

**Flexible Work During COVID-19:
A 10-Day Diary Study on Psychological Safety, Voice
Behaviour, Inclusion, and Belonging**

Dissertation submitted in partial fulfilment of the requirements for the degree of
Master of Science in Industrial and Organisational Psychology

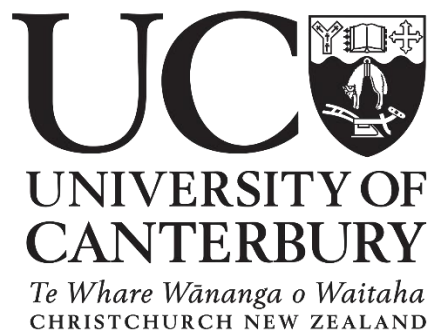
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Abstract

The COVID-19 pandemic has sped up the adoption of remote and flexible work, making such working arrangements the new normal for many employees around the world. However, concerns have been raised about the impact of remote work on communication, collaboration, and feelings of relatedness within teams. The present study aimed to investigate whether these detrimental effects extend to flexible rather than fully remote work, and whether such effects can be observed using a short-term longitudinal design. Firstly, the study compared flexible workers on daily perceptions of psychological safety, voice behaviour, inclusion, and belonging on office-working and remote-working days. Secondly, the study examined the impact of remote work frequency on these constructs. 50 office workers with flexible working arrangements were recruited from New Zealand for a 10-day diary study. Participants completed a baseline survey and 10 short daily surveys. As predicted, multilevel regression results showed that participants' perceptions of psychological safety, voice behaviour, and belonging were lower on remote-working days than office-working days, although no significant effects were found on perceptions of inclusion. Contrary to expectations, higher remote work frequency did not predict lower levels of voice behaviour, inclusion, or belonging, and predicted higher rather than lower perceptions of psychological safety. Participants also reported high levels of all four constructs, both at baseline and across the 10-day study period. While perceptions of these constructs may fluctuate daily in response to one's work location, these results suggest that flexible work is not detrimental to employees or organisations overall.

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Introduction

As a result of the COVID-19 pandemic brought on by the SARS-CoV-2 virus, social distancing, lockdown, and self-isolation measures have been implemented across the world (Waizenegger et al., 2020), severely disrupting labour markets and affecting how and where we work (Lund et al., 2021). One of the greatest changes brought on by COVID-19 is the sharp rise of remote work in many industries due to government restrictions and lockdown efforts (Lund et al., 2021). On 25 March 2020, New Zealand entered Alert Level 4, the strictest of its four-level COVID-19 alert system (Unite Against COVID-19, 2021). This marked a nationwide lockdown, with all non-essential businesses closing and the entire population going into self-isolation to prevent the spread of the virus (Unite Against COVID-19, 2021). The country slightly relaxed restrictions and moved into Alert Level 3 from 27 April 2020 until 13 May 2020, during which most non-essential businesses remained closed and people were encouraged to stay home whenever possible (Unite Against COVID-19, 2021). Because of these restrictions, over 40% of employed New Zealanders worked from home during Alert Level 3 and 4 lockdowns, 48% of whom had not worked from home prior to the pandemic (Stats NZ, 2020b). As remote working arrangements had been previously limited to the privileged few whose organisations offered this benefit (Morganson et al., 2010; Sparrow, 2000), the lockdown provided an opportunity for many employees to experience remote work for the first time, while also forcing others to work from home against their wishes (Waizenegger et al., 2020).

While remote work was already on the rise pre-COVID-19, growing 216% between 2005 and 2019 (Global Workplace Analytics, 2021), the uncertainty of the ongoing pandemic has accelerated this due to the constant threat of lockdown. Since the March 2020 lockdown, the Auckland region entered Alert Level 3 three times, and August 2021 saw the country enter

into its second nationwide lockdown (Unite Against COVID-19, 2021), requiring all non-essential workers to return to remote work. While most of New Zealand spent two weeks in Alert Level 4, followed by a week in Alert Level 3, Auckland residents spent a total of 107 days in lockdown as a result of the COVID-19 Delta variant (Sowman-Lund, 2021). Having flexible working arrangements in place is a huge advantage during such volatile periods, allowing organisations and their employees to more easily adjust to potential alert level changes. However, even in business-as-usual conditions, New Zealanders continue to work from home voluntarily at least some of the time (Stats NZ, 2020b). A survey conducted during the first Alert Level 3 lockdown indicated that 67% of respondents were interested in occasional remote work and 22% preferred to work on an entirely remote basis (O’Kane et al., 2020). Only 11% did not wish to work from home at all (O’Kane et al., 2020). This trend appears to be replicated worldwide. Based on a sample of 2,285 employees from six countries, a Harris Poll survey commissioned by Microsoft found that 71% of respondents wanted a remote working option (Spataro, 2020). In the United States, a survey by PwC (2021) reported that over 50% of the 1,200 office workers surveyed wanted to work remotely three days per week or more. It is clear that flexible work is becoming a highly desired working arrangement across many countries and industries, especially given the current pandemic context.

Despite this, research has generally focused on full-time remote workers or compared remote and office-based workers, while less attention has been given to those with flexible working arrangements. Such working arrangements necessitate that employees regularly move between online and in-person methods of communication, potentially resulting in very different experiences of work depending on one’s work location. However, research has yet to explore the effects of work location on flexible workers’ perceptions of their teams. It is unclear how flexible work can affect feelings of relatedness, such as perceptions of inclusion and belonging, as well as perceptions of psychological safety and instances of voice behaviour. The present

study therefore aims to explore the impact of flexible work on these relational constructs, specifically focusing on short-term effects and daily fluctuations. The current COVID-19 context is especially relevant to the present study, providing a unique perspective on flexible work in the midst of an uncertain and rapidly evolving situation.

Literature Review

The following review focuses on four interrelated constructs: psychological safety, voice behaviour, inclusion, and belonging. A discussion of the benefits and challenges of remote and flexible work will follow, as well as a review of what effects such working arrangements can have on employees and organisations, specifically in the context of communication, relatedness, and team perceptions.

Psychological Safety

The construct of psychological safety originated in the organisational change literature, identified as a prerequisite to creating readiness for change in individuals (Schein & Bennis, 1965). Schein (1993) later expanded this construct and applied it to learning in the workplace, stressing the importance of psychologically safe environments that allow individuals to make mistakes, learn from failures, and experiment without fear of negative consequences. In the context of engagement, Kahn (1990) argued that psychological safety is one of the necessary conditions to authentic self-expression at work. The concept was popularised further by Edmondson (1999, p. 350) and conceptualised as a team- rather than individual-level construct, defined as “a shared belief held by members of a team that the team is safe for interpersonal risk taking”. In her seminal research, Edmondson (1999) posited that psychological safety is built on interpersonal trust and respect between team members and is shaped by their shared experiences and influences. However, psychological safety can also exist on an individual level and reflect each employee’s perception of psychological safety, or psychological climate, in

their team or workplace (Erkutlu & Chafra, 2015b). Employees who feel psychologically safe feel that it is safe to speak up, ask questions, make suggestions, seek help, and point out mistakes (O'Donovan & McAuliffe, 2020), and that they will not be punished, ridiculed, or rejected by others for engaging in these behaviours (Edmondson, 1999).

Antecedents. Factors such as tenure, status, and experience are important antecedents to feeling psychologically safe at work. This is especially true in hierarchical industries where status is highly valued and generally tends to be stable over one's career (Nembhard & Edmondson, 2006). Lower status employees may experience a lack of self-efficacy and engage in self-censorship for fear of repercussions from their higher status counterparts, while higher status employees can also contribute to this problem by dominating discussions and dismissing others' contributions (Nembhard & Edmondson, 2006). Low status can therefore become a barrier to speaking up and create a climate of fear and blame rather than one of psychological safety (Nembhard & Edmondson, 2006; O'Donovan & McAuliffe, 2020). Experience functions similarly to hierarchy, with newer or less experienced employees being less likely to speak up than their more experienced peers (O'Donovan & McAuliffe, 2020). When employees feel they lack experience, they worry their views may be discounted by more senior employees and therefore withhold their contributions from their team (O'Donovan & McAuliffe, 2020). These factors then influence team dynamics and determine who can and cannot speak up within a team or organisation.

The quality of team relationships and the overall team culture are both critical to either developing or undermining psychological safety within work groups. Kahn (1990) proposes that interpersonal trust and supportive relationships can foster psychological safety by allowing individuals to exchange ideas and make mistakes without fear of judgment or reprisal. Relational coordination, characterised by mutual respect and shared knowledge and goals

within a team, is also key to a psychologically safe climate, especially in highly interdependent teams (Carmeli & Gittell, 2009). Familiarity between team members also contributes to this, with longer tenured teams reporting higher levels of psychological safety (Koopmann et al., 2016) and employees generally feeling more psychologically safe around team members they have known the longest (O'Donovan & McAuliffe, 2020).

Leaders also play an important role in fostering psychological safety in their teams. For example, inclusive leader behaviours, such as displaying availability, accessibility, and openness to followers, have been shown to relate positively to perceptions of psychological safety in the workplace (Bienefeld & Grote, 2014; Carmeli et al., 2010; Detert & Burris, 2007; Hirak et al., 2012; Nembhard & Edmondson, 2006). Zhao and colleagues (2020) examined the impact of leader inclusiveness in hospital settings during the COVID-19 pandemic, finding these behaviours to be an important predictor of psychological safety in nurses during a public health emergency. There is also evidence that leadership styles, including transformational (Detert & Burris, 2007), ethical (Walumbwa & Schaubroeck, 2009), and servant leadership (Erkutlu & Chafra, 2015b), can influence followers' perceptions of psychological safety. Although each leadership style contributes to this through different mechanisms, each style builds upon a common foundation of trust, support, openness, and honesty, welcoming input from followers even if it challenges the status quo. On the other hand, leaders who engage in excessive monitoring and micromanaging undermine the autonomy of their employees, damaging their perceptions of trust and psychological safety in the process (Lee, 2021). The development and maintenance of a psychologically safe climate therefore relies on a combination of individual, team, and leadership factors. Each of these factors is hugely important to consider as both psychological safety and its absence can have significant and far-reaching effects on organisations.

Outcomes. Since the popularisation of the construct by Edmondson (1999), over two decades of research have shown psychological safety to be a key antecedent of important individual, team, and organisational outcomes (Edmondson & Lei, 2014; Newman et al., 2017). On an individual level, a sense of psychological safety is necessary for engagement and authentic self-expression at work, allowing individuals to bring their whole selves to work without the fear of judgment or criticism from others (Kahn, 1990; May et al., 2014). It can also contribute to employee wellbeing by decreasing psychological distress (Zhao et al., 2020) and buffering against avoidance coping behaviours triggered by fear and threat (Yin & Ni, 2021), which is especially important in the context of the ongoing challenges and uncertainty caused by COVID-19.

Psychological safety is also hugely beneficial to teams, encouraging learning and innovation at a group level. Feeling psychologically safe allows employees to engage in greater information sharing and collaboration (Edmondson, 1999; Edmondson & Lei, 2014), promoting learning from failures (Carmeli & Gittell, 2009; Hirak et al., 2012) and overall learning behaviour in teams (Edmondson, 1999; Wong et al., 2010). This increase in learning behaviour is likely to have further flow-on effects, increasing team performance as a result (Edmondson, 1999; Hirak et al., 2012; Huang et al., 2008). Psychological safety has also been linked to performance both directly (Andersson et al., 2020; Baer & Frese, 2003; Schaubroeck et al., 2011) and indirectly, such as through reduced turnover rates (Chandrasekaran & Mishra, 2012). These increases in performance, as well as the potential for improved learning and innovation, provide an obvious financial benefit to organisations. In addition to these numerous advantages, one critical benefit of psychologically safe workplaces has yet to be discussed, necessitating its own comprehensive review.

Voice Behaviour

Voice behaviour, a construct closely related to psychological safety, can be broadly understood as speaking up in the workplace. It is often defined as upward-directed verbal communication to those higher in the organisational hierarchy, such as leaders who are able to address concerns and effect change (Detert & Edmondson, 2011; Edmondson & Lei, 2014). This can involve pointing out mistakes, voicing concerns, sharing ideas, and making suggestions (Morrison, 2011). Voice behaviours have been categorised as promotive, aiming to improve organisational practices and procedures, or prohibitive, which express concern about practices or behaviours which employees believe are detrimental to the organisation (Liang et al., 2012). In Van Dyne and LePine's (1998) conceptualisation of the construct, voice behaviour is described as both challenging and promotive, with the goal being to improve the situation rather than to simply criticise it. This is different from organisational citizenship behaviours, which are promotive and affiliative, prioritising relationships with others over advocating for changes in the workplace (LePine & Van Dyne, 1998). Although it is constructive in nature, voice behaviour can therefore pose a challenge to the status quo, upsetting others in the organisation by disrupting established systems and procedures (LePine & Van Dyne, 1998).

As a result, many employees do not feel they can speak up about important issues for fear of repercussions. According to Milliken and colleagues (2003), negative or threatening information is often withheld by employees in order to avoid conflict and negative reactions from others. Employees may feel they cannot speak up out of fear of embarrassment, judgment, ridicule, or criticism from others (Torralba et al., 2020). Some worry that their upward mobility in the organisation will be compromised or that they may lose their job as a consequence of speaking up (Milliken et al., 2003). Many employees therefore engage in silence behaviour,

withholding ideas and concerns from those who are in a position to address them (Morrison, 2011). Research has shown that many employees have engaged in self-censorship despite wanting to speak up to their superiors (Detert & Edmonson, 2011; Milliken et al., 2003). In Milliken and colleagues' (2003) study, on average, each employee who engaged in silence did so on at least two different occasions. However, it is important to note that voice and silence are distinct and can exist simultaneously (Sherf et al., 2021). Individuals may voice some issues but remain silent on others, and certain issues may be universally perceived as riskier to voice than others (Sherf et al., 2021). Employees may unconsciously calculate the level of interpersonal risk they will face if they speak up, weighing up whether or not it would be worthwhile to engage in voice behaviour (Torralba et al., 2020).

