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**RESEARCH ARTICLE**

# Occupational health: the impact of occupational stressors on job productivity

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**Abstract:** Occupational health is assessing and managing the effects of work on an individual's health and effects of their health on their capability to work. Occupational stress plays a prominent role in employee productivity. Studies on occupational stress among administrative personnel in Sri Lanka are inadequate. The general objective of this study was to investigate the impact of occupational stressors on the job productivity of administrative staff in the newly established public sector universities in Sri Lanka. The study design was hypothetico-deductive. The task (task autonomy, task variety, task overload, working conditions, physical work layout, facilities provided, noises and continuous interruptions), role (role conflicts, role overload, role ambiguity, proactive coping behaviours, situational constraints, employee hassles and employee harassments), and interpersonal demands (support provided by the staff, pressure created by the staff) were considered as independent variables. Productivity was the dependent variable (efficiency: availability of quality standards, guidelines and benchmarks; effectiveness: action plans, monitoring procedures and controlling mechanisms). Ninety-two administrative officers were selected from the newly established public sector universities as the sample. A self-administrated questionnaire was applied to collect data. Four hypotheses were developed, and data was analysed through the SPSS package. Pearson's correlation, determinant of coefficient, Model summary and ANOVA for multiple regression were used to analyse data. Positive relationships of the task, role and interpersonal demands with job productivity were observed. Variance in job productivity was significantly explained by the variables associated with occupational stressors. In conclusion, conducting longitudinal or interventional studies to address occupational stressors is recommended.

**Keywords:** HRM; management; occupational health; organisational behaviour; performance.

## INTRODUCTION

Occupational health focuses on physical and mental well-being in the workplace, and a healthy workforce is one of the most significant assets a country can have. Occupational stress directly affects the health of the employees. Employees are one of the vital assets in any organisation because of their roles in the organisation's success. Stress is associated with demand and resources. It is a dynamic condition in which the outcome is perceived to be both ambiguous and essential. Responsibilities, pressures, obligations, and uncertainties that individuals face in the workplace belong to the demands. Resources are things within, and individuals control them as s/he can use them to resolve the demands (Robbins & Judge, 2013). Eliminating occupational stress among employees is one of the most costly tasks, and it plays a prominent role in employee productivity. Occupational stress has become a worldwide public health concern. Work-related stress is described as the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities, which, in turn, challenge their ability to cope (World Health Organisation, 2019). In other words, occupational stress refers to the succeeding stress an employee experiences due to numerous influences.

In many countries, workplace stress remains at a high level. According to the American Institute of Stress (2018), 80% of working people have felt stress about their job in the United States of America. In France, 52% of employees experience high anxiety levels at

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their workplace (The Local, 2017). Moreover, 80% of employees suffer from work-related stress in India (Society for Human Resource Management, 2017). As shown by the studies, 45% of Japanese men have sleeping difficulties due to workplace stress (The Japan Times, 2016).

Sri Lanka is not an exception for occupational stress. Studies have shown that employees suffering from stress affect the performance and productivity of company operations (Gomes, 2006). A descriptive study among diagnostic radiographers in Sri Lanka has shown that many radiographers suffer from stress due to various factors (Gamalendira *et al.*, 2017). Another study reveals that occupational stress is a significant condition among professionals of information technology in Sri Lanka (Jayasuriya *et al.*, 2012). A study among doctors in Sri Lanka has found a positive relationship of role overload, managerial behavior, management style, intergroup conflict, and family as reasons for stress (Bandara & Randeni, 2015). A few studies on occupational stress among employees in universities in Sri Lanka can be identified. A study reveals that a university is a place with a significant amount of stress in the working place (Palagolla & Wickramasinghe, 2009). Various stress-based behavioral, physiological, and psychological consequences can be identified, and those consequences can be harmful to the person and other members of the organisation. The drop in productivity, absence, turnover, and harmful lifestyle practices such as increased smoking, alcohol consumption, sleep disorders, etc., are behavioral consequences. Physiological reactions to stress have a long-term influence on physical health and physiological consequences. Psychological consequences can include tension, anxiety, irritability, boredom, and procrastination (Robbins & Judge, 2013).

