Improving Psychological Health of Junior Professionals in the Construction Organisations in Sri Lanka

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ABSTRACT

Construction is a volatile and highly uncertain industry that faces several challenges in terms of poor image, skills and labour shortage, exposure to adverse weather, macho culture, and stressful environment. The labour-intensive nature of construction industry leads to vertical and horizontal segregation within the workforce. This study focuses on the psychological health experienced by junior professionals from the time they join until they settle down in Sri Lanka. It is vital to keep the junior professionals in their best psychological position to ensure their continuity in the job. This study investigated the risk factors that contribute to psychological health of junior professionals in construction industry and proposed strategies to address such risk factors. The research adopted a qualitative survey strategy, where 24 semi-structured qualitative interviews, including 18 junior and 6 senior construction professionals, were conducted. The research identified 26 factors under five categories such as adverse nature, apprenticeship, company culture, competition and opinions. While conforming to the existing factors from literature, the research revealed new factors too. Few to name are some common factors such as lack of leisure events, deadlines, job uncertainty; some personal factors such as human behaviour, illegal activities, personal agendas, lack of belongingness, educational background, personal bias, and lack of confidence and some dependency factors such as lack of support from seniors and task-oriented training. The senior professionals, while agreeing to most of these factors, claimed these are mainly due to the limited subject specific knowledge and lack of awareness on the nature of the job including regulations and policies by junior professionals. Appointing a mental health monitoring officer, implementing stronger human resource management policies, investing on training and development, counselling and support systems and encouraging more social activities were some of the key strategies proposed to improve the psychological wellbeing of the junior professional.

KEYWORDS: *Psychological Health, Junior Professionals, Human Resources Management, Construction Organisations.*

1 INTRODUCTION

The construction industry is an uncertain and risky industry with the third most stress affected workforce in the world following mining and police while exposing employees and different stakeholders to mentally uncomfortable situations that create psychological issues (De Silva et al., 2017; Campbell, 2006; Bowen et al., 2013; Fordjour et al., 2020). There are two types of employees in the construction industry such as professional workers and trade workers (Fordjour et al., 2020). The level of psychological conditions of professionals, directly and indirectly, contributes to the increase or decrease of job performances of employees (Fordjour et al., 2020).

In this research, focus has been given on the negative impact of the psychological health of junior professionals of the construction industry in Sri Lanka. Several psychological researchers guarantee that the psychological needs of construction professionals differ on age (Bowen et al., 2013; Cardoso et al., 2015; Bukhari et al., 2021). Lack of support, family imbalances, qualitative work demands without prior

knowledge, minimised opportunities to learn new skills, lack of experience to cope with stress, doubt about the correct utility of skills and not having proper recognition are the problems faced by junior professionals which may direct them towards psychological ill-health (Senaratne & Rasagopalasingam, 2017; Bowen et al., 2013; Love et al., 2010; Fordjour et al., 2020; Bowen et al., 2013; Cohen-Callow et al., 2009; Bukhari et al., 2021). *"Side-bet theory of Becker (1960) suggests that even though an employee is highly dissatisfied with their job, a high tenure employee may find it more challenging and disruptive to resign from the job, as they have some side bets, sunk costs, or investment in their present organisation"* (Dodanwala & Santoso, 2021, P 09).

Construction sector-related psychological health comes under the major area of occupational psychology. The research related to occupational psychological health in construction industry is limited (Fordjour et al., 2020). Among little-explored psychological health related studies in construction, there is a dearth of knowledge specifically focusing on the psychological wellbeing of junior professionals in Sri Lankan construction industry (Senaratne & Rasagopalasingam, 2017). Hence this paper aims to investigate the psychological health experienced by junior professionals of Sri Lankan construction industry from the time they join until they settle down. Hence, the objectives of the research are,

1) to identify the risk factors that are contributing to the psychological health of junior professionals in construction organisations; and

2) to suggest organisational strategies to overcome the risk factors in order to reduce the impact of such factors on the psychological health of junior professionals in construction organisations.

The period from the beginning of the training period, up to 5 years since the first job appointment is considered as the period during which the junior professional will comparatively undergo more stress and anxiety. Hence both trainee professionals and junior professionals are included within the scope of the study. As psychological issues are personal to a particular individual, psychological conditions and factors that contribute to that of junior professionals may differ from person to person. Further junior professionals not willing to speak their heart out unless they feel safe and confident was a limitation.

Accordingly, the next section explores the existing literature related to career related issues faced by construction junior professionals, then the research methodology is presented, followed by research findings and discussion. Finally, the conclusions are drawn.

