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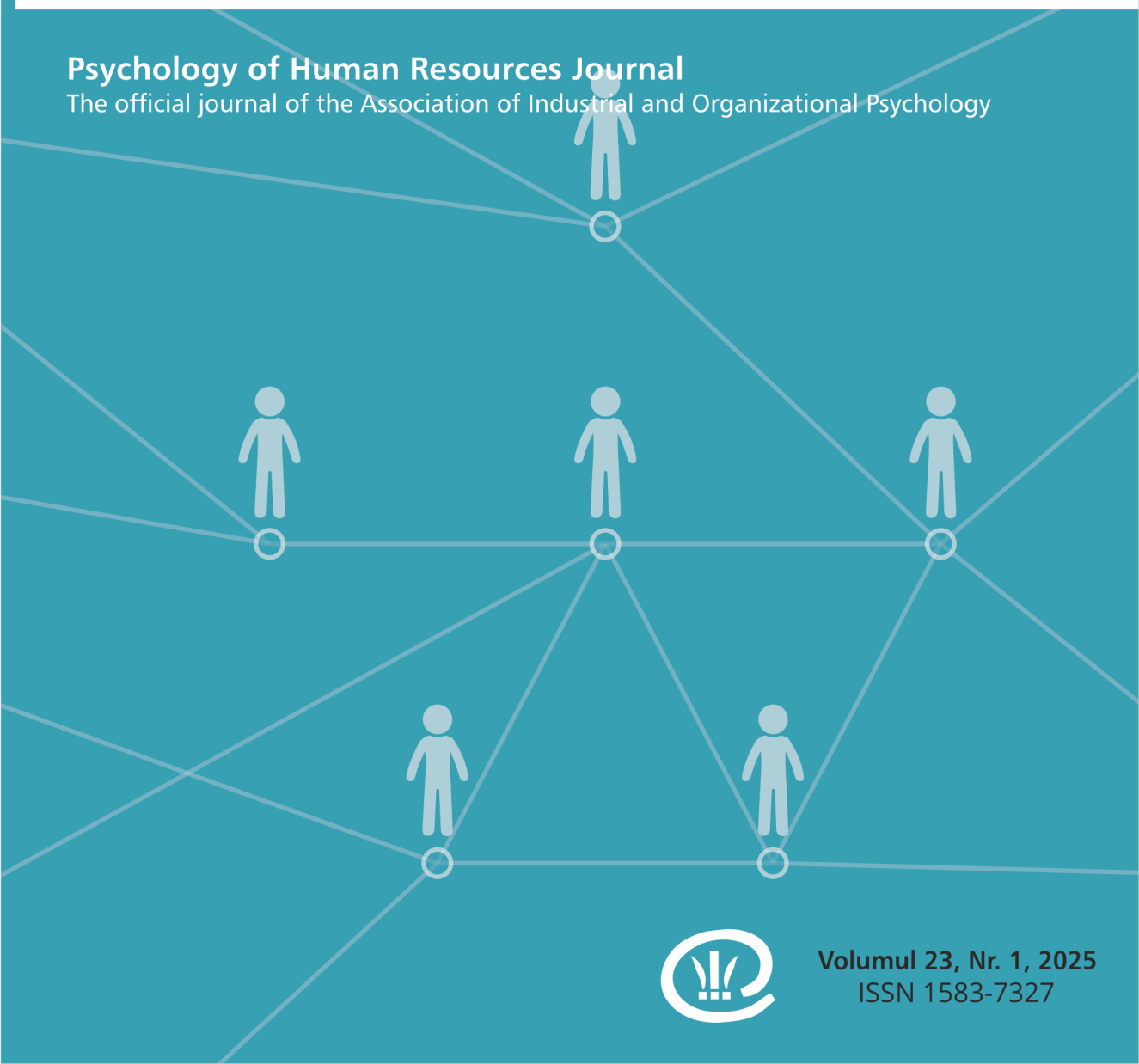

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EDITORIAL

Employee Onboarding: Best Practices, and Challenges

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Defining Onboarding

Onboarding is the bundle of deliberate, organisation-initiated practices that accelerate a newcomer's early adjustment and integration into a specific role, work unit, and organisational culture. It begins once an employment agreement is in place and ends when the newcomer reaches a level of expected independent performance (Klein, Polin, & Leigh Sutton, 2015). Unlike the lifelong, person-driven process of organisational socialisation, onboarding is a finite one, structured and explicitly initiated by the employer (Klein et al., 2015), with a three-fold purpose: to provide the knowledge and resources for task proficiency, embed the newcomer in organisational networks, and transmit organisational values so behaviour aligns quickly with organisational expectations. Several neighbouring constructs are distinguishable, however their boundaries are not always clear and they sometimes overlap heavily.