Job stressors can influence employees' health, job satisfaction, performance, and commitment (Shikieri & Musa, 2011). Recent studies have focused more on the cognitive consequences involving memory problems, difficulty in paying attention to job-related issues, concentration problems, and a decline in the ability to perform several tasks simultaneously (Rickenbach *et al.*, 2014; Wiegel *et al.*, 2016). There is a strong association between work-related stress perceptions and CE-drug use measures (Wiegel *et al*., 2016). More cognitive decline was associated with more significant increases in memory problems on weeks when individuals reported more daily stressors and less healthy cortisol awakening response (Rickenbach *et al*., 2014). Certain studies have been conducted more on the physical consequences of job stress, and according to these studies, individuals often complain about related hostile conditions such as insomnia, abnormal cardiac markers, and hypertension. In addition to that, individuals complain of diabetes, thyroid problems, and a majority suffer from symptoms of skin disorders and migraines, and tension-related headaches (Ganster & Rosen, 2013; Kivimäki & Kawachi, 2015; McCraty *et al*., 2003). Certain studies have shown the emotional consequences of workplace stress (Brosschot *et al*., 2016).

## LITERATURE REVIEW

### Job productivity

According to Colligan & Higgins (2010), there are advantages for human resources if they motivate their employees to improve employee performance in the organisation. Productivity is an element that directly influences an organisation's profit (Gummesson, 1998; Sels *et al.*, 2006). On the contrary, the organisation also has disadvantages if the organisational employees are not performing according to organisational expectations. Job stress is on the rising levels and has become a challenge for the employer because high-level stress results in low productivity. In addition, there may be specific implications such as increased absenteeism and some other employee problems. In other words, when employees are under stress, their productivity level may become typically low as compared to the normal production rate. On the other hand, when employees are less productive, they take a longer time to complete the job task, leading to a higher cost. Employee productivity in an organisation has become an essential objective for businesses (Sharma & Sharma, 2014). Job productivity comes under stress-related behavioral consequences (Robbins & Judge, 2013).

### Measures for productivity

Chase & Aquilano in Mark (2012) imply that productivity is measured based on the output per labor hour. Mathis & Jackson (2000) defined productivity as measuring the quantity and quality of work done. Robbins & Judge (2013) have described productivity as collecting effectiveness and efficiency. Efficiency is the (often measurable) ability to avoid wasting materials, energy, effort, money, and time doing something or producing the desired result (Efficiency, 2019). In general, it is the capacity to do things successfully and without waste. That means it can be described as the degree to which an organisation can achieve its ends at a low cost. Quality standards, guidelines, and benchmarks are essential aspects that increase efficiency. The impact of efficiency is pivotal for the progress of any organisation. Complex organisations such as universities

need continuous pruning and strategic planning to fast forward to the most up-to-date efficient growth. If there is good coordination, control, and a solid action plan, efficiency will emerge from those conditions (Abu Jadayil *et al.*, 2017). Hon (1982) found that monitoring and controlling the input and output of a manufacturing system is very efficient in optimizing the production and the system objectives. Effectiveness is the degree to which something successfully produces the desired result; success (Effectiveness, 2019). Organisational effectiveness is how efficiently an organisation, group, or company can meet its goals. There are numerous methods to measure the effectiveness of an organisation. According to scholars, effectiveness is measured by a simple strategy: if the mission, goals, and objectives are met, that company is efficiently running (Ekpe, 2015; Jurevicius, 2013; William, 2012). Several studies on occupational stress and productivity have been conducted in Sri Lanka (Aroosiya & Ali, 2016; Ehsan & Ali, 2019; Silva & Thilakasiri, 2014). Nevertheless, these studies have not evaluated the isolated effect of the task, role, or interpersonal demands on job productivity.

**Stress models**

Scholars have described stress based on various aspects. Stimulus-response models, stimulus organism response models, social stress theories, holistic health model, a systems model of stress, psychodynamic theory, learning theory, self-theory, existentialist theory, cognitive theory, transactional mode, and conservation of resources theory specific theories about stress (Villiers, 2003). Stress theories can be categorised into few types, including biological, cognitive, and psycho-social.

Some models on occupational stress can be identified in the literature. Cooper & Palmer's model of work stress implies the stress-related hazards of stress facing employees in the workplace. These hazards are related to culture, demands, control, role, change, relationship, and support. The model shows individual and organisational symptoms caused by stress sources, and potential adverse outcomes are mentioned in the model (Palmer *et al*., 2003). Cooper & Marshall's model of work-related stress is concerned about the long-term concerns of occupational stress. The model also relates with the acute symptoms of, sources of, and the individual characteristics associated with occupational stress. This model figures out sources of stress at work that lead to disease (Cooper & Marshall, 1976). The Conservation of Resources model is an integrated model of stress and describes stress when there is a loss or a threat of resource loss (Hobfoll, 2001). The Revised Transactional Model of occupational stress and coping is a combined model of occupational stress and coping (Goh *et al*., 2010), and it demonstrates how individuals appraise, cope with and experience occupational stress.