Antecedents. There are many reasons underlying an employee's decision to either speak up or remain silent about an issue. Factors such as tenure, status, and hierarchy, previously discussed as antecedents to psychological safety, can also predict voice and silence behaviours (Morrison, 2011; O'Donovan & McAuliffe, 2020; Torralba et al., 2020). Leadership behaviours and styles have also been linked to voice behaviour through the mediating role of psychological safety (Bienefeld & Grote, 2014; Detert & Burris, 2007; Erkutlu & Chafra, 2015b; Walumbwa & Schaubroeck, 2009). Psychological safety itself has been identified as a critical component to speaking up at work. Research has established a positive relationship between psychological safety and promotive voice behaviour (Bienefeld & Grote, 2014; Detert & Burris, 2007; Liang et al., 2012), though a stronger relationship has been observed between psychological safety and prohibitive voice behaviour (Liang et al., 2012). Conversely, the absence of psychological safety has been linked to employee silence (O'Donovan & McAuliffe, 2020; Sherf et al., 2021).

According to Sherf and colleagues (2021), more so than psychological safety, employees' voice behaviour is influenced by the perceived impact of speaking up. If voicing is expected to improve the situation or lead to valued rewards or opportunities, employees will be more likely to speak up. If individuals perceive speaking up to be futile, such as in situations where employees' opinions are not valued or welcomed, they will not go out of their way to engage in voice behaviour (Sherf et al., 2021). Detert and Edmondson (2011) have also argued that implicit voice theories, referring to internalised beliefs about speaking up at work, predict employee silence over and above levels of psychological safety. A fear of negative career consequences, such as losing out on a promotion or losing their job, was cited by many participants. Many also stressed that they did not want to point out problems without concrete evidence or solutions. Three other theories related to perceptions of the leader, such as not wanting to embarrass, undermine, or offend one's supervisor. Importantly, though some participants knew of specific experiences which contributed to their beliefs, many did not. Implicit theories often lacked evidence and were simply taken for granted within the workplace, or even the working world in general. Even if leaders do not actively prohibit voice behaviours, implicitly held beliefs about the appropriateness of speaking up prevent upward communication from employees, resulting in employee silence (Detert & Edmondson, 2011). Employees have many valid reasons for staying silent as opposed to speaking up. For this reason, it is crucial for leaders to foster psychologically safe climates and emphasise the potential outcomes of voice behaviour, highlighting the collective benefits while striving to minimise the individual costs.

Outcomes. Voice behaviour is critically important to organisations. When employees speak up to superiors, they can bring attention to problems, identify areas for improvement, fight against injustice, and prevent illegal or immoral behaviour in the workplace (Detert & Edmondson, 2011). In some fields, speaking up can even mean the difference between life and

death. One commonly cited example is the medical industry, where communication issues are considered to be a significant and preventable cause of medical errors (Nembhard & Edmondson, 2006). A failure to speak up has also been implicated in numerous preventable aviation accidents (Bienefeld & Grote, 2012). Employee silence can be extremely harmful even in industries with lower stakes, such as financial services, advertising, and consulting. Employees in such industries have reported engaging in silence regarding performance issues, concerns about company policies and procedures, ethics and fairness, harassment, conflict, and other important workplace issues (Milliken et al., 2003). This means that immoral or illegal behaviour may continue and even thrive, causing further harm to employees. Employee wellbeing may also be affected by engaging in silence, with recent research linking frequent silence with higher levels of burnout (Sherf et al., 2021).

Importantly, employees failing to speak up also has implications for organisational learning, innovation, and decision-making. For example, employees who wish to voice their concerns during a team meeting may choose to wait or drop the issue entirely, resulting in the organisation missing out on valuable information and ideas (Detert & Edmondson, 2011). This also inhibits collaboration as ideas that are not shared with the group cannot be discussed and built upon (Detert & Edmondson, 2011). This means that the quality of ideas and projects within the organisation will suffer, severely limiting innovation (Nembhard & Edmondson, 2006) and impairing organisational decision-making (Milliken et al., 2003). On the other hand, creating a psychologically safe environment where voice behaviours are encouraged allows for continued learning (Torralba et al., 2020) and innovation (LePine & Van Dyne, 1998). Different viewpoints can be considered, allowing employees to challenge existing practices and influence decision-making processes (LePine & Van Dyne, 1998; Nembhard & Edmondson, 2006). Employee voice, though threatening to the status quo, is undoubtedly

beneficial to organisations. However, speaking up may often happen in team situations, making relationships with other team members another important factor to consider.

Inclusion and Belonging

Inclusion and belonging are highly related, often overlapping constructs. The desire to belong, be included, and relate to others is generally accepted as a basic psychological need (Baumeister & Leary, 1995; Maslow, 1943; Ryan & Deci, 2000). Self-determination theory posits that relatedness is one of the three prerequisites for motivation and job satisfaction, along with competence and autonomy (Ryan & Deci, 2000). It is therefore a critical component of how individuals feel about their work. Mor Barak (2014) defines inclusion as feeling like an *insider* at work, meaning someone who is a part of both formal and informal processes in the organisation. This involves being included in information sharing and decision-making processes, as well as casual social exchanges in the workplace. She further describes inclusion as “employee perceptions that their unique contribution to the organization is appreciated and their full participation is encouraged” (Mor Barak, 2015, p. 85). However, some authors argue that inclusion is a multifaceted construct. According to Shore and colleagues (2011), a sense of inclusion is achieved when employees simultaneously feel that they belong within the organisation and that their uniqueness is being valued. Shore and colleagues (2011) argue that addressing either one of these needs is insufficient – without uniqueness, employees will be forced to assimilate into the workplace in order to belong, and without a sense of belonging, employees’ unique characteristics will be valued by the organisation while they themselves will be differentiated from others and treated like an outsider. Both a lack of belonging and a dismissal of an individual’s uniqueness can lead to feelings of exclusion (Shore et al., 2011). Jansen and colleagues (2014), however, separate inclusion into belonging and authenticity. They argue that individuals should be able to express their authentic selves at work - not just

the unique aspects of their personalities. This means that individuals do not necessarily have to be unique or different from others, benefitting both minority and majority group members (Jansen et al., 2014). Despite the varied conceptualisations of the construct, researchers generally agree that being included and valued by others, as well as feeling a sense of belonging to the team or organisation, is critical to workplace inclusion.

Antecedents. Much like psychological safety and voice behaviour, perceptions of belonging and inclusion are influenced by leader behaviour and leadership styles. Unsurprisingly, inclusive leadership has strong links to employees' perceptions of inclusion (Chung et al., 2020), especially in diverse teams (Ashikali et al., 2021). By welcoming uniqueness, individuality, and diverse contributions from followers, inclusive leaders convey that all employees are valued and appreciated in the organisation (Randel et al., 2018). Authentic leaders can similarly influence followers' perceptions of inclusion by seeking out diverse perspectives and encouraging authenticity from their followers (Cottrill et al., 2014). The attitudes expressed by the organisation itself can also influence employees' perceptions of belonging and inclusion. For example, organisational support, referring to the organisation valuing employee contributions and caring about wellbeing (Eisenberger et al., 1986), signals through both policies and actions that individual employees matter to the company (Stamper & Masterton, 2002). High levels of perceived organisational support therefore lead to high levels of perceived inclusion (Stamper & Masterton, 2002). The organisation's attitudes toward diversity are also extremely important for developing an inclusive climate for all employees. Diversity climate relates to employees' perceptions of organisational policies and practices targeted at promoting diversity (Chung et al., 2020), as well as perceptions of fair and equitable treatment of individuals from diverse backgrounds and social groups (Nishii, 2013). When organisations are successful in creating a positive diversity climate, employees feel valued and respected, resulting in higher perceptions of inclusion (Brimhall et al., 2014; Chung et al.,

2020). Both inclusive leader behaviours and organisational policies are therefore key to developing inclusive climates. While these require significant resource investments from organisations, the potential advantages appear to greatly outweigh the costs.

Outcomes. Fostering inclusion in the workplace is hugely beneficial both for employees and for the organisation itself. On an individual level, higher levels of inclusion tend to predict higher levels of job satisfaction (Acquavita et al., 2009; Brimhall et al., 2014; Mor Barak & Levin, 2002), organisational commitment (Cho & Mor Barak, 2008), intentions to stay in the organisation (Avery et al., 2008; Brimhall et al., 2014; Chung et al., 2020), and job performance (Cho & Mor Barak, 2008; Chung et al., 2020). Conversely, feeling excluded at work is associated with lower job performance (Pearce & Randel, 2004), as well as job dissatisfaction and lower perceptions of wellbeing (Mor Barak & Levin, 2002). These consequences in turn affect employee turnover, resulting in intentions to leave the organisation (Mor Barak et al., 2006).

Working in inclusive teams is also beneficial for the work group as a whole. Inclusive teams are characterised by norms of trust and reciprocity between group members, which encourage individuals to engage in organisational citizenship behaviours such as helping co-workers (Shore et al., 2011). This has been demonstrated by a number of studies focusing on overall organisational citizenship behaviour (Chung et al., 2020; Cottrill et al., 2014; Den Hartog et al., 2007), as well as research linking inclusion and workplace altruism (Stamper & Masterton, 2002). Inclusion is especially valuable in heterogeneous teams. In her research on gender-diverse work groups and conflict, Nishii (2013) found that a climate for inclusion reduces interpersonal bias and is associated with significantly lower levels of both task and relationship conflict. Although such conflict has been shown to have a negative effect on job

satisfaction, this can be mitigated entirely by the presence of an inclusive climate (Nishii, 2013).

Inclusion, Psychological Safety, and Voice Behaviour

The relationships between inclusion, psychological safety, and voice behaviour are likely to be positive and reciprocal. The uniqueness and authenticity aspects of inclusion relate to authentic self-expression at work, allowing employees to share their unique opinions and values without fear of judgment or criticism. This is supported by Chung and colleagues (2020), who note that uniqueness and voice are similar in the sense that they both value individual differences. Researchers have also posited that aspects of psychological safety such as information sharing and having a voice in the organisation are related to feelings of inclusion (Shore et al., 2011). It is therefore reasonable to assume that employees who feel more psychologically safe in the workplace will feel more included due to their ability to voice concerns and obtain information from others, while employees who feel more included will feel more psychologically safe due to their belonging and uniqueness needs being satisfied at work. This theory is supported by Vega et al. (2020), as well as research linking inclusion and psychological safety through the common factors of diversity climate (Singh et al., 2013) and inclusive leadership (Carmeli et al., 2010; Nembhard & Edmondson, 2006). Moreover, multiple studies have linked supportive or inclusive leadership to higher levels of employee voice behaviour (Jiang et al., 2020; Qi & Liu, 2017), particularly through increased psychological safety (Elsaied, 2019). As inclusion has been found to predict organisational citizenship behaviours, some authors have proposed that inclusion may also encourage more challenging yet constructive behaviours such as promotive voice (Paolillo et al., 2021). However, in Paolillo and colleagues' (2021) research, inclusive climate alone was negatively correlated with both promotive and prohibitive voice and only had a positive effect on voice

through its increase of competence, autonomy, and relatedness needs. Conversely, in Chung and colleagues' (2020) research, higher perceptions of inclusion predicted greater levels of voice behaviour. The reverse may also be true, with recent findings suggesting that engaging in promotive voice behaviour can increase employees' perceptions of inclusion (Um-E-Rubbab & Naqvi, 2020). It is likely that these constructs are built upon a shared foundation and a positive overall team climate in which employees feel safe, valued, and included in both social exchanges and organisational decision-making processes. The changes in communication methods and team interactions brought on by remote work may therefore impact these constructs, making this an important area for further research.

Remote and Flexible Work

Decades of research have examined the impact of remote work on both individuals and organisations. Research has focused both on voluntary remote work, including individual or organisation-wide initiatives, as well as involuntary remote work, such as working from home during COVID-19 lockdowns. While working remotely comes with unique opportunities that employees would not otherwise be afforded, it also creates new challenges for individuals, especially in a pandemic context.

Research has identified numerous benefits commonly experienced by remote workers. Among these are increased autonomy (Gajendran & Harrison, 2007; Gajendran et al., 2014; Wang et al., 2021), improved work-life balance (Bloom et al., 2015; Gajendran & Harrison, 2007; Grant et al., 2013), and increased job satisfaction (Bloom et al., 2015; Gajendran & Harrison, 2007; Schall, 2019). Remote work is also advantageous to organisations due to higher levels of productivity (Bloom et al., 2015; Grant et al., 2013) and increased task and contextual performance (Gajendran & Harrison, 2007; Gajendran et al., 2014). Moreover, organisations benefit from reduced office costs (Bloom et al., 2015), fewer paid sick days (Bloom et al.,

2015; Grant et al., 2013), and decreases in both turnover intent (Gajendran & Harrison, 2007) and actual turnover (Bloom et al., 2015). Such benefits make remote and flexible working arrangements extremely appealing for both employees and organisations.

