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Influence, demands, bullying and job satisfaction: a large-scale New Zealand study

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Abstract

This paper explores a number of factors influencing job satisfaction in the workplace. While our study aligns with existing literature on workplace influence and job demands, it specifically examines how exposure to workplace bullying affected employees' perceived job satisfaction. Using data from a large-scale national study covering 3,612 workers in New Zealand, we analysed data from across all industries to investigate the impact of influence at work, quantitative demands and exposure to bullying on job satisfaction. Data was collected using the Copenhagen Psychosocial Questionnaire III. We conducted a series of regression models to test the relationship among study variables.

The results showed that job satisfaction is influenced by all these factors. We found that those who experienced bullying had higher levels of quantitative demands and lower job satisfaction. In addition, the findings from regression analysis show that influence at work buffers the negative impact of high quantitative demands on job satisfaction.

Keywords: Influence at work, Job satisfaction, Quantitative demands, Exposure to bullying

Introduction

Bullying is one of the most serious forms of negative influences at work that involves repeated exposure to harmful behaviours from one or more perpetrators over a prolonged period of time (Nielsen, et. al., 2024). It is a destructive behaviour that involves repeated physical, emotional, or psychological harm inflicted by one individual or a group on another (Nielsen & Einarsen, 2012). It is a major source of emotional and psychological stress and can have a significant impact on an individual's resources making it difficult for an employee to manage their demands and erode job satisfaction and well-being (Spence & Nosko, 2013). It can counteract the positive effects of job resources, and can harm employees, and the organisation (Farley et. al., 2023).

In New Zealand, bullying is the most common negative act reported by workers (WorkSafe NZ, 2022; please also see Haar, 2023; Mental Health Foundation of New Zealand, 2022; Te Kāhui Tika Tangata – Human Rights Commission, 2025). We were interested in knowing about the job satisfaction of those exposed to bullying, and whether influence at work, and quantitative demands played any role in this relationship. While the effects of bullying on job satisfaction are clear (Nielsen & Einarsen, 2012), and there is broader literature about the role of structures and enabling factors (for instance please see Salin, 2003), we still need nuanced study of these relationships; as there is not enough evidence to determine how influence of work relates with exposure to bullying and what happens to perceptions of quantitative demands, if employees are exposed to bullying, and in turn what are the implications for job satisfaction. There can be many cases, for instance, an employee who is bullied, is stressed but has influence at work, which can make them feel resourceful thus enabling the employee to have some sense of control. This may also enable the employee to deal with the adverse act and or the perpetrator. In another case, an employee who is bullied, and is overloaded with work, can feel further depleted (Hauge et. al., 2010; Tuckey, et. al., 2009). In both cases, the complex relationship of quantitative demands, influence and work and bullying can have different impacts on employee job satisfaction. The only major study that has so far shown the relationship between job demands mentions only one factor that is 'job autonomy' and argues that it is an important moderator for bullying and employee wellbeing (Farley et. al., 2023). Little is known regarding this in the context of New Zealand.

To study these relationships, we chose the Job Demands-Resources (JD-R) theory, which can be used as a foundation to explore these factors collectively. JD- R theory, which is an extension of the model, proposes that job characteristics can be classified into two broad categories: job demands and

job resources (Bakker & Demerouti, 2007). JD-R theory focuses on occupational stress and suggests that strain is a response to imbalance between demands on the individual and the resources one has to deal with those demands (Demerouti et al., 2001; Hakanen et al., 2008). JD-R theory is a holistic alternative to existing models of employee well-being that were limited in scope and applicability (Schaufeli & Taris, 2014). It includes a wide range of demands and resources that can fit any occupation and industry (Bakker & Demerouti, 2007; 2014; 2017). Job demands refer to the physical, psychological, social, or organisational aspects of a job that require effort and are associated with certain physiological and psychological costs (Demerouti et al., 2001; 2003). Quantitative demands, such as workload and time pressure, fall under this category (Demerouti et. al., 2001; Karasek, 1979). On the other hand, job resources are the physical, psychological, social, or organisational aspects of a job that are functional in achieving work goals, reducing job demands, and stimulating personal growth and development (Bakkar & Demerouti, 2014). Influence at work can be considered a job resource as it represents the extent to which individuals have control and decision-making authority over their work (Andersen, et. al., 2022). Job demands and resources interact to affect employee outcomes such as job satisfaction (Macky & Boxall, 2008). Research posits that those who have high influence at work will have high job satisfaction (Andersen, et. al., 2022), and that quantitative demands can lead to low job satisfaction (Burr et. al., 2019). Therefore, we hypothesize that:

H1: Those who have high influence at work will have higher job satisfaction than those who have low influence at work.

H2: Those who have high quantitative demands will have lower job satisfaction than those who have low quantitative demands.

