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**Identifying and Managing
Interorganisational Work Related
Psychosocial Risks in New Zealand**

A thesis presented in fulfilment of the

requirements for the degree of

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ABSTRACT

Current research studies about workplace psychosocial risks focus more on organisational work instead of interorganisational (IO) work. It shows limited studies in relation to IO work related psychosocial risks. IO work can be defined as collaboration. It is done by more than two organizations and is organized to achieve better outcome, having more effective results and significant impact. This research study refers to the type of IO work that is carried out by more than one organization other than National Emergency Management Agency and Civil Defence.

Based on workers' experiences, IO work environment is dynamic. It may cause different psychosocial risks compare to organisational work. Furthermore, IO work does not simply involve getting tasks completed with multiple organizations, but also requires dealing with different organisational cultures, structures and people who have been trained to response, communicate and report in various ways.

This research study identifies IO work related psychosocial risks and explains the differences of psychosocial risks in IO work versus organisational work. Most importantly, it outlines possible strategies that could be used in managing these risks. Giving the significant impact of the pandemic, this research study also analyses the influence of COVID-19 responses to IO work related psychosocial risks.

The findings and discussions are based on responses from 24 participants who have had at least three months' IO work experience. Some of the participants are interviewed twice to gain in depth understanding about their IO work experiences. The first interview is designed as a semi-interview and guided by 26 interview questions, which are combined with 20 Copenhagen Psychosocial Questionnaire III (COPSOQ III) and 6 questions to help understand the differences of psychosocial risks and impact of COVID-19 responses. The

second interviews are designed to allow participants to share as much information drawn from their IO work experiences, understanding of IO work and associated issues, their understanding of IO work in comparison with organisational work. The literature review summarises scholarships related to workplace psychosocial risks and highlights the gaps and limitations. The recommendations and future studies emphasise the importance of understanding psychosocial risks in IO work and encourage future research to study IO work from various lenses including gender, age, work experiences, human reward system and functions of dopamine.

Overall, this research aims to increase researchers' awareness about IO work related psychosocial risks. As more and more IO work happens, the future of work will involve frequent and continuous collaboration between multiple organizations. There is a strong need to conduct more academic and non-academic research and studies in this area. The studies will contribute to enhance workers' health and wellbeing and improve workplace health and safety risk management and harm prevention, in turn it reduces costs of organizations in managing workers' physical and psychological health, increase workers' productivity and engagement.

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PUBLICATIONS

Some of the ideas of Chapters Two, Four and Five of this thesis have been presented in the following forum:

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CHAPTER ONE

INTRODUCTION

Organisations recognize that collaboration achieves better outcomes. Research on work-related psychosocial risks within a single company/organisation is robust in terms of understanding and managing psychosocial risks in a company or an organisation. However, there are limited studies about multiple companies or organisations involved in collaborative work, and the psychosocial risks associated in IO work.

AIM: This research study identifies IO work-related psychosocial risks. IO work requires high collaboration, as it involves dealing with multiple organisations, managing various and complex issues, and adjusting to different social settings. It requires managing conflicts that arise due to several factors such as different organisational cultures, overlapping duties, and legal obligations of each organisation. Thus, IO work is complicated and different from a single organisation practice. This research study responds to two key research questions:

- a. What are IO work-related psychosocial risks? Are they different from organisational psychosocial risks?
- a. How can IO work related psychosocial risks be effectively managed?

The following sections outline the importance of this research study, New Zealand legal requirements in risk management, and lack of research studies about IO work and its related psychosocial risks. last it presents the overview of the thesis.

1.1 Background and importance

Organisations are recognizing that better outcomes can be achieved through IO work, and they are also recognising the importance of collaboration. Increasing numbers of New Zealand government departments are shifting their focus to interagency collaboration to enhance the outcomes of the work they do (Majumdar, 2006). Loisel et al. (2005, p2) defined collaboration as “an exchange of resources among members”.

IO work can be defined as collaboration, which means a sequence of interrelated activities that are undertaken by partners to achieve shared objectives; this includes the stages of getting together, building trust, developing a strategic plan, taking actions, and measurement (Majumdar, 2006). Stoltz et al. (2016, p. 6) have pointed out that the collaboration of two or more people or organizations can turn a good service into a great service". Public sector organisations encourage collaborations to help deal with interrelated problems, develop innovation and enhance sustainability (Grossmann, 2012). organisations are recognising that better outcomes can be achieved through IO work and collaboration. IO work requires individual organisations to work collaboratively while maintaining their differences to achieve efficiency and expected outcome. Notwithstanding this, IO work comes with a multitude of potential challenges and psychosocial risks.

There are ample research studies on work-related psychosocial risks within a single organisation from various perspectives and dimensions which provide recommendations in managing psychosocial risks in an organization. There are numerous psychosocial risks within the organisational and work context such as workload. Çögenli (2019) has suggested psychosocial risks are stress factors, which may cause health problems. Santos Tome and van der Vaart (2020) highlighted that work pressure could lead to exhaustion. Research posits that psychosocial risks are linked with workers' wellbeing and burnout. Kaski and Kinnunen (2021) found that lack of positive challenge at work and feeling work is not meaningful had a strong and positive relationship with burnout. Time pressure can be a psychosocial risk, for instance Andersen et al. (2017) studied Danish prison personnel and suggested that when prison officers did not have enough time to complete their work tasks, they were more likely to experience burnout. In addition, a number of studies have found that the source of psychosocial risks likely comes from work demands, and a positive correlation exists between work overload and emotional demands and exhaustion, especially emotional

exhaustion (Vammen et al., 2019). Oppenauer and Van De Voorde (2018). Meyer and Hünefeld (2018) identified that cognitive demands positively contribute to a higher probability of feeling fatigued and a lower probability of being satisfied with the job. Cäker and Siverbo (2018) found that job autonomy and managerial support directly and positively impacted on managers' role clarity and wellbeing. Research in New Zealand and Internationally identified the association between psychosocial hazards and its negative impacts to individuals' wellbeing and suggested investments in improving the psychosocial environment can produce a significant return to organisations (Tappin et al., 2020). It is important to identify psychosocial risks arising from work demands to help minimise negative impacts to workers' wellbeing and reduce costs to organisations, which has been researched in the context of single organisation, but not in case of IO work. This research aims to fill that gap.

1.1.1 Legal Requirements

Psychosocial hazards are an emerging risk in Occupational safety and health; lack of relevant regulations, effective measures and rules are the main issues for most countries around the world (Chirico et al., 2019). Section 17 of the Health and Safety at Work Act 2015 outlines that PCBU means a person conducting a business or undertaking. IO work- related psychosocial risks need to cover a wider range of work, consider the variety and complexity of work, and the dynamic nature of the work environment. It is more than work that is conducted in a traditional way, controlled and managed by one PCBU or a single organisation. Based on section 36 of the Health and Safety at Work Act 2015, PCBU has a primary duty of care to ensure so far as is reasonably practicable the health and safety of their workers. Employers have responsibility to meet their legal requirements.

Employers need to ensure all frameworks and guidance for managing psychosocial hazards are addressed by workplace health and safety systems, and they should aim to make small

changes that can make big differences (Psychological welfare is a health and safety issue, 2019). According to section 37 of the Health and Safety at Work Act 2015, a PCBU who manages and controls the workplace must ensure, so far as is reasonably practicable, that the workplace, the means of entering and exiting the workplace, and anything arising from the workplace are without risks to the health and safety of any person. WorkSafe outlines when multiple PCBUs working together, they must consult, co-operate and co-ordinate to meet their responsibilities and obligations (Definitions and acronyms, n.d.).

While people work with different organisations, there are multiple and complex psychosocial risks that they may encounter. This can impact and cause potential harm to IO workers' physical and psychological health, especially when they are required to conduct, or be involved in, IO work for a prolonged period of time.

Therefore, it is important for PCBUs who are involved in and conducting IO work to identify and understand IO work related psychosocial risks, and ensure associated potential harm to IO workers has been managed effectively in order to minimise and prevent its occurrence.

1.1.2 GAP: Lack of Research Studies in IO Work related Psychosocial Risk

Numerous research studies identify and discuss work related psychosocial risks within single organisations, but not in collaborative environments involving multiple organizations. The current research studies about collaborative environments and IO work focus mostly on its design, structure, relationships, communication, and management. They have focused largely on understanding collaboration and developing IO relationships. Madden (2017) studied related barriers, challenges, and designs to enable more successful interorganisational collaboration. Grossmann (2012) analysed collaborations in public service sector outlining their structure, benefits, and the importance of having individual organisations work collaboratively. The studies also suggested IO work environment is highly dynamic and requires high levels of collaboration as it involves dealing with multiple organisations,

managing various and complex issues, and adjusting to different social settings.

Organisations may also need to manage conflicts caused by several other factors such as different organisational cultures, structures and overlapping duties. IO work can therefore be seen as complicated and different from a single organisational practice, and with this comes the possibility of the dynamics of psychosocial risks in IO settings being different from that of single organisations.

The IO work environment is very dynamic and may have different psychosocial risks and hazards. IO work not only involves dealing with multiple organisations, managing various ways of communications and adjusting different social settings, but also requires individual organisations to manage organisational culture- related conflicts and overlapping duties. IO work- related psychosocial risks arise from issues of differences of organisational culture and structure such as event- reporting cultures, ways of work and communications, management expectations and values promoted by each individual organisation.

The International Labour Organization (2020) has completed a study in managing psychosocial risks in the COVID-19 pandemic and provided suggested actions in ten areas; workload, work-pace and work-schedule, work-life balance health promotion and prevention of negative coping behaviours, social support and psychological support are covered in these ten areas. Awareness of psychosocial risks involves exploratory studies of processes and an understanding of connection and disconnection about why and how people do what they do and feel what they feel based on what is happening (Woodward, 2015). There are limited studies focusing on managing psychosocial risks and hazards arising from the work environment within multiple organisations in a joined work environment.

Given several research studies emphasising the links between psychosocial risks and workers' wellbeing, it is likely that a lack of research studies about IO work-related psychosocial risks may hinder organisations involving collaboration in effective management

of associated issues and risks that affect workers' wellbeing. This research study identifies IO work-related psychosocial risks by focusing on psychosocial risks arising from collaborative environments involving multiple organisations.

Motivation: I have been involved in various IO work with different organisations from both private and public sectors in the past years. I have experienced the complexity of IO work. In my experience, some employees struggle to overcome the barriers and experience high level of work-related stress. In my opinion, the increased stress has a negative impact on personal life and wellbeing, and research concurs with this. I am driven by my experiences and aim to contribute to improve workers' wellbeing when they are involved in IO work. I believe any problem has solutions. I would like to highlight the differences of IO work versus organisational work, so IO workers' health and wellbeing will not be overlooked or treated as same as other organisational workers. We need to first identify psychosocial risks associated with IO work, and find the causes, then explore tailored solutions to reduce the risks and prevent potential harm to IO workers' physical and psychological health. In turn, this will enable them to receive sufficient help and support from their superiors and organizations.

1.2 Structure of the report

The Introduction covered an overview of this research study including aim, research questions, background and importance of this research, legal requirements, and lack of research studies in IO work- related psychosocial risks. The second chapter is the literature review which covers definitions of IO work and psychosocial risks, work- related psychosocial risk factors, work-related psychosocial risks research studies, and justification for this research. The third chapter comprises the methodology and design of this research, data analysis, and ethical considerations. The fourth chapter outlines findings that cover four key themes and 16 subthemes related to IO work related psychosocial risks. The fifth chapter discusses the findings to extend my analysis of IO work related psychosocial risks. The sixth

chapter, which consists of the conclusion and recommendations, summarises my thesis and discusses theoretical contributions that my research study has made, and most importantly provides possible strategies that could be used to manage IO work- related psychosocial risks. The last chapter comprises limitations and future studies, and this chapter talks about the weaknesses of this research study and makes suggestions for future focuses for further research studies.

CHAPTER TWO

LITERATURE REVIEW

This chapter is divided into two parts to achieve two objectives. The objectives are first presenting an overview of understanding in IO work and psychosocial risks, and then establishing a different perspective in identifying IO work- related psychosocial risk factors. I begin the first part of this chapter, section 2.1, with the definitions of IO work and psychosocial risks. This section articulates a core understanding of IO work and psychosocial risks and gives a clear direction about the breadth of literature within this field. I then move to outlining six common psychosocial risk factors and the relationships between each psychosocial risk factor and workers' health and wellbeing in section 2.2. Within section 2.2, I focus on reviewing literature that has discussed six psychosocial risk factors in relation to work demands, work life conflicts, stress, burnout, social support from colleagues and supervisors, and role ambiguity that have been often linked to the impacts of workers' health and wellbeing. Finally, I summarise and compare research studies that have been undertaken in the field of IO and organisational work-related psychosocial risks based on size, area, and result of the research studies.

The second part of this chapter assesses the research studies discussed in the previous sections and provides explanations about the gaps to be addressed by my research study. It is structured under three elements within section 2.4 – (1) gaps in current research studies on psychosocial risks; (2) the need for additional research studies in IO work; and (3) the lens of looking at IO work- related psychosocial risks through human cognitive architecture, cognitive load theory, cognitive load and cognitive overload that are discussed under section 2.4.3.

2.1 Defining IO Work and Psychosocial Risks

In this section, I first address the definitions of IO work, which refers to more than one organisation working together as a whole to achieve a joint goal. I then provide a scope of the IO work that is focused on by this research study to clearly indicate the direction of the discussions in the literature. Finally, I outline the definitions of psychosocial risks to illustrate perspectives about psychosocial risks and its effects that have been suggested within this field.

2.1.1 IO Work

IO work can be defined as collaboration, which means a sequence of interrelated activities that are undertaken by partners to achieve shared objectives; this includes the stages of getting together, building trust, developing a strategic plan, taking actions, and measuring (Majumdar, 2006). Loisel et al. (2005, p. 2) define collaboration as “an exchange of resources among members,” and Madden (2017, p. 14) state that inter-organisational collaboration is “a feasible tactic for addressing complex social problems”.

The scope of this research study and literature review sits within IO work under usual circumstances other than emergency or crisis management collaborations where multiple organisations work together with the aim of preparing and responding to an emergency or crisis such as an earthquake, or a tsunami that is dealt by New Zealand National Civil defence groups. Also, it is important to distinguish IO work and intraorganisational work. With the understanding of IO work discussed above, the key difference is that IO work is to achieve collaboration externally with multiple organisations, while intraorganisational work is to work collaboratively internally within a single organization.

2.1.2 Psychosocial Risks

There is ample scholarship analysing and discussing psychosocial risks and correlations between psychosocial risks and workers’ physical and psychological wellbeing. Potter et al. (2019, p. 113) pointed out “The term psychosocial risk refers to the likelihood for a specific

psychosocial hazard to cause harm” and psychosocial risk factors are less observable and can be more complex because of their associations with people. WorkSafe explains that the term ‘psychosocial hazards’ involves an understanding of interactions between “the social environment, individual psychological factors and health outcomes,” and that a psychosocial hazard refers to “aspects of the design and management of work, and its social and organisational contexts that may have the potential for causing psychological or physical harm” (WorkSafe, 2019, p. 10). Psychosocial hazards and risks are stress factors, which may cause health problems; employees affected by stress at work are unable to concentrate and make effective decisions and are often not satisfied with the job; this may lead to problems such as heart diseases and headaches (Çögenli, 2019). Workplace injuries are commonly caused by physical and psychosocial hazards and risk factors.

“New Zealand’s Health and Safety at Work Act 2015 (HSWA) requires businesses to ensure the safety of their workers’ mental health as well as physical health and to manage risks arising from exposures to hazards at work which may cause more than just physical harm” (WorkSafe, 2019, p. 9). Therefore, New Zealand employers have responsibilities to identify and manage work-related psychosocial risks that may cause physical or psychological harm to workers at workplaces.

In addition, evidence suggests the importance of managing work-related psychosocial risks and hazards. Psychosocial hazards and risks may cause psychological or physical harm to individuals’ wellbeing and negatively impact their performance (Tappin et al., 2020). Work-related psychosocial hazards and poor psychological health have negatively impacted to Australian economy: “Each year 7820 Australian workers are compensated for work-related mental disorders, costing on average \$23,600 per claim and involving an average of 15 weeks off work, since 2006, the cost of these compensation claims has doubled and is now estimated at AUD \$480 million annually” (Potter et al., 2019, p. 38). According to

International Labour Organization (n.d.) in Europe, work- related stress accounts for 50-60% of all lost working days. Psychosocial risks **are** linked to workers' health outcomes and may result in significant costs to organisations, as well as affecting wellbeing of the employees.

2.2 Psychosocial Risk Factors

“The International Labour Organisation (2016) defines psychosocial factors as ‘interactions between and among work environment, job content, organizational conditions and workers’ capacities, needs, culture, personal extra-job considerations that may, through perceptions and experience, influence health, work performance and job satisfaction’” (as cited in New Zealand Psychosocial Survey 2021, 2022, p. 3). Workers’ poor psychological health outcomes are likely caused by workplace psychosocial risk factors, and psychosocial risk factors also impact on different stressors and individual level factors (Dollard & Bailey, 2014). Therefore, psychosocial risk factors may cover a wide range: the term includes, but is not limited to, high work demands, role ambiguity, increased work-related stress, burnout, insufficient social support from colleagues and managers, work overload and work life conflicts. In the following subsections, I review several subsequent studies have been undertaken to illustrate these six psychosocial risk factors and their effects on workers’ health and wellbeing. The breadth of scholarship related to the six psychosocial risk factors is reviewed under each subsection from 2.2.1 to 2.2.6. The aim of this section is to outline a basic understanding about different psychosocial risk factors.

2.2.1 Work Demands

Work demands or job demands are defined as “physical, psychological, social, or organisational aspects of the job that require sustained physical and/or psychological (i.e. cognitive or emotional) effort” (Wilmar & Arnold, 2004, p296). Quantitative, emotional, and cognitive demands are examples of work demands. The following paragraphs describe

quantitative, emotional, and cognitive work demands, and provide examples of scholarship in relation to each of them.

- **Quantitative Demands**

Quantitative demands can influence and deplete employee psychological wellbeing.

Quantitative demands refer to the amount of work to be done, measurable by task and time, with the possible mismatch between task and time as the source of stress (Kristensen et al., 2004; Mette et al., 2018). High quantitative work demands may directly and indirectly impact workers' wellbeing and change their ways of work such as pace of work and hours of work. When high quantitative job demands combine with low work control and social support, employees experience not only high levels of exhaustion, but also low levels of dedication and learning (Taris & Schreurs, 2008). Research about work-related stress among 106 leaders in Iceland points out that 80% of leaders worked more than 50 hours per week and they often felt overworked and overstressed (Gudmundsdottir et al., 2021). High quantitative demands are likely to be linked to long hours of work and increased level of stress that negatively contribute to workers' health and wellbeing.

Work overload and work intensification are also often discussed as quantitative demands.

Quantitative work overload can be seen as role overload, which occurs when behaviours expected are too numerous, too complicated or too difficult for individuals to perform, where the individuals find themselves needing more training to perform the tasks, or unable to perform the tasks competently (Quick et al., 2013). When quantitative work overload happens, workers often do not feel they are capable of completing the tasks given in a specific timeframe (Weinberg et al., 2010). It in turn increases workers' levels of stress.

Pressures such as time pressure and task difficulty can lead to quantitative work overload and in turn cause of mental stress (Mazloun et al., 2008). When workers are not given sufficient time to complete the amount of work, they are likely to increase their pace of work and

extend their hours of work to be able to complete all tasks, or they may intensify working, which is referred to as a process that requires intensive effort to complete more tasks under time pressure and fast speed of work within one working day (Korunka & Kubicek, 2017). When workers consistently face work intensification, it can lead to emotional exhaustion and a depletion of workers' psychological resources (Korunka & Kubicek, 2017). "Emotional exhaustion refers to the depletion or draining of emotional resources" (Zapf, 2002, p. 256), and this is positively related to work overload (Oppenauer & Van De Voorde, 2018). Thus, time pressure, tasks, working hours can lead to high quantitative demands, work overload and work intensification which can adversely influence workers' wellbeing. Under COVID-19 pandemic responses and rapid changing environment, workers are required to work under time pressure, and to manage work overload as well as adapt to frequent changes and new ways of working, and this may expose them to different psychosocial risks that can negatively impact their health and wellbeing.

- **Emotional Demands**

There is clear evidence that shows an association between emotional demands and exhaustion, with a positive correlation between content-related emotional demands and levels of exhaustion, and increased levels of exhaustion when there are increasing emotional demands under high quantitative demands (Vammen et al., 2019). Similarly, research about correction officers' alcohol use points towards a positive correlation between emotional demands and burnout, and emotional demands may indirectly influence correction officers' drinking behaviours, especially when they are unable to detach from work after work (Shepherd et al., 2019). High emotional demands may lead to health problems that are caused by workers' poor behaviours used to manage exhaustion, for instance. Higher work-related emotional demands are also associated with higher levels of pre-sleep arousal, which negatively influences sleep quality and quantity (Loft & Cameron, 2014).

Emotional demands also affect workers' work performance and increase turnover source. A study indicated emotional demands and emotional abuse are risk factors which can cause concentration problems, difficulties in decision-making, and memory problems (Elfering et al., 2017). Also, workload in general and emotional workload specifically, are positively linked to employees' turnover intentions (Heilala et al., 2021). Emotional demands have been identified as a significant contributor to Australian workers' poor psychological health (The Australian Workplace Barometer, 2012). It not only negatively affects workers' health and wellbeing but may also change workers' behaviours towards ways of recovery. Work demands and in particular emotional work demands may be different in IO work, therefore it is important to understand emotional demands in order to help reduce levels of exhaustion and prevent burnout.