2 LITERATURE REVIEW

Critical early careers of construction junior employees should be structured to develop junior's skills and knowledge with a boost to carry on the journey in the construction industry (Senaratne & Malewana, 2011; Senaratne & Rasagopalasingam, 2017; Bukhari et al., 2021). Improving the psychological health of junior professionals will increase the confidence to perform well and ultimately results in the quality of organisational outcomes (Bukhari et al., 2021). When an employee is psychologically ill, the organisation bears the cost directly (wrong decisions, losses, faulty construction, loose of employees, legal issues) and indirectly (inefficiency, moral downness, loss of goodwill, loss of motivation) (Bowen et al., 2014; Fordjour et al., 2020; Martino, 2003; Dodoo & Al-Samarraie, 2019; Fordjour & Chan, 2019)

Research studies partially represent construction junior professionals through an entire group of professionals that were focused. In addition to that, past researchers deemed to include any significant factor regarding the psychological health of junior professionals if that came across. Panojan et al., (2019) graphically represented factors that contribute to poor work-life balance and the impact of that on the junior quantity surveyors compared to senior quantity surveyors. Bukhari et al., (2021) discussed the early career of construction professionals and mentioned 46 risk factors on the motivation of construction professionals. Psychological health exists among humans as conditions like stress, anxiety, emotional distress, fatigue, frustration, depression etc. (Fordjour et al., 2020). They have found 42 working environment related psychological risk factors that contribute to the psychological health of construction professionals. Accordingly, the critical factors which could be driven to psychological problems are high task demand (high volume of work), high role demands (complex responsibilities), poor interpersonal working relationships (poor relationship among colleagues), poor working conditions (limited time, risking and unsatisfied exposure in work), lack of autonomy (possessing enough power to utilise) and lack of feedback (not being appreciated enough). Psychological indicators can be used to recognise psychological conditions. (Fordjour & Chan, 2019) classified psychological indicators of

construction employees into four categories which are individual lifestyle, psychosocial symptoms, physiological conditions, and work attitudes.

Ethically, employees in the construction sector expect the human resource (HR) department of the construction organisation to care about their needs but the construction sector is little known for the care the HR department has given to their human resources (Bukhari et al., 2021; Senaratne & Rasagopalasingam, 2017). An extensive number of research studies shows that what has been taught in academics has been a major pillar to retain in the industry (Farrow et al., 2017; Lucas, 2017; Leathem & Mcglohn, 2017; Simons et al., 2021). There should be a valuable reason for research studied in the past to identify the necessity of soft skills like team working, collaborative working skills, leadership, decision making, etc. alongside technical and theoretical knowledge (Ahn et al., 2012; Banik, 2008; Simons et al., 2021). In literature, professionals have asked for psychological training programmes from the organisation (Chan et al., 2012).

Stress is one of the key contributors to have psychological ill-health. De Silva et al., (2017) introduced a stress management framework consisting of primary secondary and tertiary strategies. Primary strategies are to reduce factors contributing to stress, secondary strategies are to respond immediately, and tertiary ones are to reduce the long-term impact. Literature in the context suggest that leisure activities, parties, trips, coaching and monitoring schemes, career development, long term career planning, family travel fees, medical subsidies compensation plans, assignment bonuses, employee benefits plans, living allowances, fairness of pay, incentives, financial rewards, on-time payment, good working facilities, and safety at work were recommended as advanced requirements to experience a stress-free career (De Silva et al., 2017; Dodanwala & Santoso, 2021; Senaratne & Rasagopalasingam, 2017; Zakeri et al., 1997; Bukhari et al., 2021; Chan et al., 2012).

2.1   Risk Factors contribute to psychological health of junior professionals

Risk Factors that contribute to the psychological health of junior professionals which are identified from the literature have been included in Table 1.

Table 1. Risk Factors contribute to the psychological health of junior professionals

Factors	Resources
Lack of autonomy	(Bowen et al., 2013)
Job description / not having a specific job role	(Bukhari et al., 2021; Chan et al., 2012; Fordjour et al., 2020; Bukhari et al., 2021)
Job uncertainty	(Bowen et al., 2013)
Complexity	(Dodanwala & Santoso, 2021; De Silva et al., 2017)
Deadlines	(Bowen et al., 2013; Fordjour et al., 2020)
Irregular work schedule	(Bowen et al., 2013)
Lack of support from seniors	(Senaratne & Rasagopalasingam, 2017)
Poor HR management strategies	(Chan et al., 2012)
Lack of management	(Bowen et al., 2013)
Lack of experience	(Dodanwala & Santoso, 2021)
Lack of knowledge	(Love et al., 2010; Fordjour et al., 2020)
Personal agenda	(Ruthankoon & Ogunlana, 2003; Bukhari et al., 2021).
Abuses	(Fordjour et al., 2020)
Addictions	(Fordjour et al., 2020)
Relation with supervisor and workmates	(Bowen et al., 2013; (Bukhari et al., 2021)

As indicated in Table 1, the risks factors identified are related to the job itself (unclear job description, job uncertainty, complexity), working schedules (deadlines and irregular schedules), the support offered (both from senior staff and from the management), personal factors (knowledge, experience, personal agenda), and social factors (abuses, addiction, relationship with supervisors).

In overseas research, racial classifications are more precise (Bowen et al., 2013). Trends and patterns differ between labour markets in different countries (Bowen et al., 2013). Some overseas research was conducted in a background in which their governments had recognized psychology is a

priory in occupational health which is unlikely in Sri Lanka (Commission of European Communities, 2002). The construction policy of a country also very precise on the topic. Lack of autonomy can differ on work demands being qualitative or quantitative (Bowen et al., 2013).

Cultural influence is effective upon the psychological well-being of construction employees (Ki et al., 2010; Chan et al., 2014; Senaratne & Rasagopalasingam, 2017). Udayanga, (2020) emphasised the unique attitudes of Sri Lankans to resolve stress-related issues with the beliefs of mixed religious blessings. As same as the uniqueness from every other aspect, risk factors that contribute to the psychological health of junior professionals may differ from other contexts as well. In addressing the context-specific risk factors, primary data was employed to the research using the methodology discussed in the next section.

