

STRESSORS OF QUANTITY SURVEYORS WORKING ON-SITE: FEMALE VS MALE

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ABSTRACT

The World Health Organization has identified stress, which can cause a devastating effect on the emotional and physical wellbeing of a person, as the health epidemic of the 21st century. Occupational stress is a severe problem among male and female professionals. This study aimed to compare the significant stressors of male Quantity Surveyors (QSs) working on-site with their female counterparts. A mixed approach consisting of a series of interviews and a questionnaire survey was adopted to collect the data required for the study. Purposive sampling was used to select the interviewees and questionnaire survey participants from among the QSs working on-site for contractors. Heavy workload/overtime/inflexible work was identified as the most significant stressor of both male and female QSs. Heavy domestic responsibilities and inadequate earned income were the second most significant stressor of female and male QSs, respectively. Shortcomings of the tendering process (document discrepancies, under-priced quotations) were the third most significant stressor for male and female QSs, though not mentioned in the literature. The study findings revealed that the stressors affecting male and female QSs working on-site must be considered separately.

Keywords: Contractor's Quantity Surveyor; Female; Male; Site; Stressors.

1. INTRODUCTION

Stress is "the non-specific response of the body to any demand", (Selye, 1975). According to Fink (2016), the World Health Organization has identified that stress can have a devastating effect on a person's emotional and physical wellbeing, and it is the health epidemic of the 21st century. O'Driscoll and Dewe (2001) identified stressors as work environment characteristics that cause strain. Accordingly, strain is the poor psychological or physical wellbeing caused by stress. Ill health, anxiety, and burnout are examples of strain that could result from workplace stressors (Webster, et al., 2010). Several studies have investigated the sources of stress (Johnson, et al., 2005), called 'stressors', in the construction industry (Leung and Chan, 2012).

Malagris and Fiorito (2015), as cited in Costa and Pinto (2017), identified the stress experienced by professionals as occupational stress. According to Salam (2016), stress can negatively impact the work quality of a professional. Abdullah, et al. (2013) stated that being a construction professional, a quantity surveyor (QS) working in a construction project has to minimise project cost and achieve value for money while meeting the required standards, which is a challenging task. Bowen, et al. (2013) highlighted that 98%

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of the QSs working in South Africa are not satisfied with their jobs despite being entitled to overtime payments. They underpinned that 86% of the QSs working in the country believed that increasing the time spent with their families and on personal activities would enhance their job satisfaction. Only a few past studies have dealt with the work stress of QSs (Bowen, et al., 2013; Panojan, et al., 2019; Chan, et al., 2020). Even those studies have considered the QSs generally without focusing on the QSs working for consultants or contractors.

The job roles of the QSs working for contractors and those of the QSs working for consultants are different (Lee and Cullen, 2018). Unlike a consultant's QS, a contractor's QS works at the head office or on-site, where the work is complicated, stressful, and accountable (Mbachu, 2015; Towey, 2017). Contractor's QSs (both male and female QSs) working on-site could have a stressful working environment because they perform many tasks within a limited period to achieve the project's cost, time, and quality targets (Mas-Machuca, et al., 2016).

Gender becomes vital in any discussion on the stress management of construction professionals (Love, Edwards, and Irani, 2010) since female professionals also work in the construction industry. As opined by Bowen, et al. (2013), the stress level of a QS depends on the gender of the QS. This gender dependence on stress is due to the different roles played by male and female QSs in their jobs, families, and personal lives (Panojan, et al., 2019). As the traditional family became a dual-earner family, scholars studying work stress became concerned about the impact of gender differences on workplace stress (Mason, 1995; Bowen, et al., 2013; Lup, 2017; Ojo, et al., 2019). Within this context, the industry would value an in-depth study on gender-related stressors of QSs because the stressors are gender-dependent and comparing the stressors of male and female QSs based on gender would be necessary. Therefore, this study compares significant stressors of male and female QSs working on-site for contractors.

The paper is structured as follows: First, the literature review and the adopted research method are presented. Next, the results obtained by analysing the collected data are presented and followed by a discussion.