- **Cognitive Demands**

“Cognitive demands play an important role in the workers' well-being” (Sophie-Charlotte & Lena, 2018, p.8). Cognitive demands may positively and negatively contribute to workers' wellbeing depending on the tasks that are given to workers to complete. Higher cognitive demands may result in low or lost productivity, which in turn increases costs for organisations.

There is a growing scholarship that posits a relationship between work related cognitive demands and workers' health and wellbeing. Higher work demands are positively correlated to sleep problems that may lead to an increase in depressive symptoms (Magnusson Hanson et al., 2014) and poorer sleep behaviours at night (Loft & Cameron, 2014). Workers who work under high cognitive demands may be adversely affected in their ability to perform tasks. In a study of pilots' cognitive processes, the findings suggested that higher workload involving the most intensive and critical tasks to be performed and completed in a short time was associated with higher cognitive load; in turn, higher cognitive load can lower

verbalisation ability, a result which is seen as an additional task and which interferes with safety (Earl, Mavin, & Soo, 2017). An employment survey in 2018 of 20000 employed individuals in Germany found that cognitive demands were linked to a higher probability of feeling fatigued and reduced good health, especially for workers who are doing unlearned things frequently as they perceive it as stressful; however, doing new tasks that are related to improving work are positively related to workers' wellbeing (Meyer & Hünefeld, 2018). Cognitive demands need to be managed to minimise negative impacts to workers' health, wellbeing and performance. Evidence suggests that companies emphasised a strong need to create policies preventing cognitive overload and suggests that it is important to assess and evaluate cognitive demands when planning construction work (Rodriguez et al., 2019). The analysis of work-related cognitive demands could be explained in depth through John Sweller's cognitive load theory to help workers understand why they experience mental exhaustion how to prevent cognitive overload and enhance their performance. The above studies suggest work demands have strong and significant relationships with workers' levels of exhaustion and wellbeing. The next section presents how work demands interfere with workers' personal life.

2.2.2 Work Life Conflicts

“Work stress cannot properly be isolated from life stress, nor is it reasonable to isolate job satisfaction from life satisfaction” (Fraser, 1984, p. 54). Research suggests that spending more time on/at work leaves less personal time to deal with family matters. This often means that to be able to meet both work and life commitments, workers need to complete both work and family activities i at a fast pace, which can lead to stress and tension. Working long hours means the individual spends less time in social relationships, which can cause tension in family relationships and creates work to family stress (Weinberg et. al., 2010).

Work life conflicts have been highlighted in many dimensions of scholarship. A study among IT workers found positive associations between higher affective reactivity to daily work to family conflicts and poorer sleep quality and mental health (Lawson et al., 2021). Viotti and Converso (2016) identified that quantitative demands have a strong and positive correlation with work life interference in a research study among health care workers. Gryna (2004) also explained that an increasing pace of work impacts family life, with long work hours reducing family time and leading to fast pace of family activities, in a way which adds more mental and physical stress to work. Work life conflict may cause sleep problems, which could lead to musculoskeletal pain complaints and increase the number of pain sites (Vleeshouwers et al., 2019). Similarly, in the context of Indian workers, high job demands, and work-family conflict associated significantly with poor health (Pestonjee & Pandey, 2013). Hall et al. (2010), in their study of Australian frontline police officers, suggest that work- family conflicts correlate with emotional exhaustion, where increased job demands can influence emotional exhaustion, which can spill over to workers' home life and negatively contribute to their work- family conflicts. The studies suggest work life conflicts and stress are positively related and negatively impact to workers' physical and psychological wellbeing.

2.2.3 Stress

Work- related stress has been studied for many years and relates strongly to wellbeing. Fraser (1984, p. 45) has stated "When stress arises it is associated with a negative emotional experience and with both psychological and physiological change". Based on behavioural stress research, stress is a common experience associated with almost all things we do (Turton, 2010). However, Fink (2016, p. 4) has highlighted that "Stress has a different meaning for different people under different conditions". People have different stress responses to the same stressor; stress can be identified as positive stress and negative stress, with the negative stress leading to stress-related symptoms and ill health (Stranks, 2005).

According to WorkSafe (Healthy Work, 2003), stress is “in terms of the interaction between a person and their (work) environment and is the awareness of not being able to cope with the demands of one’s environment, when this realisation is of concern to the person, in that both are associated with a negative emotional response” (p. 8). “The stress relationship is one in which demands tax or exceed the person’s resources” (Lazarus, 1990, p. 3). Quick et.al. (2013) have explained that people who work long hours and who work additional hours during their personal time may be seen more successful than others, but often the person who exhibits workaholic behaviour remains persistently in a state of distress; also, the person may not be aware of his or her own signs of distress and may manage the distress through increased cigarette or alcohol consumption, when exceeding the normal limit of work-related involvement, and it can cause potential serious consequences.

Stress is a physical reaction to external and internal events; prolonged or intense stress can cause health problems (Turton, 2010). Some level of stress can often be found in the body and affects the rate of processing wear and tear, which means a high stress level equals to a high rate of wear and tear in the body, which increases risks of ill health and infirmity (Levi, 1984). “The stress response begins with a stressor or demand, which serves as the trigger for a series of mind–body activities” (Quick et al., 2013, p. 13). Sources of stress could include poor working conditions, organisational culture including insufficient training, lack of control of the workload, insufficient staff, poor relationships with colleagues, or inconsistent management style and approach (Stranks, 2005). Stress is cumulative and the sources of stress can be varied. Unmanaged or poorly managed prolonged stress can cause significant harm to workers’ health.

2.2.4 Burnout

The World Health Organization (2019) has identified burnout as an occupational phenomenon in the 11th Revision of International classification of Diseases and has described

it under three dimensions including “feelings of energy depletion or exhaustion”. “Increased mental distance from one’s job, or feelings of negativism or cynicism related to one’s job,” and “reduced professional efficacy”. In a research study based on a burnout and engagement model, burnout is described as a state of mental weariness that has a strong and consistent relationship with job demands and health problems (Wilmar & Arnold, 2004). According to a study in New Zealand public hospitals by Bährer-Kohler (2013), one in five medical consultants experienced high levels of burnout and one third experienced high emotional exhaustion. A study of the Australian workforce found that “depression costs Australian employers approximately AUD\$8 billion annually because of sickness absence and presenteeism” (The Australian Workplace Barometer, 2012, p. 66). Waddill-Goad (2016) indicated that the consequences of burnout could be absenteeism, poor relationships with others and lack of commitment to work. People often refer to exhaustion when describing their experience of burnout, and exhaustion makes people distance themselves emotionally and cognitively from their work (Maslach et al., 2001). Burnout can lead to direct costs such as loss of productivity, and costs of recruitment and training, and to indirect costs like increased level of stress and risk of getting burnout for remaining employees (Bährer-Kohler, 2013).

There are many work-related psychosocial risk factors that may potentially lead to burnout. Kaski & Kinnunen (2021) highlighted that job demands and work-family conflict positively contributed to burnout. A research study found a positive association between emotional exhaustion and depression, and depression positively correlates with burnout among nurses (Chen & Meier, 2021). A research study about burnout among Danish prison personnel found quantitative demands, emotional demands, involvement in work and meaning of work have the most significant correlation with burnout (Andersen et al., 2017). Another meta-

analytic study among nurses showed that higher level of burnout associates with greater sleep problems (Membrive-Jiménez et al., 2022)

Some research studies have indicated that burnout may have positive correlations with internal risk factors. A recent study conducted by Yale University indicated that one in five employees reported both high engagement and high burnout; these engaged-exhausted workers also had high levels of interest, stress and frustration (Seppälä & Moeller, 2018). In addition, Pestonjee and Pandey (2013) explained that burnout is shown by individuals who have high expectations of the job when joining an organisation but fail to achieve those purposes afterwards. In a study of white- and blue-collar workers in Italy, it was suggested that workers' personalities as one of the burnout internal factors influence affectivity in the workplace (Bährer-Kohler, 2013). The studies indicate clearly that work- related psychosocial risks are sources of burnout, and that burnout can cause serious consequences to workers' health, engagement and productivity at work.

2.2.5 Social Support from Colleagues and Supervisors

People's support systems at work could be a powerful resource to help individuals manage various stressful situations and reduce their level of stress (Quick et al., 2013). Social support can help in reducing the adverse influence of psychosocial risks. Ryan et al. (2021) highlighted that workers' relationships with their colleagues may impact on workers' wellbeing, and that increased levels of support from colleagues can help to reduce the negative impact of burnout and improve workers' engagement. Breugh (2021) also suggested that support from their colleagues and supervisor can help employees to better manage work- related stress. Rhoades & Eisenberger (2002) highlighted that a favourable treatment from a supervisor can be seen as one of the perceived organisational supports for an employee. In a research study of rescuers, Settiet al. (2016) highlighted perceived job support from colleagues and superiors protected rescuers from negative health effects.

Vleeshouwers et al. (2019) suggested that superiors' support may help to relieve some of the worries from employees. Quick et al. (2013) highlighted that social support may help to improve individuals' physical or psychological wellbeing and having active social support from co-workers and colleagues through dialogue may help individuals to understand stressful events, their stressors, and their experiences. In a study of perceived job demands in the US and Indian context, it suggested having supportive workplace culture and supervisors can significantly reduce job demands of workers (Banerjee & Doshi, 2020). A study of child welfare workers' coping strategies shows that workers who have the least working experience use superiors and colleagues as sources of emotional support to help them cope with challenging work experiences and manage emotional demands (Løvseth, 2017). However, it sometimes depends on individuals' communication efficiency. Cohen et al. (2000, p. 283) suggested that "recipients receive more support if they learn how to request assistance from others appropriately and how to reinforce others for offering assistance". Support from supervisors and colleagues is found to have only a protective effect, not moderating effects on exhaustion caused by content-related emotional demands (Vammen et al., 2019). Social support from colleagues and supervisors is crucial. It helps workers to reduce their level of stress, which in turn positively contribute to their health and wellbeing. Workers also need to learn to adequately communicate their needs for support to others

2.2.6 Role Ambiguity

Role ambiguity happens when the role holder does not have sufficient information to adequately perform their role (Stranks, 2005). Role ambiguity is the opposite situation of role clarity. Lack of role clarity is caused by a lack of understanding of expectations, roles and responsibilities or by inadequate training, which may lead to tension, fatigue, high levels of anxiety, physical and psychological strain and absenteeism (Weinberg et al., 2010). Role

ambiguity and role conflicts have been found to have a strong negative relationship with job competence (Aslan & Uyar, 2021) whereas role clarity and job involvement may influence workers' commitment to their organisations (ul-hassan et al., 2021). If employees have both role clarity and social support, it significantly and positively relates to job satisfaction, according to a study by Orgambídez and Almeida (2020). Role clarity strongly correlates to emotional exhaustion and role ambiguity is associated with emotional depletion caused by work (Abraham et al., 2021). In the study of leaders' and followers' behaviours under ethical and passive leadership, role clarity has been found to link negatively to follower burnout, while role overload shows a positive relationship with burnout (Vullingsh et al., 2020). Lack of clarity about roles and responsibilities influences workers' commitments and job satisfaction. It may also increase their level of stress and possibilities of getting burnout.

2.3 Work -Related Psychosocial Risks Research Studies

So far, I have illustrated literatures discussing IO work, psychosocial risks, six psychosocial risk factors in sections 2.1 and 2.2. With the basic understanding about work- related psychosocial risk factors in place, , I follow up with an overview of scholarship in IO and organisational work-related psychosocial risks under sections 2.3.1 and 2.3.2 to highlight their commonalities in general. Each section is divided into three parts which include size, area, and result of the relevant scholarship. The objective of section 2.3 is to address gaps in the comparison with IO and organisational psychosocial risks related scholarships.

2.3.1 IO Work- Related Research Studies

As identified earlier on, the area of IO work and its related psychosocial risks remains largely unstudied. This lack of research has created barriers in understanding workers' experience in relation to working collaboratively with multiple organisations under a range of work environments. The current scholarship has yet to explain what associated IO work- related psychosocial risk factors are, and how these psychosocial risk factors contribute to workers'

physical and psychological wellbeing. The scholarship that focuses on IO work appears to be based on a relatively small size of data collection within a defined area. For instance, Durand et al. (2005) conducted a case study about IO collaboration in occupational habitation. The data were collected from the team meetings and discussions of 22 workers who were absent from work due to musculoskeletal disorders. In an exploratory research study about identifying important components of IO relationships between a school of social work and field agencies, the data was collected from in-person interviews of 62 respondents to help understand four hypotheses in relation to commitment to social work education, organisational supports (Bogo & Globerman, 1999). Hoelscher (2019) conducted a research study to analyse IO collaboration and dialectical tensions experienced by participants involved in collaboration based on observations of meetings and data collected from a small group of committee leaders. Certainly, the size of data collection is guided by a research methodology, but it could be a possible limitation which hinders an in-depth understanding in IO work. The current research studies mostly analysed and discussed IO work through the lens of its design, structure, relationships, communication, and management. Madden (2017) studied IO collaboration through mixed research methods to explore related barriers, challenges, and design to enable more successful collaboration. The barriers were identified among successful and less successful IO collaborations including funding issues, leaders' actions when facing challenges, and their competence in problem solving, different goal orientations and adaptabilities of changes. Grossmann (2012) analysed collaborations in the public service sector and discussed cooperation, structure, and principles of collaboration. The findings of research studies have largely focused on understanding IO collaborations and developing IO relationships. Loisel et al. (2005) pointed out that the credibility of the team's expertise and effectiveness of the treatments were seen as critical elements to the success of collaboration. Their study also suggested that education and awareness-raising were

commonly used to promote collaboration and improve stakeholders' understanding. The study also indicated that challenges of collaboration may be impacted by the size of companies as the team considered collaboration with large companies to be more difficult than with small companies.

2.3.2 Organisational Work-Related Psychosocial Risks Research Studies

In comparison with IO work-related research studies, there extensive literature analysing organisational work-related psychosocial risks. The studies are designed in various ways with different considerations to identify phenomena and correlations.

The size of the studies in the area of work-related psychosocial risks tends to be based on larger data collections, and they tend to apply quantitative research methods. Some large-scale studies are cited below.

Sophie-Charlotte and Lena (2018) conducted a research study analysing the data collected from around 20000 respondents through a German employment survey in 2018. Ghazawy et al. (2019) conducted a cross-sectional study about work engagement and its impact on the job outcomes among 535 nurses from three hospitals in Egypt. Tucker et al. (2020) studied two sample groups involving over 400 employees in an Australian medical research organisation and a government organization. Santos Tome and van der Vaart (2020) explored the correlations between work pressure, emotional demands, exhaustion, depersonalisation, work performance and counterproductive work behaviour and explained their impacts based on the data collected from 296 IT professionals in South Africa. ul-hassan et al. (2021) completed a study in relation to exploring the links between role clarity and organisational commitment among 330 social workers working for four organisations. A research study analysed 499 Finnish top-level sport coaches in relation to relationships between job demands, job resources, burnout and work engagement (Kaski & Kinnunen, 2021).

The areas of studies about organisational psychosocial risks are covered under various work environments, contexts and issues. There are number of research studies which analysed organisational psychosocial risks by looking at different roles and responsibilities in different organisations. Argentero et a. (2016) conducted a research study on the role of affective commitment and social support from colleagues and superiors in preventing burnout among 782 Italian rescuers. Cäker and Siverbo (2018) analysed the data from 799 managers in one public sector organisation and 187 managers in one private sector organisation in Sweden. Some research studies were designed to understand specific issues raised from an organisation. Bernhard-Oettel et al. (2020) studied Swedish permanent employees in situations of workplace locked-in and explained the correlations of work control, learning opportunities and quantitative work demands with workplace locked-in. Cäker and Siverbo (2018) studied the relationship between inconsistent performance management systems and managers' role clarity and wellbeing. Orgambidez and Almeida (2020) completed a cross-sectional research study of social support, role clarity and job satisfaction among 191 nursing professionals from a hospital in Portugal.

Many studies also analysed organisational psychosocial risks from different approaches. Boyte (2009) studied psychosocial risk factors, work design and wellbeing in relation to New Zealand contact centres from a management approach. Weissbrodta et al. (2018) researched workplace responses and effects before and after Labour Inspectorate visits and interventions; the studies included worker participation and psychosocial risk management. Gryna (2004) addresses ten contributing causes of work overload in relation to changing priorities and strategies, job requirements, and the mental demands required in jobs within an organisation. Ofluoglu (2013) discusses psychosocial risks from a human resources perspective, outlines human resources as one of the important psychosocial risk factors, and addresses the issues in relation to work and life conflict, psychological harassment at work, aging, and workers'

adaptability. De Sio et al. (2018) explained psychosocial risks from workers' perceptions of work-related stress caused by job insecurity and gender differences.

A substantial number of studies have explored various correlations between various organisational psychosocial risks. Ghazawy et al. (2019) found that work engagement had a strong and positive correlation with job performance and had a negative correlation with turnover intention. Orgambidez and Almeida (2020) found role clarity had significant and positive correlations both with job satisfaction and social support from colleagues and supervisors, and social support was significantly and positively related to job satisfaction. ul-hassan et al. (2021) indicated a significant and positive direct relationship between role clarity and organisational commitment.

Studies indicate correlations between organisational psychosocial risks and their impacts on workers' wellbeing and work performance. Cäker and Siverbo (2018) showed that job autonomy and managerial support directly and positively impacted on managers' role clarity and wellbeing. Kaski and Kinnunen (2021) discovered that a lack of positive challenge at work and feeling that work is not meaningful had strong and positive relationships with burnout. Santos Tome and van der Vaart (2020) highlighted that work pressure could lead to exhaustion, emotional demands were not strongly and directly related to exhaustion, and only had a positive relationship with work performance.

2.4 Justification for the Research

Under each subsection of 2.4, I first identify the gaps and needs, then move to explanations of viewing IO work related psychosocial risks and draw upon literature to illustrate three elements, which are John Sweller's cognitive load theory, cognitive load and overload. The objective of this section is to convey the need to understand IO work-related psychosocial risks and lay a basic understanding of the four elements that will be referred to in chapter 5 Discussion.

2.4.1 Gaps

By looking at the organisational and IO research studies, it is clear that organisational work-related psychosocial risks scholarship has covered more areas and more varied workplaces than IO work-related research studies. Given ample scholarship emphasising the relationships between psychosocial risks and workers' wellbeing within a single organisation, their findings strongly suggest that analysing of psychosocial risks in the context of multiple organisations' collaborative environment may bring more impact when seeking to understand collaborations and associated issues. I disagree that correlations identified between organisational work-related psychosocial risks and their effects on workers' health and wellbeing can be viewed as the same as IO work. When psychosocial risks are viewed through an IO work lens, the relationships between psychosocial risks and their impact on workers' wellbeing may change and additional issues could emerge.

2.4.2 Need

Having read various literature on the topic, I felt issues about work-related psychosocial risks such as burnout, cognitive demands, quantitative demands, and worker engagement could be interpreted from a different angle. Shifting our thinking to John Sweller's cognitive load theory may help develop our deeper understanding about mental exhaustion, which in turn helps discover more effective solutions. Future research studies could use this lens. Research has highlighted that work resources may not always strongly and positively contribute to cognitive stress symptoms, and that emotional demands and abuse may be the risk factors, which could cause cognitive stress symptoms. The above was evident the study by Elfering et al. (2017) where they show relationships between cognitive stress symptoms, quantitative work demands, and emotional demands among 48 surgery nurses from two hospitals. The findings further indicated that supervisor-related emotional abuse could cause surgery nurses to have difficulties in detaching psychologically from work and could lead

to sleeping problems. This research study addressed cognitive stress symptoms and effects on surgery nurses' wellbeing. It could negatively impact surgery nurses' operational performance as well as patients' safety. To gain an in-depth understanding about correlations of IO work-related psychosocial risks, it is vital to understand psychosocial risks through the lens of cognitive load theory to explain why individuals respond differently when facing similar levels of IO work-demands, and why some of them experience mental exhaustion and burnout while others do not. Under this section, I review cognitive load theory.

- **Cognitive Load Theory**

When analysing work demands, especially cognitive demands and their negative impacts on workers' wellbeing, it is crucial to understand how human cognitive architecture lays a foundation to help understand cognitive load theory. John Sweller created cognitive load theory in the late 1980s, focusing on an analysis of cognitive demand in learning and problem-solving practices (Moreno & Park, 2010). It was further developed using cognitive architecture and related principles and effects (Sweller et al., 2019).

Sweller et al. (2011, p.51) have defined human cognitive architecture as " a natural information processing system that has been generated by biological evolution." The identification of biological evolution as a natural information processing system explains how primary and secondary knowledge are acquired and used biologically under five principles. The five principles explain how information is processed and stored by describing what long term memory, working memory and sensory memory are, their roles and their limitations. To understand why mental exhaustion occurs, it is important to first learn how humans process information and what our limitations are. Sweller et al. (2011, p.18) explain that long-term memory is a "very large store of information," and that the information stored in long-term memory is "familiar" information to us: we use the information to plan our routine daily activities and deal with all high-level cognitive activities such as learning and problem

solving. further, these authors explain that long-term memory is central to human cognition and the information stored in long-term memory could show our competence and skill. “Working memory is the primary structure that processes incoming information from the environment”; the novel information comes from external environment via our sensory system including visual and auditory (Sweller et al., 2011, p. 42). Novel means “unfamiliar information that needs to be learned” (Sweller et al., 2011, p. 65). In comparison with long-term memory, our working memory has limited capacity and duration: it can process no more than two to three items of novel information at a given time; these limitations only apply to novel information obtained via sensory memory instead of long-term memory (Sweller et al., 2011). Whether or not the novel information can be potentially stored in long term memory is partly decided by working memory (Sweller et al., 2019). If we require our working memory to process more than two to three items of novel information at a given time, “our working memory processing system tends to break down” (Sweller et al., 2011, p. 43). Human cognitive architecture clearly explains different types of information, how working memory processes information, and what can cause working memory dysfunction. It helps to understand root causes of mental exhaustion, which can help better understand burnout.