However, researchers have also called attention to numerous challenges faced by remote workers. Among these are work-life interference and professional isolation. While many remote workers experience improved work-life balance, conflict may also arise between these two domains. Remote workers may find themselves working longer hours from home than from their regular office, as well as struggling to switch off from work at the end of the day (Felstead & Henseke, 2017; Grant et al., 2013; Mann et al., 2000; O’Kane et al., 2020; Spataro, 2020). These challenges are likely to be exacerbated by the ongoing pandemic. The sudden transition to remote work was especially challenging for employees without a dedicated workspace at home, as well as working parents whose children moved to remote learning (O’Kane et al., 2020; Spataro, 2020). Previous research on voluntary remote work is therefore unlikely to fully apply to a pandemic context in which individuals may have vastly different work-from-home experiences (Wang et al., 2021). A second commonly cited challenge is professional isolation, referring to feeling like one is “out of sight, out of mind” (McCloskey & Igbaria, 2003, p. 23) when it comes to job opportunities, promotions, and rewards (Cooper & Kurland, 2002). Employees often fear that their careers will be negatively impacted by remote work due to being left out of informational networks and being perceived as less committed to the organisation than their office-based peers (McCloskey & Igbaria, 2003), which may have negative consequences for employees’ job satisfaction (Morganson et al., 2010) and professional development (Cooper & Kurland, 2002). Research in this area has been mixed, with some authors arguing that perceived career prospects are unlikely to be affected by remote work (Gajendran & Harrison, 2007; McCloskey & Igbaria, 2003) and others finding professional isolation, along with a high frequency of remote work, to be detrimental to job

performance (Golden et al., 2008). However, this may depend on how highly development opportunities are valued by the organisation and whether or not remote workers have sufficient access to these opportunities (Cooper & Kurland, 2002). Two other commonly cited challenges, communication issues and social isolation, are of particular interest to the present research.

Remote Work, Communication, and Social Isolation

One of the most notable issues in the remote work literature is its impact on relational aspects of work. Belonging and relatedness are considered to be key psychological needs (Baumeister & Leary, 1995; Maslow, 1943; Ryan & Deci, 2000), but meeting these needs is much more difficult when employees are both physically and psychologically distanced from their team. Working away from the office severely disrupts communication, removing the opportunity for face-to-face communication and forcing individuals to move to other communication mediums. As face-to-face interactions provide a greater amount of physical and social cues, as well as immediate feedback, relying solely on other communication mediums can lead to less effective and satisfying interactions at work (Gajendran & Harrison, 2007). For example, employees communicating primarily over email may feel disconnected from colleagues due to a lack of facial input (Stewart et al., 2010). Even with more information-rich mediums such as video calling, communication can feel shallow and disconnected (Bolick, 2020). This also has the potential to undermine psychological safety and limit opportunities for voice and learning behaviours. Edmondson and Daley (2020) argue that virtual meetings create unnatural conversation experiences and inhibit our ability to read social cues, making it harder to judge others' reactions and determine when to speak up. However, empirical research on remote work and psychological safety, specifically post-COVID-19, is currently lacking. A recent study conducted by Bolick (2020) during the COVID-19 lockdowns is one of the first

to investigate the effect of remote work on psychological safety. His findings showed that employee perceptions of psychological safety did not vary significantly before and after organisations switched to remote work during the pandemic, although workers reported slightly greater difficulties with regard to speaking up when working remotely (Bolick, 2020).

Online-only communication can also limit opportunities for relationship building and networking (Bolick, 2020; Grant et al., 2013; Morganson et al., 2010; Stewart et al., 2010). Spontaneous connections are no longer possible as remote workers cannot participate in informal ‘water cooler’ conversations and office gossip (Bolick, 2020; Stewart et al., 2010). This also affects information sharing in the workplace. Remote workers may miss out on key work-related information as they are less likely to overhear ideas or engage in spontaneous interactions with colleagues (Grant et al., 2013; Stewart et al., 2010). While informal interactions are still possible even without being face-to-face, online interactions can lack intimacy and centre solely around work-related topics, leaving little room for non-task-related socialising or gossip (Wang et al., 2021). Moreover, even formal communication can suffer, leaving employees out of the loop and unaware of work-related news or key events (Dolan, 2011). Given the multitude of communication barriers faced by remote workers, it is unsurprising that many experience feelings of disconnection, loneliness, social isolation, and exclusion. Both Stewart and colleagues (2010) and Dolan (2011) conducted research on remote-working academic faculty members, finding that many struggled with social isolation, a lack of collegiality with co-workers, and a lack of belonging to the organisation, often due to issues such as limited and ineffective communication. Similarly, 57% of the interviewees in Mann and colleagues’ (2000) research named social isolation as a disadvantage of remote work, lamenting the loss of social contact and camaraderie they experienced in an office environment. These findings were supported by Mann and Holdsworth (2003), whose remote-working interviewees reported feelings of loneliness, which none of their office-working

counterparts experienced. Feelings of loneliness and social isolation may arise even after a short period of remote work, such as in the case of the nine-month remote work trial evaluated by Bloom and colleagues (2015). Many employees who worked from home expressed a desire to return to the office a few months into the experiment, and 50% of these employees returned to the office upon the end of the trial, citing reasons such as loneliness and social isolation (Bloom et al., 2015). In organisations with both office and remote workers, team members may also have vastly different perceptions of their team. For example, in a study comparing remote and office-based working arrangements, remote workers were found to have lower perceptions of inclusion and reported feeling excluded by their office-working counterparts (Morganson et al., 2010).

More recent research during the COVID-19 pandemic continues to draw attention to the prevalence of social isolation and loneliness in remote workers (Bolick, 2020; Wang et al., 2021). The need for face-to-face interactions in the workplace appears to be especially vital in the context of a pandemic. When individuals do not receive sufficient social support at home and interaction with others outside of one's household is impossible, in-person interactions with colleagues take on an even greater importance (Wang et al., 2021). For employees who were previously unaccustomed to working from home, this lack of social contact and communication can be extremely detrimental. Further research into this global shift to remote work is therefore necessary to determine the extent of these effects on employees.

Remote Work Frequency

Although research has identified numerous challenges remote and flexible workers face in regard to communication and relatedness at work, other factors may also be important to consider when evaluating such working arrangements. Specifically, the frequency or intensity of remote work may play an important role in the extent to which employees are affected. As

research on remote work frequency has yet to investigate its effects on psychological safety, voice behaviour, inclusion, or belonging, tentative inferences may be made from existing literature. For example, in the case of remote work frequency and job satisfaction, a positive relationship has been observed in recent research (Schall, 2019). However, other researchers argue that moderate amounts of remote work may be optimal, with low- and high-frequency remote workers instead experiencing lower levels of job satisfaction (Golden & Veiga, 2005). While low-frequency remote workers suffer from a lack of autonomy and flexibility, their high-frequency counterparts experience greater difficulties with communication and social isolation (Golden & Veiga, 2005). This is supported by meta-analytic evidence showing that working remotely for more than 2.5 days per week can damage relationships with co-workers (Gajendran & Harrison, 2007). In regard to job performance, a study by Golden and colleagues (2008) found the interaction of professional isolation and a high frequency of remote work to have a detrimental effect on flexible workers' job performance, although frequency of remote work was not itself correlated with professional isolation. Notably, the authors also found that these negative effects on job performance could be alleviated by better access to communication technology and more face-to-face interactions (Golden et al., 2008). While there is currently no consensus on the effects of remote work frequency, the findings of Golden and Veiga (2005), as well as Gajendran and Harrison (2007), suggest that a high frequency of remote work can be detrimental to relatedness at work. This makes remote work frequency an important and highly relevant variable to explore in the present research.

The Present Research

As many organisations are now transitioning from fully remote to flexible working arrangements, it is critical to investigate whether this increased flexibility can mitigate some of the negative aspects of remote work. While recent research has investigated the impact of

involuntary remote work during COVID-19 (Bolick, 2020; Wang et al., 2021), the literature on flexible work in this context is currently lacking. The present study aimed to address this gap and explore the impact of flexible work on knowledge workers' perceptions of psychological safety, voice behaviour, inclusion, and belonging using a short-term longitudinal design. It is unclear whether these constructs are stable or whether individual perceptions can fluctuate on a day-to-day basis, as well as whether potential fluctuations can affect individuals' overall levels of these constructs. Research has also yet to investigate how these constructs can change in response to situational factors, which may be especially important in today's uncertain and rapidly changing COVID-19 context. As well as changing work location, situational factors such as lockdowns and workplace responses to COVID-19 may also affect employees' daily experiences at work. It is possible that these daily experiences will then cause fluctuations in employees' daily, and potentially even overall, levels of psychological safety, voice behaviour, inclusion, and belonging. This makes research designs that can examine both interindividual and intraindividual variability ideal.

The present study therefore uses an interval contingent daily diary design over 10 working days. Diary studies provide a series of repeated self-report measures, increasing validity and reliability by reducing recall bias and measurement error (Bolger et al., 2003). Such designs have the advantage of observing phenomena in their natural contexts (Bolger et al., 2003) and examining variability both within and between persons (Bolger & Laurenceau, 2013). Importantly, this allows for the examination of short-term fluctuations in variables which are predicted to vary over time due to situational conditions (Ohly et al., 2010). The current study specifically examines daily fluctuations in perceptions of psychological safety, self-rated voice behaviour, and perceptions of inclusion and belonging as a function of daily work location (office or remote). This allows for the exploration of within-person temporal effects on an immediate, same-day basis, as well as between-person comparisons.

Based on the previously reviewed findings about remote work and its detrimental impact on the quantity and quality of interactions with others, the following within-person hypotheses were proposed:

Hypothesis 1: Daily remote work will negatively predict daily psychological safety. Employees' perceptions of psychological safety will be lower on remote-working days as opposed to office-working days.

Hypothesis 2: Daily remote work will negatively predict daily voice behaviour. Employees' will report lower levels of self-rated voice behaviour on remote-working days as opposed to office-working days.

Hypothesis 3: Daily remote work will negatively predict daily inclusion. Employees' perceptions of inclusion will be lower on remote-working days as opposed to office-working days.

Hypothesis 4: Daily remote work will negatively predict daily belonging. Employees' perceptions of belonging will be lower on remote-working days as opposed to office-working days.

As the frequency of remote work was expected to vary between participants, the number of days worked remotely on an average/typical week, as well as during the 10-day study period, was also taken into account. Because a higher frequency of remote work may be detrimental to workplace communication and feelings of relatedness (Gajendran & Harrison, 2007; Golden & Veiga, 2005), the following between-person hypotheses were proposed:

Hypothesis 5: A higher frequency of remote work will negatively predict psychological safety. Employees who work remotely more frequently will have lower average perceptions of psychological safety than employees who work remotely less frequently.

Hypothesis 6: A higher frequency of remote work will negatively predict voice behaviour. Employees who work remotely more frequently will report lower average levels of self-rated voice behaviour than employees who work remotely less frequently.

Hypothesis 7: A higher frequency of remote work will negatively predict inclusion. Employees who work remotely more frequently will have lower average perceptions of inclusion than employees who work remotely less frequently.

Hypothesis 8: A higher frequency of remote work will negatively predict belonging. Employees who work remotely more frequently will have lower average perceptions of belonging than employees who work remotely less frequently.

Method

Design

The current study employed an interval-contingent diary study design. Participants first completed an initial baseline survey, followed by 10 short daily surveys over 10 consecutive working days. This was a repeated measures multilevel design, with days nested within persons. This design allowed for within-person comparisons using daily data (Level 1 variables), as well as between-person comparisons using baseline and averaged daily data (Level 2 variables).

Participants

Recruitment

50 full-time office-based employees with flexible/hybrid working arrangements were recruited from across New Zealand. Flexible/hybrid working arrangements were defined as having the ability to work remotely, from a different environment or location than the

participant's usual workplace. This included both formal (e.g., working remotely on specific days) and informal arrangements (e.g., working remotely at one's own discretion). Participants were also required to be 18 years of age or older to participate in the study. This sample size was considered sufficient for a daily diary study as a sample size of at least 30 has been recommended for Level 2 variables, or participants, in multilevel designs (Ohly et al., 2010; Scherbaum & Ferreter, 2009). Participants were recruited through personal contacts, snowball sampling, and the University of Canterbury Applied Psychology Alumni group on LinkedIn. The online recruitment advertisement and recruitment flyer can be found in Appendix A and Appendix B, respectively. These recruitment materials included the researcher's email address, allowing potential participants to voluntarily initiate contact with the researcher if they were interested in taking part or learning more about the study.

As a research incentive and token of appreciation, participants were entered into a prize draw upon completing at least seven daily surveys and were given three entries for completing all 10 daily surveys. 10 \$50 gift cards were offered in the prize draw. All 10 gift cards were drawn randomly, and winning participants were contacted by email.

Demographics

All 50 participants were included in the final analyses. On average, participants completed 7.88 out of 10 days, and 25 participants completed all 10 daily surveys. Participant ages ranged from 23 to 73 ($M = 41.06$, $SD = 12.78$). 27 participants identified as female (54%) and 23 identified as male (46%). 37 participants (74%) identified as Pākehā/New Zealand European, seven (14%) as Asian, six (12%) as Other European, one (2%) as Māori, and one (2%) as African. The sum of these ethnic groups is 104% as participants were able to select multiple ethnicities. Organisational tenure ranged from less than a year to 30 years, with an average tenure of 4.78 years ($SD = 6.54$). Participants worked in a variety of industries, with a

large number of employees from “Government, Public Administration, and Defence” (50%), “Professional, Scientific, and Technical Services” (22%), and “Education and Training” (8%).

Analysis of Daily Non-Response

In order to test for patterns in the missing data, a missing value analysis was conducted using expectation maximisation in SPSS Version 23 (IBM Corp., 2015). Little’s MCAR test was run on all daily scale variables, as well as the Day variable reflecting whether or not participants completed each of the 10 days. A significant chi-square result was obtained ($\chi^2 = 65.98(33)$, $p = .001$), indicating that the data were not missing completely at random.

