 2020), reports from international organizations like ILO, etc. unpublished dissertations, articles, newspaper etc.

3.2 Methodology

3.2.1 Sampling and sample. Bankura and Hooghly districts were selected purposively for having significant positions in brickfield manufacturing in West Bengal, manufacturing 60% of the total brick production of West Bengal (Ghosh, 2024). The fly ash brick-making project was grounded at Bankura Block-1 in 2015, which was an ideal and innovative project set up under MGNREGS (Mahatma Gandhi National Rural Employment Guarantee Scheme) for the first time in West Bengal (Chatterjee, 2016). Side-by-side, Hooghly district acquired the 3rd position in brick manufacturing in West Bengal (<https://indiankanoon.org/doc/63582089/>).

From the total of 62 brickfield manufacturing units and 2,200 workers in the said two districts of West Bengal (District Industry Centers of Bankura and Hooghly), the study has purposively selected 12 units, considering the condition that the units apply occupational health care practice” for their workers. From the units, therefore, 220 workers (85 from Kotulpur block, 70 from Joypur, 45 from Goghat and 20 from Arambagh) [2] (<https://www.wallstreetmojo.com/sample->

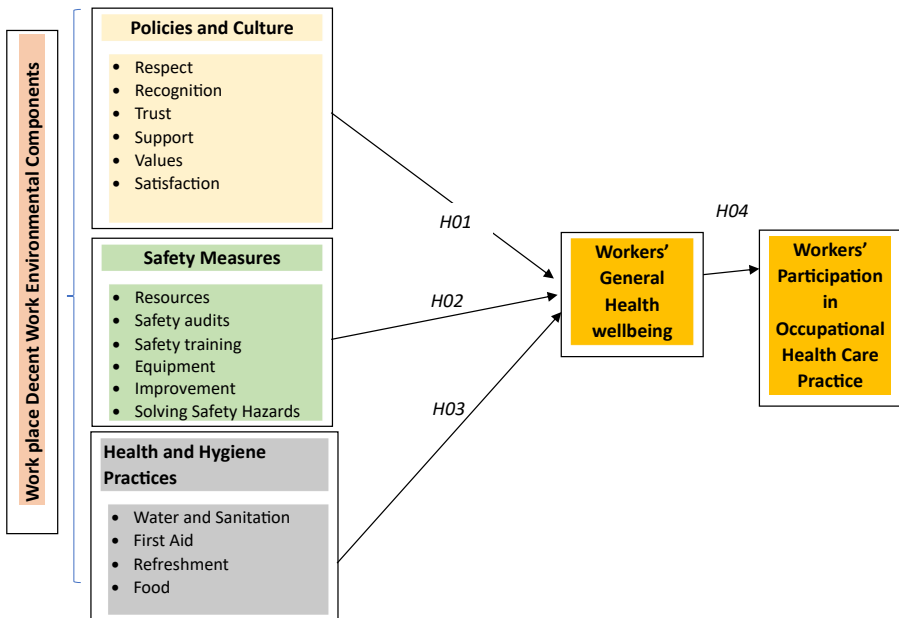


Figure 1. Decent work-derived general health well-being and workers participation in occupational health care practice in enterprise. Source: Authors' elaboration

size-formula/) were selected randomly. Out of the sample respondents, 10 responses were found incomplete and hence were rejected. Table 1 reflects the block-wise sample collected from Bankura and Hooghly districts.

3.2.2 Tools for data collection. A total of 18 items were used in the field survey questionnaire to capture the perception of the brickfield workers regarding workplace policy and culture, workplace safety measures, workplace health and hygiene practices and workers' general health status through the established scale of NIOSH-WellBO (2021) (<https://www.cdc.gov/>). The National Institute for Occupational Safety and Health Worker Well-Being Questionnaire (NIOSH-WellBQ, 2021) determines "workers' well-being" as holistic well-being as well as simple-to-measure "workplace well-being" or "work-related" well-being. Thus, this scale is used to measure the workers' general health-related well-being. In this respect, a 5-point rating scale was used to collect the respondents' opinions, like 5 = Strongly disagree, 4 = Disagree, 3 = Neutral, 2 = Agree and 1 = Strongly agree (Table: A-1). Apart from the structured questionnaire, the study also opts for unstructured interviews, as many of the respondents do not have an adequate literacy level. Therefore, participants' lower literacy level is carefully handled by the interviewer's expert knowledge to get a valid and unbiased response. Thus, the study employed mixed methods in data collection, combining both qualitative and quantitative approaches.