Though it may be straightforward to understand the influence of each factor, if these were considered in isolation, but the interaction of influence at work and quantitative demands can be dynamic. Quantitative demands as the term points are ‘demands’ that take their toll on ‘resources’, thus can become ‘hindrances’ at work (Bakker & Demerouti, 2017). But when employees have influence at work, the demands may not necessarily be hindrances but instead can become a challenge because one may view them as achievable and encouraging (for more details please see the challenge-hindrance framework, Haar, 2006; LePine et al., 2004; 2005). Challenging work tends to foster increased job satisfaction, as individuals feel a sense of fulfilment and accomplishment (Cavanaugh et al., 2000; LePine et al., 2004; LePine et al., 2006; Lepine et al., 2005). Quantitative demands with influence may be motivating and therefore less taxing as compared to quantitative demands without influence, which can feel constraining and taxing. Schilbach et. al. (2022) touch on the inconsistencies in the findings around the relationship between quantitative demands and influence at work, and we have used that gap to build our argument.

Next, we focus on bullying at work. While the JD-R theory does not explicitly incorporate bullying as a variable, it provides a framework to understand the interplay between job demands (including quantitative demands), job resources (such as influence at work), job satisfaction, and well-being (please see Bakker, Demerouti and colleagues, 2001, 2007, 2017). We argue that those who have more influence at work are likely to have better position power (Pfeffer, 1993), as there is some indication in the literature that the likelihood of being bullied will be less for those with high influence than those with less influence at work (Einarsen et, al., 2011; Salin, 2003). Thus, we have developed the following hypotheses:

H3: Those who will experience bullying at work will have lower job satisfaction, than those who don’t experience bullying.

H4: Influence at work will moderate the effects of quantitative demands on job satisfaction i.e., influence at work can reduce the detrimental effects of quantitative demands on job satisfaction.

H5: Influence at work will moderate the negative effects of bullying on job satisfaction.

Integrating the two hypotheses and the preceding arguments, we propose that influence at work may mitigate the negative effects of both quantitative job demands and workplace bullying.

H6: Bullying will exacerbate the negative consequences of quantitative demands on job satisfaction.

Figure-1 portrays the anticipated main and moderating effects demonstrating the relationships between influence at work, quantitative demands, exposure to bullying and job satisfaction.

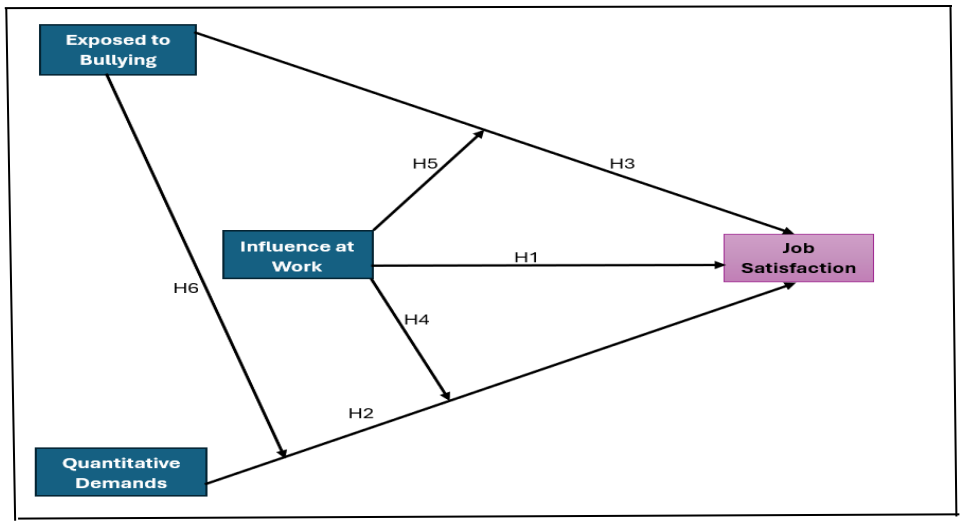


Figure 1: Theoretical model.

Methods

Sample

This study is based on the self -reported information from the New Zealand Psychosocial Survey (NZPS) 2021 (WorkSafe NZ, 2022). Data for this study was collected between March and May, 2021. The majority of the interviews were conducted online; however approximately one-sixth were administered through alternative methods to improve the representativeness of Māori, Pacific and migrant workers in the sample. The study overall covered a total of 3,612 respondents aged 18 years and older who were employed for wages or salary from all industries at the time of the survey.

Measures

The Copenhagen Psychosocial Risks Questionnaire (COPSOQ III; Burr et. al., 2019) was used in the present study to assess the relationship of influence at work, quantitative demands, exposure to bullying and job satisfaction.

Exposure to Bullying

As in COPSOQ III, bullying is measured based on the definition that is when "a person is repeatedly exposed to unpleasant or degrading treatment, and that the person finds it difficult to defend himself or herself against it" (Burr et al., 2019). Exposure to bullying was assessed through the question "*Have you been exposed to bullying at your workplace during the last 12 months?*". The response options for bullying exposure were "*Yes, daily*"; "*Yes, weekly*"; "*Yes, monthly*"; "*Yes, a few times*"; and "*No*". In this research, report of exposure to bullying with any frequency (either daily, weekly, monthly or a few times) was considered as "Yes" (exposed). If the respondent reported "no", it meant "No" (Not exposed).