3 RESEARCH METHODOLOGY

In this chapter, the methodology adopted to this research to achieve the objectives is described. Knowledge regarding risk factors on the psychological health of junior professionals and strategies to overcome those psychological risk factors are limited in the context of Sri Lankan construction industry. Hence the knowledge capturing across a wider context is more useful. This justifies the selection of a survey strategy (Punch, 2003).

As psychological health is a sensitive and subjective phenomenon, and due to the limited existing studies in psychological health of junior professionals in Sri Lankan construction industry, this research adopted a qualitative approach. Qualitative approaches are primarily concerned with understanding, explaining, exploring, discovering, and clarifying a group of people's situations, feelings, perceptions, attitudes, beliefs, and experiences (Saunders, Lewis, and Thornhill, 2019).

Hence, the research strategy adopted was a qualitative survey as the objectives have an exploratory nature where a wider capture of knowledge is needed before going for an in-depth analyses. The qualitative type of survey does not aim at establishing frequencies, means or other parameters but at determining the diversity of some topic of interest within a given population (Jansen, 2010). As there is no specific sample size is required for qualitative studies (Naderifar, Goli, and Ghaljaie 2017), 24 semi-structured interviews were conducted among 18 junior professionals and 6 senior professionals to capture significant risk factors contributing to their psychological health and the appropriate strategies to address such risks factors. The number of interviews was limited to 24 after realising a data saturation. Though the study focuses on the issues faced by junior professionals, few senior professionals were also contacted mainly to minimise the biasness involved with having a single perception. The experience that senior staff faced when they were in their first few years of employment were captured. In addition, as the senior professionals have gone through the similar situation as junior professionals, the strategies to overcome the risk factors were mainly collected from senior professionals. Hence a single tool was used for the primary data collection and both junior and senior professionals were included to have a better data triangulation (Carter et al. 2014). Purposive sampling, which is a non-probability sampling technique, was used to select the interviewees to best enable the achievement of the objectives (Saunders et al., 2019). The profile of the respondents is provided in Table 2.

Table 2: Participants' Collection

ID	Gender	Age	Sector	Experience	Job	Project Sector	Education Level
JP01	M	24-28	Private	below 3 years	QS	building	BSc
JP02	F	24-28	Private	below 3 years	Asst. QS	building	BSc
JP03	F	24-28	Private	below 3 years	Asst. QS	building	BSc
JP04	M	24-28	Private	below 3 years	Asst. QS	civil	BSc
JP05	M	24-28	Private	3-5 years	QS	civil	BSc
JP06	F	24-28	Private	below 3 years	Asst. QS	civil	BSc
JP07	F	24-28	Private	below 3 years	Asst. QS	building	BSc
JP08	M	24-28	Private	3-5 years	QS	civil	BSc
JP09	M	24-28	Gov	below 3 years	Eng	civil	BSc
JP10	F	24-28	Private	below 3 years	Asst. Eng	building	BSc

JP11	M	24-28	Private	below 3 years	Asst. Eng	building	BSc
JP12	M	24-28	Private	below 3 years	Archi	building	MSc
JP13	M	24-28	Private	3-5 years	Eng	building	BSc
JP14	M	24-28	Private	3-5 years	Eng	building	BSc
JP15	M	24-28	Private	3-5 years	Eng	building	BSc
JP16	M	24-28	Private	3-5 years	Eng	building	BSc
JP17	M	24-28	Private	below 3 years	QS	civil	BSc
JP18	M	24-28	Private	below 3 years	Asst. Eng	building	BSc
SP01	M	29-35	Gov	8-10 years	Eng	civil	BSc
SP02	M	29-35	Private	8-10 years	Archi	building	BSc
SP03	F	36-45	Gov	10-20 years	QS	civil	BSc
SP04	M	29-35	Private	8-10 years	Eng	civil	BSc
SP05	F	45-55	Private	above 20 years	QS	civil	BSc
SP06	M	29-35	Private	8-10 years	Archi	civil	Dip

Using the semi-structured qualitative interviews conducted among the respondents, the risk factors that are contributing to the psychological health of junior professionals were identified. Then, the strategies to overcome the risk factors to reduce the impact and in turn to improve psychological health of junior professionals in Sri Lanka were proposed. The interviews were recorded after obtaining permission from the respondents. The interview transcripts were prepared for further analysis. A qualitative content analysis was employed to analyse the primary data collected through qualitative interviews. Content analysis can be identified as the frequently used technique of data analysis method in qualitative research approaches (Wahayuni, 2012). The next section discusses the results in detail.

4   RESULTS AND DISCUSSION

This section discusses the risk factors contributing to the psychological health of junior professionals and the strategies to overcome such risk factors.

4.1   Risk factors contributing to the psychological health of junior professionals

Table 3 presents the 26 risk factors contributing to the psychological health of junior professionals identified through the semi-structured interviews. The factors identified were classified under 5 main categories as adverse nature; apprenticeship; company culture; competition and personal opinions. Table 3 presents these risk factors along with the discussion from primary data within the table itself.