Missing data patterns were investigated further. These are shown in Table 1. Out of 500 possible daily survey responses across 50 participants, 439 of these were completed, resulting in 439 valid cases. 61 out of 500 daily surveys were not completed and were therefore treated as missing data. These included participants who did not complete daily surveys due to forgetting, sickness, unplanned leave from work, and other potential reasons unknown to the researcher. 347 daily surveys did not have any missing data on the variables of interest. However, participants were given the option to answer “did not experience today” on all daily items if they had not had any relevant interactions with their team on a given day. Because of this, some participants did not provide answers for a particular scale or for multiple scales. It is therefore unsurprising that the data were not missing completely at random, as all daily scales related to team interactions and were highly correlated with each other (see Table 7 in the Results section for descriptive statistics and correlations).

Table 1*Missing Data Patterns*

Number of Cases	Day	Psychological Safety	Voice Behaviour	Inclusion	Belonging
347					
10		x			
19		x	x		
39			x		
8		x	x	x	x
61	x	x	x	x	x

Note: 'x' represents missing variables. Patterns with less than 1% of cases (5 or fewer) are not displayed.

A binary logistic regression was conducted to examine the effects of baseline levels of psychological safety, voice behaviour, inclusion, and belonging on the likelihood of participants missing daily surveys. The model was statistically significant, $\chi^2(4) = 30.28, p < .001$. Participants higher in baseline voice behaviour were 2.04 times more likely to complete a daily survey than participants lower in baseline voice behaviour, $B = .71, p < .001$. As voice behaviour is related to speaking up and voicing ideas, suggestions, and concerns at work, it may also affect whether or not individuals wish to speak up about and share their experiences of their work with others, such as by completing a daily survey. It is therefore likely that participants who missed a greater number of days may have differed systematically from those who skipped fewer days. However, it is also possible that individuals who tend to engage in greater levels of voice behaviour self-selected into the study out of a desire to share their experiences of their work. Baseline psychological safety, inclusion, and belonging were not

significant predictors of daily non-response. Overall, these missing data patterns are not overly concerning and suggest that systematic missingness should not pose a serious problem for further analyses.

Materials

The baseline and daily surveys were created using Qualtrics survey software. Internet access (on either a computer or mobile device) was required to take part in the study.

Baseline Measures

All baseline survey items can be found in Appendix C. All items, with the exception of the calendar for date selection and the two summary opt-out questions, were optional, prompting but not requiring a response from participants if they chose to skip an item. All baseline scales, not including demographics, work-related questions, and team-related questions, used a 7-point Likert response scale ranging from (1) “strongly disagree” to (7) “strongly agree”, with (4) “neither agree nor disagree” as a midpoint. This allowed for sufficient variation in participant responses. Endpoint and midpoint rather than full labelling was used for all scales, meaning that only anchors 1, 4, and 7 were verbally labelled on the response scale. This avoids the potential ambiguity and subjectivity caused by the wording of additional labels (Sauro & Lewis, 2020). The use of a midpoint also avoids a forced choice format, allowing participants to provide a neutral response.

Demographic Questions. Participants were asked their year of birth, gender, ethnicity, and industry.

Work-Related Questions. Participants were asked questions relevant to their working arrangements: their organisational tenure, their role tenure, whether they worked remotely prior to New Zealand’s first COVID-19 lockdown, how long they have been working remotely in

their current role, how often they work remotely on an average/typical week, and which work location they prefer (office or remote work). Participants were also asked, “Is there anything else you would like to share about your working arrangements?”, allowing them to expand upon their answers.

Team-Related Questions. Participants were asked questions relevant to their team: how big their team is, how often they have work-related meetings with their team (either virtually or in person), whether they would prefer more or fewer meetings, and how important teamwork is for their role (on a 7-point scale from (1) “not at all important” to (7) “very important”, with (4) “moderately important” as a midpoint). Participants were also asked, “Is there anything else you would like to share about your team?”, allowing them to expand upon their answers.

Psychological Safety Scale (PS). Edmondson’s (1999) 7-item psychological safety scale was adapted for use in two Master of Science in Industrial and Organisational Psychology dissertations. A scale development was conducted by the researcher and by Madeline White, another Master of Science in Industrial and Organisational Psychology candidate. Both researchers have experience and training in the field of scale development. While Edmondson’s (1999) scale has been widely used in the psychological safety literature (Carmeli et al., 2010; Detert & Burris, 2007; Erkutlu & Chafra, 2015a; Erkutlu & Chafra, 2015b; Nembhard & Edmondson, 2006; Sherf et al., 2021; Walumbwa & Schaubroeck, 2009), both researchers raised concerns about its content validity and the suitability of particular items. Furthermore, many of these studies use adapted versions of Edmondson’s (1999) scale (Newman et al., 2017), suggesting that improvements could be made to the original items. A scale development was conducted to develop a scale that more accurately captures individual perceptions of

psychological safety and more closely matches Edmondson's (1999) definition of the construct.

Item Generation. After conducting a literature review, the researchers jointly developed a pool of 11 potential psychological safety items (see Table 2), including five items from Edmondson's (1999) original scale. After consulting with subject matter experts, the remaining two items from Edmondson (1999) were not included in this item pool due to the researchers' concerns about construct contamination and content validity. "People on this team sometimes reject others for being different (R)" was thought to relate too closely to diversity and inclusion, while "No one on this team would deliberately act in a way that undermines my efforts" seemed better suited to measuring incivility rather than psychological safety.

Table 2

Item Pool for Adapted Psychological Safety Scale

Item Number	Item	Reversed	New or Adapted Item
PS01	If I make a mistake on this team, it will be held against me.	(R)	Adapted from Edmondson (1999)
PS02	I feel comfortable bringing up problems and difficult issues on this team.		Adapted from Edmondson (1999)
PS03	I feel safe taking risks on this team.		Adapted from Edmondson (1999)
PS04	It is difficult to ask others on my team for help.	(R)	Adapted from Edmondson (1999)
PS05	I feel like my unique views and opinions are valued by my team.		Adapted from Edmondson (1999)
PS06	I feel comfortable disagreeing with others on this team.		New

PS07	It is risky to speak up on this team.	(R)	New
PS08	I may face negative consequences for speaking up on this team.	(R)	New
PS09	I can talk openly with my team about work-related issues.		New
PS10	I feel comfortable expressing opinions that are different from those of my team.		New
PS11	I feel comfortable speaking up in front of my team.		New

Content Validity Evaluation. In order to establish content and face validity, nine subject matter experts were consulted, including both lecturers and students from the Master of Science in Industrial and Organisational Psychology programme at the University of Canterbury. Subject matter experts were provided with the following definition of psychological safety:

Psychological safety is defined as “a shared belief held by members of a team that the team is safe for interpersonal risk taking” (Edmondson, 1999, p. 350). Employees who feel psychologically safe feel that it is safe to speak up, ask questions, make suggestions, seek help, and point out mistakes on their team (O’Donovan & McAuliffe, 2020).

Subject matter experts then reviewed and rated these 11 items using two rating scales. Firstly, items were judged based on how well they matched the above definition, with ratings from (1) “poor match” to (5) “excellent match” (Dunn et al., 1999). Secondly, items were judged as either (1) “unnecessary”, (2) “useful”, or (3) “essential” (Lawshe, 1975). Subject matter experts were also asked to provide comments to explain their reasoning or point out potential problems with the items (Dunn et al., 1999).

Item means ranged from 2.56 to 4.22 on the first rating scale (see Table 3). The lowest rated item was “I feel safe taking risks on this team” ($M = 2.56$, $SD = 1.07$) and the highest rated item was “I am comfortable expressing opinions that are different from those of my team” ($M = 4.22$, $SD = 0.79$).

Table 3

Content Validity Evaluation: Item Match to Definition

Item Number	Item	Mean	Standard Deviation
PS03	I feel safe taking risks on this team.	2.56	1.07
PS05	I feel like my unique views and opinions are valued by my team.	3.22	1.31
PS07	It is risky to speak up on this team. (R)	3.33	1.56
PS08	I may face negative consequences for speaking up on this team. (R)	3.44	1.17
PS01	If I make a mistake on this team, it will be held against me. (R)	3.67	1.33
PS06	I feel comfortable disagreeing with others on this team.	3.67	1.33
PS04	It is difficult to ask others on my team for help. (R)	3.78	1.13
PS09	I can talk openly with my team about work-related issues.	3.78	1.13
PS11	I am comfortable speaking up in front of my team.	3.89	1.20
PS02	I feel comfortable bringing up problems and difficult issues on this team.	4.11	0.99
PS10	I am comfortable expressing opinions that are different from those of my team.	4.22	0.79

Item means ranged from 1.89 to 2.67 on the second rating scale (see Table 4). The lowest rated item was “I feel safe taking risks on this team” ($M = 1.89$, $SD = 0.74$) and the two

highest rated items were “If I make a mistake on this team, it will be held against me (R)” ($M = 2.67, SD = 0.47$) and “I am comfortable expressing opinions that are different from those of my team” ($M = 2.67, SD = 0.47$).

Table 4

Content Validity Evaluation: Item Essential to Scale

Item Number	Item	Mean	Standard Deviation
PS03	I feel safe taking risks on this team.	1.89	0.74
PS05	I feel like my unique views and opinions are valued by my team.	2.00	0.82
PS09	I can talk openly with my team about work-related issues.	2.00	0.67
PS07	It is risky to speak up on this team. (R)	2.33	0.82
PS04	It is difficult to ask others on my team for help. (R)	2.44	0.68
PS08	I may face negative consequences for speaking up on this team. (R)	2.44	0.50
PS06	I feel comfortable disagreeing with others on this team.	2.50	0.71
PS02	I feel comfortable bringing up problems and difficult issues on this team.	2.56	0.50
PS11	I am comfortable speaking up in front of my team.	2.56	0.50
PS01	If I make a mistake on this team, it will be held against me. (R)	2.67	0.47
PS10	I am comfortable expressing opinions that are different from those of my team.	2.67	0.47

Item Reduction. The researchers examined the ratings and comments provided by the subject matter experts in order to decide which items to retain in the final scale. There was some overlap between ratings on the two content validity rating scales. Items PS03 and PS05

were the lowest rated on both scales, while PS10 was the highest rated item on both scales. In the comments, seven of the nine subject matter experts raised concerns about the meaning of “taking risks” in item PS03, “I feel safe taking risks on this team”. This item was considered to be vague and subjective, as well as potentially problematic for employees in more safety-conscious industries where risk-taking is discouraged. Multiple commenters also mentioned that item PS05, “I feel like my unique views and opinions are valued by my team”, might instead measure belonging, inclusion, or feeling valued at work. Other comments also mentioned preferring one item over another similar item, which aided in the removal of redundant items. After taking subject matter experts’ ratings and comments, as well as adequate content coverage, into account, five items were removed from the scale.

Final Scale Version. The final 6-item version of the adapted psychological safety scale is shown in Table 5.

Table 5

Final Adapted Psychological Safety Scale

Item Number	Item	Reversed	New or Adapted Item
PS01	If I make a mistake on this team, it will be held against me.	(R)	Adapted from Edmondson (1999)
PS02	I feel comfortable bringing up problems and difficult issues on this team.		Adapted from Edmondson (1999)
PS04	It is difficult to ask others on my team for help.	(R)	Adapted from Edmondson (1999)
PS09	I can talk openly with my team about work-related issues.		New

PS10	I feel comfortable expressing opinions that are different from those of my team.	New
PS11	I feel comfortable speaking up in front of my team.	New

The scale was presented with the instruction, “Thinking specifically about the team you work with, please rate the extent to which you agree or disagree with the following statements.” Edmondson’s (1999) study using her original psychological safety scale obtained a mean score of 5.25, a standard deviation of 1.03, and an internal reliability of $\alpha = .82$. In the present study, the adapted psychological safety scale obtained an internal reliability of $\alpha = .85$.

Voice Behaviour Scale (VB). Van Dyne and LePine’s (1998) promotive voice behaviour scale was used as a baseline measure due to its widespread use in the voice and psychological safety literature (Detert & Burris, 2007; Detert & Edmondson, 2011; Erkutlu & Chafra, 2015a; Erkutlu & Chafra, 2015b; Subhakaran & Dyaram, 2018; Walumbwa & Schaubroeck, 2009). After reviewing the 6-item scale, the item “This particular co-worker keeps well informed about issues where his/her opinion might be useful to this work group” was removed from the scale due to concerns about face and content validity. The scale wording was adapted to suit the current study, including changing “this particular co-worker” to “I” and changing “work group” to “team”. The scale was presented with the instruction, “Thinking about your work in general, please rate the extent to which you agree or disagree with the following statements”. An example item from the adapted 5-item scale is, “I communicate my opinions about work-related issues even if my opinion is different from others on my team”. According to Van Dyne and LePine’s (1998) original study, mean self-ratings of voice behaviour at two different times range from 5.50 to 5.63 and standard deviations range from

0.90 to 0.99, with an internal reliability of $\alpha = .82$ and a test-retest reliability of $r = .78$. In the present study, an internal reliability of $\alpha = .83$ was obtained using the adapted 5-item scale.

Inclusion Scale (IN). The Perceived Insider Status Scale by Stamper and Masterson (2002) was used to measure perceptions of inclusion. The current study uses the authors' revised 6-item scale, including three reverse-coded items. Items were adapted to refer to inclusion in a team rather than in the organisation as a whole. The scale was presented with the instruction, "Thinking specifically about the team you work with, please rate the extent to which you agree or disagree with the following statements." The scale includes items such as, "I feel I am an 'insider' in my team". Using their original 5-point response scale, Stamper and Masterson (2002) obtained a mean inclusion score of 3.71, a standard deviation of 0.74, and an internal reliability of $\alpha = .88$. The scale obtained a similarly high internal reliability of $\alpha = .90$ in the present study.