Quantitative Demands

Quantitative Demands (Cronbach's alpha = 0.72) were measured through three questions: Is your workload unevenly distributed so it piles up?, How often do you not have time to complete all your work tasks?, and Do you get behind with your work? The COPSOQ assigns a score between 0 and 100 for each possible response to these three questions. In the survey, respondents provided their answers on a 5-point scale from Always (100); Often (75); Sometimes (50); Seldom (25); Never/hardly ever (0).

Influence at Work

Influence at Work (Cronbach's alpha=0.77) was assessed with four items: Do you have a large degree of influence on the decisions concerning your work?, Can you influence the amount of the work assigned to you?, Do you have any influence on what you do at work? , and Do you have any influence on how you do your work? . Similar to Quantitative Demands, a score between 0 and 100 was assigned for each possible response to these four questions. In the survey, respondents

perceived their influence at work on a 5-point scale from Always (100); Often (75); Sometimes (50); Seldom (25); Never/hardly ever (0).

Job Satisfaction

Job Satisfaction (Cronbach's alpha=0.77) was explored through three items in the question *How pleased are you with your work prospects?; your job as a whole, everything taken into consideration? and your salary?* This question referred to their work in general. The respondents reported their satisfaction to each of the above items on a 5-point Likert scale from Very satisfied (100); Satisfied (75); Neither/Not (50); Unsatisfied (25); Very unsatisfied (0).

Analysis

For analysis, three major steps have been performed in this study. First, descriptive statistics for the selected variables are presented to summarise the data and provide an overview of its distribution and central tendencies. Next, for bivariate analysis, correlation and independent sample t-test have been used. Finally, hierarchical weighted multiple linear regression models have been incorporated to see the impact of quantitative demands, influence at work, and exposure to bullying on job satisfaction. Analysis was performed using SPSS 26 and R 4.1.2.

Results

Sample characteristics

The data set reveals that sex ratio of workers is 50.46% male and 49.52% female. A large proportion of workers (70.71%) were born in NZ. Regarding ethnic composition, 66.05% of the workers are NZ European and 14.42% of them identify as Māori. Additionally, 7.28% are Pacific, 16.05% are Asian and 6.12% have identified themselves as other ethnic groups.

Univariate Analysis

Table 1 provides the descriptive statistics for quantitative demands, influence at work, and job satisfaction. The overall mean obtained across all participants for quantitative demands is reported as 47.80, for influence at work it is 55.31, and for job satisfaction, it is 66.05. These values provide the central tendency pointing that the quantitative demands are close to average, influence at work is slightly above average and job satisfaction is above average scale score of 50. The standard deviations for the various scales are as follows: 22.14 for quantitative demands, 21.51 for influence at work, and 20.37 for job satisfaction. These values indicate the degree of variability or spread of scores within each scale. Furthermore, 22.60% of NZPS 2021 respondents reported being bullied at work in the past 12 months.

Table 1: Descriptive statistics for psychosocial scales

Psychosocial scales	Cronbach's Alpha*	Overall mean	SD
Quantitative demands	0.72	47.80	22.14
Influence at work	0.77	55.31	21.51
Job satisfaction	0.77	66.05	20.37

SD= standard deviation; *Cronbach's alpha is used for measuring the scales' reliability. Cronbach's alpha over 0.7 means that the scale is highly reliable in relation to measuring its dimension.

Bivariate Analysis

As shown in Table 2, the correlation coefficient between quantitative demands and influence at work is 0.09 (p-value < 0.05), suggesting a weak positive relationship. This indicates, people who perceive higher levels of influence at work also perceive higher levels of quantitative demands. The correlation coefficient between quantitative demands and job satisfaction is -0.17 (p-value < 0.05), indicating individuals who perceive higher quantitative demands tend to have slightly lower levels of job satisfaction. The relatively weak correlation suggests that other factors may play a more substantial role in determining job satisfaction. Finally, the correlation coefficient between influence at work and job satisfaction is 0.32 (p-value < 0.05), indicating individuals who perceive higher levels of influence at work are more likely to have higher levels of job satisfaction.

Table 2: Correlation matrix among selected psychosocial scales

	Quantitative demands	Influence at work	Job satisfaction
Quantitative demands	1	0.09*	-0.17*
Influence at work		1	0.32*
Job satisfaction			1

*p-value < 0.05

In Table 3, we have conducted a number of independent sample t-tests (an inferential statistical test) to determine whether the average scores for the psychosocial variables differ significantly by gender, ethnicity and exposure to bullying at the 95% confidence interval.