2. LITERATURE REVIEW

2.1 CONTRACTOR'S QUANTITY SURVEYORS WORKING ON-SITE

The construction industry is a high-speed, dynamic, complicated, and crisis-ridden industry (Leung and Chan, 2012). In the construction industry, profit margins are narrow, and construction schedules are tight, while project delays and time overruns cause serious financial repercussions (Lingard and Francis, 2004). Consequently, construction professionals have to deliver safe projects on time and within the budget. Project work is stressful due to its dynamism and uncertainty (Asquin, et al., 2010; Mohr and Wolfram, 2010). The stressfulness of project work makes construction professionals criticise themselves and wish that their next projects would be different (Enshassi, et al., 2018).

According to Badu and Amoah (2004 cited in Okeke, et al., 2018), a QS is a construction professional who can analyse both the cost components and physical construction works of a project successfully so the analysis results can be used to solve the problems specific to each project. According to Seely, et al. (2009), and Dada and Jagboro (2012), as cited in Ranasinghe, et al. (2018), QS is a professional who adds value primarily to the financial

and contract management of construction projects during pre-construction, construction, and post-construction stages of projects through contributing to overall project performance by acquiring, enhancing, and deploying the required competencies adequately. Okeke, et al. (2018) studied the four main construction stakeholders who employ QSs: constructing firms, consulting firms, academic institutions, and the civil service.

According to Lee and Cullen (2018 as cited in Perera, et al., 2021a), a considerable difference exists between the job roles of QSs working for contractors and those working for consultants. Nisansala, et al. (2018) have cited that the basic duties of contractor's QSs would be estimating and tendering, post-contract administration, sub-contractor selection, evaluation and payments, preparation of interim applications, conducting negotiations, preparation of claim reports, and preparation of final accounts and agreements (Abiramy, et al., 2016). Similarly, Ashworth, et al. (2013) identified that a contractor's QS must look after the financial interests of the contractor and work in conjunction with the project QS when preparing interim payments and final accounts.

A contractor quantity surveyor's role extends further than the day-to-day running of a building project, covering sub-contract formation, forecasting of costs and values of the project, cash flow forecasting, and the collation of the operation and maintenance manuals of the project (O&M Manuals) (Jongo, et al., 2019). Further, the quantity surveyor is likely to have extensive dealings with subcontract organisations, including the bulk of work and managing their demands for payment and claims (Ramus, et al., 2006). During the post-contract period of a project, a contractor's QS is most likely to be involved in commercial project activities and project and contract administration to deliver the project (Towey, 2017). On-site construction personnel, in particular, are required to work long hours, even during weekends (Lingard, et al., 2007, as cited in Perera, et al., 2021). Thus, site QSs also will have to work long hours, being on-site personnel. Mas-Machuca, et al. (2016) reported that long working hours would affect a person's work-life balance.

2.2 STRESS AND STRESS MANAGEMENT

The word *stress* is derived from the Latin word *stringere*, which means to *draw tight*. (Oladinrin, et al., 2014; Ross, 2020). Ross (2020) mentions that in the 14th century, the term "stress" was associated with adversity, hardship, or some type of affliction. In the 17th century, stress was described as hardship, strain, adversity, or affliction (Oladinrin, et al., 2014). Fontana (1989), as cited in Chow (2009), defines stress as those challenges that excite us and keep us on our toes, and without stress, life for many people would ultimately become dull and not worth living. This study focussed on the harmful effects of stress which could be overcome by managing it. Jeffrey (2006) defined stress as a state of cognitive, emotional, and physical arousal (Oladinrin et al., 2014), which links up in the perspective of the human body. Kalia (2002) and Spielberger et al. (2003) identified stress as an epidemic (Ajayi, et al., 2019). Thus, its management deserves attention. Greenberg (2002) mentions that the goal of stress management should not be to eliminate stress but to learn how to manage and use it effectively.

2.3 STRESS/STRESS MANAGEMENT: MALE VS FEMALE

Bowen, et al. (2013) opined that QSs are highly stressed, and their stress levels vary with gender. According to Loosemore and Waters (2004), in the construction industry, the sources and levels of stress differ statistically and significantly between males and

females, although they also have similarities. Researchers, mostly feminist researchers, pinpointed that in dual-career households, men are more likely than women to let their job commitments limit their family work, whereas women are more likely than men to take time off (often at very short notice) to attend to unexpected family demands (Coltrane, 2004). A study among counsellors in domestic call centres of Korean financial institutions found that work-family conflicts have a significant effect on female workers' job stress in call centres and on reducing internal motivation (Jeon, et al., 2022). Ojo, et al. (2019) disclosed a significant difference in the perceptions of males and females on the usage of all identified stress response strategies except continuing professional development, offloading/delegation of work, time-off work, specialist assistance, sports, exercises, or hobbies, and leaving the organisation to join another organisation.