Belonging Scale (BL). The Work Group Inclusion Scale by Chung et al. (2020) was used as a baseline measure for belonging. Although the scale is made up of two correlated factors, belonging and uniqueness, the current study used only the 5-item belonging scale as the 5-item uniqueness scale was considered too conceptually similar to the psychological safety construct and was excluded to avoid construct overlap. Minor changes were made to item wording, such as changing "work group" to "team" to fit with the language used throughout the rest of the survey. The belonging scale was presented with the instruction, "Thinking specifically about the team you work with, please rate the extent to which you agree or disagree with the following statements." Using their original 5-point response scale, Chung et al. (2020) obtained a mean belonging score of 3.92 with a standard deviation of 0.73. High construct, convergent, discriminant, and criterion-related validity have been demonstrated, as well as a

high internal reliability of $\alpha = .91$ for the belonging scale (Chung et al., 2020). The scale also obtained an internal reliability of $\alpha = .91$ in the present study.

Final Open Question. Lastly, participants were asked, “Is there anything else you'd like to add about yourself, your work, or the survey itself?”, allowing them to provide additional information they considered relevant or important.

Daily Measures

All daily survey items can be found in Appendix D. All items were optional, prompting but not requiring a response from participants if they chose to skip an item. A review of the existing literature found no suitable daily scales for psychological safety, voice behaviour, inclusion, or belonging. For this reason, a small number of items from each baseline scale was adapted for each daily scale. Adequate content coverage and suitability for a daily context were considered when selecting these items. 10 items were chosen in total from the four baseline scales in order to reduce response load for participants and keep the response time below 5 minutes. All daily scales were presented together, preceded by the instruction, "Thinking specifically about your experience at work today, please rate the extent to which you agree or disagree with each of these statements. If a statement presented below did not apply to you today, please select "Did Not Experience Today". Today...". The response scale was identical to that of the baseline scales but included “did not experience today”, coded as (99) for data analysis.

Daily Work Location. Participants were asked where they worked from each day. They were given three options: “my usual workplace/office”, “remotely (e.g., home, coffee shop, co-working space)”, or “both from my usual workplace/office and remotely”.

Daily Communication Mediums. Participants were asked how they communicated with others from their workplace each day. They were presented with the following options, adapted from Bolick (2020): in person, video calls, audio-only calls, email, instant messaging, or other. Participants could also answer, “Did not communicate with others from my workplace today”.

Daily Psychological Safety Scale (DPS). 3 items from the baseline psychological safety scale were adapted to create a daily measure of psychological safety. One item, “It was difficult to ask others on my team for help”, was reverse-coded. The internal reliability for this scale ranged from $\alpha = .63$ to $\alpha = .91$, with a mean of $\alpha = .76$, over the 10-day study period.

Daily Voice Behaviour Scale (DVB). 3 items from the baseline voice behaviour scale were adapted to create a daily measure of voice behaviour. An example item is, “I spoke up in my team with ideas or suggestions”. The internal reliability for this scale ranged from $\alpha = .67$ to $\alpha = .95$, with a mean of $\alpha = .84$, over the 10-day study period.

Daily Inclusion Scale (DIN). 2 items from the baseline inclusion scale were adapted to create a daily measure of inclusion. One item, “My team made me feel left out”, was reverse-coded. The internal reliability for this scale ranged from $\alpha = .44$ to $\alpha = .81$, with a mean of $\alpha = .69$, over the 10-day study period.

Daily Belonging Scale (DBL). 2 items from the baseline belonging scale were adapted to create a daily measure of belonging. An example item is, “I was treated as a valued member of my team”. The internal reliability for this scale ranged from $\alpha = .65$ to $\alpha = .90$, with a mean of $\alpha = .78$, over the 10-day study period.

Open-Ended Questions. Participants were asked three open-ended questions to obtain more details about their experiences and expand upon their responses. One item referred to

negative experiences: “Did anything happen today that made you feel excluded, ignored, or unsafe to speak up? Please add details if you feel comfortable doing so.” The second item referred to positive experiences: “Did anything happen today that made you feel included, listened to, or safe to speak up? Please add details if you feel comfortable doing so.” Participants were also asked, “What was the highlight of your day, if you feel comfortable sharing?” in order to end the daily survey on a positive note.

Final Reflection Question. At the end of the Day 10 survey, participants were also asked, “Finally, is there anything else you would like to add about your experience taking part in this study?”, allowing them to reflect on their participation in the study, their experience with flexible work, or anything else they wanted to share.

Ethical Approval

This project was reviewed and approved by the University of Canterbury Human Research Ethics Committee. HREC reference number: 2021/110.

Procedure

As all recruitment materials included the researcher’s email address, potential participants voluntarily initiated contact with the researcher. Following this, the researcher sent an invitation email to those who expressed an interest in the study. This email included an information sheet about the study (Appendix E), as well as the link to begin the baseline survey if they wished to take part in the study. Confidentiality was maintained by assigning a unique code to each participant, allowing participant responses to be linked together and all other identifying information to be removed from the dataset before data analysis.

All surveys were created and distributed through the Qualtrics survey platform using personalised links for each participant. The information sheet was shown again at the beginning

of the baseline survey. Participants were asked to indicate their informed consent by clicking the forward arrow and continuing with the survey. Participants were also reminded that they could withdraw from the study at any time by closing their browser, unsubscribing from survey emails, or contacting the research team. At the end of the baseline survey, participants indicated whether they would like personal and/or overall summaries of the study results. A calendar was also included for participants to select 10 consecutive working days during which to complete the diary component of the study.

At 4:30pm on each of their chosen days, participants received an email with an invitation to complete a daily survey. Each daily survey invitation email included an attached information sheet if participants wished to reread this information at any point, and the contact information for the research team and helplines available in New Zealand were repeated at the start of each survey. If participants did not complete the daily survey before 7:30pm, they were sent an automated reminder email. Each daily survey expired at 12:00am the following day.

Analysis

Data from the baseline survey and all 10 daily surveys were merged and reformatted in SPSS Version 23 (IBM Corp., 2015), creating 10 cases or rows for each participant. As the current study used day-level (Level 1) data nested within persons (Level 2), Mplus Version 8.2 (Muthén & Muthén, 2017) was used for all further analyses, allowing for multilevel modelling to be conducted. Missing data were handled using full information maximum likelihood estimation. This allowed for all available data from the 439 valid cases to be used in analyses, excluding missing variables rather than entire cases.

Within-person hypotheses were tested using Level 1 day-level data. Person-mean variables were created for psychological safety, voice behaviour, inclusion, and belonging, reflecting each participant's average over the 10-day study period. Person-mean centred

variables were then created to represent how participants' daily scores deviated from their mean scores. All person-mean centred variables were then regressed on daily work location to examine whether participants' daily work location predicted daily perceptions of the four variables of interest.

Between-person hypotheses were tested using Level 2 person-level data. Frequency of remote work was measured by two different variables – remote-working days on an average/typical week, as reported in the baseline survey, as well as frequency of remote work over the 10-day study period (not including hybrid work). All analyses controlled for organisational tenure and baseline levels of psychological safety, voice behaviour, inclusion, and belonging. Person-mean levels of psychological safety, voice behaviour, inclusion, and belonging were regressed on the two different remote work frequency variables to examine whether average daily levels of the variables of interest could be predicted by remote work frequency.

Intraclass Correlations

Intraclass correlations (ICCs) were computed to determine the amount of total variance that could be attributed to between-person factors. These are shown in Table 6 below. ICCs for day-level variables ranged from 29% to 48%, similar to the ICC values typically obtained in most diary studies (Bolger & Laurenceau, 2013). A large proportion (52%-71%) of the variance was therefore attributed to within-person variability, suggesting that multilevel modelling was appropriate for the current study.

Table 6*Intraclass Correlation Coefficients for Within-Person Variables*

Variable	ICC Value
Daily Work Location	.29
Daily Psychological Safety	.41
Daily Voice Behaviour	.34
Daily Inclusion	.48
Daily Belonging	.43

Results

Descriptive Statistics

Descriptive statistics and correlations were calculated for baseline variables (Level 2), daily person-mean variables (Level 2), and daily person-mean centred variables (Level 1). These are shown in Table 7 below. Participants reported working an average of 2.38 days remotely on a typical week. Across the 10-day study period, 160 observations were obtained for office work and 244 for remote work, with an average remote work frequency of 4.76 days per participant during the study. While 45 observations of hybrid work (working both from the office and remotely within the same workday) were also obtained, these were excluded from further analyses, allowing for the comparison of solely office and solely remote work. Participants reported high levels of baseline psychological safety ($M = 5.76$), voice behaviour ($M = 5.47$), inclusion ($M = 5.83$), and belonging ($M = 5.54$). Similarly, participants tended to report high levels of psychological safety ($M = 5.88$), voice behaviour ($M = 5.95$), inclusion ($M = 5.95$), and belonging ($M = 5.84$) on a daily basis.

9 Baseline Belonging	5.54	1.25	.15**	-.05	.37**	.18**	.08	.59**	.47**	.88**						
10 Daily Psychological Safety	5.88	.72	.48**	-.19**	.48*	.27**	.17**	.38**	.40**	.40**	.38**	.44**	.51**	.53**	-.10	.09
11 Daily Voice Behaviour	5.95	.61	.33**	-.09*	.32**	.26**	.19**	.36**	.38**	.47**	.53**	.78**	.41**	.45**	-.10	.11*
12 Daily Inclusion	5.95	.75	.13**	-.06	.31**	.00	-.11*	.41**	.15**	.67**	.61**	.63**	.60**	.72**	-.07	.08
13 Daily Belonging	5.84	.72	.27**	-.08	.40**	.08	.01	.57**	.42**	.77**	.76**	.64**	.69**	.84**	-.13**	.13**
14 Daily Work Location	.60	.49														
15 Daily Hybrid Work	.10	.30														

* $p < 0.05$; ** $p < 0.01$.

Gender: 1 = Male; 2 = Female. Daily Work Location: 0 = Usual office/workplace; 1 = Remote. Daily Hybrid Work: 0 = No; 1 = Yes.

Values below the diagonal are between-person correlations using baseline and person-mean variables. Values above the diagonal are day-level correlations calculated with person-mean centred data. $N_{\text{between}} = 50$, $N_{\text{within}} = 439$.

Hypothesis Testing

A multilevel regression was conducted in order to test all within- and between-person hypotheses within a single model, accounting for the interdependence of the data. Daily work location was used to predict the variables of interest on a within-person level, while frequency of remote work was used on a between-person level. All analyses controlled for organisational tenure and baseline levels of the variables of interest.

Predictors of Psychological Safety

Table 8 shows the regression results for daily and average daily psychological safety. On a within-person level, Hypothesis 1 predicted that daily psychological safety would be negatively related to daily work location, meaning that participants would experience lower levels of psychological safety on remote-working days when compared with office-working days. The estimate for daily work location predicting daily psychological safety was significant at the more liberal $p < .10$ level (estimate = $-.18$, $p = .053$, 95% CI $-.35, .00$), providing support for Hypothesis 1. Considering the arbitrary nature of the $p < .05$ cut-off, many researchers argue for a greater focus on meaningful interpretation rather than the use of rigid, dichotomous significance cut-offs (Aguinis & Vandenberg, 2014; Haig, 2017). Researchers such as Haig (2017) and Halsey and colleagues (2015) also maintain that small p -values which barely exceed $p < .05$ will be just as meaningful as a p -value of $.049$. Confidence intervals can also provide insight into both the magnitude and probability of an effect (Sim & Reid, 1999). While the null value lies within the 95% confidence interval, implying that a population difference of 0 between psychological safety on remote-working days and office-working days is possible, these results nevertheless suggest that a meaningful effect may still exist in the population (Sim & Reid, 1999), specifically in the predicted negative direction. Given the controversy around p -values in recent literature, regarding this result as significant is considered to be the most

appropriate interpretation. This means that, on days when participants worked remotely as opposed to from their usual office, they were also more likely to report lower perceptions of psychological safety.

On a between-person level, Hypothesis 5 predicted that average daily psychological safety would be negatively related to remote work frequency. Hypothesis 5 was not supported. Contrary to expectations, average remote work per week predicted higher levels of average daily psychological safety (estimate = .12, $p = .017$, 95% CI .02, .23), although remote work frequency was not a significant predictor (estimate = -.02, $p = .559$, 95% CI -.08, .05). This indicates that participants who reported working remotely more often on a typical week had higher levels of average daily psychological safety than participants who reported working remotely less often on a typical week. Including two control variables in the analysis found that organisational tenure was a small but significant predictor of average daily psychological safety (estimate = .05, $p < .05$, 95% CI .03, .07), while baseline psychological safety was not (estimate = .01, $p = .858$, 95% CI -.11, .14).

Table 8

Predictors of Daily and Average Daily Psychological Safety

Within-Person Predictors (Level 1)					
	Estimate	Standard Error	Two-Tailed p -Value	Lower 95% CI	Upper 95% CI
Intercept	.05	.05	.307	-.05	.15
Daily Work Location	-.18 ⁺	.09	.053	-.35	.00
Residual Variance in Outcome	.62 ^{**}	.11	< .001	.40	.85

Between-Person Predictors (Level 2)					
	Estimate	Standard Error	Two-Tailed <i>p</i> -Value	Lower 95% CI	Upper 95% CI
Average Remote Work Per Week	.12*	.05	.017	.02	.23
Remote Work Frequency	-.02	.03	.559	-.08	.05
Organisational Tenure	.05**	.01	< .001	.03	.07
Baseline Psychological Safety	.01	.06	.858	-.11	.14
Residual Variance in Outcome	.37**	.07	< .001	.23	.52

⁺*p* < .10; **p* < .05; ***p* < .01.