Table 3: Mean scores (and standard deviations) of psychosocial scales by gender, ethnicity and exposure to bullying at NZ workplace

	Quantitative demands	Influence at work	Job satisfaction
Exposure to Bullying (n)			
Not exposed (2796)	45.60* (21.48)	55.88* (21.43)	68.52* (19.29)
Exposed (816)	55.33* (22.68)	53.35* (21.64)	57.57* (21.63)
Gender (n)			
Male (1823)	48.58* (21.89)	56.18* (22.20)	65.55 (20.94)
Female (1789)	46.99* (22.35)	54.42*(20.75)	66.54 (19.74)
Ethnicity (n)			
NZ European (2375)	47.96 (21.96)	55.24 (21.00)	66.25 (20.06)
Māori (519)	48.03 (23.18)	58.30* (22.35)	68.58* (21.57)
Asian (577)	46.82 (21.42)	53.65* (20.53)	63.27* (19.51)
Pacific (262)	46.89 (23.45)	57.42 (23.01)	68.87* (22.86))
Others (220)	46.84 (20.19)	53.83 (22.56)	62.56* (20.31)

*Mean differences are statistically significant (p-value < 0.05) between psychosocial scales and selected variables

According to Table 3, all mean differences on each variable between ‘exposed to bullying’ and ‘not exposed to bullying’ categories were statistically significant at 95% confidence interval. The higher mean score for quantitative demands (mean=55.33, SD=22.68) in the exposed group suggests that workers who experience bullying tend to perceive greater quantitative demands at work compared to those who are not exposed (mean=45.60, SD=21.48). In the case of influence at work, the lower score for the exposed group (mean=53.35, SD=21.64) indicates that workers who experience bullying may perceive slightly lower levels of influence at work compared to their non-exposed counterparts (mean=55.88, SD=21.43). However, the difference is relatively small.

Finally for job satisfaction, the substantial difference in mean scores suggests that individuals who experience bullying at work (mean=57.57, SD=21.63) tend to have significantly lower levels of job satisfaction compared to those who are not exposed to bullying (mean=68.52, SD=19.29).

As shown in Table 3, we can see that experiences of the psychosocial working environment differ by gender. Male workers perceived to have significantly higher quantitative demands and influence work. On the other hand, female workers have reported a higher level of job satisfaction compared to male workers, however, the difference is non-significant at the 5% level of significance. In relation to ethnicity as seen in Table 3, results show that Māori and Pacific workers report statistically higher job satisfaction. In addition, Māori workers reported to have significantly higher influence at work compared to non-Māori workers.

Regression Analysis

This paper aims to focus on the relationship of quantitative demands, influence at work, and exposure to bullying on job satisfaction. For the purpose of analysis, hierarchical weighted multiple linear regression models have been employed (Table 4). In Model 1, influence at work (IN), quantitative demands (QD) and exposure to bullying (BU) have been considered as covariates to test the hypotheses H1, H2 and H3. Model 2 we have included interaction components along with the covariates considered in Model 1 to test the hypotheses H4, H5 and H6. In Model 3, gender and ethnicity have been incorporated along with the covariates considered in Model 2 to examine how demographic factors change the effect of influence at work, quantitative demands and exposure to bullying on job satisfaction.

Table 4: Parameter estimates of selected covariates from the hierarchical weighted multiple regression models for job satisfaction

	Model 1		Model 2		Model 3	
	coeff	**std. Err**	**coeff**	**std. Err**	**coeff**	**std. Err**
Intercept	68.03**	0.35	67.99**	0.35	66.49**	1.32
QD	-3.51**	0.32	-3.47**	0.36	-3.42**	0.36
IN	6.71**	0.31	6.62**	0.36	6.56**	0.36
BU	-8.62**	0.76	-8.59**	0.77	-8.69**	0.78
IN*QD			0.65*	0.29	0.70*	0.29
IN*BU			0.73	0.77	0.71	0.77
QD*BU			-0.13	0.73	-0.25	0.74
Gender (male)					0.93	0.62
NZ European					0.14	0.96
Māori					2.01*	0.98
Pacific					1.82	1.34
Asian					-2.43*	1.18
R2	0.176		0.178		0.183	
ΔR2			0.002		0.005**	

*p-value < 0.05; **p-value < 0.01

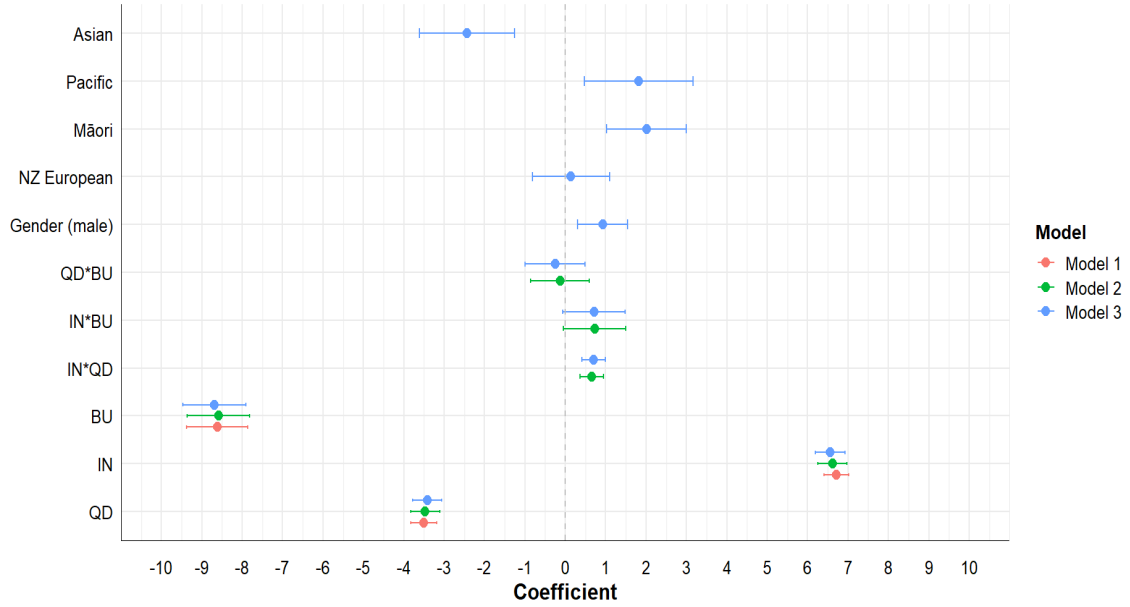
As revealed in Model 1, there is a statistically negative association between quantitative demands and job satisfaction. Estimated regression coefficient (β=-3.51; p-value< 0.01) confirms that higher levels of quantitative demands reduced job satisfaction significantly. Similarly, bullying exhibits a strong negative association with job satisfaction in Model 1 (β = -8.62; p-value < 0.01). Conversely, influence at work is positively associated with job satisfaction (β = 6.71; p-value < 0.01), suggesting that workers who report greater influence at work appear to experience higher levels of job satisfaction.