Briefly, *orientation* is a short, often one-day event that delivers rules, forms and compliance basics and it has a life span of days, not months (Wanous, 1993), *Einarbeitung* –a form of job training– concentrates on task skills and may last a few weeks; for example, a machinist learns safe equipment use under a trainer's eye. Other constructs include *mentoring* which pairs a new employee with an experienced colleague for psycho-social support and career advice and lastly *organisational socialisation* that spans the entire career and includes changes such as a move to management or a return from leave (Moser, Soucek, Galais, & Roth, 2024). Thus, while all five constructs aim to ease adjustment, onboarding is the only one that deliberately integrates administrative, social and cultural elements into a time-bounded programme.

The topic has gained importance over time for at least three important reasons. First, remote and hybrid work remove the classic learning that once substituted for deliberate entry paths, forcing firms to design virtual equivalents. Second, demographic shifts and cross-border mobility induce a diverse spectrum of new employees who expect professional integration. Third, many employees now re-enter after prolonged leaves—parental, medical, or overseas assignments—and experience challenges comparable to brand-new entrants. The literature labels this the re-entry shock: initial euphoria at "being home" dissipates within six months, giving way to frustration and identity strain before genuine re-integration settles in (for a good example of re-integration process model see Hirsch, 2003). In short, onboarding is seen no longer as a "nice-to-have" tool but a system for accelerating contribution —not only for new employees, but also for colleagues arriving from long stays abroad who must re-learn the very organisation they once left.

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Pathways to organisational performance

Research identifies several ways in which well-designed onboarding promotes both individual well-being and organizational performance. For example, employees enjoy lower stress levels and display better coping mechanisms, as orientation augmented with trainings equip newcomers to handle demanding situations (Ślebarska, Soucek, & Moser, 2019). They also experience reduced expectation–reality gaps, with Realistic Job Previews and other pre-entry information lowering the risk of the so called *Praxisschock* (i.e., disappointment with, or the bitter experience of, the substantial gap between the acquired theoretical knowledge and its actual applicability in professional practice) and early job dissatisfaction (Bauer & Erdogan, 2011; Wanous, 1992). Effective onboarding also sharpens role clarity, boosts confidence in job performance (Lapointe, Vandenberghe, & Boudrias, 2014), and accelerates the formation of social networks (Calero Valdez et al., 2016). From the organizational domain, benefits include better employee compliance and risk reduction (Stessl, 2012) and enhanced satisfaction and lower early turnover intentions (Saks, 1994). Yet if the advantages are so clear, why do many employers still struggle to implement such programs?

The gap in the implementation

Building on the evidence above, which favors clear returns on investments, one might expect onboarding to be a universal HR routine. In practice, however, many European organizations default to "laissez-faire onboarding," wherein managers cite lack of time, HR delivers only paperwork, and cultural induction is omitted (Moser et al., 2024). On the Romanian side, quantitative data is scarce, however we do have a 2019 baseline survey of 170 HR professionals across various Romanian industries (My HR Lab, 2019). According to this data, about half of Romanian companies (50%) had a formal onboarding process in place, while an additional 44% said they were in the process of developing or improving one. This indicates that by 2019, awareness of onboarding's importance was high – indeed, over 90% of HR respondents believed onboarding has a major impact on attracting and retaining employees, but actual implementation is laggard, with many organizations still working to establish robust programs. In most Romanian companies, onboarding begins on the new employee's first working day (39% of companies) or upon acceptance of the job offer (36%), whereas only a small minority (8%) start the process during the recruitment phase (e.g., providing integration resources before the employees' start date). This suggests that pre-boarding – while recognized as useful – is not yet widespread except in a few locations. As for the duration of the onboarding process, it tends to be short: 44% of the respondents reported that the structured process lasts just 1–2 weeks, and only 8% extend their onboarding program to around six months –By comparison, best practice often advocates 3, 6, or even 12 months of phased onboarding activity (Moser et al., 2024). Perhaps closing this practical gap requires a simple, memorable framework that busy practitioners can apply and action upon without major investment. The Inform–Welcome–Guide (IWG) triad provides such a roadmap and outlined below.