- **Cognitive Load and Overload**

Cognitive load theory categories three different types of cognitive load to intrinsic, extraneous, and germane load (Schmidt et al., 2006). Intrinsic cognitive load refers to the intrinsic nature of the information, which means the basic structure of the information that learners need to learn to be able to meet learning objectives; extraneous cognitive load refers to unnecessary information unnecessary to the learning goals; germane cognitive load refers to the information that is relevant to learning and considered as an intrinsic load imposed to our working memory (Sweller et al., 2011).

There are many research studies about cognitive overload. Galant-Gołębiewska et al. (2020) found that cognitive overload is one of the main reasons causing pilots to make mistakes during the flight. They highlighted the cognitive load was increased when the complexity of the tasks increased, which impacts the pilots' cognitive function. They suggested the pilots' experience and skills learned from training could help to reduce the impact of cognitive overload.

To better explain our experiences of mental exhaustion, we need to know what cognitive overload is. Iskander (2019) identified that, when an individual was required to co-ordinate a larger than possible number of elements that exceeded working memory capacity to complete tasks, it will lead to cognitive overload. Plass et al. (2010, p. 65) highlighted "the major cause of cognitive load effects is the limited capacity of working memory". Cognitive overload can happen during problem solving where declarative and procedural types of information must be dealt with and processed at the same time, where "declarative information is defined as related to reasoning about the cause of the problem and finding a solution, whereas procedural information is related to manipulating the environment" (Sweller et al., 2011, p. 206).

The scholarships about IO work- related psychosocial risks is limited. I have found that IO work- related psychosocial risks have not been clearly identified, so it may hinder organisations which are involved in IO work in their management of associated risks, issues, and negative impacts on their workers. I covered that by analysing how IO work- related psychosocial risks from the lens of John Sweller's cognitive load theory can help to gain in-depth understanding about mental exhaustion and burnout. In the following chapters, I explain the design of my research methodology.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter outlines the choice of research method, the approach towards data collection and analysis, and considerations of ethics. The chapter begins with a brief overview of research philosophical assumptions and research paradigm, followed by a discussion of the research design to provide reasoning for the chosen method and design. I then discuss my data collection process, interviews, participants, and the approach of data analysis. At the end, I explain my ethical considerations of this research.

3.1 Philosophical Assumptions and Paradigm

Philosophical assumptions are essential and lay a foundation for a research process (Coates, 2021). It is important to pose innovative research questions to help trigger theoretical inspiration, develop influential theories and make significant theoretical contributions (Alvesson & Sandberg, 2013). My research is driven by assumptions of work-related psychosocial risks are not limited by what have been researched and identified as commonly exists. I use an exploratory lens to understand IO work and argue there are uncommon psychosocial risks that are unique to different work context.

Pragmatism demonstrates the belief of “what works” and examines not only “what researchers do but why they do things the ways they do” (Morgan, 2013, p. 1051). Rescher (2012, p. 8) points out “Its emphasis is on effectiveness in goal attainment”. My principal objective when embarking on this line of work was to understand IO work related psychosocial risks and in recommendations and future directions provide possible solutions that are practical and effective. Pragmatist methodology focuses on the nature and potential solution of the problem (Kaushik & Walsh, 2019). For this reason, I adopted a pragmatic research methodology.

3.2 Research Design

“A good research is systematic”, follows rules, structures and specific steps, and it also needs creative thinking (Dubey & Kothari, 2022, p. 1). Kale & Jaynath (2019) point out that “to philosophers and thinkers, research may mean the outlet for new ideas and insights, whereas to intellectual people research may mean the development of new styles and creative work” (p. 3) and also that “creativity is a quality that adds essence to the expected outcomes” (p. 5). When deciding on the research method and design for this research study, I sought both to follow the rules and structures, and to embrace creativity in order to achieve the best outcome. This research is exploratory and applies a pragmatic and qualitative research methodology. As discussed in the second chapter, Literature Review, the area of IO work and its related psychosocial risks remains largely unstudied, therefore, in order to gain more understanding in this area, an exploratory study was considered more suitable to meet the research objectives. An exploratory study is used for clarifying a researcher’s understanding of a particular problem (Saunders et al., 2012).

Given the research was an exploratory study, the qualitative research methodology was considered more suitable to help gain an in-depth understanding of psychosocial risks.

Harding (2019) has indicated that qualitative research incorporates researchers’ main interest of understanding the behaviour, attitudes, and emotions of smaller groups of people.

This research study also adopted both deductive and inductive approaches to meet its objectives. The deductive approach is to draw initial codes from existing literature, and then code data by using a start list; the inductive approach “involves working exclusively from the participant experiences that drive the analysis entirely” (Azungah, 2018, p.391).

Applying phenomenological exploratory study design, as well as qualitative and pragmatic research methodology, and using both inductive and deductive data analysis approaches, enabled me to identify core phenomena, issues and root causes based on the participants’

views of their own experiences. It also allowed me to create tailored solutions to issues in managing IO work- related psychosocial risks. I am driven by the contribution of this research study to add value to IO related research studies and reduce or minimise negative impacts of work-related psychosocial risks to workers' wellbeing.

3.3 Data Collection

I conducted two rounds of data collection. The first round of data collection ran from 28 November 2020 to 7 April 2021. The second round was conducted from 30 November 2021 to 25 January 2022. Each round had its own purpose. The first round laid the foundation of my basic understanding of IO work demands, while the second round helped me to gain an in- depth understanding of IO work- related psychosocial risks other than IO work demands.

- **Frist round**

The first round of data collection was focused on 10 areas, which were drawn from COPSOQ III. Guidelines and questionnaire (COPSOQ International Network, n.d.) and a consideration of pandemic responses to help guide data collection from interviews, capture phenomena and analyse data from the pre-determined categories. Then, based on the information collected from the first one, I identified the common phenomena, analysed my initial findings, and conducted the second round of data collection.

As agreed by the participants, I took interview notes for the first round of data collection. I did this because writing the participants' responses down enabled me to remember new phenomena and prompted me to connect to the common and central phenomena that were described by other participants. Jackson (2014) has explained that qualitative analysis involves reading notes that have been taken, identifying patterns, and putting them into different categories. It built my confidence to conduct a more effective data analysis for the second round of data collection.

- **Second round**

This round was designed to allow participants to share as much information as possible, drawn from their IO work experiences, their understanding of IO work and associated issues, and their understanding of IO work in comparison with organisational work including intraorganisational work. Intraorganisational work means working with different groups within one organisation. This helps to gain in-depth understanding of IO related psychosocial risk factors and of differences between IO work related psychosocial risks and organisational psychosocial risks.

To enable capturing all the phenomena and understanding whether the pre-determined themes were relevant, the participants were asked to comment on the extent to which something happened such as how frequently they were facing these demands in the initial interview.

This was intentional because my intention was to understand the extent to which a phenomenon occurs and to explore its nature. This enabled me to capture the frequency and intensity of something happening, and to build and extend my understanding from the first round to the second round of data collection. Table 1 below shows the coding of each participant, the number of female and male participants, and the total number of participants for each round of data collection.

Table 1 Participant Demographics

First Round	Second Round	
Participant A	Participant U (in second round only)	
Participant B	Participant V (in second round only)	
Participant C	Participant W (in second round only)	
Participant D	Participant X (in second round only)	
Participant E	Participant B2 (in both rounds)	
Participant F	Participant C2 (in both rounds)	
Participant G	Participant F2 (in both rounds)	
Participant H	Participant L2 (in both rounds)	
Participant I	Participant M2 (in both rounds)	
Participant J	Participant O2 (in both rounds)	
Participant K	Participant P2 (in both rounds)	
Participant L	Participant R2 (in both rounds)	
Participant M	Number of Female: 6	
Participant N	Number of Male: 6	
Participant O	Total: 12	
Participant P	Note: Participants who attended both first and second round data collection were given the same alphabets, but I added number 2 for each of them as an indication.	
Participant Q		
Participant R		
Participant S		
Participant T		
Number of Female: 9		
Number of Male: 11		
Total: 20		
Participants attend both rounds:		8
Participants attend the second round only:		4
Total Number of Female:	11	
Total Number of Male:	13	
Total Number of Participants:	24	

3.3.1 Procedures

The data collection followed three steps. The first step was to contact each participant, explain the research study and gain their permission for either a face-to-face in person or online, or via a phone interview. The participants were given the Research Information Sheet, Participant Consent Form and Transcript Release Authority to read prior to the interviews. Once they agreed to participate the research study, I arranged the interviews to be conducted at their preferred time, date and way of interview.

The second step was to conduct and record the interviews. I recorded each of the first interviews by taking notes during the interviews. Most of the first interviews were conducted face-to-face in person. A few interviews were conducted through telephone or over online chat tool. The second interviews were completed via online chat tool and voice recorded as agreed by the participants. All interviews were completed during their break, available time within their working hours or their personal time.

The last step was to invite the participants to check the interview notes. After the interview, the interview notes and transcripts from the voice recording were either sent to the participants' nominated email address or a printed copy was given to the participants in person to check. This was to ensure that the participants were given opportunities to read and edit the transcripts of the interviews if they wished to, and to ensure the accuracy of the information collected from each participant.

The sample size was determined by sufficient data being collected. Determination of adequate sample size is based on the point at which saturation is reached, which means no new themes can be identified from data collected (Fofana et al., 2020). No new phenomena were collected from the interviews after completing both the first and second round data collections. The data collected showed that saturation had been reached, so no further interviews were carried.

3.3.2 Interviews

The interviews were semi-structured. Semi-structured interviews are suitable for asking probing, open-ended questions to find out independent thoughts from each participant (Newcomer et al., 2015). The first interview was planned to be completed in around 30 minutes. The second interview was planned to be completed in around 30 to 45 minutes. Most of the first interviews were completed within 30 minutes. The second interviews were completed within various time ranges between 20 and 90 minutes. Most of the interviews

took longer than 30 minutes. The participants had multiple involvements and experiences in different IO work, and they were given enough time to talk about their understanding and experience of IO work. Giving the focus of the exploratory study, each individual interview was conducted in a way which facilitated sufficient data collection.

Interview Questions

The interview questions used to guide the first and second interviews were a mix of open-ended and closed questions. There was a total of 26 questions including 15 open-ended with one multiple choice and 11 closed questions. Open-ended questions do not suggest certain answers to respondents, and they are good for exploring new information that is unknown by the researcher, but they are time-consuming, which means interviews may take longer than expected; closed questions allow respondents to process answers easily and enhance the comparability of answers (Bell et al., 2019). “Open-ended questions require the respondent to do most of the talking while close-ended questions restrict the respondent’s responses to the variable options” (Dubey & Kothari, 2002, p.126). Using a mixture of 15 open-ended, one multiple choice and 11 closed-ended interview questions helped to collect adequate data and enabled most interviews to be completed within the expected timeframe.

Within the 26 interview questions, there were 20 questions selected from COPSOQ III. Guidelines and questionnaire (COPSOQ International Network, n.d.) covering 10 predetermined areas, three questions related to identifying differences of psychosocial risks in organisational work versus IO work, and three questions regarding the influence of COVID-19 responses on IO work. The 10 themes were categorised as quantitative, cognitive and emotional demands, role clarity, social support from supervisor and colleagues, work engagement, work life conflict, burnout and stress. These questions allowed a consistent comparison with other research studies and findings that were also based on similar questions and areas from COPSOQ III. Guidelines and questionnaire. It made it easier to understand

whether there were any similarities or differences in IO versus organisational work-related psychosocial risks.

The second interview was designed to be less structured than the first interview and aimed to allow the participant to talk about more in-depth about their understanding of IO work with a comparison of organisational work, the stressors they encountered when conducting IO work, and their IO work experiences.

3.4 Participants

There were in total 24 participants who participated the first and second interviews. I first collected data from 20 participants in the first round. In the second round, I interviewed a total of 12 participants. Eight participants were from the first 20 participants as they responded that they were available for further interviews. I also added four new participants who had long IO work experiences to gain different perspectives about IO work. The selection of the participants attending the second interview was based mainly on their availability.

Most participants work for the public sector in New Zealand. All 24 participants were over the age of 18 and had at least three months' IO working experience. The participants were recruited through direct or indirect communications such as via phone or in person. The participants all agreed to attend approximately 30 minutes for the first interview and 30 to 45 minutes for the second interview. There were no other restrictions such as gender or specification of job roles as the focus of the interviews is on their experiences and understanding of IO work. Also, no names and any other indicative information is included in the transcript. This is to ensure the information used for the research study is not identifiable.

The initial and potential participants were identified through people who I know that they had IO work experience. I am also connected by some intended participants to other potential

participants they know. The potential participants are recruited through direct or indirect communications such as via phone, online chat tool or in person, then follow up with confirmations regarding the arrangement of the interviews. The Participation is completely voluntary as discretion by the potential participants.

3.5 Data Analysis

The data analysis was based on individual participants' responses to each question to help identify and explain IO work- related psychosocial risk factors. Quotes from individual responses were used in findings to emphasise important phenomena. Harding (2019, p.253) stresses that "the key requirement is that the findings section accurately represents the views, ideas and experiences of the respondents".

The initial data analysis was completed prior to conducting the overall data analysis to assess whether the information collected was meeting the research objectives. Initial data analysis was conducted after completing the first five, seven, and ten interviews, following with a thematic and qualitative analysis that was conducted to look at all of the information collected directly from further participants. For an exploratory study, researchers need to fully understand the data to help develop themes, trends or ideas; once the data is understood fully, thematic analysis can be used to identify and describe all ideas appeared within the data, which can be treated as themes (Guest et al., 2012). The qualitative data analysis helps to explore the research topic, understand what to include and what to discard from the data collected (Wilson, 2014). The process of the qualitative data analysis includes breaking the data down into bits, describing, categorising and interconnecting phenomena, and then explaining the interconnection from a fresh view (Dey, 1993). To conduct good research, a researcher needs to avoid guessing and apply intuition to produce findings and arrive at a conclusion (Dubey & Kothari, 2022). During the process of data analysis, I reminded myself

to be open- minded and collect all relevant phenomena to build a whole picture based on all themes and then make an overall conclusion.

In total, 24 participants were interviewed from the first and second round of the data collection. The initial analysis was completed after the first seven participants were interviewed to check whether the information collected was sufficient. Since I also had IO work experience, to help remove confusion and distinguish my own and the participants' interpretations about IO work and related experiences, I positioned my reflections under the section on implications. Creswell & Báez, (2021) suggested that, in a qualitative research study, too much self-reflexivity can make the study self-centralised instead of participant-focused. The purpose of this research study is to explore and understand central and common phenomenon from the 20 participants not myself.

3.6 Ethics

There were three crucial ethical considerations for this research study. The first consideration was what information was needed for this research. Based on comments from Massey Ethics Committee, there was no need to mention the gender or sexual orientation of participants within this project, so this information was not collected.

The second consideration was what information that the participants needed to know before the interviews. The participants were given three documents prior to the interviews including the research information sheet, participant consent form of individual interview and authority for the release of transcripts. The information sheet outlined the purpose and procedures of this research study, data management, participants' rights, researcher's and supervisors' contact details. It also clarified anonymity, confidentiality of the information collected, people who can access the information collected, and storage duration of the information collected. Most importantly, the information sheet included contact details of the helplines. Helpline options were made available for the participants if they felt that they

needed immediate support during or after the interviews. The participants were also advised that they could skip any questions and terminate the interviews at any time to prevent or minimise any discomfort that might be caused by the interviews. The interviews began with the participants' acknowledgement of the Information Sheet received and confirmation to be interviewed and recorded.

The last consideration was what could hinder myself to conduct a good research study. In my opinion, removing my own conscious and unconscious bias and personal interests towards this research study was vital. When conducting data analysis, I explained all the phenomena based on the participants' own views of their experiences and quoted their own words to emphasise and demonstrate the core phenomena. I am aiming to conclude my findings, discussion and implications by building on a reasonable and unbiased analysis and reflecting this practice through the whole exercise.

CHAPTER FOUR

FINDINGS

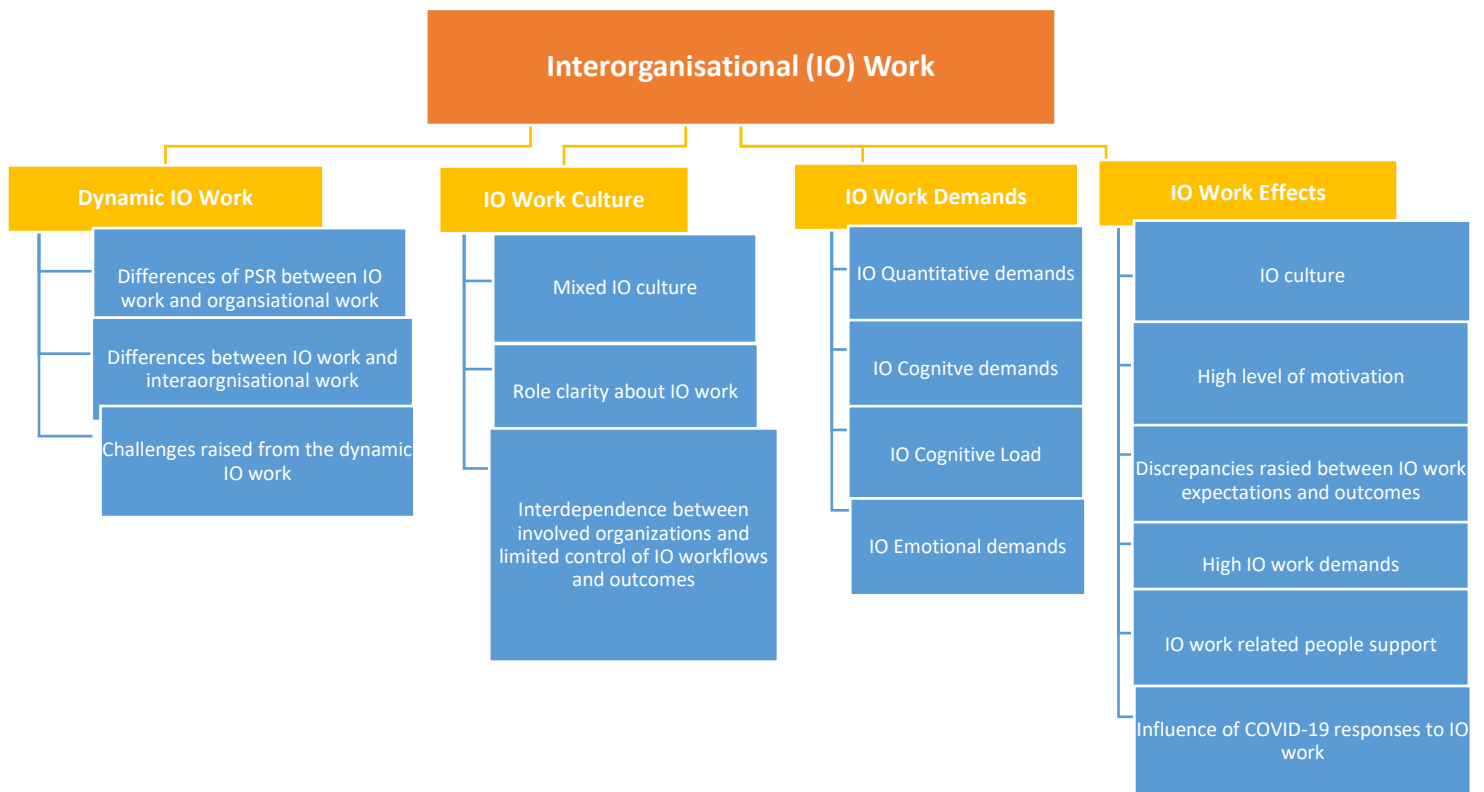
4.1 Introduction

This chapter presents the findings of this research study. Four key themes were identified that indicate the differences between IO work and organisational work-related psychosocial risks, and they are the basis for 16 subthemes. The key themes and subthemes are shown in Figure 1: Overview of the themes. At the end of this chapter, I provide a summary of identified IO work related psychosocial risks to address the research question of what IO work related psychosocial risks factors are. IO work-related psychosocial risks are identified based on all findings from the interviews of 24 participants.

Within participants' responses, certain words were used interchangeably, such as 'agency' or 'agencies' instead of 'organisation' or 'organisations', and 'interagency' instead of 'interorganisation'. Participants also often used 'BAU' as an abbreviation for 'business as usual.'

The four key themes identified through the analysis are dynamic IO work, work culture, work demands and work impacts. Figure 1 below gives an overview of the four themes and 16 subthemes:

Figure 1: Overview of the themes



4.2 Theme 1: Dynamic IO work

Dynamic IO work is one of the key themes that was addressed by many participants through IO work demands, complexity of IO work, dealing with different organisational cultures, working with people from other organisations who carry out various ways of working, and managing associated challenges. There are in total three subthemes, these are differences of psychosocial risks between IO work and organisational work, differences between IO work and intraorganisational work and challenges raised from dynamic IO work.

Intraorganisational work refers to work that is conducted between different groups within one

organisation. An explanation of intraorganisational work was given to the participants before they responded to questions relevant to this topic.

