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Learning to work from home: experience of Australian workers and organizational representatives during the first COVID-19 lockdowns

Abstract

Purpose – This paper provides a snapshot of workers’ experience while working from home (WFH) during the Australian lockdown in the middle of the COVID-19 pandemic. It focuses on lessons to inform organizations, employees and the design of the workspaces post-2020, human, organizational and environmental considerations may affect satisfaction, productivity and health.

Design/methodology/approach - Two separate surveys were designed for this study to target Australian organizations and knowledge workers. Participants included 28 organizations and 301 employees, and descriptive and correlational analyses were conducted.

Findings – Organizations stated productivity losses, maintaining culture and workplace health and safety concerns with WFH setup, while employees were more concerned about their social interactions, internet connectivity, and increased workload. Employees also found the social aspects of WFH challenging and disclosed that face-to-face interactions with their colleagues was the most important reason they wanted to return to the office. High level of trust and value was reported among the organizations and workers.

Originality/value - In the scarcity of academic literature around negative and positives of the WFH experiment during the COVID-19 pandemic, the main sources of information have been industry-focused reports. This study aims to contribute to this knowledge gap by identifying positives and negative aspects of WFH during the first wave of lockdowns in Australia in 2020 from the organization and workers’ perspective, including human, organizational and environmental considerations.

Keywords: knowledge workers, organizations, productivity, social relations, physical environment, future workplace

Introduction

COVID-19 induced lockdowns have disrupted workplaces globally by forcing employees out of the office to their own homes, casting doubt over the future of corporate real estate and challenging the purposes of offices. According to media and industry reports many knowledge workers around the world started working from home (WFH) in a very short period of time and at a scale never seen before. In the U.S., the percentage of employees working from home reportedly doubled from 31% to 62% (Harter, 2020) when compared to the same time in 2019. Additionally, by the end of May 2020, 57% of Australian Public Service employees were working from home (Colley and Williamson, 2020). In this new and emerging situation, knowledge workers found themselves working from home, not out of desire, but from necessity arising from the pandemic.

Current debates about the short and long-term impacts of the abrupt transition to WFH range from black and white predictions around the ‘death of the office’ (Eltringham, 2020.b) to a perhaps more sensible take focusing on the challenges of supporting a fully distributed workforce (Boland *et al.*, 2020). Prior to the COVID-19 pandemic, the

office was considered pivotal to the productivity of knowledge workers, organizational cohesion and a key asset used to attract and retain talent (Boland et al., 2020). Regardless of the tone of the argument, COVID-19 has called into the question the fundamental purpose and physical form of the office. Organizations which once competed intensely for prime office space in central business districts (CBD) around the world, are now looking at ways to increase the flexibility, mobility and safety of their space in the long term, including a significant reduction of office space and a profound rethink of the purpose of workplaces.

Before we can effectively address how the office and ways of working will look like in a post-2020 world, it is important to understand from human, organizational and physical environment perspectives what the WFH experience during the pandemic has taught us in terms of benefits and challenges around remote working at large scale. While academic research is only just emerging, much has been documented in industry - so what have we learned so far?

Organizational aspects

For more than 50 years, the resistance toward remote working has stemmed from managerial concerns about loss of productivity and performance leading to endemic cultures of presenteeism (Kniffin et al., 2020). However, this perception was shifting even before the COVID-19 pandemic with organizations around the world implementing flexible working arrangements within their workplace policies. The 'WFH experiment' has shown that cultures of presenteeism and lack of organizational trust often masked beneath concerns of productivity loss do not need to exist. As an example, recent findings from a survey of 6000 Australian workers, including 1300 in managerial roles, indicated the majority of managers believe productivity has remained the same, 30% stated it was higher and less than 10% reported lower productivity rates in comparison to those prior to remote working (Colley and Williamson, 2020). The quick adjustment and the high level of resilience displayed by employees throughout the forced transition to working from home has indeed blown arguments related to productivity and presentism out of the water (Hood, 2020) and given room for greater offering of flexible and remote working, which before were limited to certain demographics and very much behind red tape.

The disruption to the normal life and work caused by COVID-19 has also accelerated the digital transformations already underway in many organizations (Savić, D., 2020), giving rise to omnichannel workers which in turns breaks the long-held connection to a fixed office location (Edwards, 2020). Ongoing, this will drive new behaviours, management, and development of flexible work policies in both the physical and virtual realm, requiring consciousness of the broader societal and economic factors at play. (Kniffin *et al.*, 2020). Little data is available on organizations' concerns, goals and challenges during this time, more research is needed as we observe how the situation evolves. Although industry reports show that while many companies showed a high level of resilience in maintaining employees' work performance during COVID-19, the new hybrid work-office arrangement will still require a well-developed plan for continued success over the long-term

Human perspective

From a human perspective, industry reports show the negative effects of isolation (Neilson, 2020), challenges in team communication and knowledge sharing, maintaining productivity, disruption of work-life boundaries, and virtual fatigue, collectively fuelling a global wish for many knowledge workers to return to the office for face-to-face connection (Gensler, 2020. b; Edwards, 2020). Regarding team communication and knowledge sharing, some predict that 2020 will have significant impact on innovation capabilities of organizations over the coming years (Buchanan, 2020) as face-to-face interaction are known as critical in developing the relationships needed to create and identify opportunities for collaboration and innovation. A great proportion of creative collaboration takes place in informal settings where "creative collisions" between colleagues occur (Coenen and Kok, 2014). Regarding productivity, studies have shown maintain productivity is reported as a challenge for the workers in WFH arrangements. A survey conducted among 2,300 U.S. workers (Gensler, 2020. b) indicated that respondents were feeling less connected and less productive when working from home during the pandemic. Work-life boundaries are also reported to be vague as a recent study (Feldman and Mazmanian, 2020) found employees in a digital workforce feeling invisible and consequently trying to make themselves more reachable by working longer hours and replying to e-mail more quickly.

The new work arrangements have significantly diminished opportunities for effective mentorship, employee onboarding, and cultural training. Younger generations are coming from a more social background with less experience in self-management and work autonomy. A study by Mix Interior (Köerting, 2020) pointed out generational inequalities when considering remote working set-up. They found that Generation Z (born 1990-2012), followed by millennial (Generation Y) knowledge workers (born 1980-1994), have less access to appropriate home-working set-up, hence might be less productive in WFH arrangement. Furthermore, WFH and isolation has not hit both genders to the same extent. Not surprisingly, a study by Yildirim and Eslen-Ziya (2020)

also showed an alarming gap in the influence of the pandemic on daily routines for female and male academic knowledge workers with children.

Overall decline in mental and physical health (Davis et al., 2020), especially during lockdowns call for greater responsibility of employers in mitigating these risks for their workforce. Majumdar et al. (2020) show that issues related to mental health such as extensive feelings of sleepiness, increased daytime nap duration, and depressive symptomatology are concerning on a rise during the lockdown. A recent survey (Westfall, 2020) indicated that 75% of U.S. workers have struggled at work due to anxiety caused by the COVID-19 pandemic and other recent world events, with 80% they would consider quitting their current position for a job that focused more on employee mental health.

Despite many reasons found in recent studies for a return to the physical office, there are reports from industry showing that workers have fully embraced digital work tools like collaboration platforms and video conferencing to keep working at the same or even higher productivity rates (Davidson, 2020). Some recent surveys (Gensler, 2020. b) suggested that many employees would indeed prefer having access to greater flexibility beyond COVID-19-induced lockdowns, but more evidence is needed about the challenges workers face while WFH.

