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THE IMPACT OF ROLE OVERLOAD AND INNOVATION FATIGUE ON TEAM VIABILITY

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Abstract
This study investigates the impact of role overload and innovation fatigue on team viability. A quantitative survey of team members who are knowledge workers was conducted, and 207 participants were surveyed. The results show that, while role overload does not directly affect team viability, innovation fatigue has a significant negative impact. Further analysis demonstrates that innovation fatigue mediates the relationship between role overload and team viability. These findings demonstrate that team management strategies should include employees' innovation fatigue interventions and effectively manage role demands to ensure a successful team's future. In addition, the study advances the theoretical and practical understanding of the effects of work stressors on team viability, emphasising the importance of addressing demanding work tasks in knowledge-intensive organisational environments.
KEY WORDS: role overload, innovation fatigue, team viability, knowledge workers.

Anotacija
Šio tyrimo tikslas – ištirti vaidmenų perkrovos ir inovacijų nuovargio poveikį komandos gyvybingumui. Šiam tikslui pasiekti atliktas kiekybinis tyrimas, apklausiant žinių darbuotojų komandų narius (N = 207). Empirinio tyrimo rezultatai atskleidė, kad vaidmens perkrova neturi tiesioginio neigiamo poveikio komandos gyvybingumui, o nuovargis, jaučiamas dėl inovacijų, daro stiprų neigiamą poveikį. Tolesnės analizės rezultatai atskleidė, kad inovacijų nuovargis tarpininkauja ryšiui tarp vaidmenų perkrovos ir komandos gyvybingumo. Šie rezultatai atskleidžia, kad komandos valdymo strategijos turėtų apimti darbuotojų inovacijų nuovargio intervencijas ir veiksmingai valdyti vaidmenų reikalavimus, siekiant užtikrinti sėkmingą komandos ateitį. Be to, šiuo tyrimu plėtojamas teorinis ir praktinis supratimas apie darbo streso sukėlėjų poveikį komandos gyvybingumui, pabrėžiant, kaip svarbu spręsti sudėtingas darbo užduotis žinioms imlioje organizacinėje aplinkoje.
PAGRINDINIAI ŽODŽIAI: vaidmenų perkrova, inovacijų nuovargis, komandos gyvybingumas, *žinių* darbuotojai.
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Introduction

The ability of team members to continue working together, often termed as the team's viability, is likely one of the crucial factors for the organisation to reach its objectives and aspire to long-term success. It can be assumed that team viability adds value to the understanding of team effectiveness. In theoretical models of team effectiveness (Hackman, 1987; Sundstrom et al., 1990), team viability is indicated as an integral part of these models. As a criterion of effectiveness (Hackman, 1987), team viability is seen as an indicator of future performance (Bell, Marentette, 2011), and could help to assess the team's effectiveness in the future at the present time (Guzzo, Dickson, 1996). Team viability has historically been regarded as a fundamental aspect of efficient team dynamics and sustained success in the execution of various innovations (Hackman, 1987; Sundstrom et al., 1990; Balkundi, Harrison, 2006), thus being relevant to various organisational and team dynamics research.

The increasing demand and rapid pace of modern work environments have led to significant challenges, especially for knowledge workers, in terms of role overload and innovation fatigue, which could lead to negative working experiences, resulting in the intention to quit or other withdrawal behaviours. Understanding the impact of role overload and innovation fatigue on team viability is crucial to theoretical and practical knowledge in fast-changing work environments. This knowledge could help develop strategies to keep the team intact, reduce negative work experience, and enhance team performance and overall organisational success.

Previous studies have explored the effects of role overload on counterproductive work behaviour (Zhang et al., 2019), organisational citizenship (Montani, Dagenais-Desmarais, 2018), employee innovation (Montani et al., 2017), and others. However, only one attempt has been made to measure the impact on team viability using student samples (Marrone et al., 2007). Innovation fatigue has also been studied in various work behaviours, but no study has attempted to measure its impact on team viability. Despite the growing body of research on the negative aspects of work, comprehensive studies examining how role overload and innovation fatigue influence team viability among knowledge workers are understudied. Knowledge worker teams are essential for organisations because they can foster innovation, improve performance, and create competitive advantages. These teams can be viewed as significant assets for various organisations (Lewis, 2004). According to Davenport (2005), knowledge workers possess a high degree of expertise, education and experience. His descriptions and theoretical explanations of knowledge workers are widely used in the scientific literature. Davenport (2005) states that knowledge workers 'think for a living' and 'any heavy lifting on the job is

