Journal of Physical Science and Environmental Studies
Vol. 9 (4), pp. 22-29, November 2023
ISSN 2467-8775
Research Paper
https://doi.org/10.36630/jpses_23013
http://pearlresearchjournals.org/journals/jpses/index.html

Analysis of the Consequences of Job-Pressure Among Skilled Workers on Performance Standards in the Building Industry in South-Eastern Nigeria

Madukwe, Richard E[1*] and Umunakwe, Henry C[2]

Accepted 25 October 2023

[1]Department of Building, Abia State University, Uturu,Nigeria.
[2]Department of Urban and Regional Planning, Abia State University Uturu, Nigeria.

ABSTRACT

This research was conducted to identify pressing influences among skilled workers in the building industry in South-eastern Nigeria. This is because not much is known about job pressure among skilled workers in the building industry in the sampled areas to date. The investigation involved the administration of a questionnaire to about 108 skilled workers including architects, builders, town planners and quantity surveyors randomly selected from 60 uncompleted building projects in Imo, Ebonyi and Enugu States, Nigeria. The data were analyzed using descriptive statistics and findings show that the prime sources of pressure were high volume of tasks, uncomfortable site offices, lack of feedback on previous and uncompleted building projects and variations in the scope of work in uncompleted building projects in the selected states. This study recommended taking job responsibilities that one has adequate capacity to handle, establishing realistic budgets and time frames for project delivery, providing spatially adequate, visually and thermally comfortable site offices, adopting appropriate job construction practices, and educating skilled workers on pressure management will reduce the incidence of pressure among skilled workers in the study area.

Keywords: Job pressure, building industry, skilled workers, job seekers, south-east, Nigeria.
*Corresponding author.Email: Richardmadukwe30@gmail.com; Tel: +2348060513244

INTRODUCTION

Recently, research has shown that the building industry, all over the world, has witnessed incredible societal and industrial revolution (Lath, 2020). Incessant reform of building development, stride and convolution of jobs and collective request for increased output have turned out to be shared variables of the building industry. These are in rejoinder to the unification of the global economy, markets, industrial development and altering the user inclinations. Actually, the vibrant and multifarious form of builders' jobs, varied qualifications and unfriendly approaches of members are much understood to have caused enormously swift vicissitudes occurring between the building industries at large (Vicar, 2023). Consequently, trained workforces and certainly the job potency in the building division function in a tremendously challenging atmosphere where jobs are planned, erected and conveyed amidst constricted finances and schedules. These variables and more have collectively joined to make housing construction more psychologically and passionately challenging (Aitken and Chord, 2017).

Job pressure is recognized to impact deleteriously on efficiency and utility derived by job seekers in diverse careers (Brainy and Agricola, 2022; Crown, 2021). It is also believed to be a key backer to non-attendance, low self-esteem, increased mishaps and rate of gross revenue as well as rise in homeopathic overhead costs of many building industries (Deron, 2022). Therefore, an investigation into work-interconnected pressure has remained topical recently (Gondar and Samson, 2023).

Remarkably, preceding research have revealed that, job pressure can be substantially and emotionally damaging to job seekers and it is related to corporeal ailment, administrative configuration, relational skirmish, individual indicators and job forms (Haloes and Bouzoukis, 2019; Lath, 2020; Leister, 2021).

There seems to be established proof from literature signifying that, work-related pressure has demonstrated itself in insecure job performances, reduction in the magnitude and eminence of performance at job and decrease in recital precision (Lenard and Francis, 2021; Crown, 2021; Deron, 2022). Consequently, there is an agreement that strong, uninterrupted and recurrent job pressure can be hostile to discrete and institutional efficiency and competitiveness in job routine, and hence justifies further consideration in research investigation.

There is in existence a rising body of study literature on work-related pressure among skilled workers and job-seekers in the building industry as recommended by extant studies (Lenard and Rawlins, 2021; Leister, 2021; Aitken and Chord, 2017). Remarkably, this body of existing literature has radicalized human understanding of the roots of pressure and how skilled workers in the building industry in South-eastern Nigeria are coping with it. This, however, provides insufficient insight into the present situation among skilled workers in the building industry in Africa in general and West Africa in particular (Lenard and Rawlins, 2021). The literature review, so far, demonstrated that very little work has examined pressure influences among skilled workers in the building industries in Nigeria.