Physical environment

From the physical environment perspective, the well-known challenges around open plan working, including lack of control over the physical environment (Candido et al., 2020; Ekstrand and Damman, 2016; Candido et al., 2021), lack of visual and acoustics privacy (Brand and Smith, 2005, Bodin Danielsson and Bodin, 2009), lack of ability to perform focused work, and being interrupted (Candido et al, 2019) where in the spotlight again. The initial impression is that some of these issues were “resolved” by having people working from home with some reporting productive outcomes arising from the ability to concentrate alone (Parker, 2020). The positive outcomes of WFH arrangements have stimulated discussions around an expanded organizational commitment to supporting employees working from home to varying degrees. Important issues have been raised around adequacy and appropriation of the personal office infrastructures with regards to ergonomics, environmental quality and overall health (Parker, 2020). Supplying furniture, to remove the damaging effects of physical set up and furniture in WFH arrangements, is imposing extra cost to the knowledge workers. Organizations like Twitter have already started to reimburse their employees for their home office expenses. Slack has also offered a stipend to employees for working from home, along with a mobile and internet allowance (Ratho and John, 2020). For poor ergonomics in home offices, Davis et al. (2020) alerted that, if not addressed, it might progress from a widespread discomfort into more detrimental conditions such as musculoskeletal disorders. They also accentuated that musculoskeletal disorders would increase companies’ bottom line through treatment costs, compensation costs, and absenteeism and presenteeism. However, more evidence is needed in order to better support the workforce while WFH, especially when it comes to physical health.

The role of the office in enabling interactions through physical proximity is well documented. Many industry experts reported on the increasing importance of connections and networks to business success moving forward into increasing digital realms (Eltringham, 2020). The physical workplace plays a pivotal role in communicating brand identity (Edwards, 2020) and through principles of person-environment fit (Carnevale and Hatak, 2020), maintaining company culture, and productivity. The value proposition of the future workplace is shifting and requires consideration beyond the cost benefits of space density (Edwards, 2020) but a clarity of purpose in a hybridized face-to-face virtual workforce. Yahoo famously called its entire workforce back into the office in 2013 to combat the perceive languishing culture and productivity that had slowly crept in over years of fully remote working (Sander, 2019). Whether Yahoo’s experience is what we might go through in shifting knowledge workers to WFH arrangements need more research.

Study aims

This study aims to contribute to the research gap by identifying positives and negative aspects of WFH from the organization and workers’ perspective during the first wave of COVID-19 induced lockdowns in Australia, including human, organizational and environmental considerations. By “freezing in time” the WFH experience during the lockdown by conducting subjective surveys with employees from numerous Australian organizations, this paper provides a snapshot in the middle of the COVID-19 pandemic. This study focuses on lessons to inform organizations, employees and the design of the workspace post-2020. The study further explores how WFH may affect the future of work by learning from the past situation in 2020 while acknowledging that is still very much evolving and calling for more comprehensive research to understand the real long-term effects of the pandemic in our lives.

Methodology

Findings from a total of 301 employees and 28 organizations surveyed in Australia are reported in this paper. In Australia, many non-essential knowledge workers were forced to work from home from mid to late March after international travel restrictions in February, followed by closing non-essential services in March (Duckett and Stobart, 2020). The lockdown continued in different stages in different states based on their daily infectious rate. A plan for ease of restrictions and returning to the workplace was released in May along with strict social distancing rules. As of January 2021, a gradual shift to work from the office is still progressing in different states based on the fluctuation on the infection rates, occupancy limitations, and/or preferences to extending remote working arrangements..

Surveys

Two separate cross-sectional surveys were designed for this study to target Australian organizations and knowledge workers (**Table I**). The surveys were conducted among Australian organizations and knowledge workers between April and July 2020 (during the first wave of COVID-19 induced lockdowns in Australia). The employees' survey instrument consisted of both closed and open-ended questions. The questions asked about different aspects of WFH arrangements such as productivity, perceived mental and physical health, sense of trust and value, autonomy, social aspects, and overall challenges in WFH arrangements, along with some questions about work arrangement before COVID-19 and people's expectation of the post-pandemic work arrangements. Background questions were asked to record respondents' data about their age and gender.

The organizations' survey instrument also consisted of closed and open-ended questions, asking organizational representatives' view on challenges in the transition to WFH and the key enablers of this transition. Organizational representative were people in leading roles who were directly responsible for teams' managements within the organization and also financial management of the business. These representatives are referred as organizations throughout the paper. In addition, organizations were asked about the percentage of their employees working from home before and during COVID-19 and their view on the probable new normal regarding work arrangements after COVID-19. Organizations from a broad range of sectors including Government, Property and Construction, Arts, Technology, Finance, Retail, Professional services, Manufacturing and Health were invited to participate and represented in the result. No follow-up interviews were conducted with the organizations or knowledge workers.

Table I: Overview of employees' and organizations' questionnaires

Survey sent to leaders from organizations	Questions	Survey sent to workers
✓	Percentage of the organizations WFH	✓
✓	Challenges associated with WFH	✓
✓	Supporting elements of work environment for transitioning to WFH and the top enablers of this transition	✓
✓	"New normal" and desirable changes in the near future	✓
✓	Technologies being used to support the staff while WFH	✓
✓	Level of preparedness to increase WFH in near future	-
-	Reasons for returning to the office	✓
-	Rate of adjustment to WFH arrangement	✓
-	Productivity score- prior and after WFH arrangement	✓
-	Sense of connection, value*, trust**, autonomy and knowledge sharing	✓
-	Satisfaction with WFH	✓
-	Demographics	✓
-	Mental and physical health ***	✓

* Sense of value is measured by this question: "How would you describe your sense of value in your organization since the shift in your working arrangements?". This question is asked to measure how valued employees feel by the organization in WFH arrangements".

** Sense of ~~value-trust~~ is measured by this question: "How trusted do you currently feel by your organization/team?"

*** Two following questions are asked to record perceived mental and physical health: 1. "During the past 4 weeks, my ability to work and/or develop other activities has been negatively affected because of my mental and emotional health", and 2. "During the past 4 weeks, my ability to work and/or develop other activities has been negatively affected because of my physical health".

Participants

Organizations were directly contacted to take part in the organizations' online survey. They were also asked to distribute the employees' online survey to their workers. More volunteer knowledge workers were recruited to participate in the study by responding to a social media advertisement.

Out of the whole sample of employee participants, 57% were female knowledge workers, while 37% were male, 6% selected “prefer not to respond” option. The majority of participants (56%) were Generation Y (born 1980-1994), followed by the older groups: Generation X (35%) born 1965-1979, and baby boomers (6%) born 1946-1964, while only 3% of the respondents were born earlier~~later~~ than 1995. Around one third of the employee respondents were working in tertiary education (32%), followed by design/engineering (28%), consulting (10%), government (9%), construction (5%), IT (5%), property management (4%), and other (7%).

Analysis

Descriptive statistics was used to show how organizations and knowledge workers answered the core questionnaire items. Variable such as WFH enablers, challenges and opportunities of WFH, sense of trust, value, autonomy, connection, cohesion, and knowledge sharing were investigated using this method. In addition, the new normal and the reasons for returning to the office were also reported by descriptive statistics. Correlational analyses were conducted to find potential association between variables which were expected to have a correlation such as mental and physical health, trust and value, and policy for flexible working and productivity. Different between age groups and genders regarding the main challenges and opportunities was also analysed. All analyses is performed using SPSS Statistics v.20 and Excel.