The Inform–Welcome–Guide (IWG) triad

Based on a thorough literature review of onboarding practices across academic and practitioner sources, Klein and Heuser (2008) develop the IWG framework, which translates newcomer socialisation into three overlapping stages —Inform, Welcome, and Guide— allowing organisations to move from intentions to structured action and behavior. The framework is simple, yet provides enough structure to inform and categorise onboarding practices according to their main purpose:

Inform. Start sharing essentials even before the contract begins. Send a brief role preview, outline first-day logistics, and point candidates to a short FAQ site. In the first month, arrange one-to-one meetings with the supervisor and team colleagues, run a

structured induction workshop, and give access to job-specific learning modules. Make sure the workstation, laptop, and key documents are ready and waiting. For graduates or trainees, schedule regular "on-the-job" sessions so they can practice tasks in real time.

Welcome. On day one, introduce the new employee informally through the company channels. Add them to the team's intranet channels (or dedicated Slack/Whatsapp rooms) and plan a casual coffee or lunch during the first week. Simple team-building exercises in presence or virtual, reinforce the idea that they are part of the group.

Guide. After the first week, pair the new employee with a "friend" at *peer level* and a mentor or coach for more detailed questions. Hold structured check-ins at 30, 60, and 90 days to review progress, solve problems, and set new goals. A quick checklist or interview guide would help managers track which support steps are complete and which still need attention.

An illustrative case: DATEV eG

DATEV is a German cooperative IT-services provider with more than 8,400 employees and a customer base of tax advisors and auditors. The Nuremberg based company ranks as one of the top European software vendors (IDC-Ranking, 2020) and handles approximately 14 million payslips each month. Since the Pandemic, the internal onboarding program has been thoroughly reworked as to cope with the large and dispersed (read *virtual*) workforce. The result, described by Moser et al. (2024), stretches over six months and covers all the above Inform–Welcome–Guide (IWG) layers.

The process begins ten days before the start date. Instead of sending a hefty orientation manual, DATEV releases a sequence of ten micro-e-mails, one per weekday. Each message asks the future employee to complete exactly one task—upload identity documents, collect a laptop, review the payroll calendar, skim a short FAQ. The drip feed prevents information overload while making steady progress visible.

On Day One, newcomers join a live MS Teams event opened by a board member and the works-council chair, then choose elective breakout sessions on culture, security, or product basics. Polls (based on Mentimeter - a spiced-up MS PowerPoint used to create presentations with real-time feedback) and chat prompts keep engagement high, while the presence of senior leaders signals the importance of the moment. For those who need an in-person handshake, DATEV offers now a two-hour "Welcome Coffee" at headquarters on Day Two. Participation is strictly optional; according to DATEV keeping the event hybrid respects colleagues who live too far away to justify travel.

From Week 1 through Week 7 the same cohort meets weekly in "Onboarding Circles"—peer groups of five to ten guided by a trained volunteer. Each circle sets a small project, such as building a mock payroll workflow that pulls data from several corporate modules. The exercise accelerates cross-functional networking and demonstrates DATEV's preference for self-directed learning. Formal support continues through Month 6. Every new employee is paired with a unit mentor and invited to two structured feedback rounds that include the said mentor, line manager and the HR department. The conversation mainly centers on role clarity, well-being and any roadblocks encountered; lessons learned feed directly into incremental improvements to the programme and are used as a feedback for the company.

DATEV's approach shows that a comprehensive, virtual-first onboarding can remain personal, scalable (important for large corporations) and also data-driven. Reading practitioners can make leadership visible on Day One, leverage peer networks and circles and maintain feedback loops without expensive technology or large training teams.