Model 1 (Table 4 and Figure 2) showed a statistically significant positive association between influence at work and job satisfaction, thereby supporting H1. On the other hand, the negative regression coefficients for quantitative demands and exposure to bullying suggest that these variables are associated with lower job satisfaction (supported H2 and H3).

Model 2 (Table 4 and Figure 2) incorporates both main effects and interaction effects of quantitative demands, influence at work, and exposure to bullying on job satisfaction. High quantitative demands (β=-3.47; p-value< 0.01) and exposure to bullying (β=-8.59; p-value< 0.01) have negative implications for job satisfaction, while influence at work has a positive effect (β=6.62; p-value< 0.01). When adding interaction terms, the significant positive interaction IN*QD (β = 0.65; p < 0.05) indicates that influence at work buffers the negative impact of high quantitative demands on job satisfaction. The interaction of influence at work and quantitative demand is a dynamic one, where due to the influence at work, there is a likelihood that the quantitative demands become challenges rather than hindrances. This is also evident in our result where we see that the interaction term changes the relationship of

quantitative demands in terms of the direction of the coefficient from negative (-3.42) to positive (0.70). The sign changes from negative to positive indicates that influence at work reduced the detrimental effect of quantitative demands on job satisfaction (supported H4). However, the interaction IN*BU (β = 0.73; p-value > 0.05) indicates a possible moderating effect of influence on the impact of bullying, but the evidence is insufficient (not supported H5). Similarly, the non-significant interaction QD*BU (β = -0.13; p-value > 0.05) suggests that the combined effect of high quantitative demands and exposure to bullying does not significantly differ from their individual effects on job satisfaction (not supported H6).

Figure-2: Regression coefficients with standard errors



Coefficients with 95% confidence intervals. Model comparison adjusted for covariates.

Points represent estimated regression coefficients. Error bars represent ± standard error if the coefficient estimates

We examined the effect of gender and ethnicity in Model 3 along with the covariates considered in Model 2 to see how demographic factors influence the effects of influences at work, quantitative demands, and bullying on job satisfaction. From Model 3 it can be said that job satisfaction significantly decreases with high quantitative demands (β=-3.42; p-value< 0.01) and exposure to bullying (β=-8.69; p-value< 0.01) but increases with greater influence at work (β=6.56; p-value< 0.01). From the interaction terms, it is still observed that influence at work significantly moderates the negative effect of quantitative demands on job satisfaction (β = 0.70; p < 0.05).

Discussion

Our findings largely align with the existing literature. We found that higher quantitative demands, such as having a heavy workload or time pressure, are associated with lower job satisfaction. When employees feel overwhelmed by the demands placed on them, they tend to be less satisfied with their job. When employees have a sense of influence and control over their work, they tend to be more satisfied with their job. This is similar to the JD-R theory and other studies that focus on job satisfaction and stress (Haar, 2006; Lepine et al., 2005), including the studies conducted using COPSOQ (Burr et. al., 2019). Furthermore, JD-R theory suggests that greater influence at work and higher quantitative demands can indicate challenging job tasks. Challenging work tends to foster increased job satisfaction, as individuals feel a sense of fulfilment and accomplishment (Cavanaugh et al., 2000; LePine et al., 2004; LePine et al., 2005; LePine et al., 2006). On the other hand, tasks that are perceived as hindrances or obstacles can lead to job dissatisfaction, where high job demands can be detrimental without sufficient resources. Individuals with high influence at work may have the resources, in such cases their quantitative demands may act as challenges rather than hindrances, which helps with better job satisfaction. Thus, our findings resonate with the literature which posits that resources at work are a crucial factor in moderating the impact of quantitative demands on job satisfaction (Dawson et al., 2016; Demerouti et al., 2003).