3.2.3 Strategy of the analysis. The study is structured with two steps of data analysis. Firstly, it aims at determining the relationship between workplace decent work environmental components and workers' general health well-being. Secondly, it focuses on the relationship between the decent work-derived general health well-being of the workers and their chance of participating in occupational health care practices at the workplace.

- (1) Detecting the relationship between workplace decent work environmental components and workers' general health well-being

Structural Equation Modelling (SEM) method was used to analyse the relationship between measured variables and latent constructs (Path Analysis) (Fan *et al.*, 2016) following confirmatory factor analysis and path analysis.

Confirmatory Factor Analysis (CFA): CFA is a tool that a researcher can use to reduce the overall number of observed variables into latent factors based on the commonalities within the data (Fan *et al.*, 2016). Therefore, the study examined the existing dataset to evaluate the construct validity of this instrument using CFA on the latent constructs.

Path analysis: Path analysis is used to find out the causal relationship among variables by creating a path diagram (Lleras, 2005; Fan *et al.*, 2016). Thus, the study used it to examine the consequences of the hypothesized model and the relationship between the independent variables (decent work environmental components) and dependent variables (workers' general health well-being).

- (2) Estimating the relationship between decent work-derived general health well-being and the chance of workers' participation in occupational health care practice at the workplace.

Table 1. Block-wise sample collected

Particulars	Kotulpur block	Joypur block	Goghat block	Arambagh block
Brick units	5	3	2	2
Population	220	120	68	74
Sample	85	70	45	20
Rejected	10			
Total sample size = 210 (n)				

Source(s): Primary Survey (September 2023 to October 2023)

The binary logistic regression ($\log [p(X)/(1-p(X))] = \beta_0 + \beta_1x_1 + \beta_2x_2 + \dots + \beta_kx_k$) model is applied in this study to understand the relationship between decent work-derived general health well-being and the chance of workers' participation in occupational health care practice at the workplace. This estimates the maximum likelihood where workers' participation in occupational health care practice (women participants = 1, men participants = 2) is the dependent variable and decent work-derived general health well-being of the workers is the independent variable. Therefore, latent variables are introduced into the Logit model for setting up the SEM-Logit model to explore the chance of workers' participation in occupational health care practice depending on the general health well-being.

For the analysis, SPSS software (Version 20) is used, while for verification of the model path analysis (SEM) method in the AMOS (Version 23) is used.

The study has found its limitation due to the intervention of the employers in employees' responses, for which it cannot avoid subjectivity. Additionally, due to time and resource constraints, the study has to consider a restricted number of samples with only one sector, which can be considered as another limitation. Hence, for further analysis, the study can opt for other sectors, a specific group of people, or other dimensions of health-related well-being, like psychological, physical state, etc., of the workers.

4. Results and discussion

4.1 Responses on decent work environment

The study focused on the relationship between workplace decent work environmental components and workers' general health well-being and classified the responses on decent work into three constructs, namely (1) Workplace Policy and Culture (Workplace Respect, Job Recognition, Employer Trust, Superior Support, Workplace Values, Earning Satisfaction) (2) Safety Measures (Work Resources, Solving Safety Hazards, Safety Audits, Safety Training, Safety Equipment, Safety Improvement) and (3) Health and Hygiene Practices (Safe Drinking Water, First Aid, Restroom, Tiffin room, Clean Toilet-bathroom, Handwash). The response pattern of these observed variables is shown in [Table 2](#).

As per [Table 3](#), both the men and women participants were found to hold maximum average response in favour of all the items under the "Safety Measure".