Results

1. Organizations’ views during working from home

Organizations reported that 31% of their employees were working from home before lockdowns, and 83% of the employees were working from home during isolation, representing an increase of more than 50% in the proportion of employees who had previously been working from home. Our data found that many organizations had already flexible working arrangements in place and the pandemic accelerated enhancement of infrastructures to support this new arrangement on a larger scale. Nine out of 28 organizations mentioned this preparedness in some ways in the open-ended comments. Table II shows three examples of these quotes. the quotes

Table II: Quotes from the surveyed organizations regarding preparedness to transition to WFH

Topic	Open-ended comments
Preparedness to transition to WFH (mentioned by 9 out of 28)	Our firm was in a great position by already having had the technology and infrastructure in place to allow people to work remotely. We did, however, bring forward the release of some additional functionality in MS Teams to make it easier for a greater amount of people to collaborate virtually.
	The rollout of WebEx was accelerated significantly to facilitate team connectivity/video.
	Remote desktop was already part of our set-up ... but utilising zoom and microsoft teams has continued our ability to collaborate. Our firm was in a great position by already having had the technology and infrastructure in place to allow people to work remotely. We did however bring forward the release of some additional functionality in MS Teams to make it easier for a greater amount of people to collaborate virtually

Out of the 28 surveyed organizations, 27 stated that the design of their workplace and their work style had enabled their teams to successfully transition to working remotely. As depicted in Figure 1, they indicated IT-infrastructure (software), unassigned sitting and activity-based working, and IT-infrastructure (hardware) as the top three factors that enabled this transition. When comparing this perspective to the employees’ view, the biggest difference can be seen in views on “flexible work policies”, for which 72% of the employees and only 25% of the organizations indicated that as a factor that had supported transition to WFH.

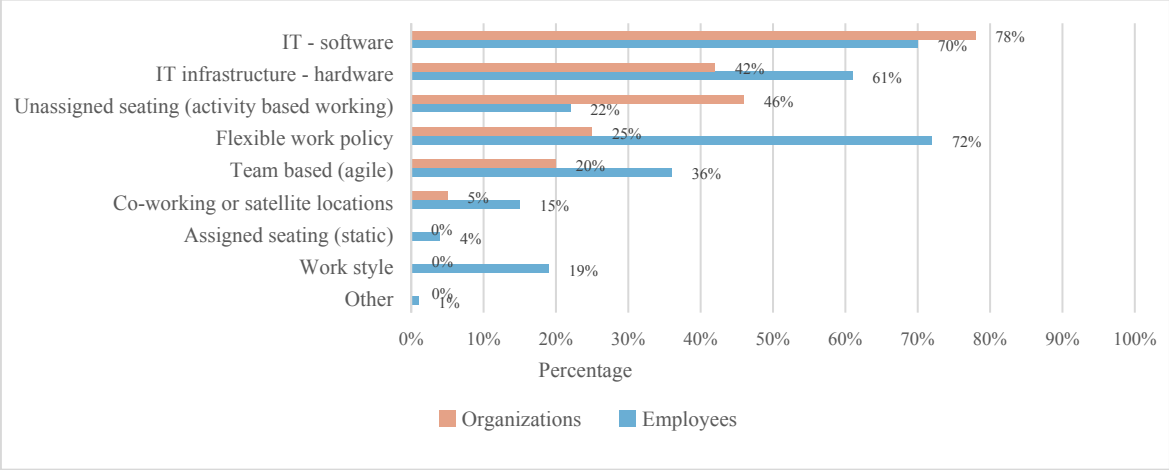


Figure 1: Elements that supported transition to WFH from organizations' and employees' perspective

Thirty-nine percent of organizations identified productivity, maintaining culture and workplace health and safety concerns with WFH setup as the top three challenges in the new WFH arrangements. Knowledge sharing and IT infrastructure were respectively the fourth and fifth challenges from the organizations' perspective. In contrast, employees were more concerned about being isolated from colleagues (47%), internet connectivity (47%), and increased workload (Figure 2).

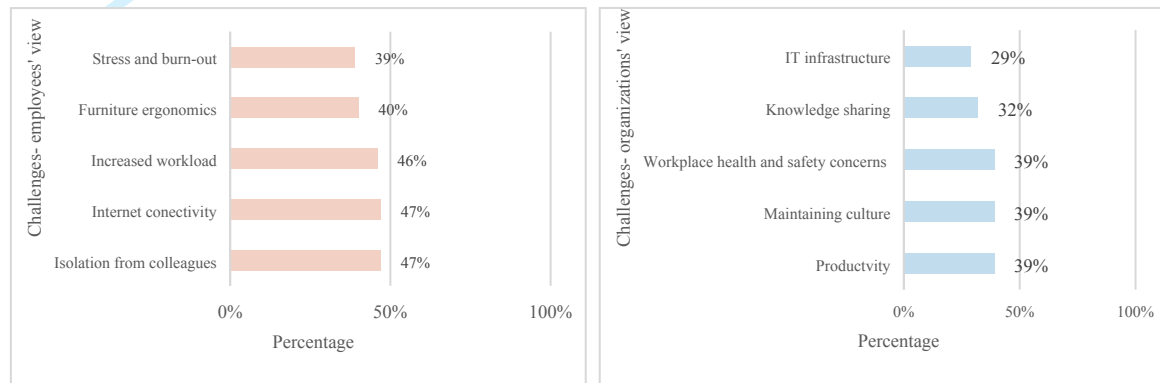


Figure 2: Top five challenges that employees (a) and organizations (b) have faced during COVID-19 pandemic

With 56% of the organizations indicating that the more likely new normal after COVID-19 pandemic was "increasing the proportion of team members that can WFH", and 89% denoting being prepared or developing a plan for an increase in remote working, it seems remote working is becoming an acceptable practice for most of the organizations in the survey. In contrast, only a minority of organizations (16%) believed that a more probable scenario was "everyone works from home" or "return to the previous work style".

2. Employees' experience while working from home

2.1. Transition to remote working

When Australian knowledge workers were asked about their usual work arrangements 90% stated that prior to the pandemic they had been working in either a private, open-plan, or activity-based open-plan office. The remaining 10% of workers stated they had worked from home in a dedicated or non-dedicated home office. Among these, 78% worked from home every day and 22% worked from home 4 days a week. No respondent indicated working from home 1-3 days per week.

A majority of the employee respondents (68%) stated that there was a flexible working policy in their organizations before the pandemic, and 63% stated they were satisfied with the organization's flexible working arrangements. Most employees surveyed (78%) rated their productivity prior to pandemic-related WFH arrangements high and very high. However, there was no correlation between policy supporting flexible working and productivity ($p=0.75$, correlation coefficient = -0.025).

The adjustment rate among the employees was quick with 97% of the knowledge workers stating it took up 2 weeks to adjust to the new WFH arrangements including 66% who indicated that they adjusted to WFH within 2 days (Figure 3). Our findings also indicated that 89% of the employees believe that the design of their workspace and their work style have enabled them and their team to make a successful transition to working remotely, while 11% stated that these aspects did not enable the transition. The employees reported flexible working policies (72%), IT-software (70%) and IT-hardware (61%) as the top three factors supporting transition (Figure 1). The respondents also indicated that for the current WFH arrangement "technology" was the most valuable enabler of productive work. "Human connection" and "flexibility of choosing where to work" were respectively mentioned as the second and third most valuable enablers (Figure 3).