4.2.1 Theme 1, Subtheme 1: Differences of psychosocial risks between IO work and organisational work

Participants were asked to consider the different psychosocial risks in IO work specifically, as opposed to organisational work in general. They were also asked to think about strategies that have been used or could be used to resolve these differences. At the end of the first round of data collection, the 20 participants were asked to indicate the differences by multi-selecting from four choices including severity, cost, nature and complexity and explain their choices. This process helped in the collection of adequate data and enabled most interviews to be completed within the sufficient timeframe. The four choices were created to indicate the area of key differences when working under IO work environment. Apart from one participant thought there were no differences, *complexity* and *nature* were selected as the main differences in psychosocial risks by most participants in IO work versus organisational work.

After the selection, the participants were asked to provide explanations. Many participants suggested the main differences in doing IO work as opposed to organisational work was dealing with different people, organisational structure, and culture. This also added complexity and indicated the nature of IO work.

Participant E, for example, selected *nature* and *complexity* and explained that working with people from multiple organisations involved in IO work and different organisational cultures added more complexity. Participant E explained: “Because more staff involved in IO work adds more complexity. Nature of work changes when you do IO work. When you bring another agency to the work, you bring in different processes and procedures. It also flows on complexity”.

Only two participants selected all four items of *severity, cost, nature* and *complexity* and emphasised challenges that made it difficult to gain clarity on resources needed for IO work.

Participants' responses often noted different organisational culture, work environment and people factor as key aspects that indicate IO work is different and likely more complex than organisational work.

4.2.2 Theme 1, Subtheme 2: Differences between IO work and intraorganisational work

The participants pointed towards the differences between IO and intraorganisational work in terms of complexity and dynamism. Many participants explained how it is more complex to deal with IO work than organisational work from their perspectives. The participants responded differently with various perspectives. Some participants suggested IO work is more complex than intraorganisational work. Participant F2 indicated it may have fewer external factors and challenges that they need to deal with and noted the following:

Interagency, you've got the external factor, you've got the complexity there of aspects that you don't know what you don't know, versus the intraorganisational work, complexities, where you may have a shared understanding or overall purpose goal, which helps, have that closer relationship and understanding of a bit of a wider picture, which you don't get with Interagency. [Participant F2]

Participant L2 found it was easier to communicate with people within one organisation than communicating with people from other organisations where you are not familiar with and explained:

You need to process what's being asked before being able to do the task. Whereas with the other (Intra organisational work), you know the language that this person uses or the expectations that they have. You don't have to read too much into the instruction. You can just get on and do it. [Participant L2]

Also, many participants found it difficult to deal with more than one or multiple organisational culture differences under in an IO work environment whereas for intra

organisational work, they only need to deal with one organisational culture, which helps to reduce the complexity of work.

Some participants suggested IO work is not necessarily more difficult than intraorganisational work, and even they agreed with IO work involving different organisational cultures. Participant P2 for example explained it depends on the relationships you have with the other groups and the actual work or project. He emphasised: “It can’t be a black and white answer”. Participant O2 responded similarly and said both IO work and intraorganisational work can be very complex, and “it depends on what you do and the scope of the program or project that you are trying to work on”.

Participant M9 who was conducting IO work as well as organisational work suggested IO work was easier to deal with because of well established relationships with other organisations, but intraorganisational work was more difficult due to roadblocks that were created internally and meeting unrealistic deadlines that caused mental stress. He found himself emotionally drained and exhausted when dealing with intraorganisational work demands.

Analysis of participants suggests the main difference between IO work and intraorganisational work is its organisational culture. The participants only need to deal with one organisational culture when they are working under intraorganisational work environment., in comparison with an IO work environment, in which they normally need to deal with more than one or multiple organisational cultures. As expected, the respondents highlighted that the challenges raised from dealing with the differences between one and more than one or multiple organisational cultures can be perceived as adding additional complexity when conducting IO work- related tasks.

4.2.3 Theme 1, Subtheme 3: Challenges raised from the dynamic IO work

During the interviews, participants narrated possible interventions that have been helpful when managing challenges within their work. A group of participants suggested communication, knowing the people they work with and building relationships were important.

When I moved to the office to encourage more, regular informal contact, help to build the relationship. Small help and not vital questions can be asked in a timely and regular manner. [Participant L]

Open and regular communication and maintain relationship between the key organization people. They got multiple organizations and change multiple people multiple times. [Participant Q]

Participant U highlighted the importance of building relationships and communicating with people from other organisations. She said: “the pillars of working in an IO environment are those relationship building and communication, engagement and consultation with all aspects of the workforces.

Having a clear understanding of expectations, roles and responsibilities was also seen as an important element by four participants.

Having a clear understanding of expectations, roles, and responsibilities was also seen as an important element by four participants, with Participant H, for example, stating that: “From the beginning, very clear expectations and responsibilities should be laid out to all IO staff”.

Three participants highlighted it is useful to have an agreement between organisations and get support from IO senior management.

We had lots of success when high level of agreement achieved and high-level escalation bring up to the high level of partnership to resolve, and resources, people deployed to the work. [Participant O]

Two participants emphasised that having simple and less formal processes could help some situations. Other participants addressed the importance of having experience and knowledge, maintaining an impartial approach, talking to someone and using available resources, and not putting pressure on people from other organizations.

Participant I indicated that superiors' IO work experience and understanding about dynamic IO work and IO work demands is critical to solve IO work- related problems. She said it is beneficial if reporting managers have done the work before and understand IO work- related pressures and if they understand that time is needed to build a better understanding of problems that have been raised.

Building relationships with people from other organisations, having frequent communications, increased role clarity and gaining support from managers and senior management are seen as effective strategies to help manage the challenges raised by the dynamics of IO work.

Interestingly, despite the number of challenges raised by IO work, many participants gave positive responses about their IO work experience. They considered it as a great learning opportunity and rewarding experience. Participant V said he liked doing IO work because it can make systematic change, which in turn makes bigger and better impact. Participant L2 addressed both:

It can be very rewarding work because it's a chance to apply the skills that you've gotten to a different environment and in a much more effective way because all of these people are doing the similar thing and so we can amplify the outcome.

Overall, the participants illustrated in this theme indicate that IO work is dynamic, and that the dimensions of this work include its complexity, the nature of the work, and various organisational cultures. This makes IO work different from organisational and intraorganisational work. However, it does not automatically mean IO work is more complex than organisational work or intraorganisational work. It depends on many contextual factors such as the strength of relationships, communication, role clarity, manager support, work demands and actual work. Notwithstanding the dynamic IO work and its challenges, most participants enjoy their IO work experience because it advances their personal and professional growth.

4.3 Theme 2: IO Work culture

IO Work culture was the second main theme. The participants highlighted that they had to learn and deal with different ways of working such as various processes, procedures, ways of reporting and communications. The section provides evidence to support the three subthemes. They are mixed IO culture, impacts on role clarity and level of interdependency, and limited control of IO workflows and outcomes. The findings highlight the role that IO culture plays in the IO work environment. It addresses its impacts on role clarity, level of interdependency and control of IO workflows and outcomes.

4.3.1 Theme 2, Subtheme 1: Mixed IO culture

Most participants emphasised certain factors when working with different organisations, such as different ways of work, unfamiliar language used through communication, multiple hierarchies and reporting lines, different processes, procedures, expectations and priorities. Their responses suggested the IO culture that was constructed by various organisational cultures and indicated it is a mixed organisation cultural work environment. The participants illustrate the culture by noting:

A melting pot of cultures and “You've got a more diverse workforce that you're working with, and therefore you're getting a lot more diversity just in terms of the ideas that people have in the outlooks.
[Participant U]

It could be working for organizations that are completely new to you. Who more than likely have other aspirations in other goals that may not necessarily align with yours, and that mainly coming to common sense solutions on a particular problem is a bit more difficult. [Participant B2]

You're trying to marry up across a whole range of dimensions that have got different levels of maturity and understanding, and this leads to constant ambiguity. [Participant V]

Participant F2 described different organisational cultures. She pointed out: “You've got different ways of working within different agencies, it could be a chain of command, it could be access to systems technology and even conflicting priorities.

Due to a lack of understanding and familiarity about the differences of other organisational cultures such as ways of work, processes and procedures, goals and priorities, working under a mixed organisational culture environment may cause more confusion and ambiguity, which in turn creates barriers to collaboration.

4.3.2 Theme 2, Subtheme 2: Role Clarity about IO work

The literature has indicated that lack of role clarity may increase level of stress, tension, fatigue and decrease job satisfaction. Based on the analysis of the participants' responses, the findings indicated most participants gained clarity about their roles and responsibilities, but lack of understanding about expectations due to unknown other involved organisations' cultures and structures. In the first round of data collection, the participants were asked whether they knew their responsibilities and expectations when they were conducting and involved in IO work. Over half of the participants confirmed that they knew exactly their responsibilities as well as the expectations at work. Only one participant provided uncertain answers for both questions.

More participants confirmed that they knew exactly their responsibilities than participants said they knew exactly what are expected of them. They explained their responses through addressing their ambiguity, role unclarity, differences with other organisations and dynamic IO work.

Participant Q said: "Different organizations have different desired outcomes lead to conflict views. They have different structures that cause ambiguity".

Participant S indicated he did not know his responsibilities and expectations and felt frustrated due to the IO work was set up quickly and work requirements were changed frequently. He said: "our work requirements were changed every day and every hour".

The participants used terms like '*different desired outcomes*', '*conflicting views*', '*ambiguity*', '*unclear*', '*ownership*', '*vague*', '*board*', '*change*' and '*dynamic*'. Most of them

were directly addressed to exterior influences caused by other organizations and people other than their own organizations involved in IO work.

The participants' responses about role clarity showed that, even though they know their responsibilities and expectations, their understanding about the roles could be impaired by the influences of other organisational cultures that have different ways of work, reporting lines, processes and procedures and timeframe to complete certain tasks. As a result, it may lead to role ambiguity and reduce the level of role clarity for individuals. They may find it difficult to work with people from multiple organisations who have various views about how work needs to be done. Sometimes these views may conflict with their own, particularly when they work with people with whom they have not yet established mutual working relationships, and the IO work that they are conducting involves frequent changes. The level of work-related stress is likely to be increased due to not knowing others' needs, resources and limitations, and because it is necessary to remove roadblocks that hinder IO work moving forward.

4.3.3 Theme 2, Subtheme 3: Interdependence between involved organisations and limited control of IO workflows and outcomes

Several participants' responses showed a certain level of interdependency between involved organisations when working under an IO work environment, which was not only a hindrance to the progress of progressing the IO work- related tasks, but also caused the participants to experience negative emotions.

Sometimes you work collaboratively with another agency, they're really engaged, and they've seen that also a priority, so you can work together really successfully. Sometimes just because limited capacity that they have or it's not their priority. Then it can feel like you can't move something forward because you don't have influence over the next stage that need to be taken. That's frustrating. [Participant O2]

In addition, when participants were asked about the stressors they experienced when conducting IO work, their responses illustrates that they are unlikely to have full control of assigned IO work- related tasks such as how the work needs to be done, timelines and

progress. As a result, their ability to control the progress of the work they do is limited, which causes additional stress as well as negative emotions. When asked about these impacts, Participant O2 responded: *“I think people end up feeling like they're banging the head on the ball or whatever that expression is. You can make some gains but not really solve the problem”*.

When working collaboratively with other organisations on a particular task or project, due to different approaches and interpretation of the work, and shared work and responsibilities, participants indicated that they all depend on each other to complete their own parts to be able to move forward towards a shared goal. They can influence each other, but none of them has full control of the work they do. The following quotes indicate that differences between organisations in terms of resources and priorities could lead to stress, exhaustion, confusion, and ambiguity. Participant F2 addressed the variation of priorities from other organizations and said:

The conflicting priorities which may pull an individual away from a piece of work because of something else happening in their business. So it's stressful when you don't know if or when that's going to happen, and you've put your time aside to do it when suddenly that other person is no longer available at the expected time.

Participant F2 also explained the source of stress and exhaustion and said:

Where there wasn't the clarity that leads to high levels of stress and exhaustion because I didn't know what was coming, and when it was coming, so there was always the anticipation, which is exhausting when you're constantly sitting there waiting for something to happen.

To conclude, IO work culture can be influenced by various factors from single or multiple organisations which are involved in IO work. They do not have control and awareness about what is happening within other organisations. For example, a lack of resources in one organisation may change their work priorities and deadlines, which in turn impacts the progress of IO work. The unexpected changes create confusion and ambiguity about expectations especially these were initially agreed by organisations. Due to interdependency between organisations, and limited control of IO workflows and outcomes, there may be

roadblocks which lead to delays in IO work, conflicts, and disagreements. This can also lead to negative emotion and stress. IO workers may feel mentally exhausted and drained by adjusting constant changes and anticipating uncertainties.

4.4 Theme 3: IO Work demands

This section covers four subthemes including quantitative demands, cognitive demands, cognitive load and emotional demands that were found through the first-round data collection to illustrate IO work demands. Each subsection provide evidence to explain how IO work demands increase workload and cognitive load.

4.4.1 Theme 3, Subtheme 1: IO Quantitative demands

Based on the participants' responses, more than half of the participants confirmed they did not have enough time to complete all their IO work-related tasks. Small number of participants addressed that they used their personal time to get the work done. Less than half of participants said that they had enough time to complete their IO work-related tasks. Participant M addressed not having enough time to complete IO work related tasks was because of high workload and fast response.

I don't have time to complete the related tasks very often because of the workload. I am doing two different jobs BAU and this work...All the time, everything needs to be quick to be able to complete and communicate to other agencies. [Participant M]

Participant L noted that she often did not have enough time to complete all the IO work-related tasks and that she was disabled in her ability to complete tasks because of limited communication and awareness between organizations. The nature of IO work resulted in more ambiguity around systems and ways of working and this was seen to have an impact on the participants.

There are often late deadlines. Deadlines aren't explained until the deadlines are looming. When two organizations working together, one organization doesn't explain timeframe to the other organization. We are together not good at describing our own deadlines. [Participant L]

Interestingly, it was found the word '*time*' was interpreted differently by some participants when explaining whether they have enough time to complete IO work-related tasks. Their responses showed that they considered both working time and personal time to assess whether they have enough time to complete IO work-related tasks. It also indicated the reality of work spilling over into their personal time. They were motivated to get work done to meet IO work-related quantitative demands. It was not a matter of whether it was using their personal time or work time, as long as the work was done. It suggested getting the work done was the main drive for some participants. They might consider meeting work demands and fulfilling their work-related responsibilities to be more important than meeting their personal needs. This is illustrated from a few participants' responses. Participant F said: "During work time I cannot get it done, so I use my personal time. Participant Q indicated: "I completed tasks most of the time, used personal hours, working more than my own working hours". Participant P highlighted: "I do work long hours, nights or weekend. I get the work done. I have to use my personal time occasionally".

The participants' responses show IO work-related quantitative demands was likely higher than in organisational work due to high workload, fast response, more ambiguity caused by different organisational cultures. Also, high quantitative demands could potentially increase work life conflicts and cognitive demands when decision making and problem-solving are part of the tasks.

4.4.2 Theme 3, Subtheme 2: IO Cognitive Demands

Cognitive demands were another subtheme identified through the analysis of participants' responses. Nearly all participants confirmed they were required to remember a lot of things. Many participants confirmed they were required to not only remember a lot of things, but also make difficult decisions that need to consider other organisations' needs and

expectations. It may suggest more mental effort is needed when making IO work-related decisions compared to organisational work-related decisions.

At work, we make a lot of critical decisions. We need to make decisions, but we need to be aware of other agencies for a whole lot of decisions that we don't normally need to consider. [Participant N]

A lot of time they were required to make frequent difficult decisions for IO related tasks responded because the desired outcome from one organization may be different from other organizations. [Participant Q]

The 20 participants' responses related to cognitive demands indicated that high cognitive demands were happening in the IO work, which were caused by the dynamic of IO work, the complexity of its related tasks, and the people involved. It also highlights a decision-making process that involves an understanding of multiple organisations' needs and expectations, which could lead to ambiguity, conflicts, and inconsistency. Participants described this decision-making process as more complicated and requiring more mental effort than what they were normally going through when doing organisational work. In turn, it could also increase IO work-related emotional demands, which is addressed as the next subtheme. In comparison with the organisational context, workers in an IO context may also be required to remember lots of things and make decisions that require high levels of mental effort. However, the size and type of information load that needs to be learned and considered in a multiple organisation context to complete IO work-related tasks could be larger and wider than the information load that needs to be learned and considered to complete organisational work under a single organisation context. The findings suggested more mental effort is needed to deal with an IO work-related decision-making process. The IO work-related cognitive load is explained in the next section to show increased cognitive load and type of information load.

4.4.3 Theme 3, Subtheme 3: IO cognitive load

To better understand the link between high cognitive demands and mental exhaustion, it is important to know how cognitive load is increased by high cognitive demands, and the type of cognitive load. This will be addressed through the participants' responses below.

- **Increased cognitive load**

Based on the findings of quantitative demands, it appears the participants needed to deal with increased workload when conducting or involving in IO work. The increased workload meant they were more likely to process more information and be able to complete different tasks, which in turn increased their cognitive load. Several participants confirmed there was a lack of time available to complete all IO work-related tasks. Participant M said she very often didn't have enough time to complete all IO work-related tasks, because she was doing organisational and IO work. She also explained that to be able to complete her IO work-related tasks, she had to remember other organisations' procedures. Under organisational work settings, workers are required to learn and follow their own organisation's processes and procedures. It is not required or necessary for them to learn other organisations' processes and procedures that may be similar or distinctive to their own. This is unique to workers who are working under IO work settings to enable them work more collaboratively and effectively.

According to the responses about cognitive demands, many participants confirmed that they needed to process a lot of information to meet IO work demands. Participant S said he had to remember new and unfamiliar information to help make decisions. Participant D confirmed he was always required to remember a lot of things due to unknown other organisations' needs and expectations, so he had to learn their procedures.

Also, several participants used words such as '*timeframe*', '*time pressure*', '*deadlines*', '*pressure to deliver*', '*urgency and severity of the tasks*' to describe IO work-related tasks. This indicated they may feel pressured to complete IO work-related tasks. The participants

might not only need to manage increased cognitive load, but also process a large amount of information under time pressure. It is vital to know the type of cognitive load to understand whether it may potentially lead to cognitive overload.

- **Cognitive load**

The participants' responses about the cognitive demands and complexity of IO work indicate there were two types of information required to be processed frequently. According to John Sweller's cognitive load theory, they are intrinsic loads, which refers to unfamiliar and complex information, and extraneous loads, which refers to unnecessary information that could be distracting (Sweller et al., 2011).

Many participants mentioned they had to learn new and complex information, such as other organisations' policies, process, procedures, and new legislations. This would not usually be done in organisational work.

Participant B described them as "important information" and "critical information". He addressed he needed to report the critical information to ensure the critical decisions were made in a timely manner.

Participant J referred them as "legislation" and "logistics" that she was required to remember often. She confirmed some tasks would put her in emotionally disturbing situations because of dealing with disturbing information.

Participant L2 highlighted that she had to deal with unfamiliar language and acronyms when communicating with other organisations. She said: "You need to translate what's being asked either from a characteristic or from a language perspective before you can go on and do the task".

In addition, most participants identified *complexity* as the key difference between IO and organisational work. IO work is likely to be more complex than organisational work. The

participants might need to process increased intrinsic cognitive load to complete more complex IO work-related tasks.

Several participants explained that they needed to remember a lot of things due to frequent changes when conducting IO work, which pointed towards the cognitive load. Participant M highlighted about the quick changes and it's because of the nature of work. Participant N said it's because the dynamic of work that has no standard operation procedures, and no prescribed things about the way of doing things, so all things need to be remembered.

Due to frequent and sometimes unexpected changes, the participants might need to deal with incoming information that could be distracting. Also, for participants who were required to complete both BAU and IO work-related tasks, this type of incoming information could be unnecessary as well as distracting, especially when they were trying to complete their BAU work-related tasks. Overall, the participants were required to deal with an increased cognitive load including intrinsic and extraneous loads, and many of them needed to process both loads at the same time, which applied to the IO work and their own organisational work.

4.4.4 Theme 3, Subtheme 4: IO Emotional demands

All participants were asked whether their IO work put them in emotionally disturbing situations and whether the work-related tasks were emotionally demanding. Half of the participants confirmed that the IO work put them both in emotionally disturbing situations and the work-related tasks were emotionally demanding. The participants' responses indicate IO work-related emotional demands were likely caused by lack of control over IO work involving multiple organisations, lack of resources affecting by other organisations, and working under a fast-paced collaboration environment. Participant G explained: "I normally go through a process and figure out what is in my control and what is not in my control. I do think about it in my personal time".

We are finding ourselves doing tasks more than what we equipped to do and trained to do, because of resource issues including staffing from other organisations in addition to our own from all levels. [Participant B]

You need to have some resilience to be able to do this job. Because you need to make quick decisions and the changes are quickly, so you need to protect yourself from your personal life to separate your personal life and work. [Participant M]

Their responses indicate that they were aware of the link between IO work- related high emotional demands and its potential effects. Some participants not only recognised its effects, but also tried to minimise the negative impacts to their wellbeing. When workers need to meet IO work-related high quantitative, cognitive, and emotional demands, it is important to understand the associated work impacts.

To sum up, the findings suggest that the participants experienced high IO work demands including quantitative, cognitive, and emotional demands that associate with increased workload and cognitive load. All these factors likely lead to work overload, cognitive overload, stress, burnout, work life conflicts, which negatively contribute to the participants' mental wellbeing.

4.5 Theme 4: IO Work effects

The theme of work effects is around the impacts on IO workers' health and wellbeing, which presents IO work- related psychosocial risks through six subthemes. The subthemes are IO culture, high level of motivation, discrepancies raised between IO work expectations and outcomes, high IO work demands, IO work related people support and influence of COVID-19 responses to IO work. Each factor as one subtheme will be explained with the supporting evidence under each subsection.