The concept of pressure has an extended tradition in Administrative and collective literature (Hamill and Raman, 2023). However, evidence in contemporary literature demonstrates that pressure has been defined and viewed from diverse perspectives. Aitken and Chord (2017) noted that the exploration of the concept of pressure began with the job of Hans Walter in 1936. Walter in his job defined pressure as the force, pressure, or strain exerted upon an object or a person that resists these forces and attempts to maintain its original state. He conceived of pressure as a pathological human response to psychological, social, occupational and/or environmental pressures; and therefore concluded that pressure is neither a simple nervous tension resulting from damage nor necessarily something to be avoided (Walter, 2020).

Gondar and Samson (2023) on the other hand indicated that pressure is an experience expressed in one's feeling of being strained while the Health and Safety Executive (Heath and Sylvester, 2018) defined pressure as the adverse reaction people have due to excessive pressure or other types of demand placed on them. Put differently, Leung and Chan (2020) and Leung and Skit (2020), were of the view that every person including a child, an adult, employed or unemployed faces pressure in his/her everyday life. He defined pressure as any challenge that exceeds the coping abilities of the individual. From the occupational perspective, pressure has also been defined as the physical and emotional reactions that occur when job seekers perceive an imbalance between their job demands and their capability to meet such demands.

In view of the evidence in the literature on the negative consequences of pressure among modern-day job forces, several theoretical models on job pressure have been developed. One such theory is the Person-Environment fit theory first proposed by French, Robert and Van Harrison in 1982. According to this theory, pressure occurs as a result of an incongruity between the individual and the ambient environment (Wahhabi, 2020). The key elements of this model comprise objective and subjective variables that could be found in the environment or the person. Somerfield and McCrae (2020) were of the opinion that pressure is a highly individual phenomenon that exists as a result of a person's appraisal of his/her involvement in the environment. They pointed out that pressure arises as a result of an imbalance between the person's perception of the demand placed on them and their sensitivity of aptitude to manage.

Job pressure can also be understood as including a realistic condition of passionate fatigue, de-identification and abridged individual success (Leung et al., 2023). Pressure, here is perceived as the condition of physical, emotional and mental tiredness owing to lasting participation in ardently challenging circumstances (Malachi and Lester, 2021). Leung et al. (2017) noted that people undergoing extended phases of severe job pressure are likely to meet physical and health complications, condensed efficiency, minor degree of consummation and administrative involvement. This concept of pressure suggests that extended exposure to physical, mental and emotional testing activities could lead to enervation which might result in decreased output level and subsequent accomplishment.

The leading questions to the study are: what factors are responsible for job pressure in the building industry? and to what extent has job pressure affected your output? As a backup to the key study questions, Melina and Becerra (2022) discovered that temperatures above 30°C and relative humidity above 74% posed health threats to building job seekers in Brazil. They noted that physically overloaded building job seekers were among the most vulnerable to the negative impact of temperature on their health and productivity. Most recently, it was found that noise, cold, conflict with one another, unintended and unforeseen phenomena, search for optimal solutions consistent with the developer's budget and time frame, reaching compromise, moving and rearranging job schedules and other potentially intolerable conditions constitute pressure carriers to job seekers in the building

industry in Nigeria (Skit and Leung, 2023).

MATERIAL AND METHODS

The research design for this study revolves around a survey research approach. The target population included skilled workers such as architects, builders, town planners and quantity surveyors involved in uncompleted building projects in the study area. Enugu, Ebonyi and Imo States representing the South-eastern Nigeria and East regions of Nigeria were selected as research areas. A pilot survey was conducted earlier by the researchers to identify uncompleted building projects in major urban centers in the selected States. Altogether, 225 uncompleted building projects of various categories were identified. From that, 20 building projects were randomly selected for the research from each state, representing approximately 27% of the identified building projects. Simple Random Sampling (SRS) was used in selecting 185 skilled workers for the administration of the questionnaire.

The cross-sectional survey was conducted between January and June 2023 with questionnaires administered to the already mentioned skilled workers' jobs in building project sites surveyed. To get reactions from the targeted population, some of the building sites sampled were visited more than once, and some of the skilled workers were traced to their offices. Of the 185 questionnaires distributed, 114 questionnaires representing approximately 62% of the distributed questionnaires were retrieved. However, seven of them were invalid and not used in the analysis.