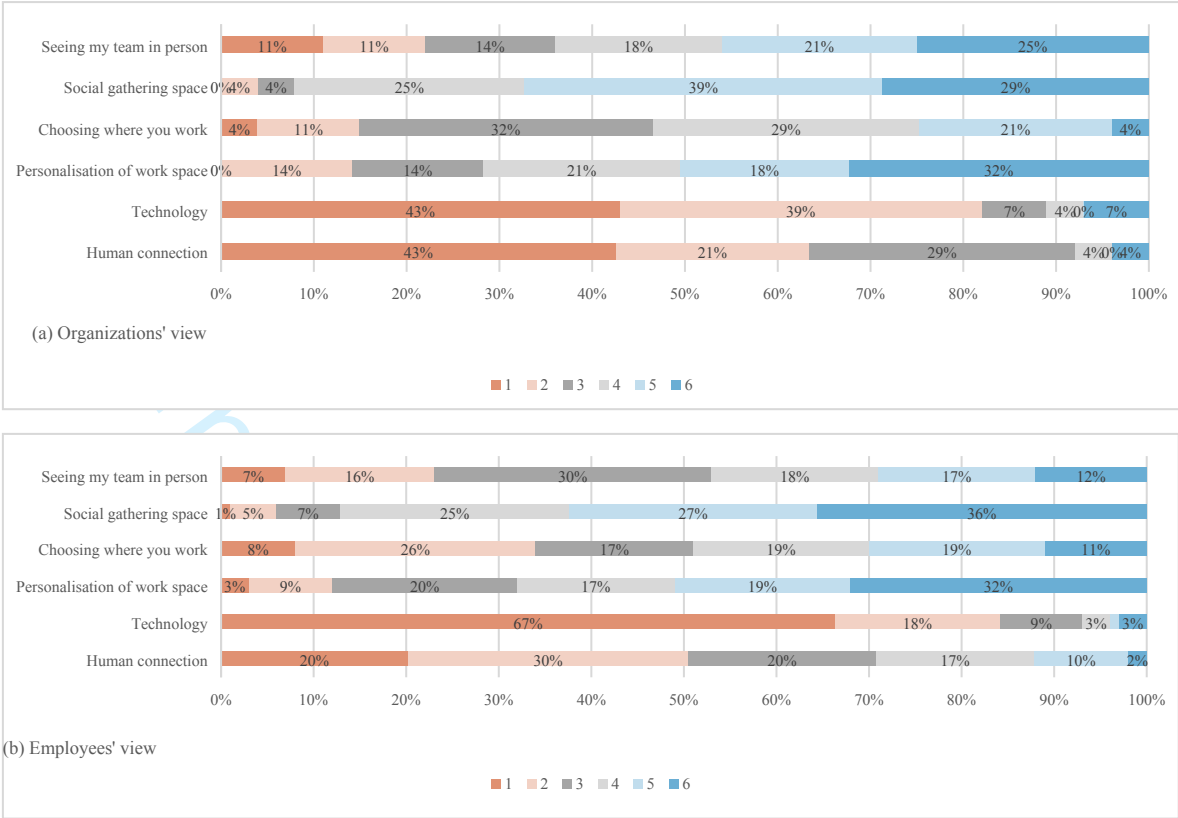


Figure 3: Valuable work enablers from employees' perspective (From the current situation, what have you found to be the most valuable enablers for work?(1-Most important to 6-Least important))

2.2. Remote working experience

While organizations indicated employees' productivity as the biggest concern in remote working (Figure 2), 75% of the employees rated their productivity "same or better than before", and 65% indicated that they could do their job as effectively remotely as they did in the workspace. Comparing these data to the productivity rate pre COVID-19 it is almost aligned with 79% of the employees rating their productivity high or very high.

More than half of the surveyed employees (55%) felt completely trusted by their organizations, with 51% indicating a very strong or strong sense of value (Figure 4), with a statistically significant positive correlation between sense of value and trust ($p=0.0005$, correlation coefficient= 0.341). Several open-ended comments from the organizations clearly highlighted the level of trust despite the previous perception among organizations that staff are not productive while not at the office (Table II). The majority (80%) of the employees states strong or very strong sense of autonomy and ownership while working from home, followed by 17% who selected neutral and 3% who selected "little" autonomy and ownership.

Sense of connection and community is reported to be strong or very strong among 45% of the employees, with 38% reporting neutral and 17% reporting little or very little. Respectively 30% and 40% indicated sense of cohesion and knowledge sharing very challenging or somewhat challenging, while around half of the employees (43% and 47%) stated these to be the same as before (Figure 5).

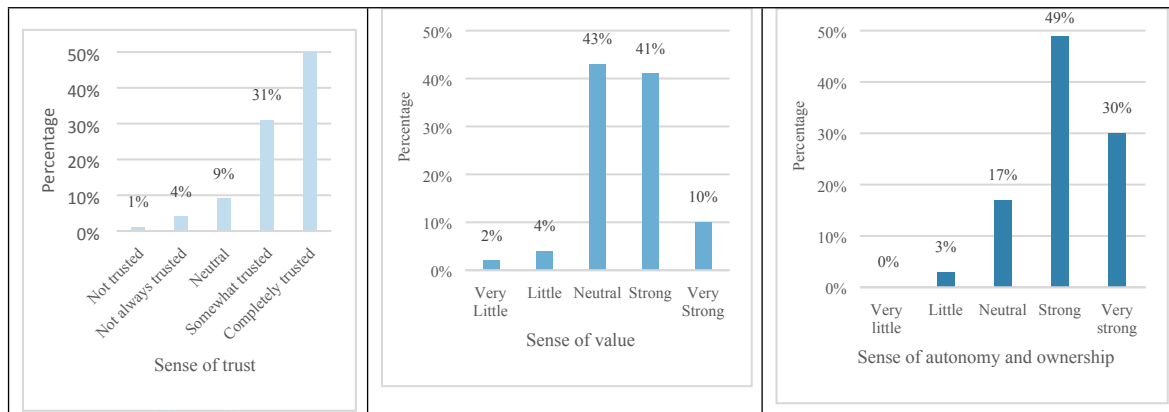


Figure 4: Sense of trust, value and autonomy and ownership in WFH arrangement during COVID-19 pandemic

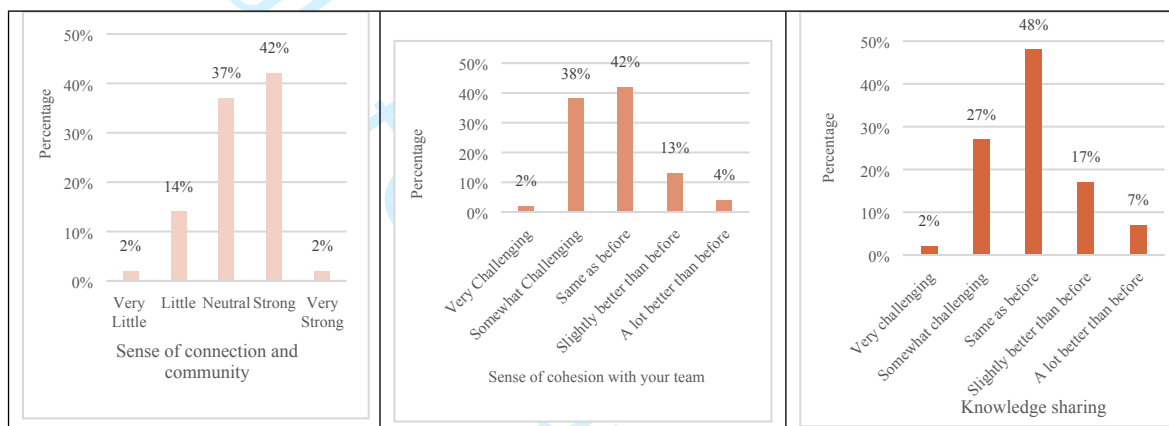


Figure 5: Sense of connection and community, cohesion with the team and knowledge sharing in WFH arrangement during COVID-19 pandemic

Challenges and opportunities

Amid COVID-19 pandemic and WFH experience, knowledge workers stated that their biggest challenges were internet connectivity (47%), isolation from colleagues (47%), and increased workload (46%). Furniture ergonomics (40%) and stress and burn-out (39%) are also among the top challenges mentioned by the respondents (**Figure 6**). Organizations seemed to be more concerned about productivity, culture, health and safety (**Figure 2**), showing differing viewpoints between employees and organizations.