4.5.1 Theme 4, Subtheme 1: IO culture

I have already discussed mixed IO culture as one of the subthemes under theme 2: IO Work Culture, but this is different because the focus of this discussion is about the negative impacts caused by working in the mixed IO culture work context. Based on the participants'

responses, the challenges raised from the mixed organisational culture includes confusion caused by inconsistent approaches in managing work demands, resistance raised from different ways of work, and communication barriers caused by unfamiliar language and acronyms. These challenges increased participants' level of stress. The following participants' responses indicated these challenges and its negative impact to their wellbeing:

Lots of different organizations have lots of different systems and ways of thinking, unless you have an understanding of that or unless you're able to meet in the middle, it can make operations really difficult and create friction within that environment... IO environment just makes it a little bit more complex in the sense that we don't know how to manage workplace stress. [Participant U]

Participant U also described her feeling as hopelessness when she was trying to implement change, but it has no buy in from other organisations. She also experienced stress and burnout and found it quite challenging when working under a mixed organisational culture environment. She highlighted the following:

It is a very difficult thing to deal with because it basically throws out all the things that you think you know, or you want to implement in your work life out of the window, where you have other organisational cultures that are basically work until you burn out. [Participant U]

When she observed others were all doing the same thing, she questioned what a normal working life and work life balance should be. She also felt a strong sense of self-obligation, which motivated her to work the same way. She worked long hours and found it difficult to switch off after work. Participant U also described that she was working herself into the ground and then she was trying to get up the next day to do more work and it never ends.

Participant V suggested resistance as one of the challenges raised from working in a mixed organisational culture due to different ways of working among joined organisations. He found it was stressful to constantly try to find solutions or the middle ground. He explained the following:

You've got to accept there are a lot of people will say, well, they don't agree with that. It's not the way they want to do the work. You've got to try and win them over, find a middle ground. So it's in that respect you're always bumping against and you've got to work through solutions.

Overall, the responses point out that working under a mixed organisational culture environment may raise challenges that workers find difficult to deal with in comparison with organisational work. It may also increase IO workers' level of stress.

4.5.2 Theme 4, Subtheme 2: High level of motivation

The participants were asked about how often they feel bursting with energy, enthusiastic and immersed in IO work. More than half of participants confirmed they frequently experienced all the above. Nearly all the participants confirmed they were enthusiastic. A lot of participants frequently felt enthusiastic about IO work. Many participants felt bursting with energy and immersed in IO work.

In general, most participants were highly engaged with IO work. Some participants considered IO work as a learning experience.

More participants felt enthusiastic than bursting with energy and immersed in the IO work.

For example, Participant S felt enthusiastic about IO work because he enjoyed the experiences of sharing and learning from other workers.

More than half of participants who responded positively about their experience of feeling bursting with energy and were enthusiastic and immersed in IO work used words like '*always*', '*very often*', '*often*', '*most time*', '*all the time*', '*sometimes*'.

Based on participants' responses, some participants were motivated to conduct and get involved in IO work because they like the reward and they believe they will receive the reward they expected.

When looking at responses of the participants who felt bursting with energy, enthusiastic and immersed in IO work and their responses in relation to physical, mental and emotional exhaustion, I found some participants also experienced either physical, mental or emotional exhaustion.

Participant F confirmed she was always enthusiastic about IO work because it is a learning opportunity. She also said she sometimes felt physically and emotionally exhausted and had problems relaxing and explained: “It’s my brain keep process and does not allow me to relax because I know the pressure of the work”.

Participant B who confirmed he was enthusiastic and immersed in the IO work, also confirmed he was often had problems because of “the complexities of working in the multiagency environment with competing interests, deadlines, everyone works in the different timetables, less control of decisions.” He very often felt been tense and described it as a “roller-coaster feeling, and you try to smooth out as much as you can”.

Participant M said she often felt bursting with energy to conduct and get involved in IO work because she was always keen to help and felt more energy by helping others. She confirmed she sometimes experienced physical exhaustion when tasks require a lot from her. She also indicated that she sometimes had problems relaxing due to high work demand.

However, there are number of participants who confirmed they were bursting with energy, enthusiastic and/or immersed in IO work and who did not experience as much physical, mental and emotional exhaustion. For instance, Participant S responded he was enthusiastic about IO work because he enjoyed his experience of sharing and learning from other workers, but he never experienced emotional exhaustion and did not have problems relaxing when conducting IO work. He said he only occasionally felt physically exhausted and 10% of time felt tense. When asked to explain what could help manage the differences of psychosocial risks in IO work, he said: “just maintaining impartial approach. Take nothing personally meaning have a personal barrier”.

4.5.3 Theme 4, Subtheme 3: Discrepancies raised between IO work expectations and outcomes

A number of participants highlighted dealing with discrepancies between anticipated outcomes and actual outcomes due to a lack of control of the whole project or tasks.

Participant O2 explained:

We agree to do this, but then it doesn't end up getting implemented and it's totally outside of your influence. That's not what you said that you were going to do, but there's nothing much you can do about it. But it really undermines your feeling of confidence about the work that you've been trying to do, and it makes it really hard to progress your project.

Wood and Bandura (1989, p3) outlined that “people are motivated by the successes of others who are similar to themselves, but they are discouraged from pursuing behaviours that they have seen often result in adverse consequences”. When IO workers take actions to pursue successes that they expected, they may first find themselves to have limited control of the IO workflows, then realise it is difficult to progress IO work to the next stage depending on other organisations’ input. When finally reaching the outcome, it could be different from their expectations, and this makes them feel demotivated. The following responses show how discrepancies and adverse experience impacted to the participants:

I have definitely seen stress been a factor impact on their concentration or availability. Because they've either been expecting to be doing a piece of work with across the agencies that doesn't unfold as they anticipate it. So that leads to pressure and stress, and an unease. Whether it's unease about not being able to complete the project as they expected, or unease about the value that they're adding to that process. [Participant F2]

Participant Q2 observed others’ experience when conducting IO work and said: “I've noticed a sort of like a distress that becomes like people start to feel quite cynical and negative towards a number of things, and then typically people will then move on to another job.

Participant L2 highlighted IO work may take long time to reach an outcome and said: “It will be sometimes months and years before you see an outcome... you can't see any outcome coming from work, kind of feeling drained because taking too long to see the result”.

The participants’ responses show that discrepancies raised between IO work expectations and outcomes are a result of interdependencies between involved organisations and limited

control of IO workflows and outcomes. These factors are sources of stress, and feeling demotivated and drained of energy, which may positively contribute to burnout.

4.5.4 Theme 4, Subtheme 4: High IO work demands

The findings indicate that the participants experienced high IO work demands, which cause negative impacts and lead to stress, burnout and work life conflicts. Each of these impacts will be explored in turn to provide a better understanding.

- **Work life conflicts**

The literature review shows high organisational work demands also link to increased work life conflicts and poor health and wellbeing. A similar result is identified from the participants' responses. It illustrates that many participants were negatively affected by the amount of energy and time involved in conducting IO work. More than half of the participants confirmed that IO work drains much of their energy. Nearly half of the participants confirmed that the amount of time spent on IO work negatively impacted their private lives. Overall, almost half of the participants confirmed that both time and energy that was taken to complete IO work negatively impacts to their private lives.

Participant J found it was difficult to mentally switch off after work due to nature of IO work and explained: "Because the nature of the work. You are still thinking about whether I have remembered everything even in the weekend.

Participant N confirmed IO work drained her time and energy caused by frequent change and uncertainty that negatively impacted on her wellbeing and private life. She said: "The uncertain and constant changing environment cause constant anxiety, because you never know what is going to happen".

To sum up, more than half of the participants confirmed IO work drains much of their energy and causes negative impacts on their personal life, which in turn could increase work life conflicts, levels of stress, and positively contribute to unhealthy work-life balance. Based on

their responses, this was due to dynamic IO work and associated high work demands, and this is similar to what other research studies have indicated about the relationship between high organisational work demands and its negative impacts.

- **Stress**

The participants were asked to respond about how often they have problems relaxing and feeling tensed when conducting or involved in IO work. Almost half of the participants confirmed that they had problems relaxing and had been tense half or more than half of the time. Over half of the participants responded as frequently having problems relaxing. More participants reported feeling tense.

The participants also provided explanations about what made them have problems relaxing. Their responses show IO work-related cognitive and quantitative demands could be the main risk factors. Participant F explained: “It’s my brain keep process and does not allow me to relax because I know the pressure of the work. Participant H said: “Too much and too many things going on at once. Your brain still processing it even at night. Because the multiple issues arose from the IO work”.

Participant A who confirmed IO work drained so much of their energy and took so much of their time said: “Depends on other stress...At this moment, it definitely has negatively impact to my private life, due to shift work and stress from the work, emotion involvement of the work”.

In addition, many participants described the stress and exhaustion they experienced due to a lack of shared understanding and communication. Lack of shared understanding and communication could also lead to mental exhaustion. Participant M2 referred to the IO work environment as a high-pressure work environment due to lack of communication between people from other organisations to gain clarity about the work they do. When she was conducting IO work, she used to work at least 60 hours per week and experienced both

mental and physical exhaustion. Participant M2 described her experience in the following words:

The mental exhaustion was you couldn't focus on the work, you couldn't stop thinking about work and you started to feel guilty because you couldn't do things that you were used to do before and you realize what's going on with me? Am I okay or something was wrong with me, because your body started to tell you I can't process it anymore.

In comparison with IO work, Participant X highlighted that organisational work overload puts him under a higher level of stress that causes a significant impact on his health. He said that a medical test showed his cholesterol was too high because of excessive drinking during lockdown. He felt that stress made him lose so much body mass that he was unable to lift anything heavy. Shepherd et al. (2019) have explained that, when workers are in a state of resource depletion, they may find it difficult to regulate their behaviours towards use of alcohol.

Based on all the responses, over half of the participants experienced IO work-related stress, which caused them to either feel tense or have difficulties relaxing. One participant experienced a higher level of stress from organisational work overload. The main source of IO work-related stressors were from IO work overload, cognitive overload, complexity of IO work and lack of shared understanding of different organisational cultures. Similarly, work overload and high work demands are not only IO work-related stressors, but also exist in organisational work. These stressors can increase levels of stress; if the level of work-related stress is continuously increased and persistent, it likely leads to burnout. The possible correlations and positive contributions between stress and burnout are identified as findings by many studies.

- **Burnout**

The participants were asked to indicate how often they feel physically and/or emotionally exhausted when conducting or involved in IO work, and to provide explanations for these feelings. Over half of the participants confirmed experiencing physical exhaustion. Less than

half of the participants said they experienced emotional exhaustion. Overall, more participants experienced physical than emotional exhaustion. Under half of the participants experienced both physical and emotional exhaustion.

Participant N confirmed experiencing both physical and emotional exhaustion because of lack of rest and support and working under pressure. She explained the following:

There is no physical element to it. Just often lack of rest that makes me feel physically exhausted. We are doing day shift work...It was constant pressure to get job done with little budgets, within short period of time with no support.

Only a few participants responded they did not experience exhaustion. Participant B said he did not experience emotional exhaustion but explained there could be the potential for it due to frustrations caused by decisions made by other organisations. Participant B said: "It can be frustrated or annoyed just by decisions and actions taken by individuals or other agencies.

Typically, the issues that are contribute to the objectives".

In addition, Participant L2 addressed mental exhaustion caused by unfamiliar language and acronyms when communicating with other organisations, and explained the following:

I've got to understand that your ABC is my x y z. So when you're saying ABC, I have to think x y z and then I can start. So it's mentally tiring, translating everything that you say before I can then process and think about what that means.

According to John Sweller's cognitive load theory, dealing with unfamiliar and complex information such as learning different and new systems and processes may increase level of intrinsic load. If the unfamiliar information, such as acronyms that are not necessarily relevant to what is needed, it can be distracting and increase the extraneous load. When both intrinsic and extraneous loads are increased, it can positively contribute to cognitive overload and lead to mental exhaustion.

Based on the responses, many participants indicated they experienced exhaustion when they were doing IO work. Lack of rest was the source of physical exhaustion. IO work-related demands, time pressure, and lack of support were the main source of emotional exhaustion.

When work leads to possible burnout, people support plays a critical role that can positively contribute to workers' recovery and maintain their engagement at work.

4.5.5 Theme 4, Subtheme 5: IO Work- related people support

This theme outlines findings regarding people support from supervisors and colleagues, role clarity and work engagement to understand whether people support is the buffer to help prevent burnout and keep people engaged at work. They are explained below:

- **Support from superiors**

There were two questions asked to the participants about how frequently their immediate superiors were willing to listen to their problems and provide help and support when they were conducting or involved in IO work. Overall, nearly all 20 participants confirmed that their superiors were both willing to listen and provided help and support. All participants responded that their superiors were willing to listen to their problems frequently or more than half of the time.

He is willing to listen and always available to listen even after hours. When I text him, he normally replies to straight way, doesn't matter what type of situation, he will get back to me as soon as possible. We have daily catch up. He is always there to give advice. [Participant G]

Participant N addressed her supervisor is like "sounding board", the supervisor was willing to listen and provided sufficient support when she needed

Fewer participants said they received infrequent help and support from their superiors and did not think their superiors could help them. Some participants explained certain limitations that could impact on the frequency or quality of the social support received from their superiors.

The following responses outline these restrictions.

Participant F confirmed that her immediate superior was often willing to listen, but time constrains limited her ability to offer sufficient support and said: "She is willing to listen, but she does not have time to listen. It is difficult to communicate with her because she is too busy. Her time is tight."

Participant I stated that her superior was always willing to listen to her problems, but the superior's lack of understanding of the problems hindered her receiving adequate support.

The participants' responses suggest they were given opportunities to talk about their issues or concerns when needed, which made them feel they were listened to by their superiors.

However, some superiors might not necessarily understand the problems, issues or concerns raised, so they might not be able to assist with resolving the problems as the participants expected. The social support provided by the superiors may be hindered by the work demands that were imposed on the superiors, which restrained their time and ability to provide sufficient support.

- **IO Work support from colleagues**

The participants were asked to respond how frequently their colleagues were willing to listen and provide help and support. Almost all participants responded by referring to help and support from their colleagues within their own organisations. They confirmed their colleagues were frequently willing to listen to their problems and provide help and support. Fewer participants did not receive sufficient help and support from colleagues from their own organisations due to their colleagues' limited understanding and experience of IO work, and lack of capacity. Participant I explained: "If you ask for help, someone will step up, but they don't understand the significant of the problem due to lack of experience". Participant O said: "My colleagues always willing to discuss the problems, but they don't have capacity to help fill up the gaps we have" and help to solve the problem".

The findings suggest most participants frequently received support from their colleagues, which means they were listened to when needed and received help and support from their colleagues, especially from within their own organisation. Participant G said she always receive help and support from her own colleagues and explained: "I can depend on them for assistance. Even if the tasks are not relevant to them, I can still get help if I needed. Helping each other is our team culture".

People support, therefore, could be a buffer that positively contributes to reduces level of stress and prevents burnout. However, some participants indicated that lack of understanding, time, capacity and communications were the issues that influenced the frequency of receiving social support from superiors and colleagues and quality of the support received, especially getting support from superiors. The findings suggest some participants experienced insufficient help and support from their superiors and colleagues. A few participants mentioned that they needed to ask for help, which means the social support was provided reactively instead of proactively. Overall, the findings show that most participants received people support when needed, but the support received seems insufficient to resolve problems.

4.5.6 Theme 4, Subtheme 6: Influence of COVID-19 responses to IO work

At the end of the interviews, the participants were asked whether COVID-19 responses have impacted their volume of IO work and related work demand. Many participants confirmed their IO work-related demands had increased and a similar number of participants confirmed their volume of work was also increased. More than half of participants confirmed COVID-19 responses increased their volume of work.

Most participants confirmed their volume of work and work demands had increased; they used the words '*definitely*', '*absolutely*', '*totally*', '*always*', '*to a very large extent*'. They outlined that the addition of COVID-19 related processes and requirements, accumulation of work, and conducting both IO and organisational work at the same time as the main reasons for the increased volume of IO work and work demands.

The participants were also asked to clarify how COVID-19 responses are influencing their IO work demands. The participants provided various responses including the need for and benefits of collaboration, impacts, changes, issues, challenges, and concerns that were raised and experienced due to COVID-19 responses to IO work. Three participants used the words

hugely and *huge* to describe impacts. Some participants' responses emphasised the need for and benefits of collaboration.

We are telling each other the projects we are working on. We were deliberately separate before because we didn't want to be thought as one organization. Because of COVID-19, it increased our communication. [Participant L]

They are making agencies work more closely together, which shows how poorly we have not collaborated in the past. It is showing collaboration is required to navigate COVID-19 responses. It shows the barriers between agencies still there and that needs to be removed to make the joint agency responses to COVID-19 more efficient. [Participant R]

Dealing with an increased volume of work also applies to organisational work. Participant X felt lockdown significantly impacted both his work and personal life, because he had to look after his child who has learning difficulties as well as working long hours and at unusual times of the day to meet deadlines and high organisational workload. Participant X indicated change of focus related to organisational culture and said: "It's shifted from caring about the people to more about the numbers and the deliverables. There should be a balance".

The impacts of COVID-19 responses negatively and positively contributed to both IO and organisational work. The increased volume of IO work and work demands may add more complexity to IO work, such as dealing with changes of organisational cultures including adding COVID- related processes and procedures, and new ways of working. On the other hand, it also highlighted the need to conduct more IO work, the benefits of collaboration, and the importance of building relationships and communications between organisations to achieve desired outcomes working under pandemic.

This chapter has focused on four themes and its sixteen subthemes that are illustrated through the analysis of the findings. The explanations of each theme and subtheme are directed towards addressing the main research question. In contrast, there are six identified IO work-related psychosocial risk factors that are different from organisational work-related psychosocial risks. The IO work- related psychosocial risks are high work demands, mixed IO culture, interdependency between involved organizations, and limited control of IO

workflows and outcomes that increase the level of discrepancies raised between expectations and outcomes. These psychosocial risks all clearly link to stress, burnout, cognitive overload, mental exhaustion, and work and life conflicts that negatively impact to IO workers' health and wellbeing.

To sum up, in comparison with organisational work, IO work- related psychosocial risks are unique, but the negative impacts caused by these risks are similar to organisational work. IO work can be more complex and have higher work demands than organisational work, depending on the organisations involved, their organisational cultures, the maturity level of interdependency, relationships between people from different organisations, and the level of people support. The next chapter further discusses the factors and risks identified through the findings.

CHAPTER FIVE

DISCUSSION

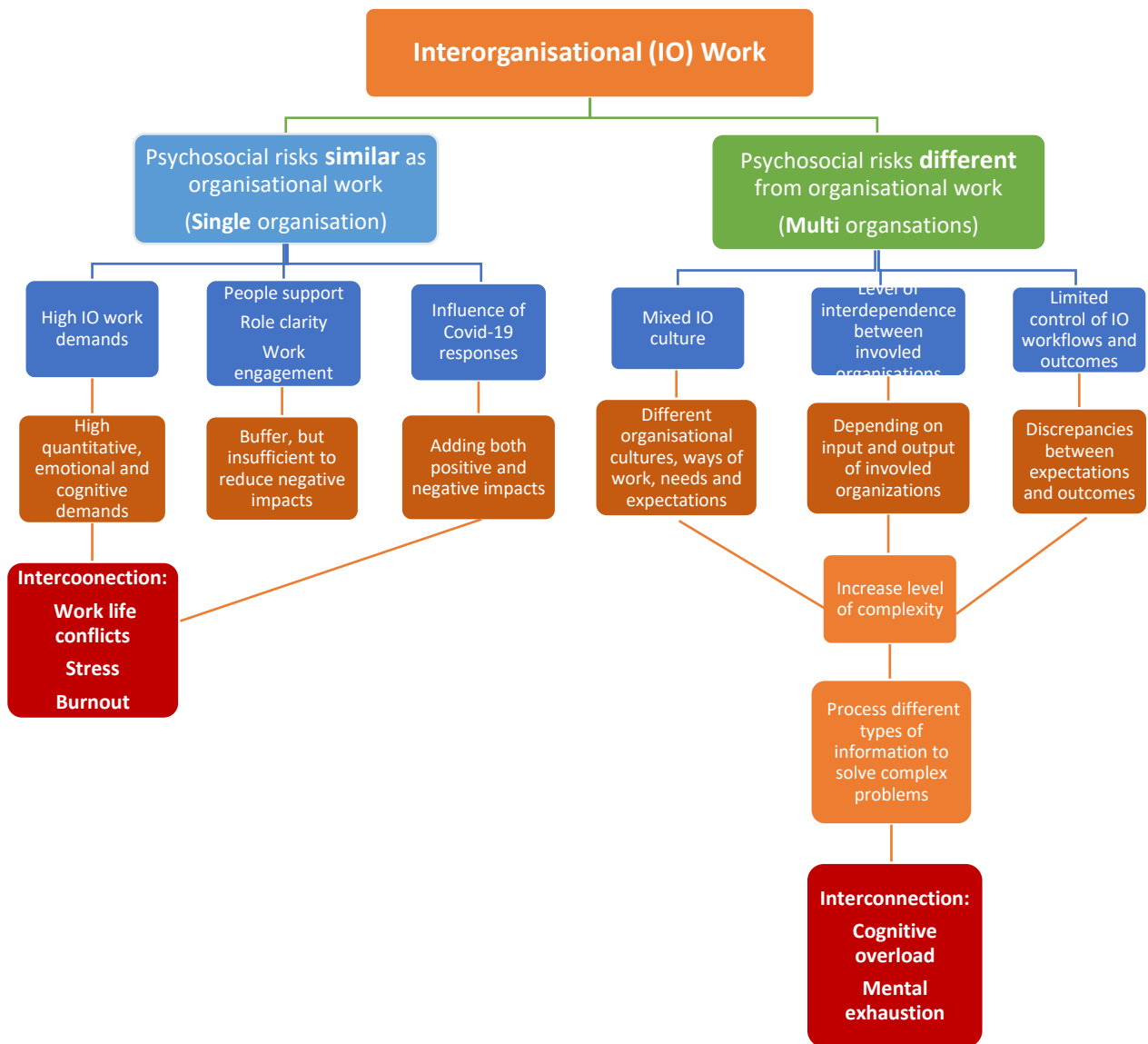
Within this chapter I discuss the factors and IO work- related psychosocial risks identified through the findings. I present how IO work demands, IO culture, and the dynamics of IO work influence each other in different ways. Accordingly, I address the psychosocial risks that are similar to and different from organisational work. The last section discusses both positive and negative impacts of COVID-19 responses to IO work.

