

Employee wellbeing factors for improving occupational health and safety performance by small-scale electrical contractors in Zambia

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Abstract:

Small-scale electrical contractors are subjected to a plethora of occupational demands that negatively affect social, psychological, and physical wellbeing, with an adversative influence on employees' and firms' performance. Employee wellbeing is perceived to improve occupational health and safety (OH&S) in various construction projects. However, the literature indicates that limited studies have developed employee wellbeing factors for small-scale electrical contractors that can be used to improve OH&S in Zambia. Therefore, the study sought to assess the factors influencing employee wellbeing for small-scale electrical contractors in Zambia. The study adopted a qualitative research methodology to assess the factors that influence employee wellbeing by using a Delphi study in which 11 experts from the industry were engaged to come up with consensus. Findings indicate that there are twelve employee wellbeing factors essential for OH&S performance. The most highly influential factors are employee work conditions, work relationships, workplace stress management, social support systems, occupational health care, integrating wellness programs with OH&S management. The study recommends that the developed factors for employee wellbeing be adopted to effectively improve OH&S performance management in the Zambian electricity industry, reducing accidents, injuries, diseases, and fatalities.

Keywords: Employee wellbeing, factors, occupational health and safety, small-scale electrical contractors, Zambia

Introduction

The need to promote employee wellbeing and improve occupational health and safety (OH&S) performance at projects is a growing area of research and is critical in reducing the number of accidents, injuries, fatalities, diseases, and damage to property (Manu, 2020). However, the current state of employee wellbeing at projects shows a high risk of contracting diseases, fatalities and injuries (Mwanaumo & Mambwe, 2019). The wellbeing of employees has become one of the socio-determinants of health and if it lacks in employees, it results in harmful lifestyles that affect OH&S performance at workplaces (Downward, et al., 2020). However, Mustapha et al. (2016) and Ofori and Toor (2012) point out that the most affected of the employees with poor health and wellbeing are those employed under small scale contractors (SSCs) who are the bulk of contractors in any industry providing operative flexibility.

In the recent years, employee wellbeing was endorsed to be one of the measures that cross-cuts improving health of employees by the Healthy People 2020 whose goals were to prevent injuries, accidents, diseases, promoting health and improving the quality of life of employees (Kobau, et al., 2013). Also, the 3rd Sustainable Development Goal (SDG 3) on Health and Wellbeing infers that promoting safe and secure working conditions for all employees leads to improved OH&S performance by preventing and controlling certain diseases such as cancer and respiratory diseases project (2019). In addition, an increase in health by employees through the integration of OH&S interventions in employee-centred health care helps in achieving the SDG 3 (United Nations, 2019). When employee wellbeing is promoted, it prevents stress, creates positive and thriving working environments and encourages employee engagement and OH&S performance (CIPD, 2020). At a global level, employee wellbeing has been highly affected especially with regards to employees working with SSCs. The International Labour Organisation (ILO) (2019;1992) noted that most of the SSCs contribute to the strain on employee wellbeing as they fail to provide minimum and acceptable work conditions for the employees.

However, Zambia's wellbeing issues have not been significantly tabled concerning improving OH&S performance at projects, even though employee wellbeing has been brought globally as an important factor in reducing accidents, injuries, and disease (Mwanaumo & Mambwe, 2019). In Zambia, the high rate of accidents at projects, poor wages and salaries for employees, lack of access to proper health care, poor resource levelling, lack of qualified manpower, stressed employee, and burn-out affect the wellbeing of employees in small-scale contracting firms (Mambwe, et al., 2020). According to the International Labour Organisation (ILO) (2021), Mwanaumo et al. (2021) and the National Council for Construction (NCC) (2020), SSCs are plagued with lack of financial resources, staff shortages and competency of employees, including limited awareness of OH&S procedures, lack of equipment to effectively do work, and lack of access to medical care. These negatively affect employee wellbeing and increases physical, mental and social stress on employees. Thus, it is essential that employee wellbeing is integrated in the management and improvement of OH&S performance at all levels of construction in the electricity industry in Zambia.

Poorly rated employee wellbeing and low OH&S performance levels in SSCs are attributed to a failure of recognising the wellbeing factors that improve OH&S performance management that SSCs can use. Adopting employee wellbeing factors by SSCs in improving OH&S performance was significant as a measure; hence, the need to identify factors of employee wellbeing as measures to improve of OH&S performance in the Zambian electrical contractors' context. The purpose of the study was to assess the factors influencing employee wellbeing for small-scale electrical contractors in Zambia. An overview of the literature on the topic of discussion and the adopted methodology are presented. Findings and discussion, and finally the conclusion drawn from the study and recommendations are also shown.