In developing the questionnaire used in the collection of primary data, an extensive review of the literature was carried out to identify job pressure influences as found in prior studies. The different pressure variables in building projects were broadly classified according to job demand, physical influences, Administrative influences, and job role influences in harmony with evidence in literature on pressure influences in the building industry in general (Brainy and Agricola, 2022; Deron, 2022; Leister, 2021; Vicar, 2023). Subsequently, the questionnaire was constructed based on the goal of the current research as well as findings from the review of the literature. The questionnaire contained structured barred and open-ended questions. It was further distributed into two segments, with each segment designed to elicit precise information from the respondents.

The first segment was fashioned to elicit information on the personal profiles of the respondents while the second part dwelt fundamentally on perceived job pressure influences among skilled workers. In the second part, the open-ended question asked the respondents if they have always experienced job pressure in the course of their participation in building construction and other building activities. The closed questions, conversely, stayed on job-related pressure influences, physical and environmental prompted pressure besides pressure due to Administrative structures. Respondents were provided with options of the different pressure variables as identified in literature and were asked to identify by ticking the pressure variables which they think contributed mostly to their different involvements of job pressure.

The information elicited during the filed survey was transformed and evaluated using the SPSS 20 for Windows. Descriptive statistical tools including cross-tabulation, frequency count and percentages were used in the exploration of quantitative data obtained from the close-ended questions, while the content examination was employed in analyzing open-ended questions and secondary data obtained from literature review.

RESULTS AND DISCUSSION

The result of the analysis reveals that approximately 91% of the surveyed population were males in variation with females, who were about 9%. This emphasizes the dominance of male skilled workers in the building industry.

The result also reveals that 31%, 24% and 45% of the respondents were in building sites in Imo, Enugu and Ebonyi States respectively. 33% of the respondents were Builders, 29% were Town Planners, 25% were Architects and 13% Quantity Surveyors.

Figure 1 demonstrates the distribution of the respondents according to their highest academic and skilled worker qualifications. Approximately 19% of the respondents have full skilled worker qualifications while 17% of them were corporate members of their respective skilled worker bodies getting ready for full skilled worker registration with the different regulatory agencies in Nigeria.

The result from Figure 1, also demonstrates that approximately 43% of the respondents had academic qualification of a bachelor's degree and above, and only 3%, mainly builders and quantity surveyors had the minimum academic qualification of a National Diploma. The above result demonstrates that a majority of skilled workers in the building industry encountered in the survey were highly qualified personnel. Figure 2 demonstrates the distribution of the respondents according to the number of years of site experience. Most (67%) of the respondents had over 10 years of experience, 24% had between 6 years and 10 years of experience, and only 9% had less than 6 years of skilled worker site experience (Figure 2). This result demonstrates that the majority of those interviewed had reasonable years of experience in their respective

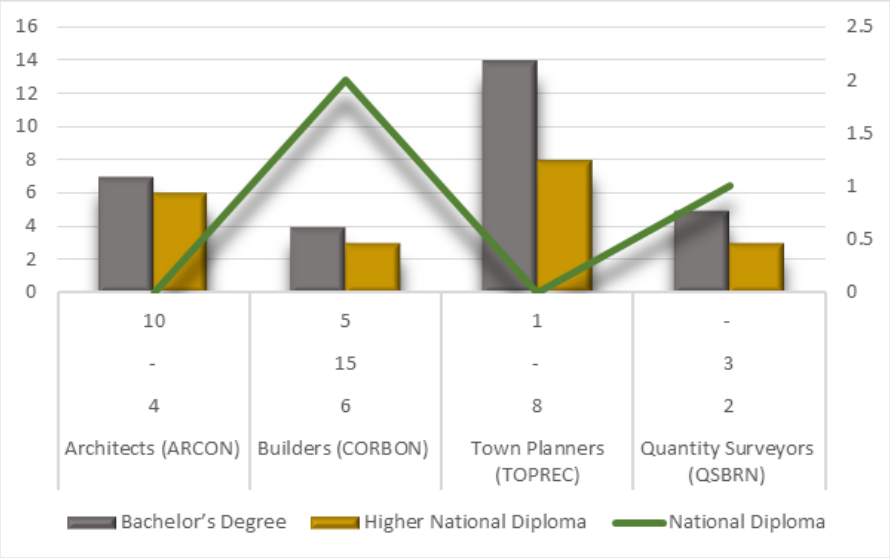

Figure 1: Maximum educational and skilled worker trainings of the sampled population. **Source:** Field survey, 2023. **Note**: ARCON = Architects Registration Council of Nigeria, CORBON: = Council of Registered Builders of Nigeria; TOPREC =Town Planners Registration Council of Nigeria; QSBRN = Quantity Surveyors Board of Registration in Nigeria.