Experiencing bullying at work was linked to lower job satisfaction, which is not a surprise; when employees face mistreatment or harassment from colleagues or superiors, it negatively affects their satisfaction with job (Leake et. al, 2025). Additionally, in this research, we find that those who experienced bullying had higher mean scores for quantitative demands, and lower mean scores for influence of work and job satisfaction, yet our moderation hypotheses were rejected. These findings suggest that individuals who report being bullied tend to perceive lower influence at work or higher quantitative demands. Whether these perceptions reflect actual conditions or are shaped by the emotional toll of bullying remains unclear, but it is a question worth exploring further.

While many studies of exposure to bullying have focused on wellbeing (Farley et al., 2023), our study focused on work factors (demands & influence) and job satisfaction often not covered together in bullying literature. Our bivariate analysis reflects that those exposed to bullying also had higher quantitative demands and lower influence at work. Having said that, perceived influence at work did not moderate the effects of bullying in our analysis. Further research is needed to better understand this relationship. One possibility is that having influence at work may empower individuals to report bullying. Exploring which organisational scales are most frequently associated with bullying could offer valuable insights. Nonetheless, our findings affirm that exposure to bullying has detrimental effects on employees — even those who hold influence at work.

Overall, these findings highlight the importance of managing quantitative demands, fostering a positive work environment, encouraging worker participation, and preventing bullying to promote employee job satisfaction. Organisations should focus on empowering employees, reducing work-related stressors, and addressing any issues related to workplace bullying to enhance employee satisfaction and well-being (Leake et. al, 2025).

Practical Implications

The findings from this research underscore the importance of considering and understanding the complexities in the interplay between work related factors and job satisfaction. Several critical insights have emerged from the analysis.

A strong correlation between low job satisfaction and high quantitative demands has been found. This finding highlights that quantitative demand should be considered as a core component to ensure workplace health and safety, rather than a separate organisational issue. Similarly, fostering participation in feedback and management systems, which allows for two-way interaction at work, can increase overall job satisfaction, even under demanding circumstances.

Bullying as a workplace phenomenon has been found to be negatively associated with influence at work and has a profound impact on job satisfaction. A confidential, robust, and enforceable framework must be put in place to support the reporting of workplace bullying combined with policies that actively prevent and mitigate such hostile act, regardless of the workers' position (Tuckey, et al., 2022).

This study highlights the ways in which influence at work, exposure to bullying, and quantitative demands are linked in influencing job satisfaction. Even though our study validates pre-existing theories, it also points to possible areas where existing frameworks can be strengthened, particularly in how the complexity of workplace bullying can be address and job satisfaction can be promoted. The key takeaway for practitioners is that improving job satisfaction requires a holistic approach that actively reduces work pressures, empowers employees, and foster a workplace free of negative behaviours.

Study strengths and weaknesses

The study has several notable strengths. It draws on a large, nationally representative sample of New Zealand workers across a wide range of industries. This enhances the generalisability of the findings and allows for meaningful insights into the workplace dynamics at a national level. To our knowledge, this is one of the very few studies that provides a comprehensive analysis of the association between workplace bullying, job demands and influence at work in relation to job satisfaction in a large-scale, population-based context.

However, there are some limitations. First, the study used self-reported measures, and as we know such responses suffer from reporting bias (Caputo, 2017). This may involve understatement or overstatement, which might not reflect respondents' actual experiences. This may be due to social desirability bias or stigma associated with reporting sensitive workplace issues, such as bullying, which can lead participants to underreport negative experiences or overstated positive ones. It is also

important to note that the data is cross-sectional and so cannot infer causality from the associations. For example, bullying and job satisfaction may be statistically significantly associated through some other mechanism, rather than having a direct effect (Pihl et al., 2016). Further studies can do peer reports and compare the findings with our study. Second, because not everyone in the population had a chance of being selected, survey weights were applied to adjust for sampling disparities. While this improves representativeness significantly, residual bias may still affect the estimates if certain population groups were systematically differed in ways not captured by the weighting variables. Third, we acknowledge that One-shot/ cross-sectional surveys collect data at a single point in time, so they cannot determine cause-and-effect relationships. However, they can highlight correlations or patterns that may warrant further investigation through longitudinal or experimental designs, which we will hopefully be able to measure longitudinally as the psychosocial risks survey studies will continue. Fourth, the data was collected during the height of the COVID-19 pandemic in New Zealand which may have caused significant changes in the nature of work and shifts in industry structures at the time of surveying. As a result, these may have influenced workers' perspectives on psychosocial conditions. This represents a potential area for further exploration to determine if these influences persist following the pandemic.

Conclusion

Our paper contributes to the JD-R theory and the literature of bullying. We provide insights from a large national survey in the context of New Zealand, while the data was collected during the pandemic. Future research in using the same survey will provide useful comparisons in relation to post pandemic findings. The results suggest that job satisfaction is influenced by quantitative demands, influence at work, and exposure to bullying, with high levels of quantitative demands and exposure to bullying tending to decrease job satisfaction, while high levels of influence at work tend to increase job satisfaction. These findings have important implications for employers, as they suggest the need to address bullying and promote supportive work environments to enhance job satisfaction and well-being among employees. It can also help to prevent and reduce the occurrence and impact of bullying in organisations. Furthermore, it can contribute to the theoretical and empirical advancement of the JD-R and challenge hindrance framework (LePine, 2022; Podsakoff et al., 2023) by integrating different perspectives and approaches on influence at work, quantitative demands, job satisfaction, and bullying.