4.1.1 *Result of CFA*. The 18 observed variables ([Table 4](#)) measured 3 latent constructs – (1) Workplace Policy and Culture (F1), (2) Safety Measures (F2) and (3) Health and Hygiene Practices (F3) – which were the independent variables, and workers' General Health Well-being was the dependent variable. The reliability and validity of the scale were measured through Cronbach's alpha value (>0.7) and Confirmatory Factor Analysis (CFA) to test whether the 18 measured variables [workplace respect, superior support, employer trust, job recognition, earning satisfaction, work values (Workplace Policy and Culture); safety training, work resources, safety audit, safety equipment, improve safety, solve safety hazards (Safety measures); safe drinking water, first aid, clean toilet and bathroom, clean basin and toilet soap, tiffin room, rest room (Health and Hygiene Practices) fit a hypothesized measurement model or not.

The Cronbach's (alpha) value hence was detected as 0.792, which confirmed the reliability of the items. It shows the reliability statistics of the scale.

4.1.2 *Validity*. CFA outcomes for the construct of workplace physical environment were presented with the help of 3 factors, namely Factor 1: Policy and Culture, Factor 2: Safety Measures and Factor 3: Health and Hygiene Practices. 2 items from Factor 1 (earning satisfaction and work values), 3 items from Factor 2 (work resources, safety training and safety equipment) and 3 items from Factor 3 (first aid, tiffin room, rest room) were removed for the model fitness of the study. Therefore, the measurement model for this study is perfectly fit and valid, as shown in [Figure 2](#) and [Tables 4-7](#), respectively.

Table 2. Responses on the components of decent work

Observed variables	Men (N = 112)		Women (N = 98)	
	Mean	Std. deviation	Mean	Std. deviation
Workplace Respect	2.68	0.738	2.14	0.995
Job Recognition	2.25	0.973	2.09	0.996
Employer Trust	1.96	0.995	1.86	0.995
Superior Support	2.61	0.775	2.14	0.995
Workplace Values	1.50	0.870	1.47	0.852
Earning Satisfaction	1.52	0.880	2.04	1.004
Work Resources	2.53	0.838	2.05	0.988
Solving Safety Hazards	2.13	0.991	2.08	1.002
Safety Audits	2.71	0.703	2.80	0.609
Safety Training	2.21	0.981	2.55	0.839
Safety Equipment	2.93	0.373	2.98	0.202
Safety Improvement	2.78	0.611	2.72	0.670
Safe Drinking Water	2.42	0.897	2.59	0.810
First Aid	2.38	0.921	2.57	1.227
Restroom	1.70	0.957	1.62	0.925
Tiffin room	1.10	0.402	1.06	0.281
Clean Toilet-bathroom	1.20	0.598	1.27	0.682
Handwash	1.10	0.424	1.12	0.482

Source(s): Authors' calculation based on Primary Survey (September 2023 to October 2023)

Table 3. Standardized regression weights: (Group number 1 - Default model)

Variables			Estimate
Job recognition	<—	F1	0.677
Work value	<—	F1	0.641
Work respect	<—	F1	0.972
Employer trust	<—	F1	0.749
Superior support	<—	F1	0.960
Earning satisfaction	<—	F1	-0.757
Solve safety hazard	<—	F2	0.612
Improving safety	<—	F2	0.676
Safety equipment	<—	F2	0.338
Safety audits	<—	F2	0.738
Work resource	<—	F2	0.263
Safety training	<—	F2	0.408
Restroom	<—	F3	0.176
Tiffin room	<—	F3	0.117
Handwash	<—	F3	0.405
Toilet bathroom	<—	F3	0.387
First Aid	<—	F3	0.783
Safe drink water	<—	F3	0.877

Source(s): Authors' calculation based on Primary Survey (September 2023 to October 2023)

Table 6 describes validity (Gaskin and Lim, 2016) measurement indicators for all the three scales. Composite Reliability (CR) for all the constructs was acceptable with >0.7 results. All the CR values were greater than Average Variance Extracted (AVE) values, which were also greater than 0.5. McDonald's Construct Reliability [MaxR(H)] was found to be >0.7 (Malkewitz *et al.*, 2023) for all the constructs. The last four conditions, as recommended by Hair *et al.* (2009), implied that the convergent validity for all the constructs was satisfied.