The allostatic load model describes the adaptive functioning of the human biological system in response to stressful stimuli. According to the model, there is a considerable body of evidence suggesting that stress has significant effects on health due to allostatic load (McEwen, 1998). The inverted U shape theory explains the consequences of constant stress on individual performances in four stages. According to that, an optimal level of performance could be seen in the moderate status of stress (Yerkes & Dodson, 1908). The importance of job characteristics is the main focus of the Job Characteristics model. Job characteristics such as skill variety, task identity, task significance, autonomy, and feedback received by an individual lead to 'critical psychological states' of experience, meaningfulness, and experience responsibility and knowledge of outcomes (Heckman & Oldham, 1976). Effort- Reward Imbalance model is a new theoretical model to identify a stressful psychosocial work environment and explain its adverse effects on stress-related health risks (Cooper & Quick, 2017). Workplace stress can be associated with the differences in job demands and resources, and it includes negative and positive indicators and outcomes of employee well-being according to the Jobs-Demand Resources model (Bakker & Demerouti, 2007). The Diathesis-Stress model implies a distinction between stressful job conditions and individual strains. The model affirms that if the combination of the predisposition and the stress exceeds a threshold, the person will develop the disorder (Islam & Choudhry, 2017).

**Organisational stressors and job productivity**

Various studies have evaluated diverse job stress factors (Adaramola, 2012; Ekundayo, 2014; Naqvi *et al.*, 2013). Robbins & Judge (2013) have identified three organisational stressors; task demands, role demands, and interpersonal demands. Task demands are related to a person's job. Tasks affect the degree of autonomy, the physical working environment, working environment/ layouts by themselves, extra pressure on workers, working in an overcrowded room, etc. This is created by the pressure placed on particular roles employees perform. There are few reasons behind the role demands. Those are connected with role overload, role conflicts, role ambiguity, and role insignificant, etc. In addition to the hassles at work, high situational constraints can create additional pressure/stress to employees. That is mainly created with the interpretational relationship within the organisation with other employees. Lack of

support from work colleagues, negative behaviors, and employee harassment is strongly related to stress at work. According to the previous studies, a negative relationship between job stress and employees' productivity can be identified (Ingram & Pilla, 2007; Leontaridi & Ward, 2002). In addition, some studies have shown that there is a low positive relationship between stress and productivity (Silva & Thilakasiri, 2014). A review has shown that organisational stressors are associated with job stress and burnout among correctional officers (Finney *et al.*, 2013). A recent study has confirmed that role ambiguity and role conflict are significant associations of organisational stressors (Yousefi & Abdullah, 2019).

**Occupational health and safety**

In the Sri Lankan context, there is an ordinance on occupational health and safety. There are specific provisions of the ordinance which are directly relevant to reducing occupational stress. According to a recent study, implementing general provisions on occupational health and safety remains satisfactory, but few provisions should be improved (Pallewaththa *et al*., 2018).

**Research problem**

Few research gaps can be identified to support this study; 1) limited studies on stressors and behavioral symptoms among university staff, 2) scarcity of health promotional programs to address the stress among university staff, 3) application of theoretical models to the university staff.

Studies on stress among administrative officers in universities of Sri Lanka are limited in scientific discussions. Therefore, no evidence has been found in previous stress measurements regarding the impact of occupational stressors on job productivity among Sri Lankan university executives. Mainly two instances of stress among administrative officers can be identified: 1) public complaints, 2) massive revisions of policies and regulations. In addition to that, two other examples have provided ample evidence of stress among administrative officers: 1) cases in audit reports, 2) results of a preliminary study.

The university students and the general public make a substantial number of complaints. These complaints are not limited to services delays, misappropriations, technical deficiencies, deformations of examination results, non-technical errors of allocating university funds, allocating physical resources to the different faculties, and allocating human resources to different faculties, delays of exam results. The university administration is responsible for these complaints directly or indirectly, and because of these complaints, administration officers may have some stress. These stress factors affect productivity of the university. In addition to that, a university is a place where massive changes can occur within a short period. It can be seen that university education is not an isolated event and various factors affect in making a supportive environment for university education. Revisions of educational policies, syllabi changes, internal quality assurance policies, increased student intake, limitations of financial allocations, change of employee attitudes, and technology development are the leading issues of higher education in Sri Lanka (Palagolla & Wickramasinghe, 2009). Therefore, it can be identified that employees in the state sector universities of Sri Lanka work in changing environments where occupational stress is highly prevalent. The situation can be higher in the newly established universities compared to the older ones. When considering the annual audit reports of the newly established universities from 2015-2018, comparatively, serious investigations can be observed. These investigations indicate that the university administration is accountable for them directly, and these issues can impact the stress among administrative officers. Apart from that, these situations can contribute to making a stressful environment at the university, and these situations affect the university's productivity. A preliminary study on experiences in occupational stress from March to May 2019 in a selected newly established public sector university was conducted. The results of the study show that occupational stress is remaining at a considerable level within the university.