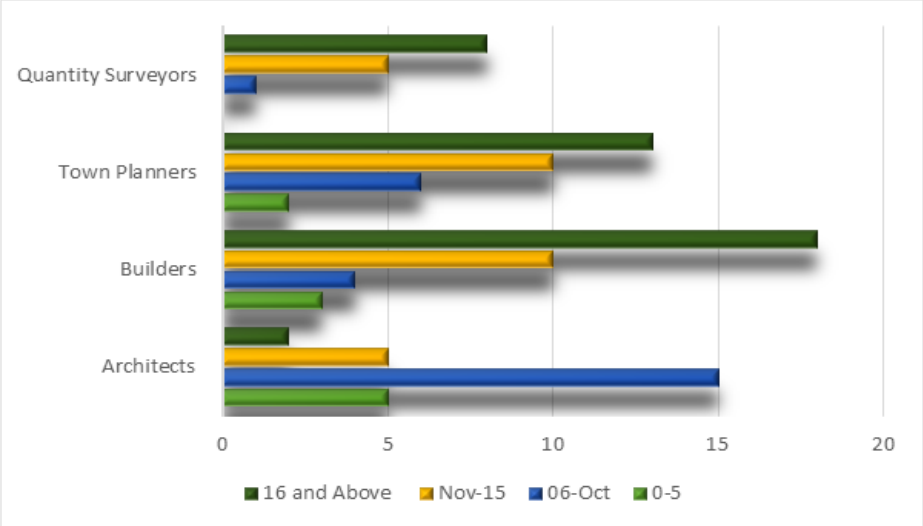

Figure 2: Site capability of the sampled population. **Source:** Field survey, 2023.

professions and in building construction and building activities. This reveals that the views of the study population on job pressure are built on individual involvement.

Sensitivity of Job Pressure

Figure 3 indicates the study populations' perception of job pressure on building sites. An examination of the result reveals that most (94%) of the respondents have experienced job pressure while 6% responded that they have not experienced job pressure. The fact that such a majority of the respondents had experienced pressure as a result of their job suggests that the data obtained on pressure influences have a reasonable degree of reliability

Job Demand and Environmental Related Pressure Influences

Figure 4 demonstrates the reactions of the skilled workers on the six job demand-related pressure

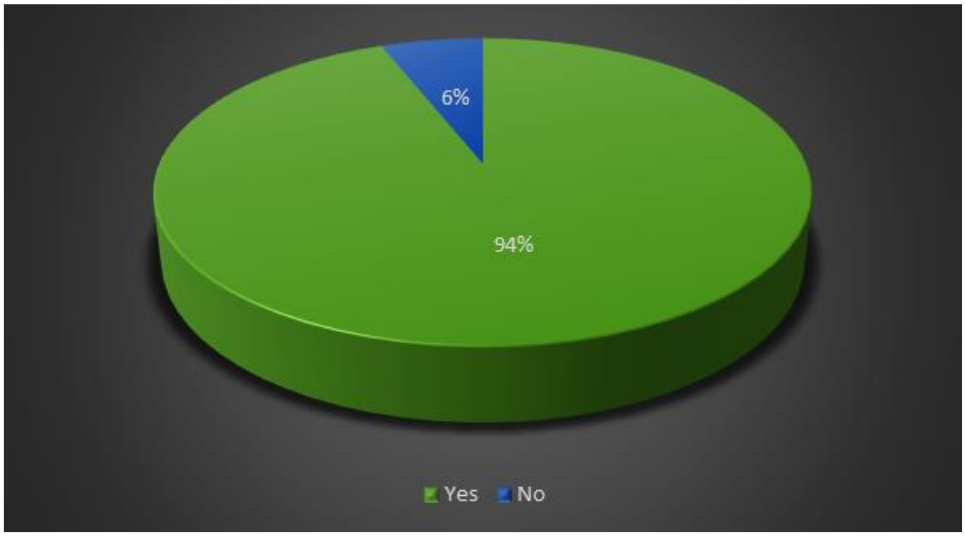

Figure 3: Perception of job pressure among skilled workers in the sampled population. **Source:** Field survey, 2023.