Take home message

As one can see, onboarding is more than a first-day handshake; it is a structured, time-limited system that blends timely information, social inclusion, and ongoing guidance so newcomers —whether fresh employees or

repatriated staff— reach full productivity faster. The Inform–Welcome–Guide model distills this into scalable actions any organisation can deploy, even in remote or hybrid teams. Finally, for practitioners, DATEV's six-month, drip-fed, peer-circle programme is a good example of pairing visible leadership with simple tech and regular feedback that turns onboarding into a strategic tool for higher engagement, lower turnover, and higher performance.

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RESEARCH ARTICLE

Job Crafting's Impact on the Relationships Between Customer Incivility, Service Performance and Job Satisfaction

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Abstract

This study explores the impact of job crafting on the relationships between customer incivility, service performance, and job satisfaction among service employees, utilizing the Job Demands-Resources (JD-R) theory. It is important to study this as, based on the results, it would provide employees with viable strategies to use, to not be negatively influenced by uncivil customers anymore. Data was collected from 341 participants in various service industries via an online survey. The study examines how approach crafting (seeking additional job demands and resources) and avoidance crafting (reducing job demands) moderate these relationships. Results indicated that customer incivility negatively affected job satisfaction. However, customer incivility did not significantly impact service performance. Contrary to expectations, neither type of job crafting moderated the relationship between customer incivility and job satisfaction. Avoidance crafting did not moderate the relationship between customer incivility and service performance. Approach crafting was positively correlated with both service performance and job satisfaction, and successfully moderated the relationship between customer incivility and service performance. These findings suggest the overall beneficial impact of approach crafting on job outcomes, highlighting the need for further research into the complex dynamics between job crafting and customer incivility.

Keywords

Job Demands-Resources, approach crafting, job satisfaction

Around 70% of service employees have experienced such behavior from customers, which is often referred to as customer incivility (Cortina et al., 2001). Customer incivility is a low-intensity deviant behavior without a clear goal of harming the target, usually in violation of workplace norms for mutual respect (Andersson & Pearson, 1999). Such behaviors include, but are not limited to, customers rolling their eyes, shouting at the employees, and making rude remarks about the employee's appearance. This interpersonal event consists of a perpetrator (i.e., the customer) and a target (i.e., the employee). This type of behavior has been found to lead to a decrease in service performance (Hwang et al., 2022) and job satisfaction (Pap et al., 2021).

To deal with the client's uncivil behavior, employees could engage in different work

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strategies, an efficient proven one being job crafting (Tims et al., 2013). Job crafting refers to the process by which employees proactively modify their own job tasks and work environments to better fit their skills, interests, and needs (Wrzesniewski & Dutton, 2001). There is a substantial amount of research on the relationship between customer incivility and job crafting, specifically approach crafting (Hur & Shin, 2022; Wenzhu et al., 2022). However, the literature lacks a focus on the avoidance type of job crafting, thus dismissing one of the two big types of job crafting. While approach crafting deals with increasing one's job resources (and challenge demands), avoidance crafting focuses on diminishing one's hindrance demands. This study focuses on both types of job crafting, and their relationship with customer incivility.

Therefore, this study focuses on the role that job crafting could play in dealing with rude clients. This study aims to answer the following research question: "How do the different types of job crafting (approach/avoidance) moderate the relationship between customer incivility and service performance and job satisfaction?". Thus, this study could provide management and employees with information on what kind of strategies they should implement when dealing with rude clients. Furthermore, this paper contributes to the literature on customer incivility and job crafting, by focusing on both types of job crafting, and their role in mitigating the effect of customer incivility on job performance and job satisfaction. This study is the only one focusing on the moderating effects that job crafting has on the relationship between customer incivility and job satisfaction, thus aiming to fill this scientific gap in the customer incivility literature.