Predictors of Voice Behaviour

Table 9 shows the regression results for daily and average daily voice behaviour. On a within-person level, Hypothesis 2 predicted that daily voice behaviour would be negatively related to daily work location, meaning that participants would engage in lower levels of voice behaviour on remote-working days when compared with office-working days. The estimate for daily work location predicting daily voice behaviour was significant at the more liberal $p < .10$ level (estimate = $-.17$, $p = .058$, 95% CI $-.34, .01$), providing support for Hypothesis 2. This means that, on days when participants worked remotely as opposed to from their usual office, they were also more likely to report lower levels of voice behaviour.

On a between-person level, Hypothesis 6 predicted that average daily voice behaviour would be negatively related to remote work frequency. Hypothesis 6 was not supported, with both average remote work per week (estimate = .09, $p = .140$, 95% CI -.03, .20) and a higher frequency of remote work (estimate = -.001, $p = .969$, 95% CI -.06, .06) failing to significantly predict average daily voice behaviour. Organisational tenure was a small but significant predictor of average daily voice behaviour (estimate = .02, $p = .040$, 95% CI .00, .05), while baseline voice behaviour was not (estimate = .07, $p = .356$, 95% CI -.08, .21).

Table 9*Predictors of Daily and Average Daily Voice Behaviour*

Within-Person Predictors (Level 1)					
	Estimate	Standard Error	Two-Tailed p -Value	Lower 95% CI	Upper 95% CI
Intercept	.05	.06	.390	-.06	.16
Daily Work Location	-.17 ⁺	.09	.058	-.34	.01
Residual Variance in Outcome	.59 ^{**}	.11	< .001	.37	.80
Between-Person Predictors (Level 2)					
	Estimate	Standard Error	Two-Tailed p -Value	Lower 95% CI	Upper 95% CI
Average Remote Work Per Week	.09	.06	.140	-.03	.20
Remote Work Frequency	-.001	.03	.969	-.06	.06
Organisational Tenure	.02 [*]	.01	.040	.00	.05

Baseline Voice Behaviour	.07	.07	.356	-.08	.21
Residual Variance in Outcome	.30**	.07	< .001	.17	.43

⁺ $p < .10$; * $p < .05$; ** $p < .01$.

Predictors of Inclusion

Table 10 shows the regression results for daily and average daily inclusion. On a within-person level, Hypothesis 3 predicted that daily inclusion would be negatively related to daily work location, meaning that participants would experience lower levels of inclusion on remote-working days when compared with office-working days. The estimate for daily work location predicting daily inclusion was not significant (estimate = $-.11$, $p = .140$, 95% CI $-.25, .04$), meaning that Hypothesis 3 was not supported.

On a between-person level, Hypothesis 7 predicted that daily inclusion would be negatively related to remote work frequency. Hypothesis 7 was not supported, with both average remote work per week (estimate = $-.01$, $p = .875$, 95% CI $-.11, .13$) and remote work frequency (estimate = $-.04$, $p = .264$, 95% CI $-.10, .03$) failing to significantly predict average daily inclusion. The estimate for organisational tenure was significant at the more liberal $p < .10$ level (estimate = $.02$, $p = .056$, 95% CI $-.001, .04$), and baseline inclusion had a significant positive effect on average daily inclusion (estimate = $.279$, $p = .007$, 95% CI $.08, .48$).

Table 10*Predictors of Daily and Average Daily Inclusion*

Within-Person Predictors (Level 1)					
	Estimate	Standard Error	Two-Tailed <i>p</i> -Value	Lower 95% CI	Upper 95% CI
Intercept	.04	.05	.345	-.05	.13
Daily Work Location	-.11	.07	.140	-.25	.04
Residual Variance in Outcome	.50**	.10	< .001	.31	.69
Between-Person Predictors (Level 2)					
	Estimate	Standard Error	Two-Tailed <i>p</i> -Value	Lower 95% CI	Upper 95% CI
Average Remote Work Per Week	.01	.06	.875	-.11	.13
Remote Work Frequency	-.04	.03	.264	-.10	.03
Organisational Tenure	.02 ⁺	.01	.056	-.001	.04
Baseline Inclusion	.28**	.10	.007	.08	.48
Residual Variance in Outcome	.33**	.07	< .001	.19	.47

⁺*p* < .10; **p* < .05; ***p* < .01.

Predictors of Belonging

Table 11 shows the regression results for daily and average daily belonging. On a within-person level, Hypothesis 4 predicted that daily belonging would be negatively related to daily work location, meaning that participants would experience lower levels of belonging on remote-working days when compared with office-working days. The significant negative estimate for daily work location predicting daily belonging (estimate = $-.21$, $p = .01$, 95% CI $-.37, -.05$) provides support for Hypothesis 4. This means that, on days when participants worked remotely as opposed to from their usual office, they were also more likely to report lower perceptions of belonging.

On a between-person level, Hypothesis 8 predicted that average daily belonging would be negatively related to remote work frequency. Average remote work per week (estimate = $-.001$, $p = .989$, 95% CI $-.09, .09$) and remote work frequency (estimate = $-.02$, $p = .360$, 95% CI $-.07, .03$) both failed to significantly predict average daily belonging, meaning that Hypothesis 8 was not supported. However, organisational tenure (estimate = $.03$, $p = .011$, 95% CI $.01, .05$) and baseline belonging (estimate = $.31$, $p < .001$, 95% CI $.18, .44$) both significantly predicted average daily belonging.

Table 11

Predictors of Daily and Average Daily Belonging

Within-Person Predictors (Level 1)					
	Estimate	Standard Error	Two-Tailed p -Value	Lower 95% CI	Upper 95% CI
Intercept	.09	.05	.056	-.002	.19
Daily Work Location	-.21*	.08	.010	-.37	-.05

Residual Variance in Outcome	.55**	.11	< .001	.32	.77
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Between-Person Predictors (Level 2)

	Estimate	Standard Error	Two-Tailed <i>p</i> -Value	Lower 95% CI	Upper 95% CI
Average Remote Work Per Week	-.001	.05	.989	-.09	.09
Remote Work Frequency	-.02	.03	.360	-.07	.03
Organisational Tenure	.03*	.01	.011	.01	.05
Baseline Belonging	.31**	.07	< .001	.18	.44
Residual Variance in Outcome	.23**	.05	< .001	.12	.33

⁺*p* < .10; **p* < .05; ***p* < .01.

Discussion

The current study investigated the effects of flexible/hybrid working arrangements on participants' perceptions of psychological safety, voice behaviour, inclusion, and belonging in their teams. This study had two key aims: to examine whether these constructs fluctuate on a daily basis, specifically as a result of participants' daily work location, and whether average remote work frequency affects participants' levels of these constructs on a between-person basis.

Hypotheses 1 to 4 stated that daily work location (office or remote) would predict participants' daily perceptions of psychological safety, voice behaviour, inclusion, and belonging, respectively. Specifically, lower levels of these constructs were expected on remote-working days as opposed to office-working days. Hypotheses 1, 2, and 4 were supported. In line with Hypothesis 1, participants tended to experience lower levels of psychological safety on remote-working days as opposed to office-working days. This is consistent with the predictions of Edmondson and Daley (2020), who posited that the challenges inherent to online communication would inhibit employees' perceptions of psychological safety. Although remote work was not found to decrease overall perceptions of psychological safety in Bolick's (2020) research, the present study suggests that psychological safety may fluctuate on a daily basis in response to employees' work location. However, it should be noted that this finding was significant at a more liberal significance level than the commonly used $p < .05$ cut-off. Hypothesis 2 was also supported at a more liberal significance level. Participants tended to report lower levels of voice behaviour on remote-working days as opposed to office-working days. This is in line with Bolick's (2020) findings and suggests that employees may have greater difficulties or fewer opportunities to speak up when working remotely. Hypothesis 4 was also supported, with participants reporting lower perceptions of belonging on remote-working days as opposed to office-working days. This suggests that working remotely can make employees feel distant and detached from their teams. While this is in line with previous research (Bloom et al., 2015; Dolan, 2011; Mann & Holdsworth, 2003; Mann et al., 2000; Stewart et al., 2010), it is important to note that the present study did not find any detrimental effects of remote work on baseline or aggregated daily levels of belonging. Rather, the results suggest that belonging can fluctuate on a short-term basis as a result of daily work location.

Surprisingly, Hypothesis 3 was not supported. There was no significant difference between participants' perceptions of inclusion on remote-working days as opposed to office-

working days. Although inclusion and belonging are closely linked constructs (Jansen et al., 2014; Shore et al., 2011), participants' perceptions of inclusion did not fluctuate on a daily basis, unlike perceptions of belonging. This contradicts previous research which has found remote work to be detrimental to perceptions of inclusion (Morganson et al., 2010). There are many potential explanations for this unexpected finding. Firstly, it may be the case that inclusion is a more stable construct than psychological safety, voice behaviour, and belonging, and is less affected by changes in daily work location. Mor Barak's (2014) definition of inclusion, which refers to being included in both formal and informal organisational processes, can also help to explain this finding. Organisations may have successfully created a hybrid working environment which includes all employees regardless of where they work from, ensuring that everyone attends meetings, events, and social gatherings. However, this does not necessarily translate to belonging. Employees may be included in organisational processes but lack a sense of connection and closeness with their team. This appears to be the case when working remotely, perhaps due to employees connecting less deeply with their co-workers when communicating online rather than in person.

Hypotheses 5 to 8 stated that remote work frequency would predict participants' aggregated daily perceptions of psychological safety, voice behaviour, inclusion, and belonging, respectively. Although participants reported their typical frequency of remote work in the baseline survey, actual remote work frequency during the study period was also calculated for each participant. This was due to an unexpected lockdown during data collection, which forced many participants to work from home full-time during the study period despite usually working flexibly throughout the week. Hypothesis 5 was not supported – remote work frequency during the study period did not predict psychological safety, while, contrary to expectations, average remote work per week (recorded at baseline) predicted higher levels of psychological safety. Employees who work remotely more frequently on an average week

appeared to feel more psychologically safe in their teams than those who work remotely less frequently on an average week. While having control over one's work arrangements can provide a sense of autonomy (Gajendran & Harrison, 2007; Gajendran et al., 2014; Wang et al., 2021) and increase job satisfaction (Bloom et al., 2015; Gajendran & Harrison, 2007; Schall, 2019), the effect of remote work frequency on psychological safety has not been explored in previous research. However, one potential explanation for this may be that employees who report working remotely more frequently on a typical week are more accustomed to remote work. As a result, remote communication may feel more comfortable and interpersonally safe than in-person communication. Conversely, it is also possible that employees who feel more psychologically safe in their teams choose to work remotely more frequently than less psychologically safe individuals.

Hypotheses 6, 7, and 8 were also not supported, with neither average remote days per week nor actual remote work frequency during the study period predicting participants' levels of voice behaviour, inclusion, and belonging. While previous research has not explored the effects of remote work frequency on these variables, a high frequency of remote work has been found to impair communication, increase social isolation (Golden & Veiga, 2005), and damage relationships with co-workers (Gajendran & Harrison, 2007). These detrimental effects were expected to extend to feelings of relatedness and speaking up in the workplace, but this was not observed in the present study.

Organisational tenure, however, positively predicted participants' average daily psychological safety, voice behaviour, inclusion, and belonging. This is unsurprising, given that previous research has identified tenure and experience as important predictors of psychological safety and voice (Morrison, 2011; O'Donovan & McAuliffe, 2020; Torralba et al., 2020). Theoretically, longer tenured employees should be more familiar with their co-

workers than newer employees. While familiarity with co-workers has been shown to contribute to perceptions of psychological safety (Koopmann et al., 2016), it is also likely to play a role in inclusion and belonging. Working in an organisation for longer should therefore positively predict perceptions of inclusion and belonging, as seen in the present study.

Overall, it appears that changes in work location over a 10-day period can affect flexible workers' perceptions of psychological safety, voice behaviour, and belonging – but not inclusion – on a daily basis. Remote work frequency (both actual and typical) does not appear to significantly affect most of these constructs on a between-person level. One exception to this is the unexpected finding of more frequent remote work on an average week predicting higher perceptions of psychological safety. Most notably, participants reported high levels of overall psychological safety, voice behaviour, inclusion, and belonging, both at baseline and averaged over the 10-day study period. While these constructs fluctuated on a short-term basis, participants' overall levels of these constructs were not significantly affected by remote work. Consequently, it appears that voluntary remote work, in itself, is not detrimental to employees' relatedness needs or to speaking up in the workplace. This is most likely due to the control afforded to flexible workers, allowing them to return to the office and interact with their team in person if they wish. Although this is not possible during a lockdown, it is also likely that employees have begun to adapt to remote communication and collaboration since the initial lockdown in March 2020, improving employees' experiences with remote work. Had this study been conducted in 2020, it is possible that participants would have reported lower levels of these constructs and potentially experienced greater difficulties with remote work. However, flexible work has quickly become the new normal for many individuals all over the world. It is therefore unsurprising that employees have found ways of meaningfully connecting with their teams and maintaining their relatedness needs after working through multiple lockdowns. This is reassuring as relatedness has been identified as a key psychological need in the

workplace (Ryan & Deci, 2000) and may be all the more important in times when social interaction is limited, such as during a lockdown (Wang et al., 2021).

Limitations

One potential limitation of the present study is the convenience sampling approach used. As a result of this, the sample does not reflect the diversity of the New Zealand population (Stats NZ, 2020a), with the majority (74%) of participants identifying as Pākehā/New Zealand European and only one participant identifying as Māori. The use of snowball sampling also led to many participants from the same organisation taking part in the research, reducing the generalisability of the research to other industries. While a limited number of occupations was represented in the present study, the convenience sampling approach ensured that a sufficient number of participants could be recruited for a time-intensive diary study. Moreover, a roughly even number of male and female knowledge workers took part in the study, representing a large range of age groups and regions across New Zealand. Future research should nevertheless focus on recruiting flexible workers across multiple different organisations and industries, as well as recruiting a larger and more diverse sample overall.