intellectual, not physical.' In recent years, a study by Muzam (2023) highlighted the competencies of knowledge workers in the modern economy, grouped into five categories: physical and manual skills, basic cognitive skills, higher cognitive skills, social and emotional skills, and technological skills, based on the McKinsey Global Institute workforce skills model. As knowledge workers are professionals who work primarily with information and ideas to create value for their organisations, ensuring knowledge workers' team viability is crucial for its members, the whole team, and organisational success.

Given the challenges that teams face today, understanding the conditions that are crucial for team viability is a necessary aspect for researchers to explore. However, in the research field, the mechanisms that may account for the effects of role overload and innovation fatigue on team viability remain largely unexplored, thus limiting our understanding of these relationships. Addressing this gap will provide valuable insights into the mechanisms through which these aspects affect team functionality and offer potential areas for improving team management and success. The object of the research is the impact of role overload and innovation fatigue on team viability. This research aims to investigate the impact of role overload and innovation fatigue on team viability in knowledge worker teams. Research methods: A quantitative research design was used to gather necessary information using an online survey. Statistical data analysis was performed using IBM SPSS and JASP version 0.19.1.

1. The theoretical framework

To understand what a viable team is, it is necessary to examine this phenomenon from the perspective of various authors. According to Balkundi and Harrison (2006), team viability is: 1) the team's potential to retain its members due to their attachment to the team; and 2) the desire to stay together. The authors argue that team viability is a broad construct that includes member satisfaction with membership and behavioural intentions to stay in the team. According to Rousseau and Aubé (2010), team viability refers to a team's ability to maintain effective work over time. As later stated, team viability refers to a team's ability to adapt to internal and external changes or difficulties affecting collective work (Aubé, Rousseau, 2011) namely team performance and team viability. Moreover, this study investigates the mediating role of team goal commitment in these relationships. Data were collected from 97 work teams (341 members and 97 immediate supervisors. Other researchers argue that team viability reflects the ability of team members to adapt to internal and external changes over time and remain together, thus maintaining an effective level of performance over time (Costa et al., 2015). Team viability

could simply be defined as the capability of members to work together in the future (Hackman, 1987; Sundstrom et al., 1990), but the modern context, team viability, according Bell and Marentette (2011), could be described as '*a team's capacity for the sustainability and growth required for success in future performance episodes*'.

According to Kumar et al. (2021), role overload is the perception of having too many work-related role tasks and not having enough time to do them. When this occurs, the individual appraises that he does not have the necessary resources to meet all the demands of the role or roles in the domain (Matthews et al., 2014). When team members experience role overload, they can decrease collaboration, lower happiness, and diminish the value placed on their roles (Marrone et al., 2007; Cooper, Sutter, 2018), ultimately affecting team viability. Similarly, role overload could lead to conflicts and reduced fairness perceptions (Arendt et al., 2024), ultimately harming team viability. Research points out that role overload is one of the three types of job stressors in an organisational setting (Jha et al., 2017). Inner role assignments within teams can have negative consequences on overall performance because of the psychological and emotional implications that individuals encounter while being assigned to a high-demand position (Cooper, Sutter, 2018). This could result in lower levels of satisfaction and happiness at work, a decreased valuation of their roles, and decreased collaboration, ultimately jeopardising the team's viability (Marrone et al., 2007; Cooper, Sutter, 2018).

Various studies have attempted to understand role overload and its effect on team outcomes. The positive relationship between role overload and the behavioural outcome of absenteeism was found to be insignificant (Carlson et al., 2019), but the same study found that role overload is positively related to a work-family conflict. Other studies did not find a negative relationship between job performance (Kumar et al., 2021; Akgunduz, 2015), satisfaction (Carlson et al., 2019), or affective commitment (Carlson et al., 2019). Other studies have found a significant negative relationship between role overload and organisational citizenship behaviour (Carlson et al., 2019). A negative relationship was found between team role overload and team viability (Marrone et al., 2007), where team role overload was aggregated from the individual to the team level. According to Marrone et al. (2007), role overload has the potential to diminish the viability of a team considerably by engendering stress and obstructing performance. This leads to the following hypothesis:

Hypothesis 1. Role overload relates negatively to team viability.