Theoretical framework

Relation between customer incivility and job satisfaction

For the purpose of this study, the Job Demands-Resources theory was used (Bakker & Demerouti, 2007). This theory proposes that every job has its own specific characteristics, which can be categorized into either job demands or job resources (Bakker & Demerouti, 2007). The Job Demands-Resources theory is a suitable model for studying customer incivility and job crafting due to its comprehensive framework that integrates both the stressors (demands) and motivators (resources) in the workplace, offering a multi-perspective view on employee well-being and performance. Furthermore, the Job Demands-Resources theory was used as the theoretical framework, due to its extensive use by other researchers in the customer incivility and job crafting literature (Lu et al., 2022; Zahoor & Siddiqi, 2021). Job resources refer to the aspects of the job that help employees be functional in achieving their work goals, reduce job demands, stimulate personal growth, and focus on learning and development. Examples of such job resources include high degrees of autonomy and social support (e.g., from coworkers and supervisors) (Bakker & Demerouti, 2007). Job demands refer to the physical, psychological, social, or organizational aspects of a job that require sustained mental or physical effort and are associated with physiological and/or psychological costs. Examples of job demands include emotionally draining interactions (i.e., customer incivility), a harsh physical work environment (i.e. high heat/working in the desert), and high job pressure (i.e. high number of projects assigned to single workers) (Demerouti et al., 2001).

Job demands are further classified as either challenging or hindering (Bakker & Demerouti, 2007). Challenging job demands can contribute to personal growth and achievement if paired with adequate job resources. An example of this would be a difficult project paired with a high degree of autonomy. This could provide the employee with a challenge while also granting them room for personal growth and improvement, as it would force them to research and develop potential new ways on how to finish their project (Bakker & Demerouti, 2007; Tadic et al., 2015). Alternatively, hindering job demands are aspects of the job that impede personal growth, learning, and goal attainment. They include factors like

excessive workload, role conflict, job insecurity, and organizational constraints (Bakker & Demerouti, 2007; Crawford, et al., 2010).

Customer incivility can be categorized as a hindering job demand, due to its role as a stressor for the employee, as well as its lack of potential positive valence. Within the job demands-resources theoretical framework, hindering job demands have been shown to be linked to a decrease in job satisfaction (Olafsen & Frølund, 2018). Job satisfaction is the positive emotional state arising from the work experience of the employee (Locke, 1969). It encompasses an individual's overall contempt for their job.

Furthermore, previous studies have already shown the negative effects that customer incivility has on job satisfaction (Hwang et al., 2022; Pap, et al., 2021; Pu et al., 2024; Rai et al., 2023). This means that an employee who is subjected to rude customers will become less and less satisfied with his job.

Hypothesis 1: Customer incivility is negatively associated with job satisfaction.

Relation between customer incivility and service performance

Service performance can be defined as the quality and effectiveness with which service employees meet customer needs and expectations (Homburg et al., 2005). In short, service performance is the equivalent of job performance in the service industry.

According to the job demands-resources theory, hindering job demands can decrease job performance (Petrou & Xanthopoulou, 2020). Seeing as customer incivility is a hindering job demand, it should have negative effects on the service performance of employees. This type of relation is to be expected, as customer incivility (hindering job demand) drains the cognitive and physical resources (job resources) of employees. Previous studies have already showed that customer incivility has a negative impact on job performance (Cho et al., 2016; Shin & Hur, 2022; Wenzhu et al., 2022). Therefore, it is hypothesized that customer incivility will have a negative impact on service performance.

Hypothesis 2: Customer incivility is negatively related to service performance

The moderating role of job crafting

Job crafting is an autonomous and proactive behavior that employees exhibit to change certain aspects of their job in order to better align them with their own preferences, motives, and passions (Wrzesniewski & Dutton, 2001). Job crafting is a bottom-up work design, in which employees have the freedom to proactively adjust various aspects of their jobs, to better align with their skills, interests, and passions. Tims et al. (2012) distinguished four independent dimensions related to job crafting. The first one is increasing social job resources. Social job resources refer to social support, feedback, and supervisory coaching. The second one is increasing structural job resources. Structural job resources refer to resource variety, opportunity for development, and autonomy. The third one is increasing challenging job demands. Challenging job demands stimulate employees to develop their skills and knowledge (LePine et al., 2005). The fourth one is decreasing hindering job demands. Hindering job demands are demands or work circumstances that involve excessive or undesirable constraints that interfere with or inhibit an individual's ability to achieve valued goals (Cavanaugh et al., 2000).