According to the current context, the absence of health promotional programs to address the stress among the staff of universities is another missing aspect. Only a few scheduled welfare activities have been conducted each year. However, the effectiveness of these interventions has not been assessed systematically. Another critical arena is the application of theoretical models to the administrative staff for active theorizing.

Based on these research gaps, studying occupational stressors and their consequences in the university setting is essential. The present research is designed to investigate the impact of occupational stressors on the job productivity of administrative staff in the newly established public sector universities in Sri Lanka.

For this study, Robbins & Judge framework was considered for empirical verification. This study considers organisational factors and productivity, and the Robbins & Judge framework clearly explains the potential sources of stress and its consequences. Other stress models do not mainly comply with this study.

According to the current context, further development of the theoretical perspective behind the Robbins & Judge framework model is essential. Therefore, this study will provide critical evidence and constructs to develop measures relevant to organisational stressors and productivity.

**Research questions**

The following questions were derived to find answers to mitigate the concurrent problem situation stated above.

Q-1: Do task demands significantly relate to the job productivity of the administrative staff in the newly established public sector universities of Sri Lanka?

Q-2: Do role demands significantly relate to the job productivity of the administrative staff in the newly established public sector universities of Sri Lanka?

Q-3: Do interpersonal demands significantly relate to the job productivity of the administrative staff in the newly established public sector universities of Sri Lanka?

Q-4: Does the job productivity of administrative staff in the newly established public sector universities of Sri Lanka explain the predictor variables (task demands, role demands, and interpersonal demands)?

**Objectives**

***General objective***

To investigate the impact of occupational stressors on job productivity of administrative staff in the newly established public sector universities of Sri Lanka.

***Specific objectives***

a) to investigate whether there is a significant relationship between task demands and job productivity of administrative staff in the newly established public sector universities of Sri Lanka.
b) to investigate whether there is a significant relationship between role demands and job productivity of administrative staff in the newly established public sector universities of Sri Lanka.
c) to investigate whether there is a significant relationship between interpersonal demands and job productivity of administrative staff in the newly established public sector universities of Sri Lanka.

**Scope of the study**

Occupational stressors are the predictor variables of the research model. Accordingly, task demands, role demands, and interpersonal demands consider as the occupational stressors which influence job productivity (which consider as a behavioral consequence) of the administrative staff of the newly established public sector universities of Sri Lanka.

## METHODS

This study was conducted based on a conceptual model derived from and based on a theoretical model. Therefore, the method is hypothetico-deductive, by which sample information was utilized to predict the population characteristics. Variables were developed based on the literature and operationalization (Table 1). Primary data were collected by administering a Likert scale questionnaire. The questionnaire contained thirty-five (35) questions, including eight questions on the demographic profile of the respondents. Questions were classified according to the study's conceptual framework (7 questions for Task Demands, 7 for Role Demands, 7 for Interpersonal Demands, and 6 for Job Productivity).

Existing tools did not match the study design. Therefore, the questionnaire was developed by the principal investigator. Items of the questionnaire were developed based on the conceptual model by considering literature. Content validation was performed among experts using standard techniques (n=4) and cognitive interviews among selected administrative officers (n=6). Some items of the questionnaire and the scale were revised based on the content validation process. Finally, the authors were able to confirm the applicability and comprehensiveness of the questionnaire.

Test-retest reliability was done with a sample of 15 administrative officers. The tool possessed good reliability with an intraclass correlation (0.89 for Task demands, 0.87 for Role demands, 0.64 for Interpersonal demands, 0.95 for Job productivity). The internal consistency was

**Table 1:** Operationalization of variables

| Variable | Measuring concept | Indicator |
|---|---|---|
| Independent | Task Demands Stressors | 1. The degree of task autonomy provided by the University |
| | | 2. The degree of task variety along with the duties and responsibilities |
| | | 3. The degree of automation and feeling of task overload |
| | | 4. The degree of working conditions favorable to the administrative employees in the University |
| | | 5. The degree of physical work layout provided by the University |
| | | 6. The degree of facilities provided by the University |
| | | 7. The degree of noises and continuous interruptions to disturb the routine duties that are to be accomplished in regular form |
| Independent | Role Demands Stressors | 8. The degree of role conflicts of University administration |
| | | 9. The degree of role overload situation in the University administration |
| | | 10. The degree of role ambiguity situation in the University administration |
| | | 11. The degree of proactive coping behavior of the University administration |
| | | 12. The degree of situational constraints such as Fixed Working hours stipulated by the University |
| Independent | Interpersonal Demands Stressors | 13. The degree of employee hassles in the University |
| | | 14. The degree of employee harassments in the University |
| | | 15. The degree of support provided by the higher officers of the University administration |
| | | 16. The degree of support provided by the similar grade officers of the University administration |
| | | 17. The degree of support provided by the lower grade officers of the University |
| | | 18. The degree of support provided by the other officers of the University administration |
| | | 19. The degree of pressure created by the higher officers of the University administration |
| | | 20. The degree of pressure created by the other employees of the University administration |
| | | 21. The degree of pressure created by the other parties of the University such as students Unions etc |
| Dependent | Efficiency of the employees | 22. The degree of availability of quality Standards |
| | | 23. The degree of availability of guidelines |
| | | 24. The degree of availability of benchmarks |
| | Effectiveness of employees | 25. The degree of availability of action plans |
| | | 26. The degree of availability of explicit monitoring procedures |
| | | 27. The degree of availability of explicit controlling mechanisms |