2.4 IMPORTANCE OF IDENTIFYING STRESSORS

A stressor refers to a threatening or challenging event that can cause stress (Lazarus, et al., 1984; Selye, 1956). Stressors in working environments are defined as *job stressors* (Nixon, et al., 2011; Brockman, 2014; as cited in Leung and Chan, 2012). Johnson et al. (2005) cited five sources of stress using Cooper and Marshall's (1976) ASSET - a shortened stress evaluation tool.

Different occupations have different stressors, such as the threat of violence, lack of control over work decisions or extended working hours (Johnson et al., 2005). Stressors, such as time pressure, are causal triggers of strain reactions, such as irritation (Rauschenbach, et al., 2013). Leung and Chan (2012) categorised the stressors of construction professionals into four categories:

- *interpersonal stressors*, such as the perceived personal traits of the locals, the perceived work traits of the locals, language barriers, poor workgroup-related relationships, home-work conflicts,
- *task-related stressors*, such as qualitative work overloads, quantitative work overloads, role ambiguities, and role conflicts,
- *organisation-related stressors*, such as organisational formalisation, organisational centralisation, organisational complexity and lack of organisational support, and
- *physical stressors* such as general living conditions, transportation, and wage differentials.

According to Wallace (2007), many people are unaware that daily hassles like traffic jams are linked to hypertension, migraine headaches, ulcers, heart attacks, depression, and death. A relationship exists between the causal effect of work stressors on human wellbeing (Ganster and Rosen, 2013).

According to Chan, et al. (2016), stress coping behaviours impact the construction professionals' health and their subsequent tasks and organisational outcomes directly. Identifying mental stressors would help the government, health institutions, and policymakers develop a preventive policy to tackle the stressors (Tijani, et al., 2020). Thus, identifying stressors is essential to cope or managing stress.

Worral (2010) stated that women are faced with white, male-dominated organisational cultures in the United Kingdom (UK) construction industry. Ness (2012) revealed that in the UK construction industry, women could do most construction jobs. The dominant ideology about who does what work appears to be challenged but strongly classed and

gendered roles in society and the job market are actually reproduced. Furthermore, a study on construction professionals in Spain revealed that almost all women interviewed acknowledged that balancing work and family life was a severe problem (Navarro-Astor, 2011).

In today's social, economic, and political environment, masculine discourses and practices, and even their macho celebrations, dominate organisations and institutions, and the impact of the feminist movement has surfaced a reactionary backlash now (Knights, 2019). Sunindijo and Kamardeen (2017) revealed that women professionals in the Australian construction industry suffer from anxiety and acute stress more than their male counterparts. However, the symptoms of depression do not significantly differ between the two genders. Tijani, et al. (2020) found that socio-psychological factors can affect gender-related stressors in an organisation. Therefore, it is evident that a distinct difference exists between stressors and reasons for stressors according to their gender. Thus, this study separately considered males and females.

3. METHODOLOGY

A mixed approach was used to collect qualitative and quantitative data for the study. Selecting a research approach depends on whether the research problem is of exploratory, explanatory, descriptive, predictive, evaluation, or historical type (Grover, 2015). First, a literature review was conducted to identify the concept of stressors stress, stress management, and the link with gender differences in the construction industry.

Yin (2006) stated that the mixed approach could help find answers to different research questions, covering the requirements of quantitative and qualitative data collection, analysis, and interpretation. Therefore, both interviews and questionnaire surveys were employed for data collection. Semi-structured interviews, which help collect qualitative information, lead to a thorough understanding of the research question (Saunders, et al., 2016). Forty-seven stressors common among construction professionals were identified from the literature. The interviews were held with construction experts with more than 15 years of on-site experience working for contractors. The sample included 15 male and 15 female QSs. Each face-to-face interview lasted for 45-60 min. The interviewees and questionnaire survey respondents were selected via purposive sampling. Semi-structured interviews helped to identify whether the common stressors identified in the literature impact on-site QSs.