Disclosure/Notes

The present study utilised data from the New Zealand Psychosocial Survey 2021 conducted by WorkSafe New Zealand. The dataset is owned and managed by WorkSafe. Access to the dataset is restricted to co-authors employed by WorkSafe New Zealand, in accordance with data governance protocols and the privacy requirements set out in the Privacy Act. All statistics analyses were performed by researchers from WorkSafe New Zealand.

Author contribution

WorkSafe co-authors led the design and execution of the study, including data access, management, statistical analyses, and drafted the methodology and results, and contributed to the introduction and discussion sections. The Massey University co-author developed the study's theoretical framework, provided conceptual oversight, supported the interpretation of the findings within the broader research and practitioner context and contributed to the introduction and discussion. All co-authors contributed to the final manuscript development and review process.

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Key points

It is important for employers to know that exposure to bullying has adverse effects on job satisfaction.
Those who reported being bullied also reported more constraints and less resources.
High quantitative demands and low influence at work can take a toll on employee wellbeing.

References

Andersen, M. F., Svendsen, P. A., Nielsen, K., Brinkmann, S., Rugulies, R., & Madsen, I. E. H. (2022). Influence at work is a key factor for mental health–but what do contemporary employees in knowledge and relational work mean by "influence at work"?. *International Journal of Qualitative Studies on Health and Well-being*, *17*(1), 2054513. https://doi.org/10.1080/17482631.2022.2054513

Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology, 22*(3), 309–328. https://doi.org/10.1108/02683940710733115

Bakker, A. B., & Demerouti, E. (2014). Job demands–resources theory. *Wellbeing: A Complete Reference Guide*, 1-28. https://doi.org/10.1002/9781118539415.wbwell019

Bakker, A. B., & Demerouti, E. (2017). Job demands–resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, *22*(3), 273-285. https://doi.org/10.1037/ocp0000056

Burr, H., Berthelsen, H., Moncada, S., Nübling, M., Dupret, E., Demiral, Y., Oudyk, J., Kristensen, T. S., Llorens, C., Navarro, A., Lincke, H.-J., Bocéréan, C., Sahan, C., Smith, P., & Pohrt, A. (2019). The Third Version of the Copenhagen Psychosocial Questionnaire. *Safety and Health at Work*, *10*(4), 482-503. https://doi.org/https://doi.org/10.1016/j.shaw.2019.10.002

Caputo, A. (2017). Social desirability bias in self-reported well-being measures: Evidence from an online survey. *Universitas Psychologica, 16*(2). https://doi.org/10.11144/Javeriana.upsy16-2.sdsw

Cavanaugh, M. A., Boswell, W. R., Roehling, M. V., & Boudreau, J. W. (2000). An empirical examination of self-reported work stress among US managers. *Journal of Applied Psychology*, *85*(1), 65-74. https://doi.org/10.1037/0021-9010.85.1.65

Dawson, K., O'Brien, K., & Beehr, T. (2016). The role of hindrance stressors in the job demand–control–support model of occupational stress: A proposed theory revision. *Journal of Organizational Behavior*, *37*(3), 397-415. https://doi.org/10.1002/job.2049

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, *86*(3), 499-512. https://doi.org/10.1037/0021-9010.86.3.499

Demerouti, E., Bakker, A., Vardakou, I., & Kantas, A. (2003). The convergent validity of two burnout instruments: A multitrait-multimethod analysis. *European Journal of Psychological Assessment*, *19*(1), 12-23. https://doi.org/10.1027//1015-5759.19.1.12

Einarsen, S. V., Hoel, H., Zapf, D., & Cooper, C. L. (2020). The concept of bullying and harassment at work: The European tradition. In *Bullying and Harassment in the Workplace: Theory, Research and Practice (3rd ed.)* pp. 3-53. CRC press. ISBN 9780429132483

Farley, S., Mokhtar, D., Ng, K., & Niven, K. (2023). What influences the relationship between workplace bullying and employee well-being? A systematic review of moderators. *Work & Stress*, *37*(3), 345-372. https://doi.org/10.1080/02678373.2023.2169968

Haar, J. (2023, May 18). *Higher frequency bullying remains significant in workforce*. Massey University. https://www.massey.ac.nz/about/news/higher-frequency-bullying-remains-significant-in-workforce/

Haar, J. M. (2006). Challenge and hindrance stressors in New Zealand: exploring social exchange theory outcomes. *International Journal of Human Resource Management*, *17*(11), 1942-1950. https://doi.org/10.1080/09585190601000147

Hauge, L. J., Skogstad, A., & Einarsen, S. (2010). The relative impact of workplace bullying as a social stressor at work. *Scandinavian Journal of Psychology*, *51*(5), 426-433. https://doi.org/10.1111/j.1467-9450.2010.00813.x

Karasek Jr, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, *24* (2)285-308. https://doi.org/10.2307/2392498