assessed through Cronbach's alpha values (0.78 for Task demands, 0.78 for Role demands, 0.87 for Interpersonal demands, 0.86 for Job productivity). A pilot study was done with the final questionnaire (n=15).

The target population was the administrative officers in six newly established public sector universities: the Uva Wellassa University of Sri Lanka, the Wayamba University of Sri Lanka, the Rajarata University of Sri Lanka, the Sabaragamuwa University of Sri Lanka, governed under the UGC (selected out of six newly established public sector Universities under the UGC); the Bhiksu University of Sri Lanka and the University of Vocational Technology (selected out of four newly established public sector universities under the other ministries); which are govern under the other ministries. Administrative officers include Registrars, Deputy Registrars, Senior Assistant Registrars, Assistant Registrars, Bursars, Deputy Bursars, Senior Assistant Bursars, Assistant Bursars, Works Engineers, Senior Internal Auditors, Assistant Internal Auditors, and Directors such as Physical educations of the universities that were selected for the present study. Two-stage proportionate random sampling criteria were used to select the sample from the target population. Ninety-two administrative staff members were selected from 118 administrative staff members to the sample following the accepted guidelines (Krejcie & Morgon,1970).

Data collected from the respondents through the questionnaire was entered into the SPSS-20 software package to prepare a database and analyse the data. Pearson's correlation analysis was used to find the degree of association between each independent variable and the dependent variable. Accordingly, a pair of variables were taken into consideration for measuring the correlation coefficients. Regression analysis was performed in this research to analyse the strength of the impact of each independent variable on the dependent variable. Determinants of coefficient ($R^2$), Model summary, and ANalysis Of VAriance (ANOVA) for multiple regression were utilized to analyse data.

$R^2$ explains how far independent variables have been capable of explaining the variation in the dependent variable. Beta coefficients in the parameter analysis indicate the impact of the corresponding independent variables on the dependent variable. Accordingly, the contribution of each independent variable to the dependent variable was assessed and utilized to test the research hypotheses. In this research, simple linear regression was applied to determine the impact of role, task, and interpersonal demands on job productivity, where,

$X_1$= Task demands

$X_2$= Role demands

$X_3$= Interpersonal demands

$\alpha$ = Constant

$\beta$ = Coefficient

Y= Productivity

$$Y= \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3$$

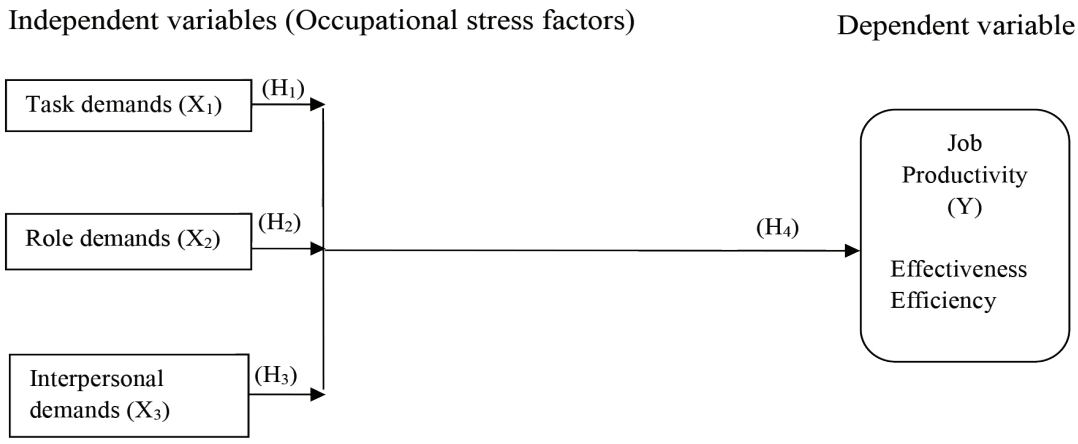


**Figure 1**. Conceptual model

The conceptual model (Figure 1) of the study was developed based on the Robbins & Judge model (Robbins & Judge, 2013).