Job crafting has multiple approaches, however, for the purpose of this study, the one proposed by Bruning and Campion (2018) will be used, called approach and avoidance crafting. Avoidance crafting refers to an action taken by the employee to prevent a negative outcome (Zhang & Parker, 2019). In the avoidance crafting category, the decreasing hindering job demands is the only dimension present, of the ones discussed above. Approach crafting refers to an action taken by an employee to achieve a positive outcome (Zhang & Parker, 2019), and includes increasing structural job resources, increasing social job resources, and increasing challenging job demands.

Avoidance job crafting serves the employees as a way of decreasing stress by decreasing hindering job demands (Petrou & Xanthopoulou, 2020). Thus it helps employees craft a better work environment for themselves, which should increase their satisfaction. However, studies in the past have linked avoidance crafting to a decrease in performance (Lichtenthaler & Fischbach, 2019). This relationship could be due to the fact that decreasing hindrance job demands could result in task avoidance and overall procrastination (Oldham & Hackman, 2010)

In the following study, it is hypothesized that Avoidance crafting is expected to moderate the relationship between customer incivility and service performance, in the sense that when employees engage in avoidance crafting when dealing with customer incivility, their service performance will decrease. This is the case because a possible employed strategy to decrease hindering job demands would be to avoid or reduce contact with rude customers. By avoiding/reducing contact with rude customers, employees engage in task avoidance, which is linked to a decrease in job performance (Oldham & Hackman, 2010). Furthermore, multiple studies have already concluded that avoidance crafting can have a negative impact on job performance (Lichtenhaler & Fischbach, 2019; Wrzesniewski & Dutton, 2001)

Hypothesis 3a: Avoidance crafting positively moderates the relationship between customer incivility and service performance.

Furthermore, it is assumed that avoidance crafting will have a negative impact on the relation between customer incivility and job satisfaction. Based on the theoretical framework of the job-demands resources theory, hindering demands decrease the employees' levels of job satisfaction (Bakker & Demerouti, 2007). By eliminating the hindering demands, which is the source of initial decrease in job satisfaction, it would be safe to assume that job satisfaction would increase. As such, seeing as avoidance crafting is based on eliminating/decreasing hindering demands, it would be safe to assume that by engaging in avoidance crafting, an employee would increase his job satisfaction, as he would minimize the amount of hindrance demands he would engage in. Seeing as customer incivility is a hindrance demand, due to its overall negative nature, avoidance crafting should decrease it as well. To summarize everything up, avoidance crafting should decrease the negative effects that uncivil customers have on the satisfaction employees feel at their job, as employees engaging in it would decrease/eliminate their hindrance demands (Cavanaugh et al., 2000).

Hypothesis 3b: Avoidance crafting negatively moderates the relationship between customer incivility and job satisfaction.

Approach crafting sees employees seeking additional job resources (or challenging job demands). By increasing their job resources while maintaining a balance with their challenging job demands, employees could increase their overall job performance and work satisfaction. An example of approach crafting when dealing with a rude customer, would be to ask colleagues for advice. Approach crafting is expected to buffer the relationship of customer incivility on service performance. By increasing the job resources available at their job, employees should have an increase in their service performance (Moreira et al., 2022). In the job crafting literature, studies have already shown the positive impact of approach crafting on job performance (Boehnlein & Baum, 2020; Dierdorff & Jensen, 2018). Furthermore, studies in the customer incivility literature have already established the relationship between approach crafting, customer incivility and service performance (Lu et al., 2022; Lu et al., 2022; Zahoor et al., 2021). Previous scholars have found that approach crafting has a buffering effect on the relationship between customer incivility and service performance, minimizing the effects of rude customers on the service employee's performance. As such, it is reasonable to assume the following hypothesis:

Hypothesis 4a: Approach crafting will have a negative impact on the relationship

between customer incivility and service performance.

According to the Job Demands-Resources theory, restructuring job resources can buffer the negative effect that hindering demands have on job satisfaction (Bakker et al., 2005). Seeing as customer incivility is a hindering job demand, increasing one's job resources should have a buffer effect on the negative influence of customer incivility. In the job crafting literature, studies have already shown the positive impact of approach crafting on job satisfaction (Boehnlein & Baum, 2020; de Beer et al., 2016).