Table 3 Responses on Psychological health risk factors of junior professionals

Risk Factors	Qualitative Discussions
Adverse nature	
Human behavior	JP02 mentioned that rejecting any work would lead to face long-term trouble in the workplace. JP06 highlighted the responsiveness of site staff and as juniors, she has nothing to do about it. JP09 says that "labour handling is difficult because, while respecting them and we also need to get work done from them".
Irregular work schedules	JP04 emphasised that it needs good psychological health to adjust to a critical situation to work more time than normally do. For JP11 working at weekends was a complete surprise. JP05 mentioned that "when critical works arrive, there are irregular working schedules arranged at a very short notice".
Illegal human activities	JP06 mentioned that at site she had a lot of tension that she could have been misled and site stuff would be robed without her awareness. One junior quantity surveyor mentioned that he came across project corruption and was threatened to keep silent about it. Another junior quantity surveyor mentioned that his organisation forces him to go against his ethical adherence to his governing body.

Personal agendas	A junior engineer highlighted that working under someone is something he didn't like since his first few years. Government campus graduates (JP05, SP01) have felt that their job is not that exciting unless they face some challenging tasks.
Industry behaviour	JP06 has felt that she must show some improvement daily to survive in the job. Most of the juniors view that the well-being of employees is just a document in the HR department and not getting implemented.
Apprenticeship	
Lack of experience	JP03 mentioned that doing document work is very stressful. SP01 mentioned that they felt like "There are a lot of bosses. We don't know to whom we need to discuss and report". Further, lack of experience leads to doubts like "are we treated well or not?"," am I overdoing or underdoing my work?". On a positive note, JP07 advised "Just keep teamwork. Don't keep problems with colleagues and just solve them before it is too late".
Lack of time management	JP02 mentioned the struggle she has been going through because of being unable to keep work life balance. JP02 highlighted that being unable to take a leave at an urgent notice is psychologically effective. SP12 mentioned that "during the first training, I felt like missing home for too long, but now I am used to the timing".
Lack of knowledge	JP10 mentioned that "first job as a graduate is quite stressful that we do not have prior knowledge about those tasks". When we don't get our qualification-related to the task, it makes us feel like we are at the wrong place". Senior professionals who have also undergone the similar struggle when they first joined, are now realising, knowledge is something they can gather by learning by doing.
Deadline	Without any doubt, government and private sector junior professionals emphasised that deadline is a huge stressor in their working environment.
Company Culture	
Autonomy	Senior professionals mentioned that certain professionals have limited autonomy comparatively when making decisions, running committees and meetings. Organisations should realise that taking good ideas from anyone, irrespective of whether he/she is a junior or senior, will be always beneficial to the company.
Lack of demand	SP03, "in the government sector, engineers usually dominate. As a junior when she was not demanded in the workplace, she felt like her dedication on education was a wasteful end". Now she thinks that she has established a position in her organisation that is recognised. In agreement JP16 mentioned that "getting relevant professional affiliations in the industry is important".
Health and safety	The majority of the junior professional are in the view that the health and safety of employees are at a stake. JP07 expressed her view saying, "management only wants their work done and they don't think about workers' health". Two years experienced engineer from essential services mentioned that "we don't get proper accessories to execute our work. Safety facilities are not in place". Few senior professionals also confirmed that the health and safety culture should be improved in the industry.
Lack of support from seniors	Two of the quantity surveying graduates who are working in the private sector mentioned that they need a senior to consult while they are working but they don't get help often. An engineer from the government sector emphasised that "when conflicts happen with top management it would be very difficult to get solved". Senior professionals are also in agreement on the lack of support from seniors when they were juniors. But they also added, the juniors were quite reluctant to ask for help, if they seek help, there will be a way to support them.
Lack of monitoring	JP02 mentioned that "it is very disappointing that workers who work in pandemic situations are not getting any promotions". JP07 determined that "when we don't get the necessary care from organisations, even can lead to high staff turnover".
specific job role	JP02 mentioned that they are not provided proper work scope to do. JP01 mentioned that "seniors put a lot of supporting work to do".

Task-oriented training	Junior professionals have a lot of complaints against task-oriented training. Here task-oriented training means providing training focused on the task company expects rather than the potential of the employee.
HR management activities	JP07 mentioned that she has not received an appointment letter for nearly 2 years of practicing in the organisation. JP16 highlighted HR management of the company tended to neglect the wellbeing of junior engineers who had health related issues. JP08 mentioned that he faced a lot of injustice from the HR management of his organisation. JP05 from the road sector mentioned that he was not supported to do his postgraduate degree. JP04 highlighted that he is not allowed to go to take care of his parents who contracted with COVID-19. The senior professionals are also in agreement with most of these statements.
Lack of leisure events	Government sector juniors suffer from being lack of connection between seniors and juniors. Junior professionals in the government sector believe that there should be some get together, sporting events and leisure activities to get more collaboration. In contrast, the junior staff in private sectors do have comparatively more opportunities for leisure and networking.
Lack of belongingness	Most of the juniors and seniors experienced lack of recognition during their first few years. JP14 mentioned that he was not added to society once he enrolled. After helping seniors for a long time, he has gained it. An engineer mentioned that he thinks everyone in the company must be work-friendly and otherwise the company is inefficient. Participant JP16 mentioned that "I like when there is a good culture and environment in the organisation. Salary is important but, in a place, not suitable for a professional is not suitable ever".
Competition	
Job uncertainty	Irrespective of sectors and educational background, all the junior professionals mentioned the risk of not having a job in the Sri Lankan construction industry is still pertaining due to high competition and economic issues.
Educational background	JP06 mentioned that she would advise her successors to do something none other than a degree to support CV.
Lack of confidence	SP06 mentioned that "depending on the competency gained, salary increases. But employee should update themselves to request something first". Juniors do not seek to improve themselves due to their lack of confidence.
Personal issues	
Personal involvement	SP02 mentioned "Our supervisor wanted to find what we are doing after office hours, which I feel like I don't have a personal space in my life".
The personal bias	JP11 mentioned that there was a comparison between trainees from different backgrounds in the first training. Junior professional from a private organisation highlighted that consultant officers are not respectful to him.
Extremism	JP06 mentioned that "seniors don't like their juniors doing good with others in the workplace and I was a junior, stay unbiased at those situations". SP02 highlighted that "some seniors micromanage juniors and he has involved in verbal arguments with seniors". SP06, a draftsman, mentioned that he was told to learn himself studying at workplace. he has not received any support from his senior".
Abuses	JP06 says "Seniors, sometimes, scold us and use us to cover their fault".