Table 4. Regression weights: (Group number 1 - Default model)

Variables			Estimate	S.E.	C.R.	p	Label
Work respect	<—	F1	2.462	0.201	12.238	***	
Superior support	<—	F1	1.860	0.151	12.302	***	
Employer trust	<—	F1	1.371	0.139	9.878	***	
Job recognition	<—	F1	1.000				
Safety audits	<—	F2	0.752	0.105	7.158	***	
Improving safety	<—	F2	0.615	0.088	6.984	***	
Solve safety hazard	<—	F2	1.000				
Safe drink water	<—	F3	0.587	0.116	5.060	***	
Toilet bathroom	<—	F3	1.014	0.139	7.288	***	
Handwash	<—	F3	1.000				
General health	<—	F1	0.218	0.123	1.775	0.076	
General health	<—	F2	0.292	0.113	2.582	0.010	
General health	<—	F3	0.817	0.153	5.322	***	

Note(s): Significance of correlations: † $p < 0.100$; * $p < 0.050$; ** $p < 0.010$; *** $p < 0.001$

Source(s): Authors' calculation based on Primary Survey (September 2023 to October 2023)

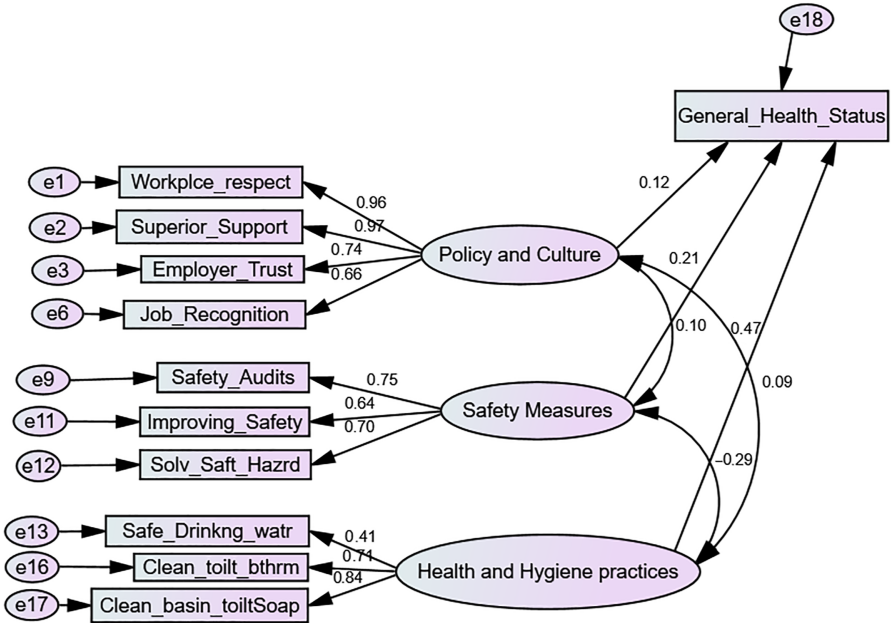


Figure 2. Measurement model with path analysis. Note: Minimum was achieved; Chi-square = 87.786; Degrees of freedom = 39; Probability level = 0.000. Source: Primary Survey (September 2023 to October 2023)

Discriminant validity for the construct workplace physical environmental components was also satisfied since all the Maximum Shared Variance (MSV) values were less than AVE.

Table 7 shows that CMIN/DF was 2.251 (threshold is between 1 and 3), CFI was 0.954 (threshold is > 0.95) and SRMR was 0.066 (threshold is < 0.08). Hence, all were found excellent. In other cases, for RMSEA (< 0.06) and PClose (> 0.05), the results were found to be 0.077 and 0.020, respectively, which was meant to be acceptable. Therefore, our three constructs were ready for further analysis.

Table 5. Standardized regression weights: (Group number 1 - Default model)

			Estimate
Work respect	<—	F1	0.962
Superior support	<—	F1	0.974
Employer trust	<—	F1	0.743
Job recognition	<—	F1	0.665
Safety audits	<—	F2	0.754
Improving safety	<—	F2	0.637
Solve safety hazard	<—	F2	0.695
Safe drink water	<—	F3	0.409
Toilet bathroom	<—	F3	0.705
Handwash	<—	F3	0.842
General health	<—	F1	0.118
General health	<—	F2	0.212
General health	<—	F3	0.474

Source(s): Authors' calculation based on Primary Survey (September 2023 to October 2023)