Employee Wellbeing, Occupational Health and Safety and Small-scale Contractors

Various literature describes employee wellbeing differently, attributing to industry and the health context. However, there is no consensus around a single definition of wellbeing. Snizek et al. (2010) relates wellbeing to include social, mental and physical aspects of a person with provision of quality support systems from family, friends, and workplaces; positive and negative balance of life, optimism, satisfaction, personal growth; and the feeling of being healthy, having vitality and energy. On the contrary, Yaldiz, et al. (2018) and Rongen et al.

(2014) argued that any offering that strives to ensure that employees are safeguarded from physical harm or lower health risk factors, is significant to reach employee wellbeing. This study describes wellbeing, according to Diener et al. (2017), as being psychological and can be subjective, relating to how individuals assess their lives as being good and desirable, or undesirable and negative.

Further, several theories expound employee wellbeing such as Affective Events Theory of 1996 by Weiss and Cropanzano that relates job satisfaction as significant in the emotions, behaviour, attitudes of employees. The theory further states that stress, emotions, frustrations, anger, sadness influence wellbeing at the same time, affecting commitment, job satisfaction and psychological wellbeing. The work demand or stress theory developed by Demerouti et al. (2001) and Karasek (1979) is central to the theoretical approach for this study due to the role it plays on individual with regards to social, financial and personal resources to alleviate the enervating effects of work stressors affecting employee wellbeing. Arguably, Bartholomew et al. (2014) posit that workload and work stress cause poor work outcomes for employees and cross-cuts most wellbeing indicators.

2.1 Factors Leading to Poor Employee Wellbeing

Employee wellbeing is internally and emotionally affected by mental triggers that lead to poor focus, reduced quality of work and sleep, poor co-worker and management interaction, severe health issues, stress by employees. Hence, if not well managed, these aspects can increase the chances of accidents, injuries, diseases, and fatalities, and thus relates well with the need to protect employees at electrical construction projects (Stephenson, 2019). Therefore, since construction projects focus highly on safety issues, the forgoing entails adopting wellbeing as part of improving OH&S at electrical construction projects. According to Mwanaumo et al. (2021), poor employee wellbeing increases the cost on individuals and organisations. Some of the factors they highlighted that cause poor employee wellbeing included long working hours, workloads and volume of work, poor management style, non-work factors such as family and society, job insecurity, and skill variety.

On the contrary, demands at a workplace negatively affect the wellbeing of employees, such as time pressure, how difficult the work is, and empathy, increase stress levels of an employee, affects the mental wellbeing and strains the employees' physical wellbeing (Jennings, 2021; CIPD, 2020; Downward, et al., 2020). There is a strong evidence that increased job demands, poor employee support, working with tight deadlines, working on complex tasks, poor salaries and wages, lack of social support systems at work places, affect the wellbeing of employees especially those employed with SSCs, as indicated by Dolye (2017). Additionally, it was forwarded by Sharratt (2017) that SSCs, most of the time prioritise profits over employee wellbeing. These factors in SSCs firms are attributed to a lack of knowledge of the factors that promote employee wellbeing to positively affect OH&S performance on projects.

2.2 Factors for Employee Wellbeing for Electrical-Construction Employees

Several advances on the factors of employee wellbeing that improve OH&S performance at projects are highly embedded in literature directly related to reducing accident, injuries, and fatalities. When employee wellbeing is applied as one of the constructs of OH&S performance, it should be able to balance the outcomes of economic and social indicators (Diener, et al., 2017). The HSE (2020) forwarded that employee wellbeing as a core factor can be measured by demand (the amount of work, work designs), how work is done, resource support, encouragement, supervision, co-workers, relationships, reduced conflict, understanding roles

in the firm, reduced conflict of role, communication, and managing change. However, Arnold and Randall (2016) and Seligman (2011) as employee wellbeing factors include job content, workload, working hours, emotional labour, integrity and fairness, work-life balance (time, strain, and behaviour) control, job support and resources (resources support from colleagues), job role, overtime, and organisational change. Leka and Jain (2013) added that counselling, flexible work, balanced work-life policy, training, job rotation, job matching, and employee assistance programs are vital factors in improving employee wellbeing.