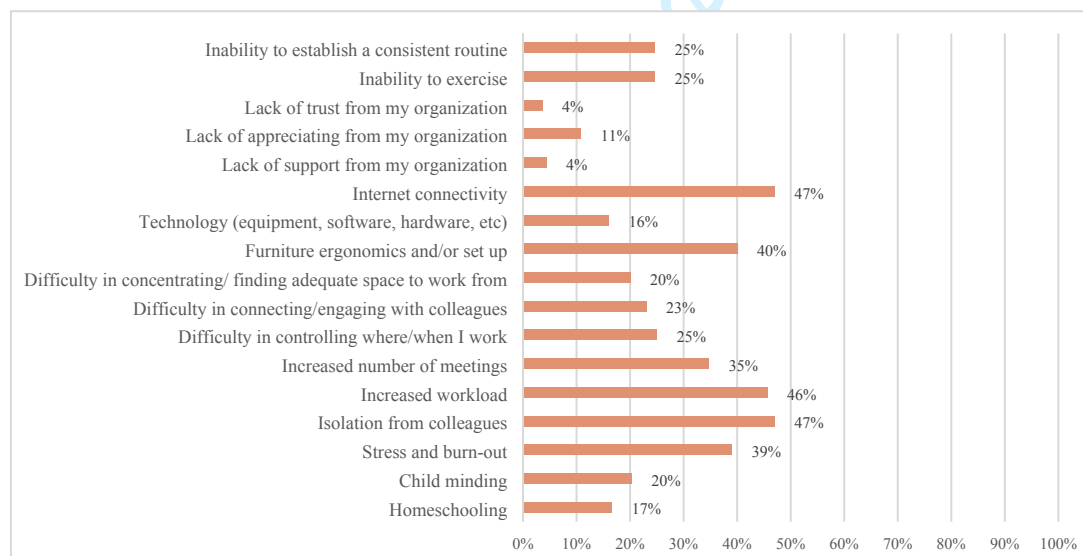


Figure 6: Challenges in WFH arrangements, employees' perspective

When comparing the top three challenges for females and males in generation X and Y (Table III), 63% of generation X females stated increased workload as their top challenge.. Increased workload was also indicated by the younger group (generation Y) as the second top challenge in WFH arrangements.

For the three groups (generation X male, generation Y female and generation Y male), isolation from colleagues played the most significant role as stated by around 50% of people in each group. Stress and burn-out were among the top three challenging factors in the remote working arrangement for all knowledge workers groups, except generation Y female workers for whom stress and burn-out was rated the fourth biggest challenge. In addition, around half of generation X female workers (47%) highlighted furniture ergonomics as a challenging feature in WFH arrangements. Generation Z and respondents born earlier than 1995 are not included in Table III as the accumulated percentage was 9% and considered too small for this analysis.

Table III: Top three challenges for different generations and genders

Generation	Gender	Top three challenges	Percentage
Generation X (1965-1979)	Female	Increased workload	63
		Stress and burn-out	47
		Furniture ergonomics	47
	Male	Isolation from colleagues	46
		Stress and burn-out	42
		Increased number of meetings	29
Generation Y (1980-1994) Millennials	Female	Isolation from colleagues	51
		Increased workload	47
		Internet connectivity	45
	Male	Isolation from colleagues	46
		Increased workload	31
		Stress and burn-out	31

Respondents on average reported their Mental health (mean=4.01, SD=1.81) was slightly worse than their physical health (mean=3.02, SD=1.65) measured on a 7-point Likert scale. Physical and mental health for the whole sample had a positive medium correlation (sig. (2-tailed) <0.005, r²=0.422).

Remote working has also created a host of opportunities and advantages for some knowledge workers. No commuting to/from work was indicated as the biggest advantage of the new work arrangement by 66% of the survey respondents. This aspect was followed by “more time with family (52%)” and “ability to perform more focused work (46%)” as the top positive aspects of working from home. Figure 7 shows responses of knowledge workers about the positive aspects of remote working. Table 4 shows the best aspects of WFH for different generation and genders. “No commute to/from work” is the top benefit for all generations and genders.

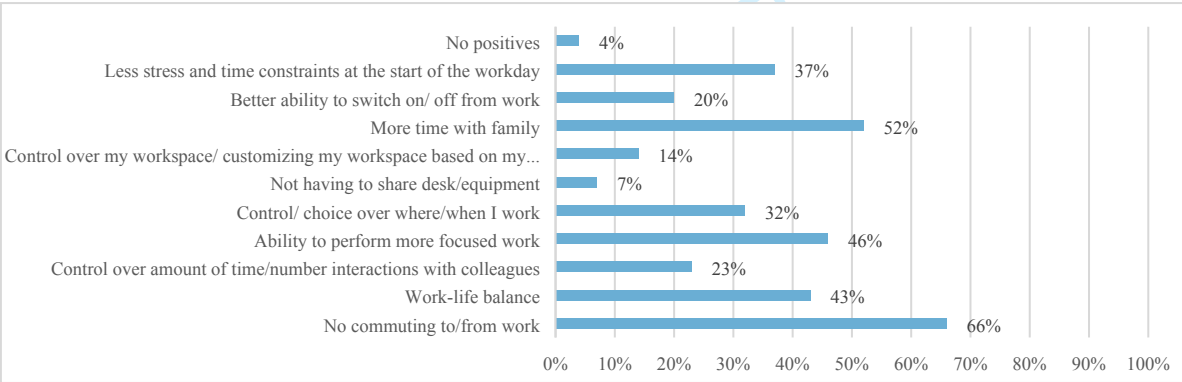


Figure 7: Positive aspects of WFH arrangements, employees' view

Table 4: Best aspects of WFH for different generations and genders

Generation	Gender	Top three aspects	Percentage
Generation X (1965-1979)	Female	No commuting to/from work	81
		More time with family	56
		Less stress and time constraints at the start of the workday	47
	Male	No commuting to/from work	77
		Work-life balance	62
		Ability to perform more focused work	62

Generation Y (1980-1994) Millennials	Female	Control/ choice over where/when I work	62
		No commuting to/from work	65
		More time with family	55
		Ability to perform more focused work	45
	Male	No commuting to/from work	54
		Work-life balance	54
		More time with family	50
		Ability to perform more focused work	42

2.3. Returning to the office

Although only 10% of the respondents were working from home before isolation, our findings suggested that 68% of the respondents preferred to have increased offering of flexible working arrangements with 26% preferred to be allowed to WFH indefinitely. A majority of the respondents (69%) also indicated that they would like to WFH 2-3 days a week, followed by 16% who preferred to WFH one day a week. A small number of respondents stated that they would like to WFH 5 days a week, while 4% indicated they did not like to WFH at all (**Figure 8**). This comparison showed a big shift in the number of people seeking flexibility in where/when to work from.