Self-selection bias may have also affected the results obtained in this study. This research involved a 10-day time commitment and self-disclosure from participants, likely appealing to a particular subset of the working population. Participants who did not wish to discuss their team or their experiences of their work would not have taken part. However, this also likely contributed to high daily response rates as participants who signed up for the study were genuinely interested in contributing to the research. Self-selection bias is also reflected in the high levels of baseline and daily psychological safety, voice behaviour, inclusion, and belonging reported by participants. This potential ceiling effect suggests that individuals who are lower on these variables may have self-selected out of the study, limiting the variability in

the sample and the generalisability of the results. A random sampling approach, potentially across multiple different organisations, would help to increase variability in future research.

The validity of the results may have also been affected by the study's reliance on self-report measures. The measurement of the variables of interest at the same time points, using the same methods, may have resulted in common method variance bias (Podsakoff et al., 2003). However, the variables of interest are best measured by self-report instruments, as constructs such as psychological safety and belonging are highly subjective and will be most accurately reported by the participants themselves. Nevertheless, steps were taken to counteract potential self-report biases, such as limiting recall bias by restricting participants to same-day responses on daily surveys, as well as randomising the order of the scale items each day (Podsakoff et al., 2003).

Finally, the timing of the data collection, which took place from early September to early November 2021, is likely to have affected the results. While the initial aim of the research was to compare flexible workers on office- and remote-working days, this was not entirely possible due to an unexpected lockdown across multiple regions in New Zealand (United Against COVID-19, 2021). Many participants working in the Auckland, Northland, and Waikato regions reported that they were unable to work from their usual workplaces due to work-from-home restrictions. This prevented a comparison between different work locations for many participants. Due to the increased spread of COVID-19 across the country, it is also likely that participants in other regions chose to work remotely more often than usual as a precaution. On the other hand, some participants who commuted to their usual office specifically to see their colleagues reported being the only ones in the office, resulting in a remote-like work environment despite the office setting. Considering the ongoing COVID-19 situation, such unexpected complications were unavoidable. While a clearer comparison of

different work locations, potentially during business-as-usual conditions, would have been beneficial, this research reflects the uncertain nature of work during a pandemic and highlights the challenges currently faced by both voluntary and involuntary remote workers.

Strengths and Contributions

A major strength of this study was in its daily diary study design. Psychological safety, voice behaviour, inclusion, and belonging have not been sufficiently explored in a longitudinal context, especially using intensive longitudinal methods. A key advantage of diary studies is their ability to capture within-person processes and detect changes over time (Bolger & Laurenceau, 2013). Based on participants' answers to the daily open questions, it is clear that daily experiences at work, such as interactions with co-workers, attending group lunches, and being included or excluded from discussions, influenced their perceptions of and attitudes toward their team. According to the intraclass correlations, the variables of interest fluctuated on a daily basis regardless of work location, though daily work location played a significant role in participants' daily perceptions of psychological safety, voice behaviour, and belonging. This suggests that levels of these constructs differ not only between persons, but also on a within-person basis. As previous research has found, factors such as tenure, leadership, and trust and familiarity between team members are all significant predictors of psychological safety, voice behaviour, inclusion, and belonging. However, it also appears that daily interactions with one's team, both remotely and in person, have the potential to strengthen or undermine these constructs.

This study has also contributed to literature on remote and flexible work from a short-term longitudinal perspective. While such research has been growing in popularity for the past few decades, the emergence of COVID-19 has created a need for greater research into these topics. With more and more organisations incorporating flexible work as a permanent policy,

it is important to expand our understanding of how various remote working arrangements can affect employees. This study approached this topic from a relational, team-oriented lens, focusing on how flexible-working employees are affected socially. This is a valuable addition to the remote work literature, which tends to focus on work-life balance, productivity, and job satisfaction. The timing of this study also provides a unique perspective into employees' perceptions of flexible work during an ongoing pandemic situation, highlighting the adaptability of individuals adjusting to a new way of working.

Future Research

Even in a post-COVID-19 world, many workers do not see themselves returning to their usual offices full-time after experiencing the benefits of working from home (O'Kane et al., 2020; PwC, 2021; Spataro, 2020). Future research should therefore continue to explore how both organisations and their employees are impacted by remote and flexible work, especially in such volatile and uncertain times. As the long-term consequences of COVID-19 are still unclear, it will be critical to follow employees through the aftermath of the pandemic and explore new challenges and opportunities that may arise for organisations. The role of new and emerging technology in communication and collaboration should also be explored further. These factors will continue to transform the nature of work and how it is conducted, as well as how individual employees are affected.

Future research should also employ longitudinal designs with longer intervals. While a daily diary design was missing from the literature on psychological safety, voice behaviour, inclusion, and belonging, examining fluctuations in these and related constructs on a weekly or monthly basis would capture changes over a longer time period. This could provide a better understanding of how these constructs are developed and sustained over time. A greater focus on the fluid and dynamic nature of teams would also be beneficial – as many participants in

the current study noted, belonging to multiple teams, project groups, and even organisations is a common occurrence. Future research should therefore consider how to best define and measure relational constructs and team-level variables in such circumstances, as well as the impact that belonging to multiple teams may have on these constructs.

Practical Implications

Considering the rapid increase in remote and flexible work during the COVID-19 pandemic, this research can aid both employees and organisations in determining their ideal work arrangements. Encouragingly, the findings suggest that employees' perceptions of psychological safety, voice behaviour, inclusion, and belonging are not significantly affected by remote work on an overall basis. Moreover, many participants in the current study reported overall positive experiences with remote and flexible work, both in the baseline survey and in the final reflection at the end of the daily surveys. This included improved productivity, increased autonomy and flexibility, and better work-life balance. This is in line with previous research on the benefits of remote work for both individuals and organisations (Bloom et al., 2015; Gajendran & Harrison, 2007; Gajendran et al., 2014; Grant et al., 2013; Schall, 2019; Wang et al., 2021). These benefits are not limited to business-as-usual conditions. Even in a pandemic situation, employee productivity does not suffer when working remotely, and often even improves (Boland et al., 2020; PwC, 2021).

This challenges the assertions of companies such as Yahoo (Goudreau, 2013) and IBM (Wright, 2017), who have previously restricted or banned remote work arrangements due to concerns about remote communication and collaboration. Similarly, many companies such as Apple (Schiffer, 2021) and Google (Coulter et al., 2021) are now mandating a return to the office, even as office reopening dates continue to be pushed back further and further due to new COVID-19 developments (Hartmans, 2021). With survey data showing 36% of employees

experiencing a negative impact on their mental health upon returning to work, and 49% of employees anticipating the same upon their eventual return (Coe et al., 2021), such mandates may prove harmful to organisations. Return-to-office mandates can also exacerbate inequalities in the workplace, disadvantaging disabled workers (Schiffer, 2021), working parents (Coe et al., 2021), and lower-level employees (Coulter et al., 2021). At Google, working away from the office may even result in salary cuts for flexible workers (Coulter et al., 2021). It is therefore unsurprising that turnover intentions are rising in response to these mandates (Coulter et al., 2021; Schiffer, 2021). Voluntary remote work does not appear to be detrimental to employees or to organisations – in fact, having a geographically distributed or hybrid team may prove to be a competitive advantage in the current COVID-19 climate, as well as in the future. Remote work has created unique new opportunities, allowing for collaboration across multinational teams and recruitment of talent from across the globe (Contreras et al., 2020; Neeley, 2015). This ensures that organisations can remain flexible, adaptable, and competitive. On the other hand, restricting work to a traditional office setting, especially in a post-COVID-19 world, may significantly disadvantage organisations who cannot provide the flexibility today's workers desire (Venkataramani, 2021).

However, it is also critical to acknowledge the significant impact of remote work on daily perceptions of psychological safety and belonging, as well as daily voice behaviour, in the current study. Based on these findings and participant comments regarding the advantages of in-person interactions, it appears that many employees would benefit from occasional in-person meetings and informal gatherings to maintain social ties with their teams. This is especially true for employees who work remotely full-time, or new remote employees who may find it useful to meet their team in person when starting a new role (Bloom, 2021). While some researchers have proposed mandating office work on particular days each week to combat this (Bloom, 2021), this may prove difficult considering the backlash that even part-time return-

to-work mandates have received from employees (Coulter et al., 2021; Schiffer, 2021). With the potential for future COVID-19 disruptions, and with more and more employees choosing to work remotely, organisations will need to adapt to hybrid working arrangements and geographically distributed teams. Leaders must foster inclusive, psychologically safe climates for all employees and ensure that full-time remote workers are not excluded from both formal and informal communication at work. Most importantly, organisations should consult their employees about how to best manage flexible working arrangements, as well as what improvements could be made.

Conclusion

The present study has investigated the impact of flexible work on employees' perceptions of psychological safety, voice behaviour, inclusion, and belonging using a 10-day diary study. While participants did report lower perceptions of psychological safety, voice behaviour, and belonging when working remotely, these short-term fluctuations did not appear to have an effect on participants' overall levels of these constructs. Flexible workers therefore enjoy the benefits of choosing how and when they work without sacrificing relationships with their team. With more and more companies transitioning to remote and flexible work in the wake of the COVID-19 pandemic, such findings are reassuring for both organisations and their employees.

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Appendix A: Online Recruitment Advertisement

Do you have flexible working arrangements and work both from home and from an office? Are you interested in how flexible work affects your daily experiences at work and with your team? If so, then we would love to hear from you!

We are looking for full-time workers in New Zealand who are 18 years or older to participate in a **10-day daily survey study** about flexible work, daily experiences at work, and team interactions. The study involves completing 10 daily surveys, which will take roughly 5 minutes each day, and also one larger initial survey, which will take roughly 15 minutes.

I am conducting this research as part of the Master of Science in Industrial and Organisational Psychology degree at the University of Canterbury under the supervision of Professor Katharina Näswall and Dr. Fleur Pawsey.

By participating in this study, you can help me complete my Master's degree, contribute to emerging research about flexible work, reflect on your own experiences of flexible work, and receive a personal summary of your results at the end of the study. You will also receive an **entry into the draw to win one of 10 \$50 Countdown or Noel Leeming gift cards** (your choice if you win!) by completing at least 7 daily surveys, or receive 3 entries by completing all 10 daily surveys.

If you are interested in participating or would like more information, please contact me at lena.chernoglazova@pg.canterbury.ac.nz.

If you know anyone else who may be interested, please pass this message on to them too!

Thanks,

Lena Chernoglazova

Appendix B: Recruitment Flyer

UC UNIVERSITY OF
CANTERBURY
Te Whare Wānanga o Waitaha

DO YOU HAVE FLEXIBLE WORKING ARRANGEMENTS?

Do you work full-time, both from home and from an office? Can you help us with a **10-day survey study** about flexible work, daily experiences at work, and team interactions?

By completing an initial 15 minute survey and 10 x 5-minute surveys, you can contribute to science, reflect on your own experiences of flexible work, and go in the draw to win one of 10 **\$50 Countdown or MTA vouchers!**

If you're interested in taking part, please contact Lena at **lena.chernoglazova@pg.canterbury.ac.nz**

This research is being conducted by Lena Chernoglazova under the supervision of Professor Katharina Näswall as a requirement for the Master of Science degree in Applied Psychology. This project has been reviewed and approved by the University of Canterbury Human Research Ethics Committee (HREC 2021/110).

Appendix C: Baseline Survey

Table C1

Baseline Survey Items

Item Code	Item	Response Scale
Consent	<p>If you agree to participate in this study, please click the red arrow below to start the survey. By clicking this, you acknowledge that you have read the above information and consent to taking part in the study.</p> <p>If you do not wish to participate, simply close this browser window to exit the survey. You may also opt out at any time by unsubscribing from the survey emails or by contacting the research team.</p>	
Demographic Questions		
BirthYear	What year were you born?	Drop-down list from 1920 to 2004
Gender	Which gender do you identify as?	<ul style="list-style-type: none"> ▪ Male ▪ Female ▪ Self-Identify (optional textbox)
Ethnicity	Which ethnic group do you identify with? Please select the option(s) below that best describe(s) you.	<ul style="list-style-type: none"> ▪ New Zealand European ▪ Other European ▪ Māori ▪ Samoan ▪ Cook Islands Māori ▪ Tongan ▪ Niuean ▪ Tokelauan ▪ Fijian ▪ Other Pacific Peoples ▪ Southeast Asian ▪ Chinese ▪ Indian ▪ Other Asian ▪ Middle Eastern ▪ Latin American ▪ African ▪ Other (Please Specify)

Industry	Which industry do you currently work in?	<ul style="list-style-type: none"> ▪ Agriculture, Forestry, and Fishing ▪ Mining ▪ Manufacturing ▪ Electricity, Gas, Water, and Waste Services ▪ Construction ▪ Wholesale Trade ▪ Retail Trade ▪ Accommodation and Food Services ▪ Transport, Postal, and Warehousing ▪ Information Media and Telecommunications ▪ Financial and Insurance Services ▪ Rental, Hiring, and Real Estate Services ▪ Professional, Scientific, and Technical Services ▪ Administrative and Support Services ▪ Government, Public Administration, and Defence ▪ Education and Training ▪ Health Care and Social Assistance ▪ Arts and Recreation Services ▪ Other (Please Specify)
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Work-Related Questions

OrgTenure	How long have you worked in your current organisation?	Drop-down list
RoleTenure	How long have you worked in your current role?	Drop-down list
RemotePreCOVID	Had you ever worked remotely prior to the COVID-19 lockdown in March 2020, either on a regular or occasional basis?	<ul style="list-style-type: none"> ▪ Yes ▪ No

"Remote work" refers to working away from your usual workplace/office, such as working

from home, a local library or coffee shop, or a co-working space or shared office.