De Silva and Wilmalaratne (2012) in the wellness framework included wellness programs and physical arrangement of work, while Jeebhay and Jacobs (1999) and Kinnunen-Amoroso (2016) posit factors of employee wellbeing as aligning and integrating wellness programs to the strategy of the organisation, sharing responsibilities and accountabilities by the contractor and the client, planning all OH&S activities including wellness programs at the project design stage; procedures and rules to comply with OH&S, and reward and incentives for best wellness programs. Jennings (2021) also forwarded that managing stress and mental health for employees are important, while Dodge et al. (2012) proposed job security and physical arrangement of equipment and the environment. The study adopted seventeen factors from the literature review for further analysis are highlighted in Table 1.

Table 1. Summary of the Factors for Employee Wellbeing from Literature

Driver	Factors	Sources
Employee Wellbeing	Employee work conditions	(HSE) (2020); Diener, et al. (2017)
	Mental Health employees	Jennings (2021); CIPD (2020); Downward, et al. (2020); Keyes (2007)
	Counselling	Leka and Jain (2013)
	Work Relationships	HSE (2020); Seligman (2011)
	Work-life balance	Arnold and Randall (2016); Leka and Jain (2013); Seligman (2011)
	Job security	Dodge et al. (2012); Cooper (2010)
	Workplace stress management	Kinnunen-Amoroso (2016); Leka and Jain (2013)
	Social support systems	Doyle (2017); Sniezek et al. (2010)
	Human resource leveling	Mwanaumo and Mambwe (2019)
	Aligning health with organisational objectives	Jeebhay and Jacobs (1999)
	Integrity and fairness at workplace	Arnold and Randall (2016) and author
	Occupational health care	WHO (2017)
	Welfare provision for employees	Chisumbe and Mwanaumo (2016); Mambwe et al. (2020)
	Physical arrangement of work area	Jeebhay and Jacobs (1999)
	Developed communication channels	HSE (2018), Mwanaumo and Mambwe (2019)
	Integrating wellness programs with OH&S management	De Silva and Wilmalaratne (2012); Jeebhay and Jacobs (1999); Kinnunen-Amoroso (2016)
	Management of overtime and working hours	Arnold and Randall (2016) and Seligman (2011)

Research Methodology

The study assessed employee wellbeing factors that influence and improve OH&S performance for small-scale electrical contractors in Zambia. The study adopted a qualitative approach in which the Delphi study was adopted to collect data by engaging a panel of experts in the field who were asked questions in two different rounds to attain consensus. The Delphi approach was adopted because of its predictive consultative structural qualitative technique, that is intuitive and subjective in nature (Alomari, et al., 2018). The technique was also used as it

provides anonymity that reduces the influence of pressure in answering questions in a structured iterative manner, giving essential feedback to the researcher, according to Yousuf (2007). The approach was used because of limited previous research that use the Delphi in assessing the factors influencing employee wellbeing for small-scale contractors in the electricity industry in Zambia. Hence, a set of questions were developed in form of a Delphi questionnaire and grouped into themes based on the factors attained from literature.

The Zambian experts were composed of electrical engineers, construction engineers, public health experts, medical doctors, health and safety experts and wellness experts, practising in the electricity industry. A total number of 11 experts were engaged to take part in the survey. According to Skulmosky et al. (2007), the number of experts adopted for the study was sufficient. The selection of the experts was purposively carried out and a set criterion for selection was set at a cut-off of 50% to be included in the survey (Aigbavboa, 2013). The criteria for selection included professional membership, at least five years' experience in the electricity industry, faculty member, involved in policy formulation, high education background. This is according to Hardison et al. (2014). The 17 factors from literature were used to develop the Delphi questionnaire, which allowed experts to make comments in the second round.

Two iterations of the Delphi survey were carried out using a structured Delphi questionnaire with a 10-point Likert scale of influence that was based on the statistical scale of agreement. The influence scale was 1-2 = strongly disagree, 3-4 = disagree, 5-6 = neutral, 7-8 = agree and 9-10 = strongly agree, to attain the study objectives. The results were analysed using Statistical Package for Social Sciences (SPSS) software. Hence, the second-round questionnaire indicated the group medians of the categorised indicators under key elements. Analysis was done using group median, mean, and interquartile deviation (IQD) between 0 and 1 (Ameyaw & Chan, 2015). Experts were updated with the feedback from each iteration results and could re-rate the indicators. To attain consensus, 60% was used as a cut-off for acceptability of a statement. This means that common consent was achieved on each question with at least 60% agreement by experts (Ameyaw & Chan, 2015).