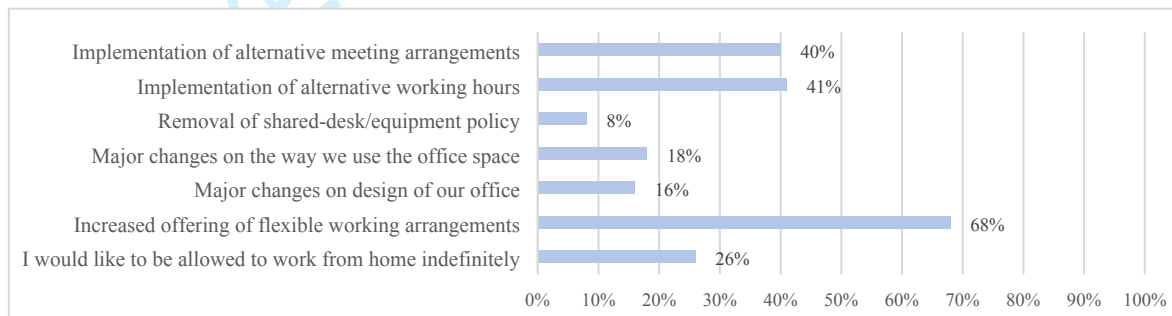


Figure 8: The changes employees like to see in their working arrangements post COVID-19 pandemic

When employees respondents were asked about what they think of the possible “new normal” after lockdown (**Figure 9**), adaptation of flexible work policy and adaptability of the business were indicated by 56% of the respondents while 41% believed that return to the previous work style was more probable. Employee (**Figure 9 (b)**) and organizational (**Error! Reference source not found. Figure 9 (a)**) perspectives regarding the new normal after COVID-19 pandemic are almost aligned in the sense that both cohorts believe that adaptability and flexibility are the probable new normal post-pandemic.

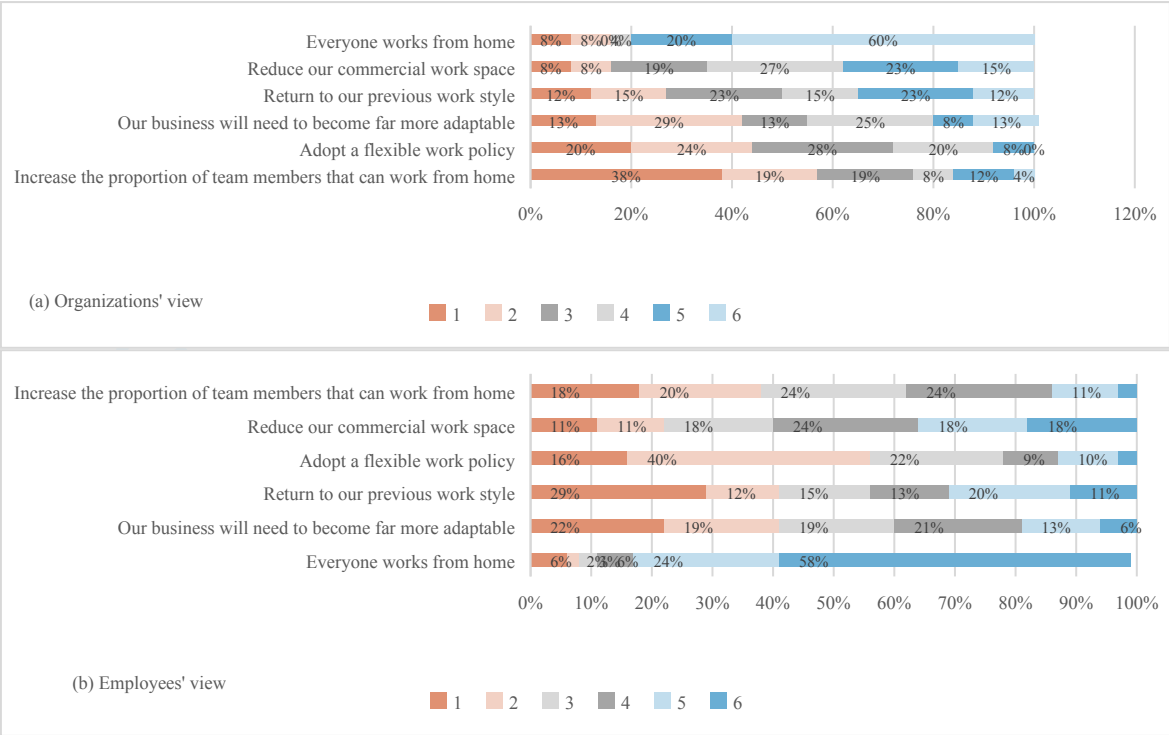


Figure 9: (a) Employees' and (b) organizations' view on the new normal for their organization after COVID-19 pandemic (Question: Please rank what you believe will be the 'new normal' for your organization (1 = Most likely, 6 = Least likely))

Seeing my team in person, face to face meetings and human connection were the top three reasons for returning to the office from employees. Open-ended comments also indicated that respondents mainly missed the social aspects of their workspace. **Figure 10** shows respondents' answer for reasons returning to work and some of the open-ended comments regarding the social aspects.

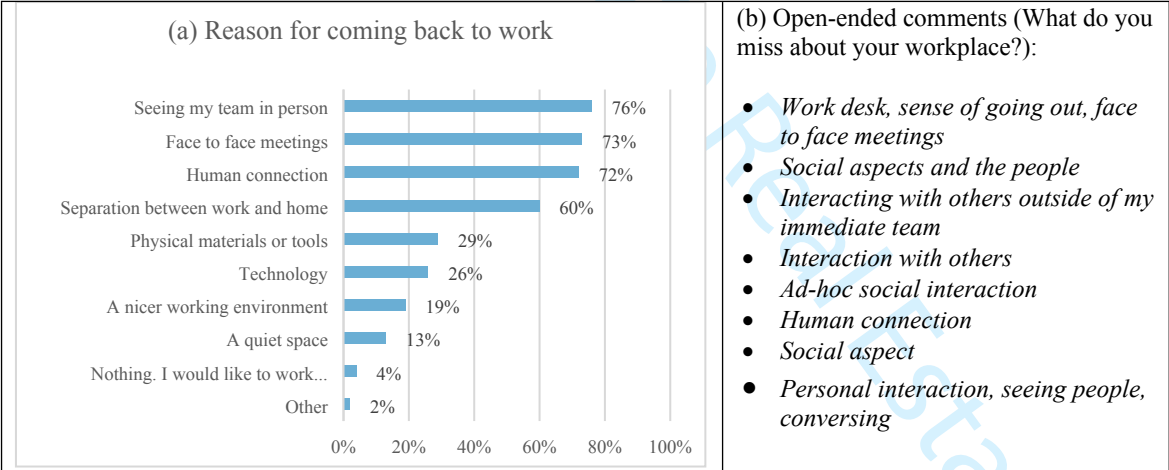


Figure 10: (a) Reason for coming back to work from employees' view, (b) Examples of open-ended comments about what employees have missed about their workspace.

Discussion

1. What was happening during the first wave of lockdowns in Australia?

Our data, aligned with previous research led by Leesman (2020), suggested that most organizations already had flexible working arrangements in place and the COVID-19 pandemic accelerated the rate of implementation of technology rollouts required to support this change on a larger scale. 9 out of 28 organizations stated this preparedness in the open-ended comments of the survey. The data also showed that the proportion of knowledge workers working from home during the pandemic in the organizations in our survey increased from 31% to 83%. A sudden increase in the number of knowledge workers working from home is also indicated by Harter (2020) and Colley and Williamson (2020) in U.S. and Australia respectively. This made what previously needed months of

planning happening overnight, making the new arrangement challenging for some organizations as 30% of the organizations have stated IT- infrastructure among the top five challenges of transition to WFH.