When psychological risk factors are considered, without a gap, 80% of factors share similarities among each study (De Silva et al., 2017; Fordjour et al., 2020; Fordjour & Chan, 2019; Panojan et al., 2019; Bukhari et al., 2021). In contrast to the lack of psychology-related research studies and the uniqueness of Sri Lanka, a minimum of 70% of psychological risk factors of junior professionals have similarities to risk factors of other contexts. In Contexts like Ghana, Pakistan & China, Psychological risk factors have been further divided into a bigger number of factors in contrast to this research possess a more clustered overview of factors (Fordjour et al., 2020; Bukhari et al., 2021; Chan et al., 2012)

That the tasks are easy, hard, long, interesting, boring or short is dependent on the mental well-being of the employee animates "personal agendas" in this research (Ruthankoon & Ogunlana, 2003;

Bukhari et al., 2021). "lack of capacity" identified in the study can be related to stressors or stress making factors (Bowen et al., 2013; Gmelch,1982; Selye, 1982, cited at Isabelle et al., 2012; Dodanwala & Santoso, 2021). In literature, "lack of demand" which has been addressed in this study was mentioned in a different term like "not having a proper job description". It is acceptable that juniors have a "lack of knowledge" since some technical matters are not taught at the academic level. In the industry above factors affect, every professional as each project is unique in the nature of the construction industry (Enshassi & Al. Swaity, 2014; Dodanwala & Santoso, 2021; De Silva et al., 2017).

Maladaptive behaviours like alcoholism were not mentioned by junior professionals as a psychological problem though, in research studies of other contexts, that is available (Panojan et al., 2019; Chan et al., 2012). Professionals have mentioned consequences to family relationships due to ill psychological health (Chan et al., 2012). But in the context of junior professionals in Sri Lanka, that issue wasn't spoken in the interviews and the reason could be most of the junior professionals who participated were below 25 years of age and not married. Deadline tops psychological health risk factors when it comes to other contexts (Panojan et al., 2019; De Silva et al., 2017; Fordjour et al., 2020). Junior professionals in interviews mentioned "lack of knowledge", "bad HR management practices", and "lack of capacity" are the critical factors compared to the deadline factor. Sexual harassment, male-dominated discrimination was not mentioned by junior professionals as such incidents are relatedly limited in the Sri Lankan context due to strong cultural barrios (De Silva et al., 2017).

Mobile phone usage and being caught in traffic were mentioned by professionals in the Sri Lankan context in literature as stressors that were not highlighted by juniors in this research (De Silva et al., 2017). The reason for that could be juniors are not mature enough to understand that deep down, mobile phone drains their future and productive time in the workplace. Minimum approximately 80% of early-career professionals were allocated full time at remote locations for accommodation and work. Due to that, stress due to traffic on road shall not affect the early-career professionals in Sri Lanka.

Several results, unique to the context, were found like illegal human activities, poor HR management activities, and extremism despite the similarity of 80-90% in other aspects. A reason for that uniqueness could be the economic impact of the country on the construction industry. From in researchers' point of view devaluation of the Ceylon currency is the major problem. While implementing strategies in long term to survive from inflation in the industry, organisational policies, ethics, cultures also change. Since other countries don't possess similar settings, factors like "Poor HR Management Activities" are considered unique to Sri Lanka and another similar context as Sri Lanka. Further critical reasons for that factor were revealed as "not providing offer letters", "lack of care on health", and "not offering leaves for personal matters". The social and cultural setting also will add to the uniqueness of this factor. Senior professionals highlighted that the personal beliefs of seniors are adopted when executing organisational policies. As mentioned by one of the junior professionals in the interviews, in other contexts, rules and regulations are established to treat equally all employees but unfortunately organisations in Sri Lanka bias employees whom they consider as an asset to company. Hence, factors like "extremism" and "illegal human activities" are unique to Sri Lankan and other similar contexts.

4.2 Strategies to overcome risk factors contributing to psychological health of junior professionals

The strategies were collected individually from the junior professionals but mainly from senior professionals. After combining the strategies collected from both groups of professionals, Table 4 presents the strategies to be considered in addressing the risk factors contributing to psychological health of junior professionals in the construction industry. As per Table 4, several strategies were proposed to address most of the risk, though certain risk factors are difficult to address at the organisational level.