Findings and Discussion

4.1 Background Information

From the 11 experts only five (5) have had an academic experience while all experts have worked more than five years in the industry with the lowest working for six years and the highest with 27 years of experience. The minimum level of education for the experts was a bachelor degree with the highest being Doctorate level. All the experts had professional membership, and were involved in OH&S activities. The 11 experts responded giving a 100% response rate; otherwise, any reduction to less than 70% would have compromised the validity of the results (Skulmoski, et al., 2007). The Cronbach alpha test was conducted for reliability and validity of the questionnaire and was found to be 0.815. According to Taber (2018), the acceptable Cronbach alpha value should range between 0.70 to 0.95 and indicates a strong interrelatedness.

4.2 Employee Wellbeing Factors

Two Delphi rounds were conducted and the results are presented as follows:

4.2.1 First Round of the Delphi Study

The results in Table 2 shows the 17 factors of employee wellbeing as derived from literature were subjected to the Delphi study. However, only 12 factors from the 17 were found to be highly influential in affecting employee wellbeing at the same time improving OH&S performance at projects. Looking at the results, in Table 2, the median ranged from high influence (HI: 7 – 8) to very high influence (VHI: 9 – 10) which is highly acceptable. However, the parameter set for the adoption of IQD (≤ 1) to represent consensus, factors with IQD above one was not subjected to the second round of the Delphi study as they did not reach consensus. The scores revealed that there is a strong consensus attained in the remaining factors whose IQD scores were from 0.00 to 1.00. The five factors that were dropped had IQD above 1.00 which is above the cut-off and could not be accepted according to Ameyaw and Chan (2015). Further evidence showed that the five factors lacked consistency by the SD that was higher than the one (1.00). These results indicate 70.59%, which is above the minimum acceptable threshold of 60% consensus.

Table 2. First Round Results for Employee Wellbeing

Employee Wellbeing	Median	Mean	SD	IQD ≤ 1
Employee work conditions	10	9.64	0.64	0.50
Mental Health of employees	9	9.00	0.95	1.50
Counselling	9	9.27	0.62	1.00
Work Relationships	9	9.36	0.64	1.00
Work-life balance	8	8.64	0.64	1.00
Job security	9	9.27	0.45	0.50
Workplace stress management	8	8.55	0.66	1.00
Social support systems	9	8.91	0.67	0.50
Human resource levelling	8	7.91	1.38	2.00
Aligning health with organisational objectives	7	7.45	1.56	2.50
Integrity and fairness at workplace	8	7.91	1.56	2.00
Occupational health care	8	8.64	0.77	1.00
Welfare provision for employees	8	7.64	1.92	2.00
Physical arrangement of work area	9	9.09	0.79	0.50
Developed communication channels	9	9.36	0.64	1.00
Integrating wellness programs with OH&S management	8	8.27	0.62	1.00
Management of Overtime and number of working hours	9	9.36	0.64	1.00

Note: SD= standard deviation; IQD = Interquartile deviation. Variables in bold did not reach consensus and were not retained for the second round.

4.2.2 Second Round of the Delphi Study

The second round indicated in Table 3, indicate that the retained 12 factors from the first round were maintained and reached consensus. The median attained ranging from very high influence (VHI: 9 – 10) to high influence (HI: 7-8); hence the results were very significant. Nine of the factors gave results ranging in the high-influence threshold. The remaining three (3) factors had the median indicating high influence (HI: 7–8) and hence, significant (7 - 8.99), while the mean range was from (8 -10). All the factors had the IQD ranging within the cut-off score (IQD ≤ 1); hence there was a strong consensus since the scores were between 0.00 and 1.00 indicating 80%-100% consensus. The SD was within the acceptable consistency range. The experts did not propose including any inclusion, adjustments or comments in the second round; hence, only two rounds were done due to time.