1.1. Organizational aspects

Some organizations raised productivity along with maintaining culture and knowledge sharing within the top five challenges of WFH. Whether this concern was due to the actual lower levels of productivity witnessed by the organizations in lack of physical office or it was just an assumption, was not clear from our data. However, studies highlight the crucial role of the physical workplace plays in maintaining culture, creative collaboration and productivity as experienced by organizations like Yahoo in recalling employees to the office in 2013 (Sander, 2019). In contrast with this study, only 10% of 1300 Australian managers stated lower productivity rates among their workers (Colley and Williamson, 2020). Further research is needed to investigate if productivity loss exists in a broad scale in WFH arrangements in the longer term, and whether it is the result of the removing the physical office, higher stress level or any other variable.

Our data suggested that organizations' and employees' views are almost aligned about the top two enablers of effective work: technology and human connection. Forty-three percent of the organizations rated these two aspects as the most important ones, while employees gave the heavier weight to technology (67% versus 20% for human connection). Regarding technology, our data showed that some organizations had the infrastructure and technology in place to enable adoption of remote working at scale, and they adjusted them based on their need in transition to WFH arrangements, as also stated by Savić (2020). Furthermore, our findings indicated that majority (89%) of the organizations felt prepared or were developing a strategy to support increased numbers of employees working from home. More than half of the organizations also stated that an increase in the proportion of team members that WFH was the new normal post onset of COVID-19. Regarding social aspects, our results clearly highlighted that human connection is a critical ingredient in knowledge work and this will require new behaviours and management in the virtual realm as highlighted by Kniffin et al. (2020).

1.2. Human aspects

Social interactions

Our findings showed that quarter to one-third of the knowledge workers found the social aspects of WFH such as sense of cohesion and knowledge sharing challenging. In addition, half of the respondents stated social isolation as one of the key challenges while WFH during COVID-19 pandemic. The findings also suggested that some workers would like to cautiously return to the office with key drivers being 1) need for social connection, 2) face to face meetings and 3) separation of work/ life (ability to focus) as also suggested by Gensler (2020) and Edwards (2020). In Australia, a gradual return to more normal schedules with schools, day-cares, offices, retail, hospitality opening is taking place, keeping people and organizations in a period of cautious re-adjustment.

We know from coping behaviours through natural disasters and other global events the role that community plays in mitigating the effects of isolation and impacts on health (Chasek, 2020). The social connections that our study and others such as Kniffin et al. (2020) found to be key drivers for the return to the office point to the important role that workplaces play in an increased flexible work arrangement. Perhaps best illustrated by coworking spaces in regional and neighbourhoods, workplaces can act as a lifeline to workers and businesses alike in the recovery process, simultaneously reviving the local neighbourhood economy (Stangler, 2020). With the rise in remote working, some predict the death of CBD's threatening major losses in commercial tenancies, introducing a model of distributed centres in alignment with Smart Cities thinking could strengthen the future resilience of both employees and organizations against future disruption and disconnection.

Younger generation (generation Y or millennials), as suggested by our data, suffered more from isolation in remote working arrangements compared to generation X aligned with findings from a Gensler study (Gensler, 2020.b). Our survey does not provide much evidence to explain this finding, it is common knowledge the challenges associated with home-schooling and childminding faced by young families during the lockdowns along with issues with financial stability, shared accommodation, etc (Lowrey, 2020).

Productivity, flexibility and mental health

While one of the organizations' main concerns in our survey was productivity loss, this did not emerge amongst the top five big challenges mentioned by the knowledge workers. Most employees reported the same or higher level of productivity after transitioning to WFH arrangements as also suggested by findings from a study by Colley and Williamson (2020). While productivity seems to be maintained in our surveyed employees, and people also acknowledged that certain tasks are better performed in isolation (Kniffin et al., 2020), we can't forget that these findings may change over time. In addition, lower levels of productivity and connectedness (Gensler, 2020. b) and unclear work-life boundaries (Feldman and Mazmanian, 2020) in WFH arrangements were reported in the recent literature.

Based on our data, a majority of knowledge workers felt completely or somewhat trusted by their organization and showed a strong or very strong sense of value. In addition, trust and value are found to be positively correlated and an increase in one of them result in an increase in the other variable. To what extent and how sense of trust and value affect productivity needs more research.

Our findings showed that 97% of the knowledge workers stated that they adjusted to the new works arrangements quite quickly (within 2 weeks). The workers also acknowledged the sense of autonomy and control over where/when they work from, their interactions with colleagues, and physical features of their workspace. The autonomy might lead to lack of ability to disconnect from work as mentioned by Felstead and Henseke (2017), and the increased workload for around half of the surveyed knowledge workers could be a result of this situation. With all the challenges associated with this experience, the workforce is seeking an increased offering of flexible working arrangements. Genuine flexibility should have both office and remote working arrangements available, as they seem to accomplish the weaknesses of each work arrangement.

When investigating mental health, aligned with finding by Majumdar et al. (2020), Westfall (2020) and Davis et al. (2020), our data showed around half of the knowledge workers had already stated isolation as an issue and around 40% and 47% indicated stress and burn-out and increased workload while working from home. Similarly, the effects of arrival of COVID-19 pandemic on stress levels of remote workers are indicated by Madero Gómez et al. (2020), and Van Der Feltz-Cornelis et al. (2020).

The stresses of broader lockdown impact such as increased childcare responsibilities (Australian institute of family studies, 2020), employment uncertainty (Pappas, 2020), health concerns of loved ones, and vulnerable domestic situations (Redfern Legal Centre, 2020) have no doubt exacerbated the issues, and a clearly cited as having a direct impact on knowledge worker's level of satisfaction with the WFH experience. Although handling these issues, knowledge workers and organizations indicated that productivity, organizational trust and autonomy in the workplace is in an acceptable level, this perhaps suggests that we are ready for a substantial re-thinking of our current workplace models in terms of employee expectations, management practices and types of activities that they are designed to support.

1.3. Physical environment

Home office furniture is an ergonomic factor related to the physical environment and physical health and was among the top 5 challenges for all employees, and among the top three for female knowledge workers in generation X. This might be because many workers did not have an appropriate work setting at home (Parker, 2020), leaving them working on a kitchen table with non-ergonomic chairs. What seems like a sustainable solution to support WFH is having a private space dedicated to work with all required amenities such as ergonomic furniture (as provided by organization like as Slack) (Ratho and John, 2020), heating, cooling and all office equipment to prevent the destructive effects of poor ergonomics as also warned by Davis et al. (2020). For many employees who do not possess a dedicated space as a home office, the idea of co-working spaces might be a good solution, considering that the organizations support the employees by providing necessary equipment and funding.

2. How the future looks like post lockdown

Debates around “death of office” are not new, however, these debates were heated during COVID-19 pandemic due to success of WFH arrangements during the lockdown in maintaining employees’ productivity, sense of value and building up a high and unexpected level of trust between the organizations and knowledge workers (as suggested by our findings). A few months post-pandemic, these debates shifted towards rethinking and redesigning the post-2020 office based on lessons learned during COVID-19 rather than removing the physical office concept.