Leake, G., Amankwaa, A., & de Pater, I. E. (2025). Workplace mistreatment: A systematic review of interventions and future research agenda. Journal of Business Ethics. Advance online publication. https://doi.org/10.1007/s10551-025-06058-x

LePine, J. A., LePine, M. A., & Jackson, C. L. (2004). Challenge and hindrance stress: Relationships with exhaustion, motivation to learn, and learning performance. *Journal of Applied Psychology*, *89*(5), 883-891. https://doi.org/10.1037/0021-9010.89.5.883

LePine, J. A., LePine, M. A., & Saul, J. R. (2006). Relationships Among Work and Non-Work Challenge and Hindrance Stressors and Non-Work and Work Criteria: A Model of Cross-Domain Stressor Effects. In *Exploring the Work and Non-Work Interface* (pp. 35-72). https://doi.org/10.1016/s1479-3555(06)06002-1

LePine, J. A., Podsakoff, N. P., & Lepine, M. A. (2005). A meta-analytic test of the challenge stressor-hindrance stressor framework: An explanation for inconsistent relationships among stressors and performance. *The Academy of Management Journal*, *48*(5), 764-775. https://doi.org/10.2307/20159696

LePine, M. A. (2022). The challenge-hindrance stressor framework: an integrative conceptual review and path forward. *Group & Organization Management*, *47*(2), 223-254. https://doi.org/10.1177/10596011221079970

Macky, K., & Boxall, P. (2008). High-involvement work processes, work intensification and employee well-being: A study of New Zealand worker experiences. *Asia Pacific Journal of Human Resources*, *46*(1), 38-55. https://doi.org/10.1177/1038411107086542

Mental Health Foundation of New Zealand. (2022). *Statistics on workplace mental health and wellbeing*. https://mentalhealth.org.nz/workplaces/statistics-on-workplace-mental-health-and-wellbeing

Nielsen, M. B., & Einarsen, S. (2012). Outcomes of exposure to workplace bullying: A meta-analytic review. *Work & Stress*, *26*(4), 309-332. https://doi.org/10.1080/02678373.2012.734709

Nielsen, M. B., Einarsen, S. V., Parveen, S., & Rosander, M. (2024). Witnessing workplace bullying—A systematic review and meta-analysis of individual health and well-being outcomes. *Aggression and Violent Behavior*, *75*, 101908. https://doi.org/10.1016/j.avb.2023.101908

Pfeffer, J. (1993). *Managing with power: Politics and influence in organizations*. Harvard Business Press.

Pihl, P., Albertsen, K., Hogh, A., & Andersen, L. P. S. (2017). Social capital and workplace bullying. *WORK: A Journal of Prevention, Assessment & Rehabilitation*, *57*(4), 535-545. https://doi.org/10.3233/WOR-172589

Podsakoff, N. P., Freiburger, K. J., Podsakoff, P. M., & Rosen, C. C. (2023). Laying the Foundation for the Challenge–Hindrance Stressor Framework 2.0. *Annual Review of Organizational Psychology and Organizational Behavior*, *10*, 165-199. https://doi.org/10.1146/annurev-orgpsych-080422-052147

Salin, D. (2003). Ways of explaining workplace bullying: A review of enabling, motivating and precipitating structures and processes in the work environment. *Human Relations*, *56*(10), 1213-1232. https://doi.org/10.1177/00187267035610003

Schaufeli, W.B., Taris, T.W. (2014). A Critical Review of the Job Demands-Resources Model: Implications for Improving Work and Health. In: *Bridging Occupational, Organizational and Public Health.* Springer, Dordrecht. https://doi.org/10.1007/978-94-007-5640-3_4

Schilbach, M., Haun, V. C., Baethge, A., & Rigotti, T. (2023). The challenging and hindering potential of time pressure: Qualitative job demands as suppressor variables. *Journal of Business and Psychology*, *38*(5), 1061-1075. https://doi.org/10.1007/s10869-022-09844-w

Spence, L. H., & Nosko, A. (2013). Exposure to workplace bullying and post-traumatic stress disorder symptomology: the role of protective psychological resources. *Journal of Nursing Management*, *23*(2), 252-262. https://doi.org/10.1111/jonm.12122

Te Kāhui Tika Tangata – Human Rights Commission. (2025). *Experiences of workplace bullying and harassment in Aotearoa New Zealand*. https://tikatangata.org.nz/news/new-research-shows-high-prevalence-of-workplace-bullying-and-harassment

Tuckey, M. R., Dollard, M. F., Hosking, P. J., & Winefield, A. H. (2009). Workplace bullying: The role of psychosocial work environment factors. *International Journal of Stress Management*, *16*(3), 215-232. https://doi.org/10.1037/a0016841

Tuckey, M. R., Li, Y., Neall, A. M., Chen, P. Y., Dollard, M. F., McLinton, S. S., Rogers, A., & Mattiske, J. (2022). Workplace bullying as an organizational problem: Spotlight on people management practices. *Journal of Occupational Health Psychology, 27*(6), 544–565. https://doi.org/10.1037/ocp0000335

WorkSafe New Zealand (2022). *The New Zealand Psychosocial Survey 2021.* New Zealand Psychosocial Survey WorkSafe