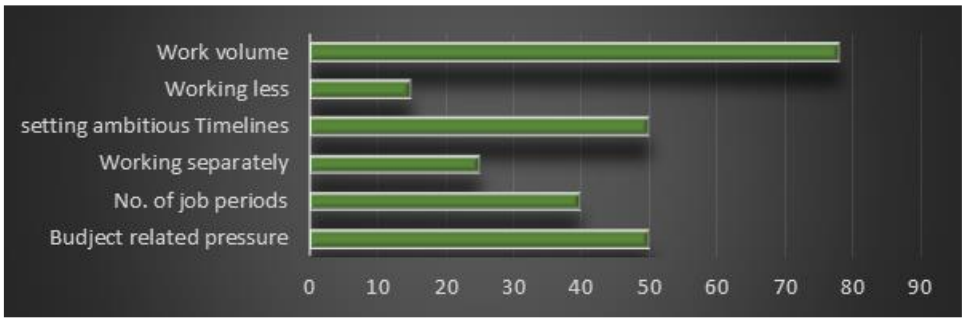

Figure 4: Job demand-related pressure influences. Source: Field survey, 2023.

influences investigated. The result demonstrates that a high volume of jobs was the most significant job-related pressure factor as identified by the study population. This is followed by budget-related pressures and ambitious deadlines respectively with 78%, 51% and 50% of the surveyed population indicating that these three influences were the main sources of job pressure.

The result is consistent with the evidence in the literature (Brainy and Agricola, 2022; Deron, 2022; Leister, 2021; Vicar, 2023) and this is so due to the following reasons. First is the nature and complexity of building jobs which overworks skilled workers and job seekers with jobs. Second is that a majority of building sites sampled were multi-story buildings and automobile service stations, which involve relatively high volumes of jobs at all stages. Third is that building job seekers in Nigeria are known to work under tight budgets and time frames as most developers want immediate delivery of their building projects in order to maximize profit on their investments.

Nevertheless, conflicting proof from literature signifies that number of job periods can be a major source of pressure (Deron, 2022; Crown, 2021; Lath, 2020; Lenard and Francis, 2021). Figure 4 shows that the number of periods put in by the skilled workers in the building industry in the sampled area was not the leading source of pressure. This is based on the result which demonstrates that only approximately 40% of the respondents indicated that the number of job periods was a source of pressure. This result can be explained by noting that the nature of training these skilled workers received exposed them to the rigors of extended periods of strenuous academic and field job, hence extended job periods was not viewed as a principal pressure by many of the respondents interrogated.

Figure 5 demonstrates the surveyed population's observation of the dissimilar corporeal job environment pressure variables. It is evident from the result that of the eight physical job environment pressure variables investigated, derisory temperature control in site offices

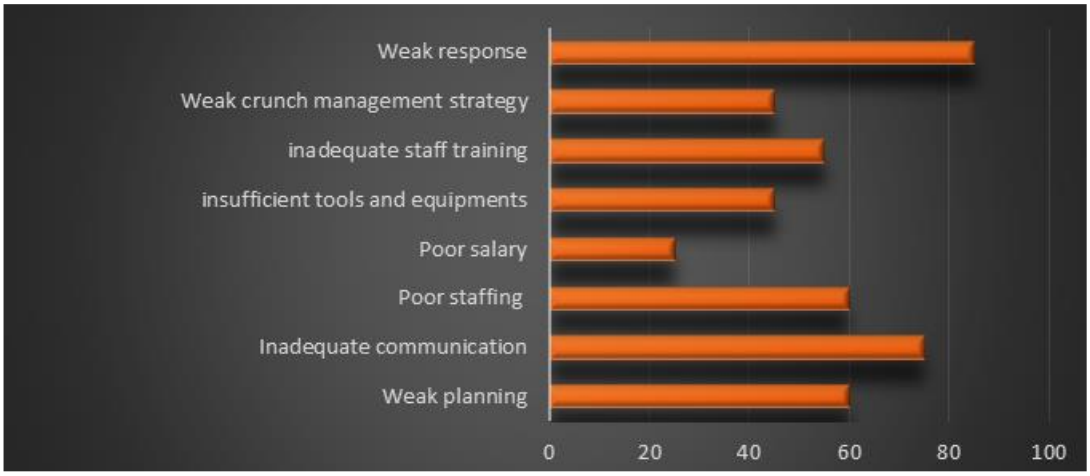

Figure 5: Physical job environment pressure variables. Source: Field survey, 2023.