IO work is highly dynamic and different from organisational and intraorganisational work as outlined in the findings. To start with, IO culture, though not defined in the existing literature, is a mix of multiple organisational cultures. It raises new and different challenges that workers may not experience when working under organisational and intraorganisational work environments. Moreover, the findings point out that IO work often involves high work demands including quantitative, cognitive, and emotional demands that are more likely lead to stress, work life conflicts and burnout. We cannot underestimate the context of Covid-19 responses which also impacts the workers' health and wellbeing. For instance, we see that cognitive overload as a result of dealing with increased number of different types of information can contribute to the overall negative effects to IO workers' mental and physical exhaustion.

This chapter has three sections. The first section discusses IO work- related psychosocial risks and their negative impacts that are similar to organisational work-related psychosocial risks. This section includes a number of subsections analysing quantitative, emotional, and cognitive demands. The second section highlights IO psychosocial risks and their effects that are different from organisational psychosocial risks. This section has four subsections outlining mixed IO culture, level of interdependency with involved organizations, and limited control of IO workflows and its influence on employees. Here I focus on the relationship of

psychosocial risks and cognitive overload and mental exhaustion. Figure 2 The following Figure 2 illustrates the title and a short description of each section and subsection and their connections with the effects:

Figure 2: Summary of the discussion



5.1 IO work- related psychosocial risks that are similar to organisational work

This section has two subsections and outlines IO work- related psychosocial risks that are identified through the findings and similar to organisational work. The first subsection discusses sources of IO work- related high quantitative, emotional, and cognitive demands

and their effects. The second subsection addresses people support, role clarity and work engagement as buffers that can help to reduce IO work-related high work demands and negative impacts. Both subsections include research studies that suggest similar findings in relation to organisational work-related psychosocial risks.

5.1.1 IO work-related high work demands and its sources

The findings suggest high work demands are IO work-related psychosocial risks. Similarly, according to research studies, high work demands are also identified as common organisational work-related psychosocial risks that can create work life conflicts, increase levels of work-related stress and lead to burnout. My research further indicates overall impacts on the participants' wellbeing and identifies sources of IO psychosocial risks by looking at IO work demands jointly with work life conflicts, work-related stress, and burnout. The following subsection discusses quantitative, cognitive, and emotional demands and their impact to participants' wellbeing.

5.1.1.1 High quantitative demands and their impacts

Based on the findings, more than half of the participants confirmed they did not have enough time to complete IO work and its related tasks. Some participants were working during their personal time to get the work done. IO work related high quantitative demands were likely to be one of the main sources leading to work life conflicts, increased levels of stress and burnout. The research studies about organisational work also suggest similar findings. This is consistent with organisational psychosocial risks that are identified in the study highlighted by Weinberg et. al. (2010), that working long hours means the individual spends less time in social relationships, and with family and friends, which can cause tension in family relationship and creates work to family stress. Similarly, Viotti and Converso (2016) suggest that quantitative demands have a strong and positive association with work life interference.

My research confirms the associations between high quantitative demands and its negative impacts on IO workers' wellbeing, but differs slightly in pointing out what drives the participants' working long hours and how 'time' is interpreted differently by the participants who using their personal time to get work done when they have not got sufficient time to complete it at work. This further indicates that highly motivated IO workers who tend to see 'time' as a whole resource to be used for work rather than distinguish it as personal and work time allow work spill over to their personal life when needed. They may use it as a way to cope with high quantitative demands and lower their work-related stress.

Literature shows the correlations between high quantitative demands, long working hours and stress. My research relates to Quick et al. (2013), who explained that people who work long hours during their personal time may be seen more successful than others, but often the person who appears workaholic behaviour remains persistently in state of distress; the person may not be aware of their own signs of distress and may manage the distress through increased cigarette or alcohol consumption that can cause potential serious consequences (Quick et.al., 2013). Due to the complexity of IO work for some participants, lack of time to complete tasks was also because they were conducting, or involved in, both organisational and IO work at the same time, which in turn increased work-related stress. Likewise, a research study based on COPSOQ III questions and scales about measurement of quantitative job demands for a representative sample of Danish employees found quantitative demands could be measured by a mismatch between task and time and the possible mismatch between work and time is the source of stress (Kristensen et al., 2004). My research further indicates that a mismatch between task and time is not the only source of stress. Individuals' interpretation of 'time' and their motivations towards work can also be a source of stress. Using their personal time to complete work related tasks may help to reduce their

work- related stress, but without realising, it could increase stress in their personal life, which may have a negative impact on not their own but others' wellbeing.

When IO workers are constantly unable to meet IO work demands within the required or expected timeframe, they may look at either working exceeding their normal work hours and/or increasing their pace of work. Gryna (2004) has explained that increasing the pace of work impacts family life, and that long work hours mean less family time, which leads to fast pace of family activities, which, as a result, adds more mental and physical stress to work. This could explain why more than half of participants felt their work drains so much of their energy and nearly half of them felt taking so much of their time negatively impacted to their personal life.

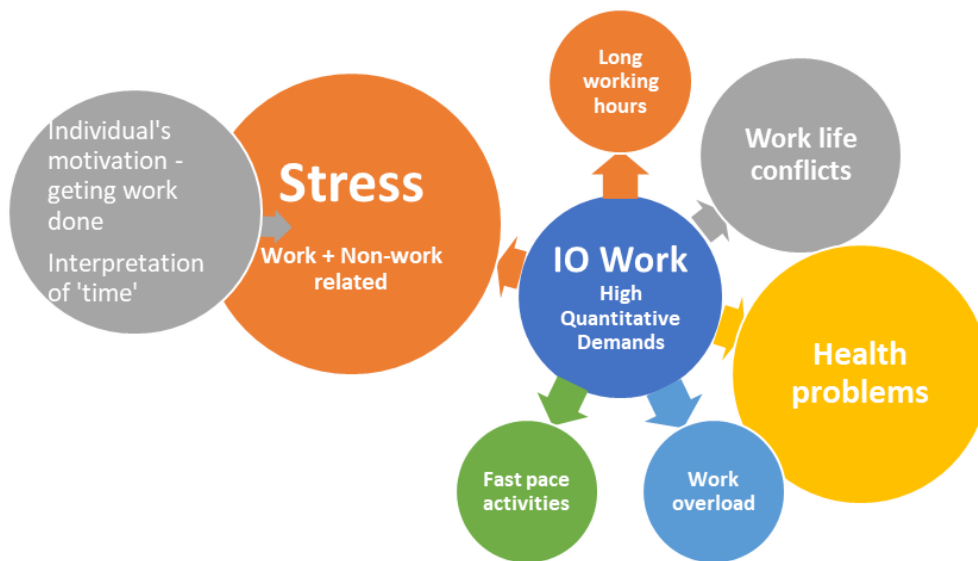
My findings further indicate that IO work- related high quantitative demands could potentially increase cognitive demands when decision making and problem-solving are part of the tasks, and ambiguity caused by different organization cultures. The participants' responses suggested that they often got given too many tasks at one time which required them to deal with their organisational work-related demands as well as IO work related quantitative demands within required timeframe. The time was given to complete the amount of work was often not enough. It appears when conducting or involving in IO work, unrealistic amount of work plus unachievable deadlines has been given to the participants regularly, which more likely increased their level of stress. "The stress response begins with a stressor or demand, which serves as the trigger for a series of mind-body activities" (Quick et al, 2013, p. 13). Furthermore, high quantitative demands and work life conflicts can influence each other. IO work related quantitative demands and work life conflicts add pressure to IO workers' mind and body. According to the studies of Indian workers, high job demands, and work-family conflicts associated significantly with poor health (Pestonjee & Pandey, 2013). Levi (1984)

explained that some level of stress can often be found in the body and effects the rate of processing wear and tear, which means a high stress level equals to a high rate of wear and tear in the body; this increases risks of ill health and infirmity. Vleeshouwers,et al. (2019) suggested work and private life conflicts may cause sleep problems, which may lead to musculoskeletal pain complaints and increase number of pain sites. Participant H pointed out: “Too much and too many things going on at once. Your brain still processing it even at night. Because the multiple issues arose from the IO work”.

Participant F explained: “It’s my brain keep process and does not allow me to relax because I know the pressure of the work”.

My findings help to illuminate the role of quantitative work overload as another source of stress. As mentioned before, information overload and insufficient resources can increase the mental intensity of a job. This resonates with Gryna (2004) who points that when workers experience excessive mental demands, it reduces their capacity to deal with job demands and can lead workers to the state of work overload faster; and with Weinberg et al. (2010) who point that it happens when workers do not feel they are capable of completing the tasks they were given. Role overload has been studied in numerous contexts, but my research highlights that high quantitative demands can lead to work related stress, work life conflicts, and health problems, including burnout not only in the context of organisational work but also IO work. Figure 3 shows the impacts:

Figure 3: High quantitative demands and its impacts



The research helps to further clarify high quantitative demands and its impacts in the context of IO work and points out the sources of overall stress, both work- and non-work- related, comes from high work demands and also from individuals' motivation and interpretation of 'time'. This research confirms IO related high quantitative demands are sources of different effects. These effects are interconnected, and, both singly and in combination, are likely to cause various degrees of risk to IO workers' health and wellbeing.

To sum up, the negative effects caused by IO work- related high quantitative demands are similar to those shown in other research about organisational psychosocial risks. The findings of the current research show, moreover, that both the IO work context and individual characteristics and responses are sources of stress. Individuals' interpretation of the time and speed that work needs to be done, as well as their actions, as may contribute to their level of stress and work life conflicts and impact their health and wellbeing.

5.1.1.2 High emotional and cognitive demands and impacts

My findings also further confirm that in an IO work context, high quantitative demands were not the only sources of stress but stress was due to high emotional and cognitive demands, with ten participants confirming that the IO work put them in emotionally disturbing

situations, and that the work-related tasks were emotionally demanding. This is similar to the findings within psychosocial risks literature where Vammen et. al (2019) found that there is a strong relationship between emotional demands at work and exhaustion; when content-related emotional demands increase, levels of exhaustion increase too. Not only does my study align with this, but it also extends the literature by highlighting that in IO work there is a chance of high levels of exhaustion due to the nature of the tasks.

Furthermore, this research articulates that high IO cognitive demands add greater challenges to the participants as a result of dynamic IO work and the complexity of tasks. Many participants confirmed that they were required not only to remember lots of things but also to make difficult decisions when conducting or involved in IO work. Similarly, Meyer and Hünefeld (2018) identified that cognitive demands positively contribute to a higher probability of feeling fatigued. Based on the results of burnout, more than half of the participants experienced physical exhaustion, and near half of the 20 participants experienced emotional exhaustion frequently or more than half of the time. The participants identified IO work related high cognitive demands through a complex decision-making process. Also, they had to learn and adjust to a new decision-making process.

The overall source of IO work- related high emotional and cognitive demands come from many dimensions, with contributions from participants' own organisations as well as from a number of involved organisations. Other organisations may play a big role in increasing IO workers' levels of exhaustion by making additional cognitive demands. This research extends the literature by building on the understanding of the uniqueness of IO work, which in turn widens the scope about potential root causes of increased cognitive demands and mental exhaustion.

5.1.1.3 Interconnection

When looking at IO work- related high quantitative, emotional, and cognitive demands jointly, my findings also confirm the associations between IO high work demands and stress, work life conflicts, and burnout. This is consistent with research (Kaski & Kinnunen, 2021) suggesting that job demands, and work-family conflicts positively contribute to burnout). Also, Oppenauer and Van De Voorde (2018) studied 395 employees and 49-line managers who were working for 12 organisations operating in different sectors in Holland and suggested that emotional exhaustion was positively related to work overload.

Other research studies using COPSOQ measurement also indicated similar results. In a study of nurses working in palliative care and quantitative demands, the result showed ‘burnout’ and ‘quantitative demands’ have a positive and significant association (Diehl et al., 2020). A study of burnout among Danish prison personnel suggested that quantitative and emotional demands have a significant correlation with burnout; when work is unevenly distributed and there is not enough time to complete work- related tasks, burnout is more likely experienced by prison officers (Andersen et. al, 2017). Nevertheless, my findings shed some light on a potential issue that IO work- related quantitative, cognitive, and emotional demands may add more stress to IO workers in comparison with workers conducting only organisational work. IO workers who are conducting or involved in both IO and organisational work are more likely to experience higher quantitative, cognitive, and emotional demands than workers conducting only organisational or IO work, because of the dynamic nature of IO work, the complexity of IO work- related tasks, and IO culture. The overall negative impacts may result in increased work life conflicts, more stress and a higher likelihood of getting burnout, which in turn leads to poor health.

5.1.2 Factors that help reduce or buffer the negative impacts of high work demands on IO workers

In this section, I discuss people support, role clarity and work engagement identified through the findings as buffers to help reduce the negative impacts caused by IO work-related high work demands. I also articulate issues and concerns that may negatively contribute to the efficiency of people support, role clarity and work engagement.

5.1.2.1 People support

Based on the findings, most participants received frequent support from their colleagues, and their colleagues are willing to listen and provide help and support. My research helps to illuminate that people support as a support resource is crucial in reducing work life conflicts, work related stress and in preventing burnout. This resonates with findings by Weinberg et al. (2010) pointing out that social support from co-workers is an important factor that influences employees' job performance and psychological health; lack of social support and having poor relationships with co-workers are potential source of stress. It also resonates with findings by Quick et al. (2013) suggesting that a person's support system at work may be seen as a powerful resource that the individual could use to manage various stressful situations and help to reduce the level and intensity of the stress. Also, Ryan et al. (2021) found that workers' relationships with their colleagues and their organisations had a substantial impact on their level of stress and wellbeing; increasing support from colleagues can help to reduce the negative impact on burnout and improve workers' engagement.

However, my findings further indicate that, even when superiors and colleagues are willing to provide support, the quality of their support may be limited by their availability, competency in effective communication and level of understanding about IO work. Therefore, the quality of people support can be influenced by IO work demands and individuals' competency in effective communications. Tubbs & Moss (1994) indicated that supervisory communication is the most important factor that influences employees' communication satisfaction. Some superiors or colleague may have a good understanding of IO work and its challenges, but if

they lack understanding about how to effectively manage work life conflicts, stress and burnout, the support provided is unlikely to reduce negative impacts caused by IO work. Stranks (2007) suggested that stress as one of the psychological hazards can be caused by conflicting job demands, too much or too little responsibility, and incompetent supervisors, which leads to stress induced injury at work. As a result, their support may be seen as insufficient and unhelpful. IO work- related people support is an important factor which can help to reduce level of work-related stress and work life conflicts and prevent burnout. My research confirms, in the IO work context, that a lack of people support for IO workers may produce negative impacts for their wellbeing and performance that are consistent with research studies related to organisational work. However, my findings further point out the importance of the quality of people support rather than the quantity. It is not about the length of time or number of times that IO workers receive support from their colleagues and superiors, but the effectiveness of people support in managing stress and reducing its negative impacts.

5.1.2.2 Role clarity and work engagement

According to the findings, half of the participants confirmed that they knew their responsibilities and expectations when conducting or involving in IO work. More participants knew exactly what their responsibilities were but did not know exactly what was expected of them. My findings further confirm the importance of gaining role clarity in an IO work context that is consistent with research about organisational work, but differs slightly in pointing out difficulties in learning the various expectations from multiple organisations which are involved in IO work. When working collaboratively in an IO work context, IO workers may not know exactly what they are expected to do for organisations other than their own.

Given that many participants confirmed they received regular support from colleagues and superiors, it could be assumed that if they were unclear about their IO work-related roles, responsibilities, and expectations, they could ask and gain clarity from their colleagues and superiors. However, due to the fact that IO work involves multiple organisations, every organisation has its own needs and expectations such as ways of conducting IO work, processes and procedures. If IO workers do not have a shared understanding about each other's roles, responsibilities, and expectations, differences between organisations may cause confusion, role ambiguity, and create barriers hindering IO work moving forward. In addition, when conducting IO work, IO workers' roles may be changing due to different ways of work from other organisations, and this also creates ambiguity. Role ambiguity, and unclear responsibilities and expectations may negatively impact IO workers' commitment, increase their level of stress and lead to burnout. This is consistent with findings by Weinberg et al. (2010) pointing out that lack of role clarity that is caused by lack of understanding and information about expectations, roles and responsibilities can lead to tension, fatigue, high levels of anxiety.

Furthermore, my findings show almost all participants were feeling enthusiastic about the IO work and felt bursting with energy and immersed in IO work. It suggested that the participants were likely highly engaged with IO work. When they invested lots of time and energy in IO work, but did not achieve the outcomes they expected, they might feel stressed, frustrated and even experience burnout. Seppälä & Moeller (2018) suggest that employees who reported high engagement may suffer from high burnout, and these engaged-exhausted workers also had high levels interest, stress and frustration. In the current study, similar responses were recorded. Participant V, for example, said the following:

You don't understand what's working on the other side of the coin and the other organizations, and I think one of the issues you have is you can find that other people are trying to do work that actually crosses what you're doing. You don't know about it

until you find out about it, but there may be at a forum and you're not prepared for it. So that is stressful itself.

Participant O2 referred to what she observed and said: “I think people end up feeling like they're banging the head on the wall or whatever that expression is. You can make some gains but not really solve the problem”.

Overall, my research help to illuminate that, when working under IO work- related high work demands, highly engaged participants likely experienced increased level of stress, work life conflicts and burnout despite receiving frequent people support and having substantial knowledge about their roles and responsibilities. People support may help reduce certain level of negative impacts, but may be insufficient due to dynamic IO work, the quality of people support, and the multiplicity of sources influencing it.

5.2 IO work- related psychosocial risks that are different from organisational work This section has four subsections and outlines three different IO work- related psychosocial risks that are identified through the findings and are different from those found in organisational work. The three psychosocial risks are mixed IO culture, level of interdependency between involved organisations, and limited control of IO workflows and outcomes under the first three subsections. In the last section, I discuss and explain the linkages between the three psychosocial risks and its overall affects that are cognitive overload and mental exhaustion.

5.2.1 IO work context

IO culture is unique and very different from an organisational culture. It has multiple organisational cultures mixed instead of one culture. Atkinson defines a culture as “the set of values, behaviours and norms which tell people what to do, how to do it and what is acceptable and unacceptable” (as cited in Collins, 2021, p. 3). This IO culture forms part of the dynamic IO work context. It involves various ways of work such as communications, processes, and procedures, which increases the complexity of IO work. The following participant’s response describes IO work culture and addresses the complexity of IO work:

The IO work environment has (...) lots of different organizations have lots of different systems and ways of thinking, and unless you have an understanding of that, or unless you're able to meet in the middle, it can make operations really difficult and create friction within that environment. [Participant U]

Mixed IO culture creates a new shape of work context and can be seen as beyond a traditional work context where you only work with people within one organisation. It could be diverse organisational cultures, and this raises new challenges that workers may not experience when working under organisational and intraorganisational work contexts.

Working in mixed IO cultures can be beneficial to organisations that are looking for innovation, new ideas, and creative ways of thinking to achieve better outcomes. However, when there is a lack of shared understanding about each other's culture, it could be very difficult to reach an agreement on a plan, timeline, resources, and outcomes, especially when IO work involves four, five or even more organisations. It requires IO workers to build trust and relationships in order to gain support from people working for other organisations. Di Domenico et al. (2011, p. 3) stated "collaboration is about exchange relationships between people, groups, organizations or even institutions". However, sometimes even though IO workers have invested lots of effort, they may not necessarily achieve the outcome they expected. As a result, this may negatively impact IO workers' health and wellbeing. Two participants described their experiences as the following:

Participant U said she experienced feelings of as hopelessness and exhaustion, because she was trying to implement changes, but there was nothing happening and no buy-in for whatever reason from people working for other organisations.

Participant V suggested the use of an influencing leadership style to gain support, and noted the following:

It is important to use influencing style of leadership. If you're not reasonably capable and competent and robust in it, those push backs could be quite stressful. You've got to accept there are a lot of people will say well, they don't agree with that. It's not the way they want to do the work. You've got to try and win them over, find a middle ground.