Another important aspect that could potentially harm team viability is that members experience fatigue from innovation. Innovation fatigue is defined as the exhaustion of an employee's emotional and cognitive resources that disrupts their engagement in the implementation of other innovations (Chung et al., 2017). Em-

ployee innovation is widely recognised as essential to organisational success and competitiveness. Nevertheless, the instability of the environment increases employees' exposure to job stressors, which has an impact on work behaviours (Montani et al., 2017). Organisations constantly try to improve their competitive advantage and catch up with modern technologies, often implementing innovations. If team members apply several innovations over a long period, this may negatively affect them by increasing their personal exhaustion (Chung et al., 2017)organizations have adopted and implemented a continuous stream of innovations to achieve sustainable growth and survival. Considering the demand for additional resources to implement innovations, the present study explores organizational conditions that may lead to innovation-targeted burnout and fatigue among employees, which impede their active participation in a subsequent innovation. To this end, we propose a theoretical framework that elucidates the effects of previous innovations on the subsequent implementation behavior of employees. We identify two dimensions of the cognitive appraisal of previous innovations (i.e., intensity and failure. Moreover, innovation fatigue can negatively affect team viability by generating an atmosphere in which cooperation and creativity are obstructed (Lindsay et al., 2009), thereby affecting not only team viability but also organisational success.

According to Chung et al. (2017), perceived intensity and failure of previous innovations are considered to be the basis of employees' schema for succeeding in future innovation, which would therefore damage the future of the team and harm team viability if the process of implementation is negative to the members. For instance, an over-emphasis on learning behaviours may jeopardise team viability, because teams may fail to attend to crucial tasks (Dimas et al., 2017). In addition, innovation fatigue can negatively influence team viability by draining employees' emotional and cognitive resources, leading to burn-out, decreased motivation (Lindsay et al., 2009; Chung et al., 2017) organizations have adopted and implemented a continuous stream of innovations to achieve sustainable growth and survival. Considering the demand for additional resources to implement innovations, the present study explores organizational conditions that may lead to innovation-targeted burnout and fatigue among employees, which impede their active participation in a subsequent innovation. To this end, we propose a theoretical framework that elucidates the effects of previous innovations on the subsequent implementation behavior of employees. We identify two dimensions of the cognitive appraisal of previous innovations (i.e., intensity and failure, or a lack of communication (González-Romá, Hernández, 2016). This leads to the following hypothesis:

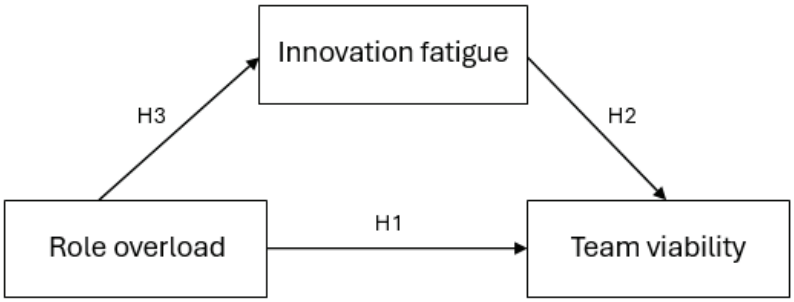

Figure 1. The research model

Hypothesis 2. Innovation fatigue relates negatively to team viability.

Inefficient working methods and a lack of communication due to role overload can lead to innovation blockages (González-Romá, Hernández, 2016; Elshan et al., 2022), which may contribute to team fatigue and negatively influence overall team viability. Some scientific evidence suggests that role overload influences employee fatigue. For example, Barling and Frone (2017) found that role conflict and role ambiguity are positively related to psychological work fatigue, indicating that role overload could increase not only psychological work fatigue but also innovation fatigue. Montani and Dagenais-Desmarais (2018) found that role overload is indirectly negatively related to organisational citizenship, mediated through emotional exhaustion. This finding indicates that role overload affects outcomes through other factors. Another study by Montani et al. (2017) discovered the indirect positive effect of role overload and the indirect negative effects of role ambiguity and role conflict on employee innovation through affective organisational commitment. Thus, the following hypothesis is proposed:

Hypothesis 3. Innovation fatigue mediates the relationship between role overload and team viability.