Table 4. Strategies to overcome risk factors contributing to the psychological health of junior professionals in the construction industry

Risk Factors	Organisational Strategy
Adverse nature: The junior-senior relationship is culturally bound which is not the problem only in construction but in the country as a whole. Therefore, the risk factors under this category are either difficult to address or will take a longer time to address as per the respondents' view. The professionals proposed the following strategies for risk factors.	

Human Behaviour Irregular Work Schedules Illegal Human Activities Personal Agendas Industry behaviour	- Allocate juniors to suitable streams to make them satisfied in the job - Establish verbal discipline in the organisation - Strictly enforcing rules and regulations to minimise non-legal practices - Juniors to be encouraged to freely share their viewpoints with the higher authority and hold psychological health training and workshops - Encourage junior professionals to work for the benefit of the organization in the first few years which will help them to be recognised - Company ethics need to be enforced to address the behaviour of employees to be respectful and closely monitor any unusual activities
Apprenticeship: The risk factors under this category are all related to personal development and profile building, hence the strategies are proposed to achieve the personal development	
Lack of experience Lack of time management Lack of knowledge Deadlines	- Establish organisational level policies to support the settling process for newly recruited employees and provide short and long term career plans - Monitor the appropriateness of supervisors allocation - Provide psychological training to junior professionals - Assign the tasks based on their capability first and gradually assign them new tasks while providing incentives for meeting deadlines - Being patient and supportive with junior professionals during the first few months to give them space to study and adapt to the working culture and environment while encouraging them to learn by doing - Encourage them to reveal and prove their talents - Provide sufficient opportunities for them to learn new knowledge - Provide necessary support when the jobs are assigned at a short notice
Company Culture: This acts a greater contributor One should understand that anyone joining construction should be given space and time to adapt to the organisational culture.	
Autonomy Lack of demand Health and safety issues Lack of support from seniors Lack of monitoring Not having a specific job role Task oriented training Poor HRM Activities Lack of Leisure Events Lack of belongingness	- Organisational policy level changes to strengthen the support to be provided for employee's career development - Making the job description clear in the offer letter, including the additional responsibilities that are expected from junior professionals - Provide an offer letter with a proper job description - Map the employee capabilities with the job demand - Establish a proper hierarchy for employee evaluation and monitoring - Assign senior professionals as mentors for juniors - Provide medical allowance and follow proper standards, policies, and ethics enforced by relevant professional bodies - Strengthen the HR management policies to support junior professionals - Training and development programme to be resigned to focus beyond the task-oriented and converting skills oriented - Training the juniors to learn the culture of learning by doing - Assign innovative team works and balance the workload across juniors - Organise monthly social and leisure activities for the employees to opportunities for networking, collaboration and have fun - Celebrate employees' personal events such as birthdays
Competition: This factor is highly influenced by external factors such as economic and pandemic related issues in the country. At times these factors are beyond the control of the organisation	
Job Uncertainty Educational Background Lack of Confidence	- Improve the recruitment policies and training policies to reduce high staff turnover - Assign personal mentors for junior staff
Personal issues: There haven't been direct strategies as the seniors had both in agreement and against with these claims. However, the strategies proposed are mostly related to ethics and policies.	
Personal Involvement	- A fair policy for conflict management - Close monitoring on the ethical behaviours of the staff

Personal Bias	-	A mechanism to report personal issues with a high level of confidentiality
Extremism	-	A fair enquiry process to address personal issues faced by the staff members and the appointment of a mental health monitoring officer
Abuses		

SP05 mentioned that the quality of the training provided to juniors depends on the training policy of the company. A senior (SP04) from a short and medium scale entrepreneur construction firm mentioned that due to a junior being just late to the industry, he is not allocated to rapid programmes but if they have completed the competency levels. Further he mentioned that it is impossible to always provide juniors with a job at the start of a project because employees leave jobs regularly in the middle of projects. To fill such vacancies, new employees must be recruited and assigned to tasks to continue with the already progressed projects. Hence the senior professionals emphasised that the juniors should understand the practical issues faced by the organisations in giving them the fullest training and opportunities in a project. Answering the question regarding lack of defence from out of scope works, SP04 mentioned that "in almost all the companies, there is conflict resolution. Junior must only report to the line manager. When juniors are assigned tasks by someone other than their line manager, the best approach is to first check with the line manager, as the manager will have a better understanding on their overall workload. If they can take additional tasks, it will always add to their experience,".