Moreover, without having an agreed and shared IO culture, a mixed IO culture may influence how IO workers deal with high IO work demands. There are different types of organisational cultures, such as role culture that is a rules and procedures orientated culture which tends to react slowly to problems and challenges; and task-oriented culture, which is opposite to role culture in that it is driven by tasks rather than rules and procedures and tends to respond quickly to problems and challenges (Collins, 2021). When people from two organisations that have distinctive organisational cultures work together, it may cause conflicts and difficulties particularly when working under high IO work demands. People from task-oriented organisational cultures may want to progress the tasks as fast as they can, even working long hours to get the work done. People from role organisational culture are likely to first check relevant rules and procedures before they work on a specific task to ensure correct processes are followed through. The differences between the two organisational cultures influence people's behaviours and create a new norm for themselves for work- in the IO work environment. Some IO workers may carry out their normal behaviours to deal with IO work-related high work demands. Some of them may change or adjust their behaviours to be able to meet others' needs and expectations. There may be multiple working norms from organisations, and IO workers may be influenced by different work norms. An IO worker could either adapt to the norms from other organisations or carry on their normal working norms, which may conflict or not align with the norms in other organisations. This can be emotionally and cognitively stressful and taxing. The following participants' responses demonstrate their own organisational cultures and behaviours influenced by other organisational cultures:

Participant B2 comes from an organisation that has a strong task-orientated culture. He had not taken any annual leave for many months and realised that he was experiencing burnout

when conducting IO work. He explained: “*What's motivated me to do that was a commitment to the task and a commitment to the organization that I work for*”.

Participant U was working for a role culture- orientated organization. When conducting IO work, she extended her normal working hours to 10 or 12 hours a day. She also experienced burnout. She found one of the reasons causing burnout was that her previous understanding about what is a normal working day had been changed by working with people from other organisations. She commented:

The work never stops. It's 24-7. So there is feeling of obligation, which I know is something that isn't real, but it's this feeling of obligation that I have to be there and I have to respond and I have to be present for the workforce. So it's a little bit weird and like self sacrificial, but it is. It's definitely skewed my perception on what a normal working life should be and what work life balance should be.

In addition, the findings suggested most participants selected *complexity* and *nature* as two main differences in psychosocial risks when comparing IO work and organisational work. Many participants emphasised the high level of complexity of IO work, which is associated with constant changes, increased work demands, fast paced workflow, intensity of job content and persistent time pressure. Mixed IO culture as one of IO work- related psychosocial risks may change ways of working and IO workers’ behaviours towards work. Lack of a shared and agreed IO culture and an inconsistent approach about how IO work needs to be done may expose IO workers to an increased likelihood of health risks especially when working in a fast paced, complex IO work environment with high work demands.

5.2.2 Level of interdependency between involved organisations

The findings indicated a level of interdependency with other organisations when working in an IO work environment. This level of interdependency caused additional stress to the participants. There are three levels of interdependency: the low level is called “pooled interdependency”, and involves two units depending on the same pool of resources; the medium level is named as “sequential interdependency”, and involves two units with direct

connections, where one's output is the input to the other one; and the third level is referred to as "reciprocal interdependency", meaning that the organisations have an iterative relationship and one's output is not only the input to the other one but also vice versa (Worren, 2018, p. 146). Based on the findings, a few participants' responses illustrated different levels of interdependency. Sequential interdependency may be more common than pooled interdependency in the IO work environment, as different organisations are likely to have their own resources.

It seems that a sequential interdependency could be a source of stress and exhaustion to IO workers when working in an IO work environment, in circumstances where one organization cannot deliver output as expected by the other organisation. As a result, this may delay the IO work and increase level of stress for people from the other organisation who are unable to meet their objectives and expectations and reach the required outcome.

Therefore, when conducting IO work, it will be beneficial to move from the lower level of interdependency to the higher level, which is reciprocal interdependency. This move may help to reduce the level of stress and prevent exhaustion in IO workers and may help to reduce related health problems. Reciprocal interdependency requires mutual adjustment where more time is invested on coordination with each other than performing actual tasks; it also requires each party to be prepared to change its plans and priorities based on each other's feedback (Worren, 2018). Many participants addressed the importance of building relationships and trust from other organisations when conducting IO work. This may help to enhance coordination and gain mutual adjustment to increase the level of interdependency to reciprocal interdependency.

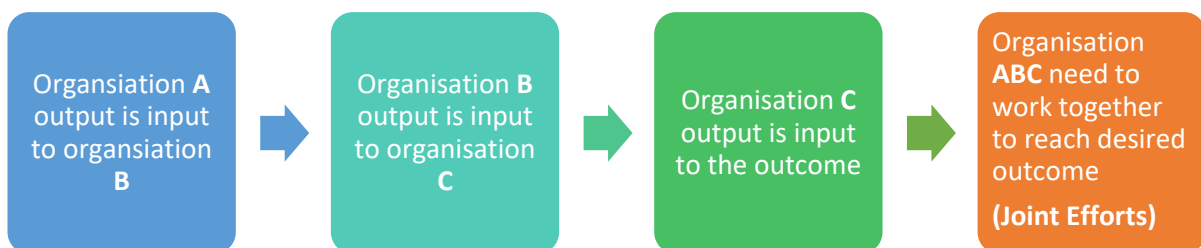
However, lifting the level of interdependency to reciprocal interdependency may be difficult, particularly when IO work quantitative demands are high and IO workers may not have sufficient time to complete IO work- related tasks. Also, if one of the organisations has a

task-oriented organisational culture, people's focus will be completing tasks rather than spending more time on coordination.

5.2.3 Limited control of IO workflows and outcomes

IO work is completed collaboratively by multiple organisations, which means involved organisations have shared roles and responsibilities in reaching agreed outcomes. When completing IO work-related tasks, each organisation needs to conduct and deliver their parts of work to move the IO work forward. It is unlikely that one organisation has full control of the entire IO work. One organisation may have control of part of a workflow and limited control of the entire IO work. As already discussed in the discussion on sequential interdependency, one organisation's output can be another organisation's input. If one organisation cannot deliver an output as agreed and expected by other organisations, it may disrupt the overall workflow and negatively affect the outcome. Figure 4 shows one type of IO workflow:

Figure 4: IO workflow



Organisation A has control of its own output, but organisation A does not have control of output from organisation B and C. Organisation A can influence the other organisations' output and contribute to part of the overall IO work outcome. Limited control of IO workflows and outcomes may negatively impact IO workers as a result of discrepancies between expectations and outcomes.

Some participants indicated that limited control of workflows and outcomes also applies to intraorganisational work when working with people from different units within one

organisation to achieve a shared goal. However, the difference is that, when conducting intraorganisational work, people share the same organisational culture and have shared understanding about organisational values, rules, processes, and procedures that makes it easier to form a more interactive and mutual relationship. It may also help taking them to the level of reciprocal interdependency, enabling them to make mutual adjustments to their priorities, resources and goals when needed.

5.2.4 What the overall impacts are?

As indicated, IO work high work demands are a source of stress, work life conflicts and burnout, but it is not the only negative impact on IO workers' health and wellbeing. In settings of collaboration, as in the IO work context, cognitive load can be increased by "the information shared among participants through various communication channels, from constructing and thinking up new information, from explaining or arguing positions, from assessing value, implications and effects of decisions, from various procedures, and from distractions" (Kolfshoten & Brazier, 2012, p. 4). When asked questions relating to IO work-related cognitive demands, a number of participants in this study confirmed that they need to complete both IO and organisational work at the same time. These demands could increase the overall information load of these individuals. They could be dealing with additional intrinsic load, which refers to information which needs to be learnt, and additional extraneous load, which refers to unnecessary information that is irrelevant to objectives (Sweller et al., 2011) to meet both organisational and IO work-related cognitive demands when compared with participants who were only conducting either organisational work or IO work.

They might feel distracted by either organisational or IO work-related information while they were trying to complete one or more complex tasks during a short period of time. These feeling are related to cognitive overload, because "total cognitive load, consisting of intrinsic and extraneous cognitive load, must not exceed working memory resources" (Sweller et al.,

2011, p. 67). If the intrinsic and extraneous cognitive loads that are required to be processed exceed the available resources of working memory, “the cognitive system will fail, at least in part, to process necessary information” (Sweller et al., 2011, p. 58). Cognitive overload is likely lead to mental exhaustion and burnout.

Stress comes from both physical and mental overloads (Weinberg et al., 2010). Rutkowski and Saunders (2019) have highlighted that the human brain’s memory processes involve three states; state 1 is to process the information that is easy and limited; state 2 needs to process the information that is more than the person’s adequate pool of resource; and state 3 requires the person to process the amount of information more efficiently and the amount of information may exceed an individual’s resources, which causes the individual to experience emotional and cognitive overload.

More than half of the participants in the current study confirmed experiencing physical exhaustion, and near half of the participants confirmed experiencing emotional exhaustion frequently or more than half of the time. Information overload and insufficient resources can increase the mental intensity of the job; when workers experience excessive mental demands, it reduces their capacity to deal with job demands and can lead workers more rapidly to a state of work overload (Gryna, 2004). As a result, the participants were more likely to experience cognitive overload, exhaustion, or burnout due to high cognitive demands.

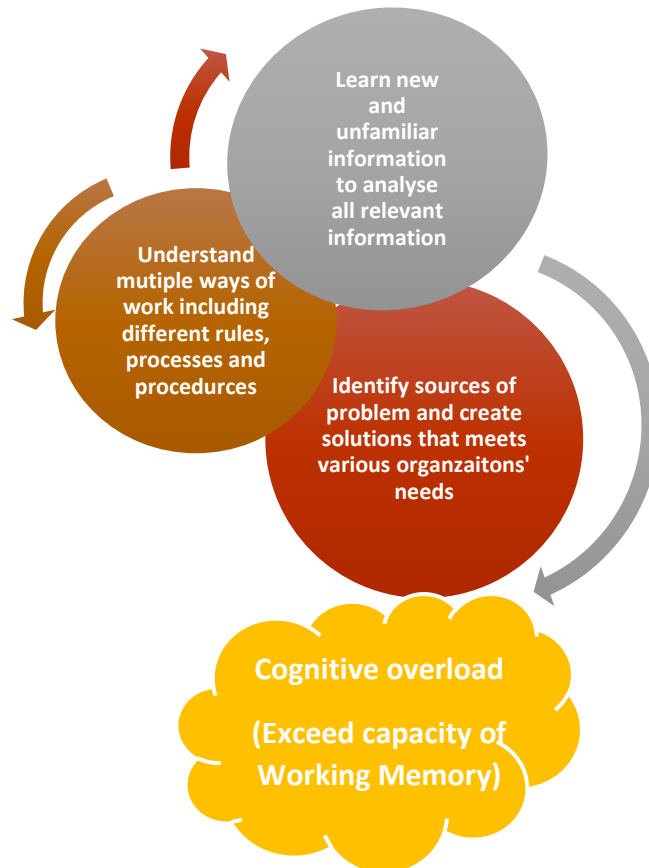
In addition, I use problem-solving in an IO work context as an example to explain cognitive overload. Problem- solving can cause cognitive overload, especially when people are making decisions about problems that are complex and require them to consider information that are new and unfamiliar. Kolfshoten and Brazier (2012) have shown that during collaboration, there are three phases that people normally go through to solve a goal-oriented problem: the first phase is to gather, share or brainstorm information; the second phase is to analyse information and create meaning and shared understanding; and the last phase is to make

decisions based on the analysis. When IO workers need to find solutions to IO work-related problems, they need to discuss the problems with people from involved organisations and understand the problem from their perspectives, consider all relevant information that comes from involved organisations that may be either familiar or new and unfamiliar, and then come up with possible solutions and make decisions that are agreed on by all involved organisations. As a result, many elements and more information need to be considered in IO work-related problem-solving processes, and this adds to the cognitive load, both intrinsic and extraneous.

Declarative and procedural are the two types of information needs to be dealt with during a problem-solving process; “declarative information is defined as related to reasoning about the cause of the problem and finding a solution, whereas procedural information is related to manipulating the environment”; and when these two types of information need to be processed at the same time, it can lead to cognitive overload (Sweller et al., 2011, p.206). Different ways of working are part of mixed IO culture including various rules, processes, and procedures. To create a solution that meets different organisations’ needs and expectations, IO workers need to consider many similar or distinctive pieces of procedural information to make sure possible solutions do not conflict with their own as well as other organisations’ ways of working. In turn, the solution can be agreed and implemented under the IO work and mixed culture environment. Moreover, sources of an IO work-related problem could be contributed by different organisations. The level of interdependency and limited control of IO workflows and outcomes can make it difficult to identify the root cause of the problem. During the reasoning stage, these factors may increase the amount of declarative information in the overall cognitive load. Declarative and procedural information related to problem-solving can also be the sources of IO work-related cognitive

overload. Figure 5 shows the types of information which need to be processed by working memory:

Figure 5: IO Work- related cognitive overload



5.3 What impacts do COVID-19 responses bring to IO work: positive or negative, or both?

Covid was something that couldn't be ignored as the data was collected during the pandemic. COVID -19 responses impact both organisational and IO work. In this section, I discuss both positive and negative impacts related to COVID-19 responses. For IO work, COVID-19 responses added additional challenges to the participants who were conducting or involved in IO work during the world pandemic. When external environment changes, it can add uncontrolled and unknown demands, it can also change the nature of the work environment, which can become stressful (Weinberg et al., 2010). According to the findings, 14 out of 20

participants' volume of IO work was increased due to COVID-19 responses. Fifteen participants confirmed that IO work-related demands were also increased.

For organisational work, COVID-19 responses such as lockdown, remote working, social distancing, and absenteeism caused by COVID-19 related sickness may significantly impact how business operates, along with organisation structure and business priorities. Some organisations may need to shift their business priorities, which in turn could disrupt and delay IO workflows and increase discrepancies between expectations and outcomes, such as putting IO work on hold due to lack of resources and capacity. Due to COVID-19 responses, remote working is encouraged by organisations. Many organisations asked their employees to work from home when COVID-19 crisis happened globally in 2020 (Delfino, G. F., & Kolk, B van der, 2021). To respond to the COVID-19 crisis, organisations created remote working procedures to minimise business disruptions and ensure the safety of employees (Bhattacharyya & Thakre, 2021).

COVID-19 responses have also had positive effects on IO work. COVID-19 responses may increase organisations' awareness about the importance of collaboration, as participants indicated it increases communications between organisations and makes organisations work more closely and more effectively. For example, during lockdown, many workers are asked to work from home, and this may save workers' commuting time and create more opportunities for online interactions that can help to enhance collaboration. However, it may hinder in-person socialising experience with people from other organisations. In addition, a recent study found that during the COVID-19 pandemic, more people experienced cognitive overload caused by using digital tools for work, and this overload also has strong positive relationships with higher perceptions of demands, loss of joy, tension, and worries (Schmitt, Breuer & Wulf, 2021). When working from home under lockdown, employees experienced more video calls, and unproductive or unnecessary video calls cause employees feeling

stressed (Delfino, G. F., & Kolk, B van der., 2021). Due to COVID-19 responses, remote working likely contributed both positively and negatively to both IO work and organisational work.

The complexity of IO work caused by mixed IO culture, level of interdependency and limited control of IO workflows and outcomes plus COVID-19 response can further increase the level of quantitative, cognitive, and emotional demands that may lead to stress, work life conflicts, cognitive overload, and burnout to IO workers.

To sum up, there are similarities and differences between IO work- related psychosocial risks and organisational risks. High IO work demands including quantitative, emotional, and cognitive demands have many common factors that are also present in the organisational work environment. However, mixed IO culture, level of interdependency between involved organisations, and limited control of workflows and outcomes driven by multiple organisations are distinctive from psychosocial risks caused by organisational work. COVID-19 responses have influenced both IO and organisational work environment and have negatively and positively contributed to work demands and workers' health and wellbeing. All IO work- related psychosocial risks can lead to work life conflicts, stress, burnout, cognitive overload, and mental exhaustion. It can be argued that organisational psychosocial risks can also cause all these negative impacts and it can be asked why it is so important to identify IO work- related psychosocial risks. In fact, the factors and root causes of these negative impacts are different and unique to the IO work environment. If organisations do not develop strategies to effectively manage IO work- related psychosocial risks and negative impacts, it may lead to poor health or health problems for IO workers, and may lead to reduced or lost productivity, which in turn can add significant costs to organisations as a result of absenteeism and presenteeism. Crucially, according to New Zealand Health and Safety at Work Act 2015, organisations have responsibilities to eliminate or minimise risks so

far as is reasonably practicable. Thus, to meet obligations, when organisations conduct IO work, strategies must be implemented to effectively manage IO work- related psychosocial risks to minimise or prevent burnout and prolonged stress- related health problems. Possible strategies will be introduced and discussed in the next chapter: Conclusion and Recommendation.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

In this chapter, I first conclude my research, and provide a summary of my thesis and discuss theoretical contributions that my research has made. In the second section, I detail possible strategies that could be used to manage IO work- related psychosocial risks as part of the research objective. I also discuss potential contribution to practice. Finally, I provide an overall conclusion in the last section.

6.1 Summary of research and thesis

To identify IO work- related psychosocial risks, I searched and read literature relevant to work- related psychosocial risks. Within my literature review, I outlined the gaps in the literature, and the need to understand IO work- related psychosocial risks. I also discussed psychosocial risks from different perspectives within the scholarship.

To address the gaps and needs identified, I designed my research study as an exploratory and phenomenological study, and applied pragmatic and qualitative research methodology. I have a strong belief that a good research study should not be limited by a research methodology. Thus, the chosen research methodology is combined, and goes beyond the traditional view of what a good research methodology should be. A methodology designed in this way enabled my research to identify and analyse four themes and sixteen subthemes from a fresh perspective. It may also help to raise researchers' interests and promote more research studies to be done in this area.

Furthermore, I applied COPSOQ III questions and categories for the initial interviews and used open questions for the second interviews to gain an in-depth understanding about IO work- related psychosocial risks. The information collected from both interviews about IO work was then discussed and compared a to organisational and intraorganisational work. As there is a lot of literature discussing organisational work-related psychosocial risks, my

attention was focused on not only identifying IO work- related psychosocial risks, but also addressing the differences between IO work and organisational work-related psychosocial risks. I focused specifically on the sources of these psychosocial risks that are unique to the IO work environment, and their negative impact on IO workers' health and wellbeing.

Accordingly, my research was guided by the following research questions:

RQ. 1a: What are IO work related psychosocial risks?

RQ. 1b: What are the differences between IO work and organisational work-related psychosocial risks?

RQ. 2: How can organisations which conduct IO work effectively manage these psychosocial risks to prevent and minimise negative impacts?

My findings indicated four IO work related psychosocial risks that are high work demands, mixed IO culture, interdependency with other organisations and limited control of IO workflows and outcomes, which in turn increase the level of discrepancies raised between expectations and outcomes. I discussed IO work- related psychosocial risks from specific factors and root causes that lead to negative impacts and detailed its uniqueness in comparison with organisational work. Particularly, I extended research studies by using John Sweller's cognitive load theory to directly address increased intrinsic and extraneous load and causes of cognitive overload.

My research has provided a rich description of the dynamic IO work environment and gone beyond the narrow understanding of work-related psychosocial risks from a single organisation to multiple organisations. I also expand the discussion of IO work related psychosocial risks to show potential conflicts between two organisations which have task- and role- oriented organisational cultures, and challenges that are raised by working under IO work- related sequential interdependency. Through the different research methodological

approach, my research findings, discussions, and expansions have contributed to reduce gaps in the research area of IO work- related psychosocial risks.

6.2 Recommendations

This section will discuss possible strategies that can effectively manage IO work- related psychosocial risks. I will provide my recommendations under five sections. They are: beyond traditional way of IO work; shared IO work- related high cognitive load increase IO worker self-awareness, enhance superiors 'competency in managing IO work related psychosocial risks, and reconsiderations about people and job match for IO work. Each subsection covers strategies developed to deal with issues under each area.

To effectively manage IO work related psychosocial risks, various strategies need to be created to tackle different issues. From a risk management and health and safety perspective, WorkSafe specifies that when businesses work together, they must manage their own health and safety duties as well as shared health and safety duties that are known as overlapping duties and requires that "businesses must so far as is reasonably practicable consult, cooperate and coordinate activities with all other businesses they share overlapping duties with" (Overlapping duties - quick guide, n.d.). Organisations need to be aware of their roles, responsibilities and obligations in risk management under the Health and Safety at Work Act 2015. It is important to manage IO work- related psychosocial risks proactively instead of reactively to reduce negative impacts, enhance IO workers' health and wellbeing and minimise costs of organisations. I aim to develop simple, practical, and cost-effective strategies that can be implemented in a dynamic IO work environment in a mixed organisation cultures context.

6.2.1 Beyond traditional way of IO work

As many of us experienced, COVID-19 changed our ways of work dramatically. The traditional way of work has been changed by remote working, use of online communication

channels, flexible working hours and locations, and more. When our ways of work are changed, our ways of thinking about how work needs to be done should also be reconsidered, especially when conducting IO work, which is dynamic and complex. Thus, looking at a new way of conducting IO work is needed with consideration of effectively managing IO work-related psychosocial risks and reducing negative impacts.

Normally, when working on a project, people tend to consider and discuss more about what needs to be done than how to complete the work more effectively. I agree planning and developing are very important to the success of a project. I think new ways of conducting IO work could be done more successfully by taking a reverse approach. Figure 6 explains how two different approaches flow when conducting IO work:

Figure 6: Traditional and new ways of IO work

Traditional way of IO work: begins with discussions about scope and plan of the IO work and what to do next



New way of IO work: begins with discussions about what a GOOD OUTCOME looks like and how to achieve it



The new way of IO work needs IO workers from different organisations to discuss what a good outcome or a desired outcome looks like from their own perspective at the beginning of

IO work. They then discuss how to achieve this outcome, which benefits all involved organisations with a key focus of making improvements throughout the entire IO work. This requires a good understanding of each other's expectations, ideas, ways of work, and other differences. Most importantly, through the discussions, IO workers start to consider potential challenges and difficulties caused by the differences, and what possible solutions could be. These discussions create opportunities for all IO workers to openly discuss potential issues and concerns in advance, which in turn mentally prepares them for adversity. It also provides opportunities for IO workers to consider all factors that may advance as well as impede desired outcomes prior to conducting IO work. For instance, the discussions could include expected timelines, impacts, costs, resources, and most importantly, obstacles that could hinder IO work progressing. By doing so, IO workers understand what the factors or roadblocks could be if IO work does not progress as they expected, or if they fail to achieve the desired outcomes, and what they can do to prevent it happening. IO workers mentally prepare themselves and plan for possible adversity, which helps to manage their emotions and the stress that arises from adverse experiences, especially when significant discrepancies between expectations and outcomes occur. It is important to discuss and understand the differences between each other's organisational cultures as a foundation and a vital component for the success of collaboration and IO work.