Table 6. Validity status of measurement model

	CR	AVE	MSV	MaxR(H)	F1	F2	F3
F1	0.850	0.576	0.011	0.971	0.759		
F2	0.779	0.576	0.084	0.749	0.104	0.613	
F3	0.711	0.599	0.084	0.796	0.087	-0.290**	0.632

Note(s): CR: Composite Reliability; AVE: Average Variance Extracted; MSV: Maximum Shared Variance; Max R(H) Maximum Reliability; F1: Factor 1 (Policy and Culture); F2: Factor 2 (Safety Measures); F3: Factor 3 (Health and Hygiene Practice)

Source(s): Authors' calculation based on Primary Survey (September 2023 to October 2023)

Table 7. Model fit measures

Measure	Estimate	Threshold	Interpretation
CMIN	87.786	—	—
DF	39	—	—
CMIN/DF	2.251	Between 1 and 3	Excellent
CFI	0.954	>0.95	Excellent
SRMR	0.066	<0.08	Excellent
RMSEA	0.077	<0.06	Acceptable
PClose	0.020	>0.05	Acceptable

Source(s): Authors' calculation based on Primary Survey (September 2023 to October 2023)

Table 4 shows that the value of coefficient regression for general health and policy and culture (F1) was 0.118 at a probability value of 0.76, while the standard estimated value was 0.123. The values showed that workplace policy and culture had no relationship with workers' general health-related well-being (H_{01} is accepted). The regression coefficient value of safety measures (F2) and general health-related well-being was 0.212, while the estimated value and the probability value were 0.113 and 0.010, respectively, which was significant. It meant a positive and significant relationship between safety measures (F2) and general health-related well-being (H_{02} is rejected). The regression coefficient between health and hygiene practices and general health was 0.474; the standard estimate and probability value were 0.15 and 0.000,

Table 8. Chance of workers’ participation in occupational health care practice at the workplace in relation to safety measures and health-hygiene measures

	B	S.E.	Wald	Df	Sig	Exp(B)
Safety_mears	-0.042	0.478	0.008	1	0.930	0.959
Health_hygin	0.860	0.383	5.045	1	0.025	2.362
Constant	-1.491	1.109	1.810	1	0.179	0.225

Note(s): B = regression coefficient; S.E. = standard error; Sig. = significance; EXP(B) = the exponent of B
* Significant at 99% level

Source(s): Authors’ calculation based on primary survey (September, 2023 to October, 2023)

respectively. This meant that a positive and significant relationship existed between health and hygiene practices and general health-related well-being (H_{03} is rejected).

Path analysis results indicated that a 1% change in safety measures generated a 21% change in general health, and a 1% change in health and hygiene practice generated a 47% change in general health well-being.

Therefore, the two components of decent work, i.e. safety measures and health and hygiene practices were considered for further analysis, where the study examined the relationship between decent work-derived general health well-being and the chance of workers’ participation in occupational health care practices at the workplace. Here, the decent work components, “safety measures-derived general health well-being” and “health-hygiene practices-derived general health well-being”, were taken as independent variables, and the chance of workers’ participation in occupational health care practice was taken as the dependent variable. In this regard, mean scores of each of the components of decent work (safety measures and health-hygiene practices) were taken in the analysis for simplification.

4.1.3 Binary logistic regression.

$$WPOHP = a_0 + a_1SM + a_2HHM + U_{li}$$

where WPOHP, i.e. workers’ participation in occupational health care practice where WPOHP = 1 denotes women participation in occupational health care practice, and WPOHP = 0 denotes men participation in occupational health care practice [3].

SM = Safety Measures.

HHM = Health and Hygiene measures.

Table 8 endorses the fact that the workers’ participation in occupational health care practice has a relationship with health-hygiene practices-derived general health well-being of workers. In this regard, the women workers expressed more chance (0.860 times) to participate in occupational health care practice at the enterprise than their male counterparts. The odds ratio in favour of women’s participation in occupational health care practice in the brickfield manufacturing unit was found to be increased by 2.362% compared to the men participants.