Participant SP03 mentioned that "there is no provision to upgrade psychological health of professionals in construction organisations in Sri Lanka". SP05 mentioned that employees including junior professionals have suffered from a lack of jobs in this period due to the pandemic situation and economic crisis. Answering the factor of job uncertainty SP05 mentioned that to the reduction of jobs available, economic issues and number of students who graduated from universities, there is a reduction in the number of juniors allowed to have trained under construction organisations. According to SP04, some companies are dependent on trainees. But companies have settled with many employees nowadays. Middle scale companies don't have the financial strength to launch training programmes. SP06 and SP05 mentioned that even juniors are not allowed to go for further education with almost 80% of local construction companies. In the past, organisations provided financial support for their employees to get an education but now in the industry, there is no such influence. Instead of educating their employees and getting benefits for a long time, companies demand professionals with necessary qualifications to fulfil their jobs as there is generally a higher supply of employees available in the job market. SP3 mentioned that juniors are not getting well-monitored training if they are engaged with a C3 graded company as per the Construction Industry Development Authority (CIDA) ratings, due to lack of resources for the companies to invest on good training programmes. To get a proper training, juniors should join a C2 or above graded company. According to SP06 in private companies, trainees are overlooked as potential campaigners in the construction industry. But once become a professional, if they are not successful, he or she is going through a tough time. But finally, transfer to a section he can survive or attempt to improve. As such the support system for juniors highly depends on the culture of the organisation, financial strength and management policies and grading of the organisation.

5   CONCLUSIONS

This research contributes to the knowledge gap on the psychological health issues faced by junior professionals of the Sri Lankan construction industry. There are 26 risk factors that are contributing to the psychological health of junior professionals identified under 5 major categories such as adverse nature; apprenticeship; company culture; competition and personal issues. Organisational strategies were proposed to address the risk factors identified and key strategies are appointing a mental health monitoring officer; implementing stronger HR management policies; investing on training and development; counselling and support systems and encouraging more social activities. Improving the psychological health of junior professionals will increase the confidence to perform well and ultimately will result in the quality of organisational outcomes and high staff turnover. This research emphasises the need to strengthen the development and monitoring of policies related to psychological health in the construction sector. In terms of practical implications, the strategies proposed will help to improve the status of junior staff members in the construction industry. As such system changes and a new thinking pattern needed to be cultivated to grow a sound psychological health care policy in an organisation.

REFERENCES

Ahn, Y. H., Pearce, A. R., & Kwon, H. (2012). Key competencies for U.S. construction graduates: Industry perspective. *Journal of Professional Issues in Engineering Education and Practice*, *138*(2), 123–130. https://doi.org/10.1061/(ASCE)EI.1943-5541.0000089

Banik, G. (2008). Industry expectations from new construction engineers and managers: Curriculum improvement. *ASEE Annual Conference and Exposition, Conference Proceedings*. https://doi.org/10.18260/1-2--4135

Bowen, P., Edwards, P., & Lingard, H. (2013). Workplace Stress Experienced by Construction Professionals in South Africa. *Journal of Construction Engineering and Management*, *139*(4), 393–403. https://doi.org/10.1061/(asce)co.1943-7862.0000625

Bowen, P., Edwards, P., Lingard, H., & Cattell, K. (2014). Predictive Modeling of Workplace Stress among Construction Professionals. *Journal of Construction Engineering and Management*, *140*(3), 04013055. https://doi.org/10.1061/(asce)co.1943-7862.0000806

Bukhari, H., Thaheem, M. J., Musarat, M. A., Alaloul, W. S., & Altaf, M. (2021). Are Pakistani construction professionals truly happy? A benchmarking approach. *Ain Shams Engineering Journal*, *xxxx*. https://doi.org/10.1016/j.asej.2021.04.012

Campbell, F. (2006). Occupational stress in the construction industry. *Chartered Institute of Building (CIOB)*, 1–16. http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Occupational+Stress+in+the+Construction+Industry#0

Cardoso, P., Dominguez, C., & Paiva, A. (2015). Hints to Improve Motivation in Construction Companies. *Procedia Computer Science*, *64*, 1200–1207. https://doi.org/10.1016/j.procs.2015.08.513

Carter, Nancy, Denise Bryant-Lukosius, Alba DiCenso, Jennifer Blythe, and Alan J Neville. 2014. "The Use of Triangulation in Qualitative Research." *Oncology Nursing Forum* 41 (5). United States: 545–547. doi:10.1188/14.ONF.545-547.

Chan, Isabelle Y.S., Leung, M. Y., & Yuan, T. (2014). Structural relationships between cultural values and Coping behaviors of professionals in the stressful construction industry. *Engineering, Construction and Architectural Management*, *21*(2), 133–151. https://doi.org/10.1108/ECAM-07-2012-0069

Chan, Isabelle Yee Shan, Leung, M., & Yu, S. S. W. (2012). Managing the Stress of Hong Kong Expatriate Construction Professionals in Mainland China: Focus Group Study Exploring Individual Coping Strategies and Organizational Support. *Journal of Construction Engineering and Management*, *138*(10), 1150–1160. https://doi.org/10.1061/(asce)co.1943-7862.0000533

Cohen-Callow, A., Hopkins, K. M., & Kim, H. J. (2009). Retaining workers approaching retirement: Why child welfare needs to pay attention to the aging workforce. *Child Welfare*, *88*(5), 209–228.

COMMUNITIES, C. O. T. E. (2002). Adapting to change in work and society: a new Community strategy on health and safety at work 2002–2006. *COMMUNICATION FROM THE COMMISSION Adapting*, *2002*, 18–19.