Once the fundamental understanding of each other's expectations, differences and difficulties have been laid out, IO workers then move their attention forward to how to collaborate more effectively, and how to make continuous improvement to achieve the desired outcome for all. This new approach reinforces the importance of identifying IO work- related psychosocial risks and managing the risks through improvement- focused practice from start to end of conducting IO work. "A healthy workplace is one in which workers and managers collaborate to use a continual improvement process to protect and promote the health, safety and well-

being of all workers and the sustainability of the workplace” through addressing wellbeing, health and safety concerns, personal health resources at work and improve health of workers and others by participating in the community (Healthy workplaces, 2010, p. 6). This new approach is also consistent with WHO’s definition about what a healthy workplace should be.

6.2.2 Shared IO work related high cognitive load

As discussed, IO work is complex, and work-related cognitive load could be high. IO workers may experience cognitive overload and mental exhaustion. However, if IO work-related tasks, especially complex tasks, are shared and completed all together within a group of IO workers instead of individually, it can adequately decrease the amount of working memory load for an individual IO worker. When an individual does not have sufficient working memory capacity to complete complex learning tasks, group members can share the working memory load as the collaborative working memory to complete the tasks (Sweller et al., 2011). Therefore, a good practice of completing IO work-related complex tasks is to allocate these tasks to a group of IO workers to maximise the benefits of using collective working memory and minimise the risks of exceeding individual working memory capacity. When completing tasks within a group, it will be beneficial for IO workers from different organisations to join one group to work collaboratively. This practice helps to build mature relationships, create opportunities for more interactions, and gain a better understanding of each other’s organisational culture, uniqueness, and distinctions as it is the foundation of an effective collaboration. Most importantly, having mature working relationships between organisations can enhance the level of interdependence. As discussed previously, moving from sequential interdependence to reciprocal interdependence (Worren, 2018) can allow multiple organisations to make mutual adjustments to their work priorities, resources and goals when needed. As a result, shared IO work-related high cognitive load not only helps to

prevent cognitive overload, cognitive fatigue and exhaustion, but also enhances level of interdependence and removes roadblocks to advance collaboration and achieve desired outcomes.

6.2.3 Increase IO worker self-awareness

As outlined in the findings, IO work is complex and dynamic. Increasing IO workers' self-awareness about IO work-related psychosocial risks can deepen their understanding about sources and signs of stress and burnout, which helps to effectively reduce the negative effects on their health and wellbeing. "Self-awareness is the starting point for effectiveness at work", which helps people to develop their own ability to understand their feelings, the impact of their feelings and the relationship between their feelings and behaviours (De Janasz et al., 2019, p. 6). Increasing self-awareness can be done through many ways such as training and self-assessment. Effective reduction and management of psychosocial risks requires a focus on increasing IO workers' understanding of why rather than how, which means addressing the cause of the risks rather than the strategies to address them. This is because of individual differences. For example, each individual responds to stress differently and may have different strategies that work well and effectively for themselves but not others. Individuals' management of stress and stressful situations varies because of their different capabilities, level of strength and vulnerabilities (Quick et al., 2013).

According to the findings, IO work-related cognitive demands are high. Most participants confirmed they were required to remember a lot of things as well as making difficult decisions and some of them were often under time pressure, which added more work-related stress, increased work-life conflicts, and as possibly leads to burnout. When training IO workers to increase their self-awareness and enhance their abilities to effectively manage IO work-related cognitive demands, cognitive load theory can be introduced in the training to educate IO workers about how the human brain processes information, and cognitive

overload is. This training can also emphasise what causes cognitive overload and mental exhaustion. By doing so, it will help IO workers to gain further understanding of mental exhaustion and to learn early signs indicating cognitive fatigue, which equips them to develop tailored strategies to minimise and prevent mental fatigue and exhaustion. It may also help them to better manage workload, stress and work life balance, use their time more sufficiently and be more productive. For instance, they may reconsider how they manage a large volume of complex IO work- related tasks by processing only one complex task at a time instead of processing multiple complex tasks. They could also group and pace one complex task with a simple and easy task to help reduce intensity of the work without compromising productivity. Basically, when IO workers gain knowledge and have a good understanding about the source of the risks that could negatively impact their physical and psychological health, instead of waiting or rely on the management to reduce the demands and find solutions for them, they can actively create their own tailored solutions to better manage quantitative, emotional and cognitive demands, especially when the IO work demands are high.

Moreover, it is important to identify their own stressors. WorkSafe defines stressors as “events or circumstances which may lead to the perception that physical or psychological demands are about to be exceeded” (Healthy Work, 2003, p. 8). Stranks (2007, p. 386) emphasised that people must recognise the existence of stress, and their personal response to stress, and that they must understand what events and situations can produce stress response and their own strategies to manage and cope stress. This can be identified through conducting a self-impact assessment. The reason it is named as self-impact assessment is to focus on the impacts of IO work- related psychosocial risks on IO workers’ physical and psychological health. It is not just a self-assessment of their current overall level of physical and psychological health, but also of potential future impact to their own health. For example, work- related stress could be accumulated and, if it is not managed, it can lead to fatigue and

burnout. IO workers could go through a set of questions to self-analyse and identify their level of stress and their stressors. There are many studies which suggest what a set of self-assessment questions could be. Because of the dynamic of IO work, the recommended self-impact assessment related questions should clearly define the sources of stress, whether they are internal, which means from IO workers' own organisations, or external, which means from other organisations other than their own that they are conducting IO work with, or even both internal and external. For instance, Participant A confirmed having been very often physically exhausted when conducting IO work and explained it depends on the type of tasks, duration of the task, working hours and days. Participant J confirmed often having problems relaxing and sometimes having been tense was all because of the nature of work. This could cover both internal and external sources. The stressors could be complex combinations of the content and intensity of the IO work-related tasks and deadlines. The related questions in the self-impact assessments can first ask "*When conducting IO work, what type of tasks often cause stress that make you having problems relaxing at end of the day?*" to help the IO worker identify the stressor and then ask, "*What makes this type of tasks difficult to deal with?*" and "*Where do the difficulties come from?*" These questions would help the IO worker understand the source of the stressor and gain clarity about what they can do about the stressors, whether they can remove the source completely or only minimise the negative impact which comes from this source. For example, one participant indicated that having been tense often is because internal and external people have unreasonable expectations. This could be a source of stress, but whether the participant is able to completely change people's unreasonable expectations is unknown or very limited, especially people from other organisations. Sometimes, if a source of stress is constant and its negative impact is so strong that cannot be removed or minimised, it could lead to loss of productivity. Participant E confirmed that the IO work always drains so much of their energy that has a negative effect

on their private life, highlighting that “*this is why we have high IO worker turnover in our team*”.

Completing a self-impact assessment can enable IO workers and superiors to have a more open and effective communication. Tubbs and Moss (1994) explained some organisations use an open- door policy to demonstrate their willingness to communicate, but this does not mean both superiors and subordinates are open minded and will have an open and honest conversation with each other; some subordinates may have concerns about expressing their true feelings. When subordinates feel that they can be themselves with a superior, the superior will be unlikely to use the employees’ mistakes to against them, which in turn encourages an open communication. IO workers can note down their concerns and identify issues when going through a self-impact assessment and use it as a reference when they are having discussions with the superiors. This may help to reduce fear and reflect their true thoughts more accurately.

6.2.4 Enhance superiors’ competency in managing IO work related psychosocial risks

Based on the participants’ responses about social support from superiors, some participants confirmed their superiors were willing to listen, but did not think they provided help and support when needed. It is due to superiors’ lack of understanding of the problems. As Participant I said, the superior was always willing to listen to their problems, however “*When I have problems, I can always raise, but I don’t have confidence that they understand the problems*”. Due to the dynamic of IO work, the associated problems are often more complex than organisational work. One simple problem may be easy to fix if it is only related to issues within their own organisation, but it becomes more complex if it combines with external issues that need to be addressed within different organisations.

According to the participants’ responses in relation to the differences of IO versus organisational work, many participants emphasised constant changes, high level of

complexity and problems raised from different organisational cultures, structures and working with people from different organisations. It shows one IO work- related problem often links to other issues that need to be discussed jointly with people from different organisations. It may involve change processes and procedures, and even change an existing collaborative agreement. This adds more difficulties and very often takes longer time to fix the actual problem. Superiors may not have quick and easy solutions to help fix problems. This may be perceived as a simple issue by IO workers without realising that the issue connects to severe roadblocks that need to be first removed externally. It could be one of the explanations why some participants did not think they get help and support from their superiors.

Nevertheless, when IO workers are willing to discuss their concerns or issues openly with superiors, as explained, the superiors may not have instant solutions or answers of their concerns or issues, but it is crucial for the superiors to have a good understanding about psychosocial risks and know what could reduce the related psychosocial risk, so they can actively help the IO workers to minimise the negative effects to the IO workers' physical and psychological health. As a result, even the actual problems may not be resolved, but the IO workers will still feel they are getting help and support from superiors that positively contribute to their health and wellbeing. For example, if an IO worker explained that he or she is stressed about constant changes and often got put under pressure to deliver, the superior could try to understand and identify what psychosocial risks are associated with the issues such as workload, time pressure, pace, control or intensity of work and then explain and discuss with the IO worker why intensity and complexity of work could cause high level of stress and how to reduce the level of stress and minimise risks of getting fatigue and burnout. WorkSafe defines stress as "the awareness of not being able to cope with the demands of one's environment, when this realisation is of concern to the person, in that both

are associated with a negative emotional response”; stress can cause fatigue, health and safety concerns and may have potential long-term effects to workers’ physical and psychological health (Healthy Work, 2003, pp. 8-9). As outlined under worker self-awareness, a self-impact assessment could be a tool to guide superiors’ and IO workers’ conversations and help to increase both IO workers’ and their superiors’ understanding about the impact of their level of stress and their stressors. However, the self-impact assessment may not be necessarily completed for every single conversation between superiors and their IO workers.

Therefore, it is important that superiors gain an in-depth understanding about psychosocial risks and risk management to be able to provide sufficient help and support to IO workers, particularly in reducing level of stress. From IO workers’ perspective, their superiors may not necessarily resolve problems or fix issues, but the superiors do understand their level of stress, high work demands and the negative impacts that they are experiencing in IO work. The superiors not only listen, but also understand, and are able to help them develop strategies to minimise and prevent potential burnout. Most importantly, the IO workers receive help and support from their superiors with the focus of their health and wellbeing where they can gain long term benefits from different aspects instead of focusing on resolving actual problems.

For example, Participant I said she did not have enough time to complete IO work- related tasks due to lack of communications from other organisations about deadlines and timeframes. If Participant I discuss this issue with the superior, the superior understands that the issue involves another organisation and that it may not be resolved easily. Apart from discussing improvement of communications between organisations, the superior could ask Participant I, from a health and wellbeing perspective, to check whether Participant I have strategies in place to manage negative impacts caused by IO work related psychosocial risks. The questions could be, “Do you feel you have got put under pressure to deliver and meet

their expectations?” and “Does it add additional stress on you?” If Participant I provide a positive response, the superior could then ask “What strategies do you use to manage the increased level of stress? What can you do to achieve a healthy work life balance?” The superior could also provide reminders of the importance of having quality rest time, and of the meaning of leisure, such as the definition given by Quick et al. (2013, p. 163): “True leisure means doing something fulfilling without having to reach a goal.” Time to rest, relax and enjoy family time helps remove difficulties in mentally detaching from work after work and maintaining a work life balance. Many people consider working time is the time spending in an office or in front of a computer, but they often do not realise that spending time thinking about work or stressing about work after work should also be counted as working time. Once all this time is added together, it leaves limited time for them to rest, relax and recharge. The danger of letting it happen regularly for a prolonged period is that it leads to cumulating stress and is likely to lead to burnout. Stress is a physical reaction to external and internal events, and prolonged or intense stress can cause health problems (Turton, 2010). It is critical to enhance superiors’ competency in managing IO work- related psychosocial risk management, so they are able to articulate issues and concerns to IO workers in relation to their health and wellbeing. Superiors can also apply their knowledge and experiences in this area to actively manage their own stress and prevent burnout.

6.2.5 Reconsiderations about people and job match for IO work

In addition, there are many studies which suggest the importance of people and job match. However, this needs to be considered differently and sensibly for IO work. When a worker is constantly not meeting expectations or experiencing high levels of stress, superiors may ask the worker to be transferred to a different role and replace them with a new worker to conduct the same tasks. Pestonjee and Pandey (2013, pp. 94-95) stated that the person and position match is important; more stressful jobs are well matched with employees who have

better capabilities of handling stress and high competencies; employees who have high degree of stress, anxiety, adequacy, and exhaustion should be referred for counselling or transferred to less stressful jobs. Based on this point of view, employees who fail to manage, or inadequately manage, their level of stress and anxiety down may be seen as not fit for the position or incompetent for what they do. As a result, the identified workers could be transferred to different positions or referred for counselling. Superiors are quite often suggesting the worker to use Employee Assistance Programme Services.

For IO work, decisions about whether an IO worker should be transferred to a different role need to be made very carefully, especially for IO workers who are considered playing an essential role in IO work. This is because IO work involves lots of collaborations that require relationship building and a good understanding about shared goals, expectations and responsibilities. Replacing or transferring an essential IO worker who has built strong knowledge about the tasks they do, and who has built relationships with people from other organisations, may delay the progress of completing the IO work- related tasks and hinder other related organisations in achieving their goals and objectives within the expected timeframe. This is because the new IO worker may need to rebuild trust and relationships with the joined organisations and to be trained to learn all relevant information such as different processes and procedures, which may take considerable time to reach the level of required competency. Consequently, it could lose time and increase overall costs of IO work for joined organisations.

Therefore, if an essential IO worker appears to be underperforming or struggling to manage increased levels of stress, the superior should first consider the sources of the stress and provide resources and support to help this IO worker to identify the stressors and find effective strategies to manage related stress. Unless moving them is deemed as absolutely necessary, the essential IO worker should remain in the same role to carry on the IO work. If

superiors are trained for stress management and able to help workers to identify their stressors, this may help the new IO worker to reduce his or her level of stress and prevent potential burnout. Otherwise, transferring a worker to a different position may happen repeatedly, which could add more challenges to other IO workers and costs to the organisation.

When selecting IO workers, potential candidates can conduct a self-impact assessment to help them identify their stressors and understand that the complexity of IO work may increase their level of stress. They will need to understand that they need effective strategies to manage their stress, minimise negative effects to their physical and psychological health and prevent burnout. In turn, the new IO workers are mentally prepared for dealing with IO work related high demands.

In the past years, I involved and conducted various types of IO work. I found my initial experience of conducting IO work was very challenging. In conversations with my superiors, I personally experienced difficulties in stating and explaining the challenges I was facing, because I had great concerns about the impression that I gave to my superiors. I did not want to give the wrong impression to my superiors that I was being negative and complaining about the IO work and the people I worked with. I also did not want my superiors to think that I was incompetent to complete the given tasks. Therefore, I carefully selected words to use to describe challenging situations, work demands and the negative impacts on me.

Sometimes, I avoided talking about my personal challenges and negative impacts. My fear of my superiors' judgements became a barrier of having an open and effective communications with them.

However, I did not have difficulties in discussing it with my colleagues, because they were always showing an interest listening to my problems. Sometimes, they asked questions to learn more. I had noticed there was one key difference between talking to my colleagues and

superiors, which was their level of interest to explore and understand my experiences. My colleagues were more likely to have high level of interests than my superiors, which encouraged them to listen more and ask further questions. Given all my superiors were male, they may have had a different approach from female superiors.

CHAPTER SEVEN

LIMITATIONS AND FUTURE STUDIES

This research study did not collect relevant information to analyse gender, age, roles and work experience differences and its influences in dealing and managing IO work- related psychosocial risks. In terms of support resources, the participants were only asked to comment on social support from colleagues and superiors. They were not interviewed about any other support resources or systems at work and in their personal life, such as counselling support provided by employers, and family members' and friends' support in the social environment. Further analysis is needed to explore and understand different types of support systems such as reporting, emotional, informational and evaluative support and related support sources such as training that are made available to workers in conducting or involving in different stages of IO work. Most importantly it is necessary to understand whether these support systems and sources are effective in managing IO work- related psychosocial risks, reducing levels of work-related stress and work-life conflict, and preventing burnout. In addition, this research study did not involve discussions and analysis of the relationship between work demands and fatigue, its effect on IO workers' physical and psychological health when they are conducting or involved in IO work. In future research studies, one of the focuses will be collecting data for discussion and analysis in relation to fatigue and fatigue management related to IO work.

Moreover, some participants mentioned that having agreements between organisations helps to reduce the complexity of IO work. To achieve the desired outcomes of IO work, the first step is to have goals and timeframes agreed by senior leadership teams in the developing stages of the IO work. This is a top-down process. It is important first to gain a common understanding from all senior leadership teams of the joined organisations. Once agreement is achieved from the top, senior managers will be able to send clear messages to guide their

superiors, and superiors will then be in a position to give consistent instructions to IO workers. The importance of gaining senior management support was also addressed by some participants. Thus, senior leadership commitment and support is vital to the overall success of collaboration and to achieve the desired outcome of IO work. This research study did not interview participants about support from internal and external senior leadership teams. Future studies will look at the impact of senior leadership commitment and support for IO workers and superiors, and its contributions to IO work- related psychosocial risk management.

This research study only involves 24 participants, and most participants are from the public sector. To have better and wider understanding of IO work- related psychosocial risks, future studies will include more participants from both private and public sectors, so their responses can be compared to explain similarities and differences between private and public sectors in IO work-related psychosocial risk management. It can help to confirm whether there are any commonalities of the findings among these 24 participants.

In addition, I would like to explore correlations between IO workers' motivations and burnout when conducting IO work. A recent study conducted by Yale University showed that one in five employees reported both high engagement and high burnout; these engaged-exhausted workers also had high levels of stress and frustration (Seppälä & Moeller, 2018). In addition, Pestonjee and Pandey (2013) explained that burnout is experienced by individuals who have high expectations of the job when joining an organisation but fail to achieve those purposes afterwards. It will be useful to learn whether this applies to IO workers.

During this research study, I read many scholarships about dopamine and motivation.

In future studies I would like to find out whether the human brain reward system and functions of dopamine could be used to explain why highly engaged and motivated workers

are more likely to get burnout. Dopamine can provide both learning and motivation signals at the same time in the brain (Hamid et al., 2015). Dopamine is important in reward processing. Webber et al. (2021, p. 124) have identified five phases in reward processing: it starts from “anticipation” that refers to “hedonic impact of anticipating future reward”; follows up with “evaluation” that involves evaluating associated costs and benefits of the future reward and deciding whether to pursue it; leads to “execution”, which means taking action to obtain that reward after decision is made; then “pleasure” that shows “hedonic responses” when receiving that reward; with the last phase being “learning”, which is gained from outcomes of receiving that reward.

From this outline, I have learnt that we tend to first decide whether we will take actions, which will be based on how much we like the future reward and our previous experiences. Once we decide to take actions, we will act and acquire the reward. After receiving the reward, we will learn from the outcome and experience, which in turn will lead our future actions. Based on the findings, most participants confirmed they were motivated to conduct IO work, so, it will be good to understand their experiences when the outcomes they received were below their expectations, and whether it positively or negatively contribute to burnout. Therefore, one of my future research questions is whether our adverse work experience can positively contribute to burnout prevention, and its relationship with motivation.

I am also interested to understand why some IO workers get burnout while others do not, and how to assess individuals’ cognitive ability when processing different amount of information load. “Cognitive effort influences our everyday decisions about whether to perform challenging mental task” (Sayali & Badre, 2019, p. 41). Cost and benefit analysis involves considerations of cognitive demand factors that lead to certainty behaviour; “rewards appeared to be discounted by an associated demand for effort”, and “high and low reward outcomes were paired with high and low levels of cognitive demand” (Koolet al., 2010, p.

679). Individuals have different cognitive abilities related to their own avoidance behaviours; most people may select to perform low cognitive demand tasks (Kool et al., 2010). Sayalı and Badre (2019) conducted a research study about neural systems of cognitive demand avoidance based on behaviours of two groups. One group who selected easier tasks above 50% rate is named as “Demand Avoiders” and another group who selected easier tasks below 50% rate is named as “Demand Seekers”. Sayalı and Badre (2019) found that “Demand Avoiders” consistently selected the easiest cognitive effort level and fewest task-switching tasks where “Demand Seekers” selected a higher cognitive effort level and greater task-switching. It may be one of the important factors help to explain that highly motivated individuals are more likely to experience burnout than others.

Finally, I intend to study more about the differences between male and female superiors’ approach in relation to providing help and support to IO workers. I also aim to explore whether personal fear can negatively contribute to manage IO work related psychosocial risks.

Overall, my future research studies will focus on gender, age, experience, and role differences in behaviour, view and attitude when managing IO work- related psychosocial risks, and correlations between dopamine, human reward system, cognitive ability, and burnout.

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APPENDICES

APPENDIX A: Interview Questions (Frist and Second rounds)

APPENDIX B: Research Information Sheet

APPENDIX C: Transcripts Release Authority

APPENDIX D: Participant Consent Form

APPENDIX E: Massey University Human Ethics Application NOR 20/55 Approval

Letter