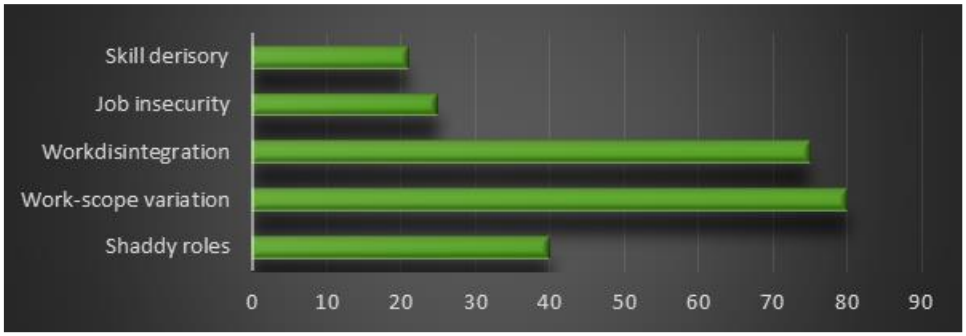

Figure 6: Job-role pressure influences. Source: Field survey, 2023.

was the key source of pressure among the skilled workers sampled. 80% of the respondents identified derisory temperature control in site offices as the key job environment-related pressure. This is followed by lack of privacy in site offices (75%); safety/security measures on building sites and spatial inadequacy of site offices (60%) as well as derisory ventilation of site offices (50%). This outcome proposes that building sites in Nigeria are described by shortfalls in ventilation, space, humidity and temperature control measures, which makes them not very conducive for productive job. Indeed high temperature as a key pressure factor is understandable as Nigeria is in the tropics and experiences temperatures as high as 39^{o}C during the dry seasons stretching between November and March. It is also evident from the result that poor site condition, noise level and poor lighting of site offices were not critical sources of pressure on skilled workers sampled in the research areas. Although the result suggests that these are challenges; the majority of the respondents did not see them as threats or impediments to the effective discharge of their normal duties. In all, the result of physical job environment-related pressure appears to provide support for evidence in the literature (Sutherland and Davidson, 2023; Skit and Leung, 2023; Lath, 2020) suggesting that unfavorable job environment is a key source of pressure among job performers in the building industry at large.

Figure 6 demonstrates the respondents' insight about pressure influences due to their respective skilled worker roles in the building process. An examination of this result reveals that 80% of the respondents indicated that variations in the scope of the job were a principal source of pressure while disintegration of job structure was a source of pressure for 75% of those interviewed. It is also evident from the result that 40% of the respondents claimed that lack of clarity in their role was a source of pressure while 25% and 21% of them indicated that job insecurity and insufficient skills respectively constituted pressure to them.

The outcome as seen in Figure 6 could be elucidated within the milieu of the datum that building schemes in Nigeria are mostly astounded with variations due to errors encountered during building construction. It can

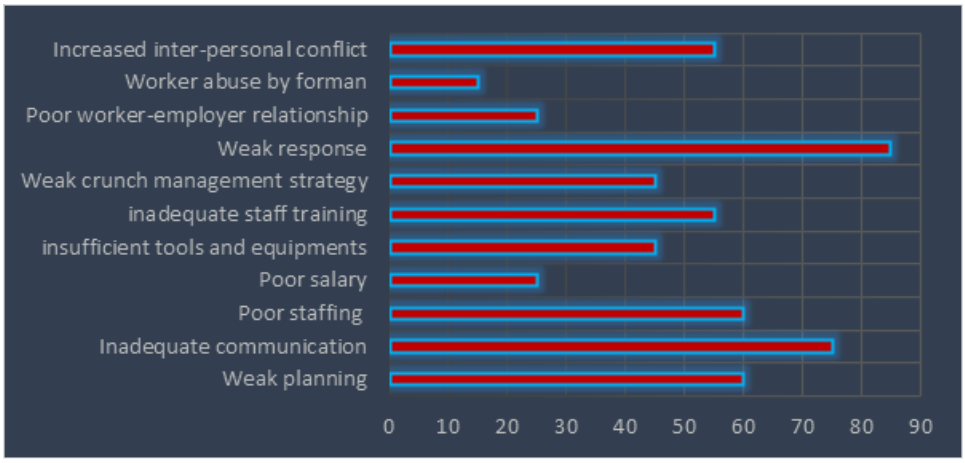

Figure 7: Administrative-related pressure influences. Source: Field survey, 2023.