An explanatory research design was adopted to achieve the objective of the study by utilising quantitative methods to determine the causal relationships between role overload, innovation fatigue and team viability. Fig. 1 illustrates the conceptual framework of the study.

2. Methodology

Participants and procedures. This study was conducted among team members of knowledge worker teams in Lithuania. To facilitate the generalisability of the

findings and to examine the hypotheses in a large sample and a variety of team settings (see Table 1), a single organisational setting was not chosen for this study, but rather a variety of team members who subjectively evaluated their current working experience. Data were collected from September to November 2024 using an online survey through Qualtrics. Respondents were approached via Facebook and LinkedIn. In addition, the respondents were asked to share the link to the survey with their co-workers.

Prior to completing the online survey, participants were provided with an informed consent form that contained details about the study and information that might be crucial in deciding whether to participate (the study goal and details regarding data anonymity and confidentiality). Respondents only took part in the study and answered the questionnaire after reading the informed consent form and confirming that they were willing to continue participating. There were no material or other incentives for participants to participate in the study, and participation was entirely voluntary. The research was conducted in compliance with all relevant ethical standards.

To qualify for the study, participants were required to be 18 years or older, be a knowledge worker, and work in a team. Before answering the questionnaire, respondents were introduced to a description of a knowledge worker from the conceptualisation of Davenport (2005): '*A knowledge worker is a person whose main resource is what he/she knows. A popular expression would be "an employee who works with his head, not his hands" or "does mental, not physical work". For example, administrative staff, managers, consultants, engineers, analysts, architects, researchers, accountants, medical workers, or educational specialists.*' Subsequently, an additional question was posed to ascertain whether respondents were currently engaged as knowledge workers. An additional requirement for managerial positions was to be part of a team where they were team members and not the manager, as the study focused on the team member's perspective. An additional question was posed to ascertain this requirement.

Data were obtained from 207 individuals using purposive sampling. The respondents came from organisations that were diverse in size; thus, the structure of the local economy was well represented (Table 1).

Most of the respondents were from large companies (250 employees or more) (41.5%), 31.9% were from small organisations (ten to 49 employees), 21.3% represented medium-size organisations (50 to 249 employees), and only 5.3% of respondents were from very small organisations (up to nine employees).

Table 1. Profile of research respondents

		Frequency	Percent
Work Environment	Hybrid	122	58.94
	Remote	16	7.73
	Office	69	33.33
Organisational tenure	Up to 3 months	15	7.25
	3 months - 1 year	19	9.18
	1-3 years	78	37.68
	3-5 years	26	12.56
	5-10 years	65	31.40
	More than 10 years	4	1.93
Size of the organization	Very small (up to 9 employees)	11	5.31
	Small (10 to 49 employees)	66	31.88
	Medium (50 to 249 employees)	44	21.26
	Large (250 or more employees)	86	41.55
Education	Secondary	7	3.38
	Bachelor's degree (college)	19	9.18
	Bachelor's degree	65	31.40
	Master's degree	97	46.86
	Doctor's degree (PhD)	19	9.18
Gender	Male	59	28.50
	Female	148	71.50
Age group	18-26	17	8.21
	27-35	144	69.57
	36-45	35	16.91
	46-64	11	5.31
Team size	Up to 3 members	40	19.32
	4 to 9 members	115	55.56
	10 to 15 members	31	14.98
	16 to 20 members	12	5.80
	21 and more members	9	4.34

Most respondents, 58.9%, worked hybrid working, 33.3 % worked from the offices of organisations, and 7.7% worked fully remotely. Most respondents worked in the organisation for one to three years (37.7%) and five to ten years (31.4%), and the smallest number of respondents worked in the organisation for more than ten years (1.9%). The team sizes ranged from three to 21 and more, where the most represented team sizes were four to nine members (55.6%), and the smallest number of participants formed teams of 21 or more members (4.3%).