FlexDuration	How long have you had flexible working arrangements in your current role?	Drop-down list
	<i>For the purposes of this study, "flexible work" (also called "hybrid work") refers specifically to having the ability to work remotely, from a different environment or location than your usual workplace. This includes both formal (e.g., working remotely on specific days) and informal arrangements (e.g., working remotely at your own discretion).</i>	
AverageRemote	How often do you work remotely on an average week?	<ul style="list-style-type: none"> ▪ Less than 1 day a week ▪ 1 day a week ▪ 2 days a week ▪ 3 days a week ▪ 4 days a week ▪ 5 days a week ▪ 6 days a week ▪ 7 days a week ▪ Other (please specify)
Preference	Where would you prefer to work from?	<ul style="list-style-type: none"> ▪ Regular workplace/office ▪ Remotely (e.g. home, coffee shop, co-working space)
WorkOPEN	Is there anything else you would like to share about your working arrangements?	Open-ended response

Team-Related Questions

TeamSize	How big is the team you work with?	<ul style="list-style-type: none"> ▪ 2 - 5 people ▪ 6 - 10 people ▪ 11 - 20 people ▪ 21 - 30 people ▪ Over 30 people
MeetingFreq	How often do you have work-related meetings with others from your team (either virtually or in-person)?	<ul style="list-style-type: none"> ▪ Every day ▪ Multiple times per week ▪ Once a week ▪ Once every two weeks ▪ Once a month ▪ Less often than once a month

MeetingPreference	Would you prefer...	Slider from "Fewer meetings" to "No change to the amount of meetings" to "More meetings"
TeamworkImportance	How important is teamwork in your role?	<ul style="list-style-type: none"> ▪ (1) Not at all important ▪ (4) Moderately important ▪ (7) Extremely important
TeamOPEN	Is there anything else you would like to share about your team?	Open-ended response

Psychological Safety Scale (PS)

	Thinking specifically about the team you work with, please rate the extent to which you agree or disagree with the following statements.	<ul style="list-style-type: none"> ▪ (1) Strongly Disagree ▪ (4) Neither Agree Nor Disagree ▪ (7) Strongly Agree
PS01	If I make a mistake on this team, it will be held against me. (R)	
PS02	I feel comfortable bringing up problems and difficult issues on this team.	
PS03	It is difficult to ask others on my team for help. (R)	
PS04	I can talk openly with my team about work-related issues.	
PS05	I feel comfortable expressing opinions that are different from those of my team.	
PS06	I feel comfortable speaking up in front of my team.	

(R) = Reversed item.

Source: Adapted from Edmondson (1999).

Voice Behaviour Scale (VB)

	Thinking about your work in general, please rate the extent to which you agree or disagree with the following statements:	<ul style="list-style-type: none"> ▪ (1) Strongly Disagree ▪ (4) Neither Agree Nor Disagree ▪ (7) Strongly Agree
VB01	I develop and make recommendations concerning work-related issues or problems.	

- VB02 I speak up and encourage others in my team to get involved in work-related issues.
- VB03 I communicate my opinions about work-related issues even if my opinion is different from others on my team.
- VB04 I get involved in issues that affect the quality of work life in my team.
- VB05 I speak up in my team with ideas for new projects or changes in procedures.

Source: Van Dyne and LePine (1998).

Inclusion Scale (IN)

- Thinking specifically about the team you work with, please rate the extent to which you agree or disagree with the following statements.
- (1) Strongly Disagree
 - (4) Neither Agree Nor Disagree
 - (7) Strongly Agree
- IN01 I feel very much a part of my team.
- IN02 My team makes me believe that I am included in it.
- IN03 I feel like I am an ‘outsider’ in my team. (R)
- IN04 I don’t feel included in my team. (R)
- IN05 I feel I am an ‘insider’ in my team.
- IN06 My team frequently makes me feel left out. (R)

(R) = Reversed item.

Source: Revised 6-item scale from Stamper and Masterson (2002).

Belonging Scale (BL)

- Thinking specifically about the team you work with, please rate the extent to which you agree or disagree with the following statements.
- (1) Strongly Disagree
 - (4) Neither Agree Nor Disagree
 - (7) Strongly Agree
- BL01 I am treated as a valued member of my team.

BL02	I belong in my team.
BL03	I am connected to my team.
BL04	I believe that my team is where I am meant to be.
BL05	I feel that people really care about me in my team.

Source: 5-item belonging scale from Chung et al. (2020).

Final Questions

Calendar	<p>Please select your preferred 10 consecutive working days on which you would like to receive the daily surveys, not including your weekends/days off.</p> <p>When selecting these days, please consider the days you work (e.g., if you work Monday to Friday, selecting two consecutive Monday-to-Friday workweeks might work best for you. However, you can start on any day of the week), as well as any upcoming leave you may have planned.</p> <p>Please make sure to keep selecting days until you have selected 10 and are unable to select any more on the calendar. You can unselect days if you would like to change your selection, and you may select days until the 7th of November, 2021.</p>	Date selection on calendar
OverallOptIn	<p>Would you like a summary of the overall study results after the completion of the research?</p>	<ul style="list-style-type: none"> ▪ Yes ▪ No
PersonalOptIn	<p>Would you like a personal summary of your results after the completion of the research?</p>	<ul style="list-style-type: none"> ▪ Yes ▪ No
FinalOPEN	<p>Is there anything else you'd like to add about yourself, your work, or the survey itself?</p>	Open-ended response

Appendix D: Daily Survey

Table D1

Daily Survey Items

Item Code	Item	Response Scale
DWL	Where did you work from today?	<ul style="list-style-type: none"> ▪ My usual workplace/office ▪ Remotely (e.g. home, coffee shop, co-working space) ▪ Both from my usual workplace/office and remotely
DCM	How did you communicate with others from your workplace today?	<ul style="list-style-type: none"> ▪ Did not communicate with others from my workplace today ▪ In person ▪ Video calls (e.g. Zoom, Teams, Skype, etc) ▪ Audio-only calls (e.g. phone calls, video calls with video turned off, etc) ▪ Email ▪ Instant messaging (e.g. Slack, Teams, WhatsApp, etc) ▪ Other (optional textbox)

Source: Adapted from Bolick (2020).

Daily Scales

Thinking specifically about your experience at work **today**, please rate the extent to which you agree or disagree with each of these statements.

If a statement presented below did not apply to you today, please select "*Did Not Experience Today*".

Today...

(R) = *Reversed item.*

- (1) Strongly Disagree
- (4) Neither Agree Nor Disagree
- (7) Strongly Agree
- Did Not Experience Today

Daily Psychological Safety Scale (DPS)

- DPS01 I felt comfortable expressing opinions that were different from those of my team.
- DPS02 I felt comfortable speaking up in front of my team.
- DPS03 It was difficult to ask others on my team for help. (R)

Source: Adapted from baseline psychological safety scale.

Daily Voice Behaviour Scale (DVB)

- DVB01 I made recommendations to my team concerning work-related issues or problems.
- DVB02 I communicated my opinions about work-related issues even if my opinion was different from others on my team.
- DVB03 I spoke up in my team with ideas or suggestions.

Source: Adapted from baseline voice behaviour scale.

Daily Inclusion Scale (DIN)

- DIN01 I felt very much a part of my team.
- DIN02 My team made me feel left out. (R)

Source: Adapted from baseline inclusion scale.

Daily Belonging Scale (DBL)

- DBL01 I was treated as a valued member of my team.
- DBL02 I felt connected to my team.

Source: Adapted from baseline belonging scale.

Daily Open Questions

- | | | |
|-------|---|---------------------|
| NegXP | Did anything happen today that made you feel excluded, ignored, or unsafe to speak up? Please add details if you feel comfortable doing so. | Open-ended response |
| PosXP | Did anything happen today that made you feel included, listened to, or safe to speak up? Please add details if you feel comfortable doing so. | Open-ended response |

Highlight	What was the highlight of your day, if you feel comfortable sharing?	Open-ended response
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Day 10 Final Reflection

FinalReflection	Finally, is there anything else you would like to add about your experience taking part in this study?	Open-ended response
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Appendix E: Information Sheet

Flexible Work: A 10-Day Diary Study Inclusion, Belonging, and Speaking Up in Office and Remote Work

Thank you very much for expressing an interest in this research! The current survey focuses on your experience of flexible work, specifically in relation to your interactions with your team. The survey will take approximately 15 minutes to complete and will ask questions regarding your working arrangements, your team, your experience of remote work, and basic demographic information. If you agree to participate, this initial survey will be followed by 10 daily surveys over your next 10 working days. Each daily survey will take approximately 5 minutes to complete.

By participating you confirm that you are over the age of 18, are currently working in New Zealand, and are currently employed full-time with flexible working arrangements.

What is the purpose of this research?

This research will explore the effects of flexible (office versus remote) work on team interactions, feelings of inclusion and belonging, and speaking up at work. We are specifically interested in how your experiences change on a daily basis.

Who is conducting this research?

We are researchers in the School of Psychology, Speech and Hearing at the University of Canterbury. Lena Chernoglazova will be conducting the research under the supervision of Professor Katharina Näswall and Dr. Fleur Pawsey. This project is being carried out as a requirement for the Master of Science degree in Industrial and Organisational Psychology.

What is involved if you agree to participate?

- We will ask you to complete this initial survey and a further 10 daily surveys over your next 10 working days.
- The initial survey will take about 15 minutes to complete.
- Each daily survey will take about 5 minutes to complete. We will send you an email at 4:30pm each day and you will have until midnight that day to complete the daily survey.
- Both the initial and daily surveys will ask you to respond to statements such as, “I feel comfortable speaking up in front of my team”, “I am treated as a valued member of my team”, and “My team frequently makes me feel left out”.

What will you gain by participating in this research?

- As flexible work is growing in popularity, we are hoping to get a better understanding of how these working arrangements affect people in New Zealand. By taking part in this research, you will have a chance to contribute your thoughts, experiences, and concerns to the emerging field of research on flexible work.
- The daily surveys can also serve as an opportunity to better understand and reflect on

your own experience of flexible work.

- You will also be offered a summary of your personal results after the completion of the project, as well as a summary of the overall results. At the end of this initial survey, you will be asked whether or not you would like to receive either of these summaries.
- As a thank-you for participating in this research, you will receive an entry into a prize draw for one of 10 \$50 Countdown or Noel Leeming gift cards (your choice if you win!) upon completing at least 7 daily surveys. If you complete all 10 daily surveys, you will receive 3 entries into the prize draw.

Are there any potential risks to participating in this research?

The risks associated with participating in this research are anticipated to be low. However, as the research focuses on your experiences at work, some survey questions may potentially be sensitive or distressing. If you experience any distress while completing this initial survey or any of the daily surveys, we encourage you to contact a 24/7 helpline for support. Their contact information is provided at the bottom of this information sheet and in every daily survey. If you have any concerns about potential risks, please contact the research team.

How can you withdraw from the research?

- Participation in this study is voluntary. You have the right to withdraw from the study at any stage without penalty and without affecting any existing or future relationships with members of the research team.
- You can withdraw at any time by not responding to any further surveys.
- If you do not complete/submit a survey, your response on that survey will not be recorded. If you do not complete the initial 15-minute survey, you will not receive any further contact from the research team. If you do not complete a daily survey, a reminder email will be sent to you at 7.30pm unless you choose to opt-out of all further emails.
- Unless you request to be removed from the study, you will continue to receive all 10 daily survey links after signing up to participate. If you would like to stop receiving these emails, an Unsubscribe/Opt-Out link will be provided at the bottom of each email. You may also opt-out by contacting the research team.
- If you would like your previously given data withdrawn from the research completely, please contact the research team. The final date to withdraw data is 10th November 2021.

Privacy, confidentiality, and data storage

- This survey is completely confidential. Your identity will not be shared with anyone outside of the research team.
- Your email will be matched to an anonymous code which will allow us to link your responses over time. Once the project is completed, your contact information will be permanently deleted, and the final data set will not have any identifying information about the participants. The presentation of findings will include only aggregated information (i.e., summarised responses rather than individual responses).
- All data will be stored securely on the University of Canterbury's password-protected servers. No physical data will be stored.

- A copy of the coded data will remain in the custody of the supervisor, Professor Katharina Näswall from the School of Psychology, Speech and Hearing at the University of Canterbury, and will be destroyed after the period of 5 years.

What happens to the information that you provide?

- The overall findings (but never individual responses) may be submitted for publication.
- The overall findings may form part of a student dissertation that will be submitted for assessment. This is a public document and will be available through the UC Library. You may be assured of the complete confidentiality of data gathered in this investigation: your identity will not be made public.
- The overall findings may be used for grant application.

Human Ethics Committee information

This project has been reviewed and approved by the University of Canterbury Human Research Ethics Committee, and participants should address any complaints to The Chair, Human Research Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz). HREC Reference: 2021/110.

Contacts

If you have any questions or concerns about taking part in this research, please contact the research team:

Researcher	Lena Chernoglazova	lena.chernoglazova@pg.canterbury.ac.nz
Supervisor	Professor Katharina Näswall	katharina.naswall@canterbury.ac.nz
Co-Supervisor	Dr. Fleur Pawsey	fleur.pawsey@canterbury.ac.nz

Helplines

If you experience any form of distress at any time during your participation in this research, we encourage you to contact one of the following helplines, available 24/7, for advice and support:

- **1737:** Free call or text 1737 for support from a trained counsellor.
- **Lifeline:** Free call 0800 543 354 (0800 LIFELINE) or free text 4357 (HELP).
- **OCP Employee Assistance and Counselling:** Free call 0800 377 990 or email support@ocp.co.nz.