Research hypotheses are conjectural statements in which a presumed relationship between variables is logically presented, typically in declarative form. Such hypotheses or hypothetical conditions are tested with empirical observations. Each hypothesis is accepted or rejected employing statistical evidence upon the statistical experiment employed in this study using regression analysis, ANOVA for multiple regressions, using the model summary of the regression. The parameter estimates upon the inferential statistical experiments. Four hypotheses were created based on the objectives.

**Hypothesis 1**

$H^1_0$: There is no significant relationship between task demands and job productivity of administrative staff in the newly established public sector universities of Sri Lanka.

$H^1_1$: There is a significant relationship between task demands and job productivity of administrative staff in the newly established public sector universities of Sri Lanka.

**Hypothesis 2**

$H^2_0$: There is no significant relationship between role demands and job productivity of administrative staff in the newly established public c sector universities of Sri Lanka.

$H^2_1$: There is a significant relationship between role demands and job productivity of administrative staff in the newly established public sector universities of Sri Lanka.

**Hypothesis 3**

$H^3_0$: There is no significant relationship between interpersonal demands and job productivity of administrative staff in the newly established public sector universities of Sri Lanka.

$H^3_1$: There is a significant relationship between interpersonal demands and job productivity of administrative staff in the newly established public sector universities of Sri Lanka.

**Hypothesis 4**

$H^4_0$: Variance in the job productivity of administrative staff in the newly established public sector universities of Sri Lanka is not significantly explained by the variables associated with occupational stressors.

$H^4_1$: Variance in the job productivity of administrative staff in the newly established public sector universities of Sri Lanka is significantly explained by the variables associated with occupational stressors.

## RESULTS

The response rate was 80.43% ($n_1$=74) of the sample (n=92). Eighteen participants did not take part in the study because of various determinants during the research period. Among the participants, the majority were males (55.4%). The majority of the respondents were Postgraduate Diploma (40.5%) qualified individuals, while a considerable percentage had Masters Degrees (21.6%). However, none of the individuals in the sample group were Master of Philosophy or Doctor of Philosophy holders by the time of the research. A majority of the respondents were married (77%), and 21.6% were single. Pluralities of respondents (63.50%) were in the 1-5 years' service category, while 21.60% were in the 6-10 years of service category. This meant that the majority of responses came from employees who are quite acclimatized to the organisation. The mean experience of the sample was 6.09 years, with a standard deviation of 6.318. The pluralities of respondents (54.1%) are in the Assistant Registrar category, followed by 14.9% of respondents who are Senior Assistant Registrar; 13.5% were Deputy Registrars.

**Hypothesis testing**

Section A of the questionnaire was developed to take the general perception of task demands. Hypothesis 1 was tested based on these data. The Pearson's correlation indicated a positive relationship between the task demands and job productivity ($H^1_1$ is accepted). Co-relation was significant ($p<0.01$), and it was a medium correlation (Table 1). Therefore, there is a significant relationship between task demands and job productivity of administrative staff in the newly established public sector universities of Sri Lanka.

Section B of the questionnaire was developed to obtain the general perception of the impact of role

demands. The Pearson correlation result demonstrated that the relationship between the two variables is positive and significant ($p<0.01$). The $H^2_1$ is supported, and it was a strong correlation (Table 2). Accordingly, there is a significant relationship between role demands and the job productivity of administrative staff.

Section C of the questionnaire was supported to obtain the general perception of the impact of interpersonal demands. Concerning the relationship between interpersonal demands and job productivity of executive officers, the Pearson correlation result demonstrated that the relationship between the two variables is positive and significant ($p<0.01$). The results were consistent with hypothesis 3; the $H^3_1$ is supported and a medium correlation (Table 3). Therefore, there is a significant relationship between interpersonal demands and job productivity of administrative staff in the newly established public sector universities of Sri Lanka.

Section D of the questionnaire was designed to obtain the general perception of whether the variance in the job productivity is or is not significantly explained by the variables associated with occupational stressors.