also be linked to the fact that building procurement is generally carried out in skilled work divided into sections such as architectural, structural, services, cost and others. As a result, the entire building process is seen as fragmented. This suggests that specialization among skilled workers in the building industry can be a source of pressure. In fact this is in line with findings (Whitten and Cameron, 2023) indicating that a specialized job nature contributed to pressure among artisans in the building industry in Nigeria. Other notable pressure factor identified in this research is the lack of clarity of roles on sites (Figure 3). The fact that there is often conflict between architects, builders and town planners in building sites in Nigeria can help to explain why about 40% of the respondents claimed that lack of clarity of role constituted a pressure influence on them. This can also be linked to administrative influences such as poor planning and communication, which the respondents indicated were among the principal pressure influences. In contrast, job insecurity and insufficient skills were not considered key sources of pressure among the skilled workers encountered in the survey, as corroborated by the findings of Gondar and Samson, (2023). This is possible as most of them are vastly competent and capable skilled workers who are not substantial and accordingly, job uncertainty and deficiency in proficiency are not fundamental trepidations in Nigeria.

Administrative-Related Pressure Influences

Figure 7 demonstrates the result of the Administrative-related pressure influences investigated. It is evident from the result that a majority (80%) of the study population claimed that the lack of feedback on the performance of staff members on building projects handled by them was a key source of pressure. This is followed by poor communication; derisory staffing, poor planning and crisis management mechanisms in their respective organizations.

The result in Figure 7 suggests that most buildings and related firms in the research areas are characterized by poor communication, planning and crisis management mechanisms. There are also indications that the building firms from where the sample was drawn had challenges of derisory staffing, lack of proper evaluation and monitoring of staff performance on project sites and inter-personal conflicts as suggested by the study.

These inferences were arrived at because these administrative features were apparent as an important basis of pressure amid the trained workers tested. Other administrative-related pressure influences identified by a reasonable percentage of the skilled workers sampled were insufficient on-the-job training and derisory equipment. It is evident from the above result, that most of the Administrative-related pressure influences borders on bureaucracy, which Haloes and Bouzoukis (2019) noted was the most difficult pressure to manage. Notably, the result however suggests that poor remuneration was not a key source of pressure among most skilled workers in the building industry in the research areas. This appears to be inconsistent with the findings of Leung et al (2023) indicating that poor remuneration was a source of pressure among building job seekers. This is probably because most of those sampled were highly qualified and scarce skilled workers and therefore adequately remunerated.

CONCLUSION

This research focused on job pressure influences among skilled worker architects, builders, town planners and quantity surveyors in the building industry in Nigeria. The findings show that the key pressure influences among

these skilled workers were the high volume of jobs; lack of thermal comfort, privacy and adequate space in site offices, lack of feedback on previous and uncompleted building projects, lack of security/ safety measures on site, variations in the scope of job and disintegration of building job into specialized fields. Other pressure influences related to Administrative structure were lack of feedback on staff performance on building projects, poor communication and derisory staffing and others. Certainly, the study has demonstrated that a greater number of the skilled workers concerned\ in building project design and implementation in Nigeria encounter job pressure from many backgrounds.

There is no hesitation that the results of this analysis have some consequences that require deliberation in eliminating and reducing pressure undercurrents among skilled workers in the built industry in Nigeria. As persons perceive pressure effects, so do skilled workers in the built industry in Nigeria; therefore, a number of consequences emanated.

In essence, job delivery at the construction phase of every building project should be teamwork; if the purpose is to diminish the occurrence of preventable pressures related to accomplishing determined goals, which mostly leads to pressure, poor job quality and truncated output. Second, building firms aiming to reduce pressure should give adequate attention to the comfort of skilled workers' jobs on building sites. Pragmatic and practicable schemes are desirable to develop the level of safety and corporeal job milieu of skilled workers in building locations. This demands careful strategies by organizations in the building firms to increase workers' job situations and appraise their recital to develop self-confidence amongst skilled workers in handling the excesses of job pressure.