5. Discussion

Workplace decent work environmental factors positively affect employee’s general health well-being (Hafee *et al.*, 2019; Litchfield, 2021). The study discovers that workplace policy and culture, i.e. workplace respect, superior support, employer trust, job recognition, do not have a significant relationship with the general health of employees (Young and Daniel, 2003; Clarke and Mahadi, 2017). This concept was opposed by Mastroianni and Torberg-Walker (2014), where perceptions of health-related well-being of workers were enhanced with superior-subordinate interactions related to collaborative support, trust and respect. In

addition thereto, it is found that “workplace safety measures” like safety audits, keeping records of safety hazards etc. have a significant influence on the general health status of workers, mainly related to the accident-prone sector like brickfield manufacturing (Mujtaba *et al.*, 2023). Moreover, improvement of workplace health and hygiene practices (safe drinking water, clean toilets and bathrooms, and clean basins and toilet soap) improves the quality of employee health (WHO, Abrampah *et al.*, 2017). The study has endorsed women’s greater involvement in occupational health practices compared to their male counterparts, which argued in favour of a decent work environment-derived general health well-being, which motivates them to participate in the health care practices by the organization (Ledikwe *et al.*, 2018; Sargent *et al.*, 2018). Workplace health-hygiene maintenance additionally shapes out its standard requirement in the pandemic situation, which rigorously changes people’s lifestyle and their working conditions (Peters *et al.*, 2022). As the study is conducted in the post COVID-19 situation, individuals in the workforce, especially women, are much more interested in having handwash facilities at their workstations, which seems a vital requirement to maintain health-hygiene standards during COVID-19 (Dwipayanti *et al.*, 2021; Batu *et al.*, 2024). This resultantly forces organizations to reshape, reassess, redesign and rethink the decent work environment at the workplace (Lara and Pinca-Atutubo, 2021).

6. Conclusion and recommendations

Brickfield workers are found deprived of the decent work environment, i.e. workplace safety measures and workplace health and hygiene practices, which negatively affects their general health-related well-being and hinders participation in occupational healthcare practice. Thus, the improvement of decent work environmental components at the workplace can improve the overall general health of brick field workers. Workplace safety training, audits, equipment, etc., and cleanliness and hygiene through safe drinking water, first aid, clean toilets and bathrooms, clean basins, toilet soap, tiffin room, rest room, etc. encourage the brickfield units to opt for decent work environments for workplace well-being and general health well-being for employees there. Through the SEM-Logit Model, the study found that the improvement of health and hygiene practices at the workplace could increase the chance of women workers’ participation in occupational health care practices at the workplace. Therefore, to ensure betterment in women workers’ general health well-being, and also to increase participation in occupational health care practices at the workplace, more facilities mainly in sanitation-related issues (clean basins, toilet soap and water, handwash, etc.) are required at the workplace.

The brickfield workers suffered more from morbidity compared to the general population due to their nature of work and working environment. Therefore, enterprises should frame provisions for formal training, proper safety equipments and safe drinking water, handwash, sanitation facilities to ensure standardized maintenance of occupational health and safety at the workplace. It should recruit occupational health and safety inspectors to take care of workplace environments and should provide training to the supervisor to recognize and collect data on work-derived health issues at the workplace. Further, different government authorities, besides arranging social awareness programmes, etc., should take more care of framing related laws mainly for women participants so that the brickfield workers can work more safely with proper health insurance.

The study may assist in identifying, preventing and reducing indecent work environment associated with health-related risks in the workplace and also in providing proper insight into the major components of the workplace related to general health well-being at the workplace. Hence, the study evidences its significance in front of the policymakers, lawmakers, entrepreneurs and academicians to access the voice of the workforce community facing occupational risks and hazards. Moreover, it is based on micro-empirical analysis, which seems very effective in framing any theoretical structure.

Ethical compliance

Human participants were under ethical standards in the Helsinki Declaration, of 1964.

Data accessibility

Data of this study will be available on request to the corresponding author.

Notes

1. www.ilo.org and www.who.int

2. Sample size, $n = N * \frac{z^2 * p * (1-p)}{N - 1 + \frac{z^2 * p * (1-p)}{e^2}}$

Where n = sample size N = Population (found as 2,200), z = Critical value of the normal distribution at the required confidence level (at 95% confidence interval 1.96), p = sample proportion taken as 0.05, e = margin of error taken as 5% (<https://www.wallstreetmojo.com/sample-size-formula>).

3. All the workers of the present study were found engaged in occupational health care practice in enterprise.

Supplementary material

The supplementary material for this article can be found online.

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