Table 3. Second Round Results for Employee Wellbeing

Employee Wellbeing	Median	Mean	SD	IQD ≤ 1
Employee work conditions	10	9.64	0.64	0.50
Counselling	9	9.27	0.62	1.00
Work Relationships	9	9.09	0.64	0.50
Work-life balance	9	9.36	0.64	1.00
Job security	8	8.64	0.64	1.00
Workplace stress management	9	9.27	0.45	0.50
Social support systems	9	9.00	0.60	0.00
Occupational health care	9	8.91	0.67	0.50
Physical arrangement of work area	8	8.64	0.77	1.00
Developed communication channels	8	7.82	0.72	1.00
Integrating wellness programs with OH&S management	9	9.09	0.79	0.50
Management of overtime and number of working hours	10	9.27	0.86	1.00

Note: SD= standard deviation; IQD = Interquartile deviation.

The study objective of identifying employee wellbeing factors that influence OH&S performance for small-scale electrical contractors in Zambia was met. Employee wellbeing is a vital component according to literature reviewed to improving OH&S performance for SSCs. Limited studies showed that employee wellbeing has not been highly used in relation to OH&S performance improvement at projects yet it is a vital driver according to HSE (2018) and, Leka and Jain (2013). Further, the wellbeing of employees, as asserted by Bergh et al. (2014), is an important elements in meeting sustainable development goal number three, the African Agenda 63(3) on health and the ILO (2001) provisions on OH&S performance management. Therefore, SSCs who are expected to improve the wellbeing of employees by adopting the factors from this study to reduce accidents, injuries, and fatalities simultaneously increase information flow on all aspects of OH&S.

After the second round, the final results show that the factors with the very strong consensus include, employee work conditions, work relationships, workplace stress management, social support systems, occupational health care, integrating wellness programs with OH&S management. The IQD and the mean scores were within the very strong consensus range. This implies that the factors have very high influence in promoting positive employee wellbeing. These factors are influential in creating wellbeing and improving OH&S performance. This agrees with De Silva and Wilmalaratne (2012) who developed a framework for wellbeing through which wellness programs, work relationships and stress management were developed and integrated into the OH&S strategy. Ryan et al. (2019) noted that social support systems promoted communication between employees and employers, which mitigated stressors to counteract poor behaviours at projects. The study agrees with Manu (2020) and the WHO (2018) on the significance of including occupational health care systems from the national level to a firm's level to reduce the gaps related to poor performance of OH&S. Work conditions that include good physical, economic and social are aspects to make employees have a sense of wellbeing, and thus job satisfaction and motivation. These are essential outcomes of improved OH&S performance at workplaces.

Further, the study results show that counselling, work-life balance, job security, physical arrangement of work area, developed communication channels, overtime management, and number of working hours ranged within the strong consensus range. The factors' IQD and mean scores indicate high influence in promoting employee wellbeing. Clear communication channels are one of the vital factors that promote wellbeing at workplaces while counselling by formulating employee assistance programs is essential in combating poor employee wellbeing. These were attributed to reducing stress levels, encouraging open conversations,

and promoting support structures (Leka & Jain, 2013). Further, overtime and the number of working hours should be addressed by management to reduce burnout. If employees are expected to work more hours, there is a need for rotation and motivational enticement by paying them for the extra hours only when they are able to work. Electrical contractors are found working long hours to meet deadlines. But this is not encouraged because overworked employees tend to cause accidents and injuries. A balancing up of work and job security are essential for wellbeing and OH&S improvement while workplaces conform to acceptable physical arrangement for employees to work comfortably. This qualifies with Burt's (2019) and Buck's (2014) studies on employee wellbeing and work-related stress.

From the foregoing, it can be noted that the role of employee wellbeing factors cannot be over-emphasised in improving OH&S performance by SSCs in the electricity industry. Therefore, management of these electrical contracting firms should show commitment by enhancing wellbeing of employees at projects to reduce accidents, injuries, diseases and fatalities and reduce indirect costs on the health employees.

Conclusion and Further Research

The study assessed employee wellbeing factors that small-scale electrical contractors can adopt to improve OH&S performance in Zambia. From the findings, it can be concluded that there are twelve employee wellbeing factors essential for OH&S performance. The most highly influential factors are employee work conditions, work relationships, workplace stress management, social support systems, occupational health care, integrating wellness programs with OH&S management. The results contribute to the existing body of knowledge and bring to light the employee wellbeing factors that can be adopted and influence OH&S performance positively. The study recommends that small-scale contractors adopt the findings in the electricity industry to reduce injuries, accidents, fatalities and diseases at projects. On-going research is being conducted by using quantitative approaches to complete the study.

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