A questionnaire survey is a suitable method of data collection when the respondents are knowledgeable in the subject concerned and competent to answer any subject-related question (Preston, 2009). Questionnaires were distributed among 300 contractors' QSs working in sites within and outside Sri Lanka. Purposive sampling was used to select QSs to participate in the survey based on their professional qualifications, experience, and knowledge. The sample included 150 female and 150 male QSs. From the 300 questionnaires distributed, 211 completed questionnaires were returned (more than 70% of the distributed questionnaires) by 102 female QSs and 109 male QSs. Table 1 presents the details of the questionnaire survey respondents.

According to Elo, et al. (2014), content analysis is a systematic and abstract process of analysing the information generated through interviews, observations, and diaries. Hence, the interview findings were analysed using manual content analysis to identify the stressors specific to site QSs. As stated by Roszkowska (2013) and Madushika et al.,

(2020), the Mean Weighted Rating (MWR) can rank factors according to their importance level. Thus, the present study used MWR to analyse the data collected from the questionnaire survey. Warmbrod (2014) emphasised that the score yielded on the Likert scale by a factor is its composite score given by individual respondents. Thus, the sum of the mean values of each rating value can be obtained on a scale. Chyung, et al. (2017) confirmed that Point 3 on a 5-point Likert scale represents neutrality. The positive responses would score 4 or 5 (Dawes, 2008). Thus, stressors that had an MWR equal to or above 4.0 were considered significant stressors and ranked.

Table 1: Details of the questionnaire survey respondents

Work Experience (Years) Designation	0-5		6-11		11-15		16-20		Total	
	M	F	M	F	M	F	M	F	M	F
QS	18	19	5	5	2	2			25	26
Senior QS	11	11	13	12	6	5			30	28
Chief QS	8	6	7	8	10	10	3	4	28	28
Contracts Specialist	2	1	6	6	2	1	5	3	15	11
Commercial Manager			3	2	2	3	4	4	9	9
Assistant General Manager							2		2	
Total	39	37	34	33	22	21	14	11	109	102

4. FINDINGS AND ANALYSIS

4.1 SIGNIFICANT STRESSORS AFFECTING ON-SITE MALE QUANTITY SURVEYORS WORKING FOR CONTRACTORS

Thirty-seven stressors were identified from the literature as stressors for professionals and validated through the interview outcomes of the selected sample of male quantity surveyors who have on-site experience working as contractor QSs working on-site. Some 20 stressors were confirmed by the interviews applicable to the male QSs working on-site for contractors, ten were removed as they are not applicable to the QSs work on-site, seven factors were modified, and ten new factors were identified by the interviewees. Therefore, the questionnaire considered 37 factors identified from the literature.

Table 2 presents the stressors of male QSs working on-site for contractors ranked according to the answers given in 109 questionnaires received from male site QSs. The ranking was made according to the MWR of each stressor. The stressors not mentioned in the literature but introduced by the interviewees are marked in bold italicised text in Table 2.

Table 2: Significant stressors of male QSs working on-site for contractors

Rank	Male	MWR
1	Heavy workload/overtime/inflexible work	4.900
2	Inadequate earned income	4.837
3	<i>Shortcomings of the tendering process (document discrepancies, under-priced quotations)</i>	4.766

Rank	Male	MWR
4	<i>High employee turnover (Departing employees and difficulty in maintaining job continuity)</i>	4.722
5	<i>Unplanned/frequent changes made to employer requirements</i>	4.695
6	Need to shoulder responsibility without authority	4.633
7	<i>Poor information flow (Improper coordination with head office, lack of details and delays in approving variations and issuing drawings)</i>	4.605
8	<i>Inadequate attention paid to site safety</i>	4.548
9	Behaviour of supervisor/colleagues/subordinates	4.511
10	<i>Poor planning by Qs</i>	4.487
11	The pressure exerted by superiors	4.423
12	<i>Clients' lack of knowledge</i>	4.341
13	<i>Lack of employee motivation, welfare, and performance evaluations</i>	4.300
14	<i>Obsolete technologies used at sites</i>	4.261
15	<i>Favouritism/Discrimination at work</i>	4.000

Thus, heavy workload/overtime/inflexible work is the most significant stressor of male Qs working on-site for contractors. According to Lingard, et al. (2007), as cited in Perera, et al. (2021), on-site construction personnel must work long hours, even during weekends. The second most significant stressor of male Qs working on-site for contractors is the inadequate earned income. Thus, even though Qs can work overtime and earn an additional income, they appear to be dissatisfied with their total income. Only the Qs and other construction professionals working at the head office of the contractor or consultant are involved in the tendering process; on-site Qs are not involved in the tendering process. Nevertheless, the stressor, shortcomings of the tendering process (document discrepancies, under-priced quotations) introduced by the interviewees, has become the third most significant stressor of male Qs working on-site for contractors.