As months passed, organizations and employees realized the value and importance of face-to-face interactions, collaboration, problem solving, innovation and non-virtual teamwork (Avdiu and Nayyar, 2020). Some evidence indicates that knowledge exchange, mentorship and impromptu communications might suffer in a virtual-only environment, but more research is needed. The importance of the physical workspace as a means for generating creative productivity is again on the spotlight, however, there is a probability that the WFH experience will change the core purpose and physical footprint of our office spaces in the future. The positive experience of WFH arrangements in performing more focused work with fewer interruptions will encourage the organizations to shift toward including flexible work arrangements.

With organizations shifting from a hierarchical structure to a networked and team-based structure, the idea of decentralized offices with a central headquarters sounds feasible. A probable future is an increasingly digital workforce consolidating the idea of the web of space or network of spaces which will include working from many different spaces: home office, office, co-working space or any other locations like a local library or a café. If this

“satellite workforce” can perform their focused task at home, and their meeting at home or at co-working spaces, the new office will be a place to bring people together mainly to collaborate and connect.

In this probable future, the big challenge for the organizations might be maintaining culture and values among the workers and pass this to the new employees joining the organization. A sense of belonging and inclusion, which sounds necessary for employees’ loyalty to the organization, is another key challenge organizations will face. When looking at the rate of adjustment among employees, it turns out that some people are not change-resistant after all (Edwards, 2020). Our data showed some employees adjusted fairly quickly to the WFH arrangements with no productivity loss and are craving greater flexibility in their organizations. They need to have the option of whether they feel safe to come to the office or they prefer to WFH. However, with no certain perspective about the future, flexibility, and resilience sound like the new normal from the employees’ side.

Physical features of the workspace like poor furniture ergonomics have been the subject of complaint in the workspaces for many years. With WFH arrangements and people using their home set-up as their office, these complaints increased drastically (Webber, 2020). This has put the physical health of knowledge workers while working from home in the spotlight. Arguments have been made about the need for organizations to facilitate improvement of the standard of working from home if hybrid modes of work including WFH is to become the “new normal”. This includes measures to compensate for extra space needed as a home office or the extra cost for the co-working and community hubs. Furthermore, training employees how to take care of their mental and physical health in the new work arrangement should be considered. Although some vaccines have been approved, the current global challenge is in the roll-out and ensuring access is equitable across the globe – this variation in rates of vaccination access will still pose a problem for organisations looking to bring large numbers of employees back to the office. In the no-vaccine scenario, the floor-area per person will increase to consider physical distancing rules, hence organizations might not end up renting smaller office spaces. The question is even if there is a vaccine, do people feel safe in returning to the previous offices with the same floor-area per person, or are they pessimistic about the possibility of a new pandemic?

The debate around the death of activity-based working after the onset of the pandemic due to hygienic-related concerns has gained attention. Whether activity-based working survive a post-pandemic scenario, the way offices are designed to support this way of working will likely to change in the meantime and until a vaccine is found, if ever. Beyond concerns about the effects of activity-based working and desk-sharing policies on occupants’ health, general health concerns in workspaces are attracting attention. Organizations are proposing ‘touch-less’ in exchange for touch technologies in place (Hemmerdinger, 2020), partitions of specific materials, height and design are proposed to provide protection for individuals sharing the same space. Antiviral materials (Ghosh, 2020) are trending to build antiviral surfaces in the workspaces. Furthermore, considering the acceptance of airborne transmission of COVID-19, standards for the indoor environmental quality of the workspaces need to be monitored and updated as more evidence becomes available.

Albeit a lot of planning being required to ensure the big shift into network or web of spaces as discussed above, there is a good chance that uncertainty will be the new normal as the situation is still evolving. Organizations and employees will need to do many trials and errors to find what best suits both parties. Regular post-occupancy evaluation surveys focus groups and deploying measurement instruments to collect real-time data and feedback will be necessary for gradual learning in this process. Whatever the future brings for us, it is most likely the workspaces will need to embrace a hybrid reality, one in which we are a satellite workforce gradually trained for working anywhere and anytime, and design of new physical workspace configurations to suits our needs. The future workspace (or a network of workspaces) will need to be enhanced in strategic ways, incorporating technologies, protocols and hybrid ways of working. Can this pandemic be a trigger to a revolution in large scale adoption of remote working? No one knows for sure at this stage, but it seems like a probable future.

Limitations and future research

Authors acknowledge the limitations of the small sample size (28 organizations and 301 employees). The surveyed employees were all knowledge workers with no data to distinguish the exact type of work they do at their workspace or their home office. The two surveys conducted were cross-sectional in nature and should be considered as snapshots of the situation during the COVID-19 pandemic between April and July 2020 in Australia. Therefore, conclusions about change before and after the pandemic, or over the course of the pandemic cannot be drawn from the current survey. In addition, comparisons between Australia and other geographic regions was beyond the scope of the study.

More research needs to be done to investigate the long-term effects of isolation. It is probable that employees’ state of mind has changed, and organizations have managed to make some progress planning new ways of working after this study was conducted. It is not still clear whether mental and physical health problems will arise, or if the sense

of trust and value between the organizations and employees will diminish over time. Whether new technologies will help people feel more connected and ease the knowledge sharing and collaboration process is another question needing further investigation.

Conclusion

Whatever the short, mid, and long-term solutions to evolving workplaces post COVID-19 are, a holistic approach considering various aspects is needed. A realistic approach includes three different levers of a gradual change: organizational, human, and environmental. For organizational and human aspects, attention should be given to maintaining productivity and culture, work-related mental and physical support, and social relations. For aspects related to the physical environment, a rethink and redesign as discussed above are crucial. Beyond everything, these changes are only possible in light of enhancement in infrastructure and technologies (as stated by organizations and knowledge workers in the top challenges) without which the whole idea of WFH during COVID-19 pandemic was far from feasible.

Acknowledgement

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Appendix

List of questions asked from the organizational representatives	
Percentage of organization working remotely full time	
Top challenges	
Whether the design of your workplace and your work style have enabled the transition to working remotely	
Elements of work environment that supported the transition	
Technologies to support WFH	
New normal for the organization	
The most valuable enablers for WFH	
Open-ended comments	
List of questions asked from the knowledge workers	
Are you currently working full-time?	
Percentage of the organization currently working remotely full time	
Age	
Gender	
Type of work	
Type of employment	
Productivity prior to WFH	
Productivity since WFH	
Sense of connection and community since WFH	
Sense of cohesion with your team in your daily interactions since WFH	
Sense of value in your organization since WFH	
Sense of trust since WFH	
Sense of autonomy and ownership over your work since WFH	
Ease of knowledge sharing with your organization/team	
Rate of adjustment to the new work style	
Satisfaction with flexible remote working	
Other factors impacting your sense of satisfaction with remote working	
Number of days you prefer to work from home in the future	
Reason for coming to the workplace if WFH	
Whether design of your workplace and your work style have enabled the transition to WFH	
Elements that support WFH transition	
Technologies to support WFH	
Policy to support WFH before the pandemic	
New normal for the organization	
The most valuable enablers	
Commute time every day before COVID-19	
Workspace layout before the COVID-19 pandemic	
How often to work remotely before the COVID-19 pandemic	
Work area before COVID-19 pandemic	
Satisfaction with indoor environmental quality	
Reason for dissatisfaction with indoor environmental quality	
Physical activity time while WFH	
Body area for pain and discomfort	

To what extend ability to work has been negatively affected because of my mental and emotional health
To what extend ability to work has been negatively affected because of my physical health.
Satisfaction with your organization’s flexible working arrangements before the pandemic
Satisfaction with your organization’s flexible working arrangements during the pandemic
Key challenges of WFH
Best aspects of flexible working arrangements
Changes you would like to see in your working arrangements post COVID-19 pandemic
Industry sector you work for
Open-ended comments