As a recommendation and implication for further study, dissimilarities in the job scope should be identified, while the building work is advancing, can be compacted by using suitable job erection practices that guarantee the least disparities owing to anthropological errors. The involvement of all the skilled workers at every building project stage at the building site could certify that responsibilities executed by the dissimilar skilled workers are identified as a whole unit of a job rather than as portions.

REFERENCES

Aitken A and Chord L (2017). Coping with pressure: Dispositional coping strategies of project managers. International Journal of Project Management, 25 (6): 666-673.

Brainy AR and Agricola BM (2022). Women's careers in large building companies: Expectations unfulfilled Career. Development International, 4 (7): 353-357.

Crown JD (2021). Using Surveys in Language Programs, Cambridge University Press, and Cambridge, Pp. 443-447.

Deron JR (2022). Language, Memory and Thought, Hillsdale, New Jersey. Lawrence Eribaum Associates Publishers, Pp. 802-805.

Gondar L and Samson N (2023). Modeling relationships between job pressure variables and injury and near-miss outcomes for building laborers. Journal of Job and Pressure, 17 (3):218-240.

Haloes G and Bouzoukis D (2019). The effect of pressure and satisfaction on productivity. International Journal of Productivity and Performance Management, 59 (5): 415-431.

Hamill Z and Raman A (2023). Job pressure among community health job seekers: A multi-method research from Pakistan. International Journal of Mental Health Systems, 15 (2): 1-8.

Heath BC and Sylvester TT (2018). Tackling Job-Related Pressure: A Manger's Guide to Improving and Maintaining Employee Health and Well-Being. Sudbury: HSE Book. Pp. 201-203.

Lath SK (2020). A Research of the occupational pressure among teachers. International Journal of Education Administration, 2 (2): 421-432.

Leister MP (2021). Coping Patterns as Predictors of Burnout: The Function of Control and Escapist Coping Patterns. Journal of Administrative Behavior, 12 (2): 123-144.

Lenard H and Francis V (2021). The job-life experiences of office and site-based employees in the Australian building industry. Building Management and Economics, 22 (11): 991-1002.

Lenard H and Rawlins S (2021). Burnout among future building skilled workers: a cross-national research. Building Management and Economics, 24 (9): 335-337.

Leung MY and Skit M (2020). Critical pressure variables influencing building estimators in Hong Kong. Building Management and Economics, 23 (2): 33-43.

Leung MY and Chan YS (2020). Impacts of pressure variables and pressure on the injury incidents of building job seekers in Hong Kong. Journal of Building Engineering and Management, ASCE, 136 (10): 1093-1103.

Leung MY, Chan YS and Chong A (2023). Developing structural integrated pressure or–pressure models for developers' and contractor's cost engineers. Building Engineering and Management, ASCE, 134 (8): 635-643.

Leung MY, Sham J and Chan YS (2017). Adjusting pressure variables – job demand pressure in preventing rust out/burnout on estimators. Surveying and Built Environment, 18 (1): 17-26

Malachi C and Leister MP (2021). Job burnout. Annual Review of Psychology, 52 (6): 397-422.

Melina JL and Becerra M (2022). Psychological sources of pressure and burnout in the building sector: A structural equation model. Psicothema Journal 19 (4): 679-686.

Skit RM and Leung TK (2023). Manageability of pressure among building project participants Engineering. Building and Architectural Management, 12 (3): 264-282.

Somerfield MR and McCrae RR (2020). Pressure and coping research. American Psychologist, 55 (6): 620-625.

Sutherland V and Davidson M (2023). Pressure among building site managers – a preliminary research. Pressure Medicine, 32 (5): 221-235.

Vicar A (2023). Job place pressure in nursing: A literature review. Journal of Advanced Nursing, 44 (6): 633-642.

Wahhabi AB (2020). Pressure management among artisans in building industry in Nigeria. Global Journal of Researches in Engineering, 10 (1): 93-103.

Walter T (2020). Gender difference in occupational pressure among skilled workers in the building industry. Journal of Management in Engineering, 20 (3): 126132.

Whitten DA and Cameron KS (2023). Developing Management Skills, 2nd ed. Harper Collins, New York, NY, Pp. 23-35.