The educational background of most participants was a Master's degree (46.9%), and the smallest number of participants had a secondary school degree (3.4%). The participants were mostly female (71.5%). Male participants accounted

for 28.5%. The participants represented all age groups from 18 to 64, of which most participants were in the 27 to 35 age group (69.6%), and a comparatively small proportion (5.3%) were in the 46 to 64 age group.

In this research, the scales of role overload, innovation fatigue, and team viability were used to measure the variables. Double translation was applied to verify the consistency of the questionnaire in Lithuanian. Each statement was rated on the five-point Likert scale (1 = 'completely disagree', 5 = 'completely agree'). To examine empirically the hypotheses of the study, IBM SPSS and JASP 0.19.1 were applied to perform statistical analysis. Linear regressions were conducted to test the direct paths of the variables, and to test the mediation PROCESS macro. Indirect effects were tested using non-parametric Bootstrapping.

Measures. Cronbach's alpha was used to test the scale reliability of all constructs used in the data analysis. This test proved that the data were suitable for further research.

The Tarafdar et al. (2023) scale was used to assess employee role overload, which was adopted from Tarafdar et al. (2007)this paper uses concepts from sociotechnical theory and role theory to explore the effects of stress created by information and computer technology (ICT. The scale consists of four statements (example statement *'I often have to do more work than I can handle*'). As the number of points collected in the questionnaire increased, employees experienced greater role overload. Overall internal consistency coefficient of the scale (Cronbach's α): 0.87.

To assess employee innovation fatigue, we used items from the Maslach Burnout Inventory (Maslach, Jackson, 1981), which was adapted for innovation fatigue by Chung et al. (2017) organizations have adopted and implemented a continuous stream of innovations to achieve sustainable growth and survival. Considering the demand for additional resources to implement innovations, the present study explores organizational conditions that may lead to innovation-targeted burnout and fatigue among employees, which impede their active participation in a subsequent innovation. To this end, we propose a theoretical framework that elucidates the effects of previous innovations on the subsequent implementation behavior of employees. We identify two dimensions of the cognitive appraisal of previous innovations (i.e., intensity and failure. The scale consists of five statements. An example of a statement is '*I feel emotionally drained from my work related to innovations*.' Overall internal consistency coefficient of the scale (Cronbach's α): 0.85.

The Demir and Ergün (2023) scale was used to assess team viability. The scale consists of seven statements. An example of a statement is 'The members of this team could work for a long time together' and 'This team has the capacity for long-term success.' As the number of points collected in the questionnaire increased,

perceived team viability increased. Overall internal consistency coefficient of the scale (Cronbach's α): 0.86.

Control variables: consistent with prior research (Wang et al., 2019; Chung et al., 2017; Fu et al., 2020), control variables, such as age, gender, education, work environment, organisational tenure and organisation size, were selected.

3. Results

The descriptive statistics for all study variables are presented in Table 2. The results indicate that role overload is high, with a mean score of the sum 13.47 (SD = 4.07) and a midpoint of 10. As such, the overall role overload of knowledge worker teams is quite high. Innovation fatigue, with a mean score of the sum 11.06 (SD = 3.89) and a midpoint of 12.5, shows that knowledge workers who work in teams experience a lower level of innovation fatigue. As seen in Table 1, team viability with a mean score of the sum 24.22 (SD = 4.15), and a midpoint of 17.5, shows that employees are working in perceived high viability teams. Role overload was significantly correlated with team viability ($r = -0.15$, $p < .05$). Role overload was also significantly correlated with innovation fatigue ($r = 0.23$, $p < .001$), education ($r = 0.27$, $p < .001$) and organisation size ($r = -0.22$, $p < .01$). Innovation fatigue was significantly correlated with team viability ($r = -0.23$, $p < .01$). Innovation fatigue was also significantly correlated with gender ($r = 0.17$, $p < .05$) and work environment ($r = 0.21$, $p < .01$). In addition, team viability was significantly correlated with age ($r = -0.15$, $p < .05$) and education ($r = -0.24$, $p < .001$).