The model summary provides information about the regression line's ability to account for the total variation in the dependent variable. The multiple correlation coefficients are the linear correlation between the observed and model-predicted values of the dependent

**Table 1:** Correlation between task demands and job productivity

| | | Task Demands | Job Productivity |
|---|---|---|---|
| Task Demands | Pearson Correlation | 1 | .472** |
| | Sig. (2-tailed) | | .000 |
| | N | 74 | 74 |

**. Correlation is significant at the 0.01 level (2-tailed).

**Table 2:** Correlation between role demands and job productivity

| | | Role Demands | Job Productivity |
|---|---|---|---|
| Role Demands | Pearson Correlation | 1 | .515** |
| | Sig. (2-tailed) | | .000 |
| | N | 74 | 74 |

**. Correlation is significant at the 0.01 level (2-tailed).

**Table 3:** Correlation between interpersonal demands and job productivity

| | | Interpersonal Demands | Job Productivity |
|---|---|---|---|
| Interpersonal Demands | Pearson Correlation | 1 | .490** |
| | Sig. (2-tailed) | | .000 |
| | N | 74 | 74 |

**. Correlation is significant at the 0.01 level (2-tailed).

variable, and its value was 0.614. The value of $R^2$ was 0.377, which means that 37.7% of the total variance has been 'explained' (Table 4).

The regression row displays information about the variation accounted for by the model. The residual row displays information about the variation that is not accounted for by the model. The F-value was F=14.128, and the P-value associated with this F-value was very small (0.00). The value of the F statistic was less than 0.05, which means that the variation explained by the model was not due to chance. These values are used to answer the question, "Do the variance in the job productivity of administrative staff in the newly established public sector universities of Sri Lanka is significantly explained by the variables associated with occupational stressors?". The p-value was smaller compared to the alpha level (0.05) and, it can conclude that the group of variables, task demands, role demands, and interpersonal demands, can be used to reliably predict Job productivity (the dependent variable) (Table 5). Table 6 gives a summary of simple linear regression to occupational stressors on job productivity.

The constant was significantly different from 0.006 at the 0.05 alpha level, and the coefficient for task demands (0.250) is statistically significant because its p-value of 0.039 is less than 0.05. The coefficient for role demands (0.264) is statistically significant because its p-value of 0.016 is less than 0.05, and the coefficient for role demands (0.209) is statistically significant because its p-value of 0.031is less than 0.05 (Table 6).

Beta (β) is the standardized coefficients and standardizing the variables before running the regression, but all of the variables on the same scale, and compared the magnitude of the coefficients to see which one has more of an effect. According to the values, an approximately similar effect can be seen. Considering the above results, the variance in the job productivity

**Table 4:** Model summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .614[a] | .377 | .350 | .43598 |

[a] Predictors: (Constant), Interpersonal Demands, Task Demands, Role Demands

**Table 5:** ANOVA table

| Model | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 8.057 | 3 | 2.686 | 14.128 | .000[b] |
| Residual | 13.306 | 70 | .190 | | |
| Total | 21.362 | 73 | | | |

[a] Dependent Variable: Job Productivity

[b] Predictors: (Constant), Interpersonal Demands, Task Demands, Role Demands

**Table 6**: Description of coefficients

| Model | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | .641 | .226 | | 2.833 | .006 |
| Task Demands | .250 | .119 | .232 | 2.098 | .039 |
| Role Demands | .264 | .107 | .284 | 2.477 | .016 |
| Interpersonal Demands | .209 | .095 | .248 | 2.195 | .031 |

[a.] Dependent Variable: Job Productivity

of administrative staff in the newly established public sector universities of Sri Lanka is significantly explained by the variables associated with occupational stressors.

## DISCUSSION

An individual may experience stress on different levels based on what they view as stressful. There have been several significant sources of stress identified. There is a significant contradiction among scholars concerning the direct and indirect effects of various supposed stressors. Results of this study will be supported by the occupational stress discipline when developed in further studies.

According to the analysis carried out in this study, there are significant correlations between job productivity and occupational stressors. However, the test results relating to the first and the third hypotheses have shown a medium correlation, and the second has shown a strong correlation. The important thing was those correlations being positive. Even though the two hypotheses demonstrate a moderate relationship between the two factors, one cannot ignore its significance in a magnified situation of approximately 800 administrative officers in all universities and higher education institutes. As the general objective, this research focused on the impact of occupational stressors on the job productivity of administrative staff of the newly established public sector universities of Sri Lanka. Based on the statistical results, the variance in the job productivity of administrative staff in the state sector universities of Sri Lanka is significantly explained by the variables associated with occupational stressors.

The regression equation of this study can be presented below.

$$Y= \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3$$

Job Productivity = 0.641 + .250* Task Demands + 0.264* Role demands +.0.209* Interpersonal Demands

These estimates were given about the relationship between the independent variables and the dependent variable. $R^2$ as low as 10% is generally acknowledged for studies in the arts, humanities, and social sciences disciplines because human behaviors cannot be accurately estimated (Ozili, 2016). Hence, $R^2$ in this study (37.7%) is not a problem because the present study attempted to predict human perceptions of occupational stressors and job productivity, including psychological aspects of human behaviors.