De Silva, N., Samanmali, R., & De Silva, H. L. (2017). Managing occupational stress of professionals in large construction projects. *Journal of Engineering, Design and Technology*, *15*(4), 488–504. https://doi.org/10.1108/JEDT-09-2016-0066

Dodanwala, T. C., & Santoso, D. S. (2021). The mediating role of job stress on the relationship between job satisfaction facets and turnover intention of the construction professionals. *Engineering, Construction and Architectural Management*. https://doi.org/10.1108/ECAM-12-2020-1048

Dodoo, J. E., & Al-Samarraie, H. (2019). Factors leading to unsafe behavior in the twenty first century workplace: a review. *Management Review Quarterly*, *69*(4), 391–414. https://doi.org/10.1007/s11301-019-00157-6

Enshassi, A., & Al. Swaity, E. (2014). Key stressors leading to construction professionals' stress in the Gaza Strip, Palestine. *Journal of Construction in Developing Countries*, *19*(1), 53–79.

Farrow, K., Grolleau, G., & Ibanez, L. (2017). Social Norms and Pro-environmental Behavior: A Review of the Evidence. *Ecological Economics*, *140*, 1–13. https://doi.org/10.1016/j.ecolecon.2017.04.017

Fordjour, G. A., Chan, A. P. C., & Tuffour-Kwarteng, L. (2020). Exploring Construction Employees'

Perspectives on the Potential Causes of Psychological Health Conditions in the Construction Industry: A Study in Ghana. *International Journal of Construction Education and Research*, *00*(00), 1–21. https://doi.org/10.1080/15578771.2020.1804491

Fordjour, G., & Chan, A. (2019). Exploring Occupational Psychological Health Indicators Among Construction Employees: A Study In Ghana. *Journal of Mental Health and Clinical Psychology*, *3*(2), 6–18. https://doi.org/10.29245/2578-2959/2019/2.1177

Jansen, H. (2010). The logic of qualitative survey research and its position in the field of social research methods. In Forum Qualitative Sozialforschung/Forum: Qualitative Social Research (Vol. 11, No. 2).

Ki, Y., Cultural, F., Johnny, W., Melissa, T., & Fiona, C. (2010). QUT Digital Repository : This is the authors ' version of the following conference paper : 2010 International Conference On Construction & Real Estate Cultural Determinants of Stress in the Construction Industry. *Differences*, *December*.

Leathem, T. M., & Mcglohn, E. M. (2017). *The Technology Conundrum : Faculty Perspectives of Opportunities and Challenges when Implementing Technology in a Collaborative Classroom*. 207–215.

Love, P. E. D., Edwards, D. J., & Irani, Z. (2010). Work Stress, Support, and Mental Health in Construction. *Journal of Construction Engineering and Management*, *136*(6), 650–658. https://doi.org/10.1061/(asce)co.1943-7862.0000165

Lucas, J. D. (2017). Identifying Learning Objectives by Seeking a Balance between Student and Industry Expectations for Technology Exposure in Construction Education. *Journal of Professional Issues in Engineering Education and Practice*, *143*(3). https://doi.org/10.1061/(ASCE)EI.1943-5541.0000318

Martino, V. di. (2003). Relationship between Work Stress and Workplace Violence in the Health Sector. *Workplace Violence in the Health Sector*, 33. http://www.ilo.org/public

Naderifar, M., H. Goli, and F. Ghaljaie. 2017. "Snowball Sampling: A Purposeful Method of Sampling in Qualitative Research." *Strides in Development of Medical Education* 14 (3): 1–4. doi:10.5812/sdme.67670.

Panojan, P., Perera, B. A. K. S., & Dilakshan, R. (2019). Work-life balance of professional quantity surveyors engaged in the construction industry. *International Journal of Construction Management*, *0*(0), 1–18. https://doi.org/10.1080/15623599.2019.1644759

Punch, K. F. (2003). Survey research: The basics. Sage.

Ruthankoon, R., & Ogunlana, S. O. (2003). Testing Herzberg's two-factor theory in the Thai construction industry. *Engineering, Construction and Architectural Management*, *10*(5), 333–341. https://doi.org/10.1108/09699980310502946

Saunders, M., P. Lewis, and A Thornhill. 2019. *Research Methods for Business Students*. 8th ed. Harlow: Pearson Education.

Senaratne, S., & Malewana, C. (2011). Linking individual, team and organizational learning in construction project team settings. *Architectural Engineering and Design Management*, *7*(1), 50–63. https://doi.org/10.3763/aedm.2010.0133

Senaratne, S., & Rasagopalasingam, V. (2017). The causes and effects of work stress in construction project managers: the case in Sri Lanka. *International Journal of Construction Management*, *17*(1), 65–75. https://doi.org/10.1080/15623599.2016.1167358

Simons, A., Collins, W., & Redden, L. (2021). *Site Development Knowledge for Entry-Level Construction Professionals: Academic Perceptions*. 2, 396–386. https://doi.org/10.29007/jk3n

Udayanga, S. (2020). Distress relief and stabilising psychological well-being: spiritual coping among Sinhalese Buddhist in Sri Lanka. *Mental Health, Religion and Culture*, *23*(5), 398–414. https://doi.org/10.1080/13674676.2019.1639650

Wahyuni, D. (2012). The research design maze: Understanding paradigms, cases, methods and methodologies. Journal of applied management accounting research, 10(1), 69-80.

Zakeri, M., Olomolaiye, P., Holt, G. D., & Harris, F. C. (1997). Factors affecting the motivation of Iranian construction operatives. *Building and Environment*, *32*(2), 161–166. https://doi.org/10.1016/S0360-1323(96)00044-3