Table 2. Correlation matrix with means and standard deviations

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Gender	—									
2. Age	0.02	—								
3. Education	-0.11	0.33***	—							
4. Team size	0.11	0.15*	-0.21**	—						
5. Organization size	-0.12	-0.13	-0.13	-0.02	—					
6. Organisational tenure	-0.03	0.29***	0.04	0.12	0.20**	—				
7. Work environment	-0.02	0.13	-0.06	-0.02	-0.14*	-0.10	—			

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
8. Role overload	-0.01	0.01	0.27***	0.11	-0.22**	0.01	0.08	—		
9. Innovation fatigue	0.17*	-0.12	0.07	-0.02	-0.09	-0.05	0.21**	0.23***	—	
10. Team viability	0.08	-0.15*	-0.24***	0.10	0.08	0.06	0.03	-0.15*	-0.23**	—
Mean	1.71	2.19	3.49	2.20	2.99	3.58	1.74	13.47	11.06	24.22
Standard deviation	0.453	0.655	0.908	0.964	0.975	1.271	0.928	4.070	3.894	4.152

Note. N=207, * $p < .05$, ** $p < .01$, *** $p < .001$

We performed variance tests to compare the age groups and education for significant differences in team viability using the recommended post hoc analysis tests. We found significant differences across the age groups ($F = 3.340$, $p < .01$), with ad hoc analysis showing that the oldest group (46 to 64) had a significantly lower team viability score ($M = 20.4$) than the younger group (36 to 45), group 27 to 35, and group 18 to 26, all $p < .05$, all mean higher than 24. In addition, a significant difference was found between respondents with different educational backgrounds. A significant difference was found between individuals with a Bachelor's degree (college) and those with a Master's degree (mean difference = 2.922, $p = 0.033$), and a Doctor's degree (PhD) (mean difference = 5.105, $p = 0.001$). A significant difference was also found between a Bachelor's degree and a Doctor's degree (PhD), with a mean difference of 3.245, $p<.05$, indicating higher team viability scores for a Bachelor's degree.

Hypothesis testing. We proposed that role overload is negatively related to team viability (H1). Regression analysis was used to test the hypotheses to explore the relationship between role overload and team viability, accounting for demographic and organisational factors. Model M_1, including control variables (e.g. gender, age, education, team size, organisation size, tenure, work environment) explained 24.3% of the variance in team viability ($R^2 = 0.243$, Adjusted $R^2 = 0.152$, $p < 0.001$) (Table 3). This suggests that these factors moderately affect team viability. In model M_2, adding role overload slightly improves the explanatory power, with R^2 increasing to 0.245 (Adjusted $R^2 = 0.150$, $p < 0.001$).

Table 3. Regression of role overload and team viability

							95% CI	
Model		**B**	**SE**	**β** [a]	**t**	**p**	**Lower**	**Upper**
M_1	(Intercept)	23.198	2.463		9.418	< .001	18.338	28.058
	Adjusted R^2			0.152				
	F			2.684				
M_2	(Intercept)	23.684	2.581		9.176	< .001	18.592	28.777
	Role overload	-0.050	0.078	-0.049	-0.641	0.522	-0.204	0.104
	Adjusted R^2			0.150				
	F			2.577				

Note. [a] Standardized coefficients can only be computed for continuous predictors.

The ANOVA results showed that both models were statistically significant (M_1: $F = 2.684$, $p < 0.001$; M_2: $F = 2.577$, $p < 0.001$). This indicates that predictors collectively have a meaningful impact on team viability. However, as seen in the regression results (Table 3), role overload has an insignificant effect on team viability ($\beta = -0.049$, $p = 0.522$), suggesting no direct relationship between role overload and team viability when accounting for control variables. Changes in team viability are explained by other factors, rather than role overload; thus, Hypothesis 1 was not supported.

To test the second hypothesis (H2), regression analysis was used to investigate the relationship between innovation fatigue and team viability, also controlling for various demographic and organisational factors. Model M_1, which includes control variables, explains 24.3% of the variance in team viability ($R^2 = 0.243$, Adjusted $R^2 = 0.152$, $p < 0.001$) (Table 4). This suggests that these factors alone influence team viability moderately. Model M_2, incorporating innovation fatigue, significantly improved the model and explained 33.5% of the variance ($R^2 = 0.335$, Adjusted $R^2 = 0.251$, $p < 0.001$). This indicates that the addition of innovation fatigue enhances the predictive power. The ANOVA results showed that for M_2, the regression model was significant ($F = 4.005$, $p < 0.001$), confirming that the predictors together have a meaningful impact on team viability. The coefficients indicate that innovation fatigue has a significantly negative relationship with team viability ($\beta = -0.393$, $p < 0.001$). This supports Hypothesis 2: higher innovation fatigue is associated with lower team viability.