4.2 SIGNIFICANT STRESSORS AFFECTING ON-SITE FEMALE QUANTITY SURVEYORS WORKING FOR CONTRACTORS

Thirty-nine stressors were identified from the literature as stressors for professionals and validated through the interview outcomes of the selected sample of male quantity surveyors who have on-site experience working as contractor Qs working on-site. The interviews confirmed some 22 stressors applicable to the female Qs working on-site for contractors, and eight were removed as they are not applicable to the Qs working on-site. Nine factors were modified, and the interviewees identified ten new factors. Therefore, the questionnaire considered 41 factors identified from the literature. Table 3 lists the stressors of female Qs working on-site for contractors, ranked according to their level of significance obtained using their MWRs. The MWRs of the stressors were calculated using questionnaire survey findings. The stressors introduced by the interviewees are presented in bold and italic text.

Thus, even in the case of female Qs working on-site for contractors, *heavy workload/overtime/inflexible work* is the most significant stressor. Asquin et al. (2010) and Mohr and Wolfram (2010) have stated that construction professionals (responsible for the safe

delivery of projects on time and within the budgets) find project work stressful due to the dynamic and uncertain nature of project work.

Table 3: Significant stressors of female Qs working on-site for contractors

Rank	Female	MWR
1	Heavy workload/overtime/inflexible work	4.900
2	Heavy domestic responsibilities	4.837
3	<i>Shortcomings of the tendering process (document discrepancies, under-priced quotations)</i>	4.766
4	<i>Poor information flow (Improper coordination with head office, lack of details and delays in approving variations and issuing drawings)</i>	4.722
5	Uncomfortable/unfavourable working environments	4.695
6	<i>Inadequate attention paid to site safety</i>	4.633
7	<i>Favouritism / Discrimination at work</i>	4.605
8	<i>Comparison of oneself with those with the same qualifications and working for other contractors</i>	4.548
9	<i>Unplanned/frequent changes made to employer requirements</i>	4.511
10	Behaviour of supervisor/colleagues/subordinates	4.487
11	<i>Lack of employee motivation, welfare and performance evaluations</i>	4.423
12	<i>Lack of support from family members</i>	4.341
13	<i>The pressure exerted by superiors</i>	4.300
14	<i>Obsolete technologies used at sites</i>	4.261

Heavy domestic responsibilities were the second most significant stressor of on-site female Qs working for contractors. The literature identified this factor, which was validated by the interviews for female site Qs working for contractors. Hochschild (1997) claims that although both men and women may prefer to get away from childcare responsibilities by spending time at the office, society expects women to look after the children, making them less committed to work than men.

As in the case of male Qs, the *shortcomings of the tendering process (document discrepancies, under-priced quotations)* is the third most significant stressor of female Qs working on-site for contractors.

4.3 GENDER-WISE COMPARISON OF SIGNIFICANT STRESSORS OF QSS WORKING ON-SITE FOR CONTRACTORS

Table 4 lists the stressors of both male and female site Qs working for contractors in descending order of their significance level. The stressors were ranked based on their MWRs. The stressors identified in the interviews but not mentioned in the literature are presented in italic, bold text. The shaded cells contain stressors that are not common to male and female Qs.

The first two most significant stressors of male and female Qs were identified from the literature and validated for site Qs working for contractors. The third most significant stressor was common to female and male Qs, and identified only in the interviews; the literature does not mention this factor.