Present research does not study the effect of environmental stressors and personal stressors that experiencing stress and organisational stressors only studied. The consequences of stress are mainly three types: physiological, psychological, and behavioral. However, job productivity was only considered the outcome of the occupational stress that comes under the behavioral consequences. Accordingly, the scope of the study is confined to occupational stressors only. Even though the study sample size is reasonable with the population, it is somewhat low, which is a limitation of this study. Another limitation of the study was the utilization of a small sample for the tool development. In addition to that structural validity of the tool was not assessed. Therefore, in future studies, these limitations can be addressed.

Therefore, in future studies, as per the conceptual model, stress becomes the intervening variable between occupational stressors and job productivity. Therefore, further qualitative or quantitative research on other occupational stressors and their impact on productivity is scope for further qualitative or quantitative research.

This study focused only on productivity as an aspect of behavioral consequences. Other aspects of behavioral, physiological, and psychological consequences of occupational stress should be taken into future studies. The proper consideration of the dimensions of occupational stressors and their correlation with other crucial job-related employee characteristics are of the highest significance. It sheds light on improving and enhancing human resources management, decreasing staff turnover, and increasing job satisfaction and productivity.

Such issues as prevention, reduction, and fighting with stressors can be studied deeper separately and presented as individual research. Another key focus of future studies could be research designs, such as longitudinal or interventional studies. This could provide a causal aspect to the data collection, which could improve the predictive validity of the research model. According to the results, the remaining 62.3% of changes in job productivity were explained by other explanatory variables that were not included in the model. The other researchers can incorporate more variables to improve adjusted $R^2$ with occupational stressors and job productivity. It is vital to watch signs of occupational stress and identify the major causes of distress and control them. It can be identified that it is impossible to reduce occupational stress to zero levels. That means one can only take some feasible actions that could take to mitigate occupational stressors.

It is crucial to make a public health policy for managing the risk of occupational stressors among administrative officers. It may also bring a benefit to the other staff members who struggle with occupational stress. On the other hand, it can be a suitable action to prepare the action plans of the universities neglecting tide situations. As a common rule, actions to reduce occupational stress should be given top priority in organisational change. In any case, an organisation must follow specific fundamental steps whenever stress is discovered to threaten its efficiency. Organisations are predominantly concerned about their employees' productivity while they have a vital responsibility of keeping occupational stress at a controllable level. In general, stress is a feeling of tension in emotional or physical conditions. Stress can occur due to various internal and external reasons called stressors. It would be better to highlight the broad scope of stressors before drawing any conclusion. Stress can come from any incident or thought that makes a person feel irritated, angry, or anxious, and it is a normal feeling that can divide into two main types: acute stress and chronic stress. Stress symptoms may be affecting the health of a human, though people might not understand it. Stress could cause physical diseases such as strokes, hypertension, heart diseases, blood pressure, miscarriage during pregnancy, impairing the immune system, and diabetes. Specifically, implications such as sleep disorders, loss of appetite, anger, extreme fatigue, etc., could become severe because of stress. Stress is unavoidable in a human's life. It is not inherently wrong and harmful to individuals, but it can be damaging. On a positive note, by changing the effects of a hostile environment, people can manage stress.

Acute stress, called short-term stress, occurs due to the immediate threat known as a fight-flight response. Chronic stress, called long-time stress, could make the human body vulnerable to various prolonged illnesses. Stress considerably diminishes brain functioning, such as memory, concentration, and learning which are vital elements for an effective operation of a person. In general, it is noticed that employees at each level are experiencing increased tension and uncertainty due to various factors related to the occupation. However, occupational stress is negatively affecting the financial strength of organisations at any time. When it is on the job, it becomes costly for employees and employers, reflecting less productivity, reduced motivation, and skills. Since it is vital to take necessary action to mitigate the impact of occupational stressors on the organisation. Based on the study results, it is noted that administrative officers in universities perform their duties under stressful situations. Thus, the findings of this research will benefit the community in the university sector and any other higher education institutions. The findings may benefit the individual level in keeping their physical and mental health stable. As far as the governing bodies of the universities are concerned, the University Grants Commission is the main body, and they could benefit from the research findings in numerous ways. It may appear like there is nothing we can do about stress. However, managing occupational stress is vital in the workplace since it directly links with its success. Previous studies have shown that occupational stress is one of the primary reasons for low productivity. On the other hand, effective occupational stress management helps break occupational stress, and employees can be happier, healthier, and more productive.

## CONCLUSION

It is suggested that the work described in this research contributes to the persisting literature on the subject of occupational stress in terms of positive implications for future studies or interventions. This study has shown that the organisational - level stressors should be paid greater attention to uplift productivity. Implementation of health promotional programs to address the organisational stressors among the staff of universities should be vital in their agendas.

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