Table 4. Regression of innovation fatigue and team viability

							95% CI	
Model		**B**	**SE**	**β** [a]	**t**	**p**	**Lower**	**Upper**
M_1	(Intercept)	23.198	2.463		9.418	< .001	18.338	28.058
	Adjusted R^2			0.152				
	F			2.684				
M_2	(Intercept)	28.479	2.543		11.201	< .001	23.462	33.495
	Role overload	-0.419	0.083	-0.393	-5.026	< .001	-0.583	-0.254
	Adjusted R^2			0.251				
	F			4.005				

Note. [a] Standardized coefficients can only be computed for continuous predictors.

The third hypothesis (H3) was tested using the PROCESS macro in the JASP software with 5,000 bootstrapped samples. First, the path coefficients were analysed, where role overload significantly predicted innovation fatigue, with higher role overload leading to higher innovation fatigue ($p < .001$). Innovation fatigue significantly predicted team viability, with higher innovation fatigue negatively impacting team viability ($p = 0.003$), showing the same results as the regression analysis. Second, to assess the mediation effect, direct and indirect paths were analysed (Table 5).

Table 5. Direct and indirect effects

					95% CI	
Paths	**Estimate**	**SE**	**z-value**	**p**	**Lower**	**Upper**
ROO → INNFA	0.220	0.065	3.398	< .001	0.090	0.351
INNFA → TV	-0.217	0.074	-2.943	0.003	-0.364	-0.093
ROO → TV	-0.100	0.071	-1.417	0.156	-0.240	0.049
ROO → INNFA → TV	-0.048	0.021	-2.225	0.026	-0.101	-0.013

Note. Confidence intervals are percentile bootstrapped. Standard errors, *z* -values and *p* -values are based on the delta method. ROO – role overload, INNFA – innovation fatigue, TV – team viability.

Discussion and conclusions

This study aimed to investigate the impact of role overload and innovation fatigue on team viability in teams of knowledge workers. Our findings fail to confirm Hypothesis 1, because role overload shows no significant negative relationship with team viability, rather changes in team viability are explained by other

factors. This relationship should be further explored for any mediating/moderating variable to explain the relationship more comprehensively. Second, the result provides strong support for Hypothesis 2: innovation fatigue significantly reduces team viability even after controlling for variables. Third, our findings confirm Hypothesis 3, showing the mediation effect of innovation fatigue in the relationship between role overload and team viability. Role overload does not influence team viability, but it could still affect it through its impact on innovation fatigue.

The study results have implications for organisations and knowledge worker team leaders that emphasise work task strategies to help reduce employee innovation fatigue to maintain viable teams that can ensure long-term success. Organisational strategies or interventions targeted at lowering innovation fatigue could therefore act as catalysts to enhance viability even under conditions of very high workloads and demands in knowledge worker teams.

Previous research has shown that high levels of role overload negatively affect team viability (Marrone et al., 2007). Our results suggest that there is no direct effect, and that role overload negatively affects team viability through mediator innovation fatigue. As no studies have been conducted on innovation fatigue and team viability relationships, our research findings highlight the importance of the direct and mediating effects when accounting for role overload. This highlights the importance of understanding the factors that influence team viability and the well-being of knowledge workers' team members.

In conclusion, this study tested the hypothesis that role overload and innovation fatigue negatively impact team viability in knowledge worker teams. The results suggest that if team members experience role overload, it does not have an impact on team viability. However, if team members experience innovation fatigue, team viability is significantly reduced. If team members experience both role overload and innovation fatigue, the results show that role overload impacts team viability through its effect on innovation fatigue. If team members experience role overload, it could increase innovation fatigue, resulting in a lower level of team viability. These findings highlight the need for further research on the relationship between the different factors and team viability. The results of this study contribute to a broader theoretical and practical understanding of employees' work stressors and their impact on team viability. Organisations, human resource practitioners, and team leaders can use the findings of this study to adapt their management strategies and address role overload and innovation fatigue more often, thereby improving team viability and ensuring favourable team outcomes.

Conflict of interest

The authors declare that there is no conflict of interest.

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