Table 4: Significant stressors of QSs working on-site for contractors

Rank	Female	MWR	Male	MWR
1	Heavy workload/overtime/ inflexible work	4.877	Heavy workload/overtime/ inflexible work	4.900
2	Heavy domestic responsibilities	4.839	Inadequate earned income	4.837
3	<i>Shortcomings of the tendering process (document discrepancies, under-priced quotations)</i>	4.805	<i>Shortcomings of the tendering process (document discrepancies, under-priced quotations)</i>	4.766
4	<i>Poor information flow (Improper coordination with head office, lack of details and delays in approving variations and issuing drawings)</i>	4.780	<i>High employee turnover (Departing employees and difficulty in maintaining job continuity)</i>	4.722
5	Uncomfortable/unfavourable working environments	4.736	<i>Unplanned/frequent changes made to employer requirements</i>	4.695
6	<i>Inadequate attention paid to site safety</i>	4.110	Need to shoulder responsibility without authority	4.633
7	<i>Favouritism/Discrimination at work</i>	4.688	<i>Poor information flow (Improper coordination with head office, lack of details and delays in approving variations and issuing drawings)</i>	4.605
8	<i>Comparison of oneself with those with the same qualifications and working for other contractors</i>	4.646	<i>Inadequate attention paid to site safety</i>	4.548
9	<i>Unplanned and frequent changes made to employer requirements</i>	4.609	The behaviour of supervisor/colleagues/subordin ates	4.511
10	The behaviour of supervisor/colleagues/subordin ates	4.531	<i>Poor planning by QSs</i>	4.487
11	<i>Lack of employee motivation, welfare and performance evaluation</i>	4.500	Pressure exerted by superiors	4.423
12	<i>Lack of support from family members</i>	4.444	<i>Clients' lack of knowledge</i>	4.341
13	<i>Pressure exerted by superiors</i>	4.392	<i>Lack of employee motivation, welfare and performance evaluation</i>	4.300
14	<i>Obsolete technologies used at sites</i>	4.109	<i>Obsolete technologies used at sites</i>	4.261
15			<i>Favouritism/Discrimination at work</i>	4.000

The study findings indicate that heavy workload/overtime/inflexible work is the most significant stressor of both male and female site QSs working for contractors. It was mentioned in the literature and validated at the interviews for site QSs working for contractors. The second most significant stressor of female site QSs is heavy domestic responsibilities, mentioned in the literature and validated in the interviews for female site QSs working for contractors - it was not among the significant stressors of male site QSs working for contractors. Manzoni (2012) revealed that some women employed in the construction industry had left the industry because of maternal responsibilities. The study findings indicate that most of the identified stressors are common to both female and male QSs of contractors.

5. CONCLUSIONS

Contractor QSs working on-site have to bear heavy workloads and attend to inflexible work because of tight project targets. Consequently, they are compelled to work overtime to achieve tight project goals. The interviewees could identify several stressors not mentioned in the literature but applicable to site QSs working for contractors. Evidently, some stressors are unique to males, such as, Inadequate earned income, High employee turnover (departing employees and difficulty in maintaining job continuity), Need to shoulder responsibility without authority, Poor planning by QSs, and Clients' lack of knowledge. The stressors to females were, Heavy domestic responsibilities, Uncomfortable/unfavourable working environments, and Lack of support from family members.

There are common stressors such as Heavy workload/overtime/inflexible work, Shortcomings of the tendering process (document discrepancies, under-priced quotations), Poor information flow (Improper coordination with head office, lack of details, and delays in approving variations and issuing drawings), Inadequate attention paid to site safety, Favouritism/Discrimination at work, Comparison of oneself with those with same qualifications and working for other contractors, Unplanned and frequent changes made to employer requirements, Behaviour of supervisor/colleagues/subordinates, Lack of employee motivation, welfare and performance evaluation, Pressure exerted by superiors, and Obsolete technologies used at sites. The contractor organisations have to focus on strategies that would overcome or minimise the stressor common to both genders, such as heavy workload/overtime/inflexible work of site QSs working for contractors to ensure the wellbeing of the QSs. Therefore, the site work can be more efficient and effective. The findings that the stressors of male and female QSs working on-site for contractors are different will again give contractors the idea about what stressors are critical for each gender and how to address them separately. Ultimately, the research will be beneficial in enhancing the mental health of QSs working on-site for contractors.

Literature that identifies stressors specific to male and female contractors' QSs working on-site is scarce. Thus, the study findings, which fill the research gap by identifying the stressors specific to contractors' QSs working on-site, will solve the dearth of literature on stress management of Quantity Surveyors considering gender differences.

This study could be a benchmark for similar studies in other countries. It focused only on the stressors of contractors' QSs working on-site but could be extended to identify the

strategies to overcome all identified stressors. Future studies on the subject could be in the global context.

The present study was limited to the QSs working in the sites of contractor organisations, both within and outside Sri Lanka. It did not consider the specific experiences of each participant.

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