As such, job crafting could have a negative impact on the relationship between customer incivility and job satisfaction, weakening the negative effect of customer incivility on job satisfaction.

Hypothesis 4b: Approach crafting will have a negative impact on the relationship between customer incivility and job satisfaction.

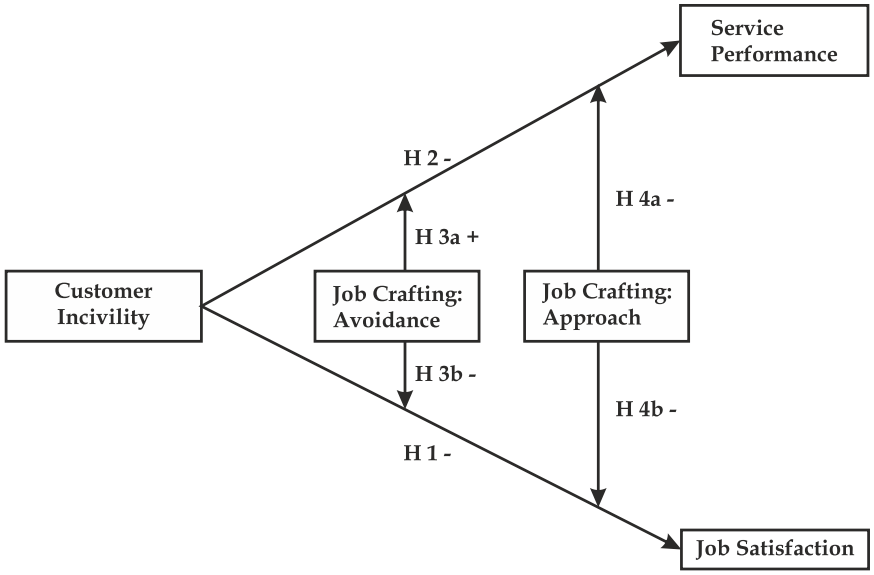

Figure 1. Proposed research model.

Method

Participants

The sample comprised 341 participants aged 18 and above, employed in various service industries. Participants were recruited through professional and/or personal networks. To be eligible for the study, the participants had to work a minimum of 20 hours per week. Furthermore, they had to have frequent contact with the customers of their business. Out of the 341 participants who completed the survey, 245 were used for the subsequent analysis, as 96 of them did not work for a minimum of 20 hours per week. The mean age of participants was 37.57 years (SD = 14.6), with a gender distribution of 65.3% female, 33.5% male and 1.2% non-binary or undisclosed. Participants had a mean of seven and a half years of work experience. When questioned about the number of minutes they spent interacting with customers on a daily basis, the average respondent reported around 28.67 minutes spent in contact with customers.

Procedure

Participants completed an online survey through Qualtrics. Participation was voluntary, and confidentiality was ensured. Informed consent for usage of data was obtained from all participants prior to their

participation, at the beginning of the survey. Participants got access to the survey via email, in the form of a personalized link.

Measures

Customer incivility was measured using a 10-item scale adapted from previous research (Wilson & Holmvall, 2013). Participants rated their experiences with uncivil customer behaviors on a 7-point Likert scale ranging from 1 (Never) to 7 (more than three times per day). Sample items include "Customers made gestures to show their impatience (i.e. rolling eyes)" and "Customers used an improper way of addressing you (hey you)." (α = .93)

Job crafting was assessed using a 21-item scale developed by Tims et al. 2012, and consisted of four subscales: decreasing hindering job demands, increasing social job resources, increasing structural job resources increasing challenging job demands. All four subscales used a 5-point Likert scale ranging from 1 (never) to 5 (very often).

Avoidance crafting To determine the level of avoidance job crafting the employee engages in, the decreasing hindering job demands subscale will be used, which was measured using a 5-item scale with items such as "I make sure my work is mentally less intense." (α = .65).

Approach crafting was measured by combining the subscales of increasing social job resources, increasing structural job resources (Tims et al., 2012), and increasing challenging job demands. All three subscales were measured on a 5-item scale, including items such as "I ask colleagues for advice." (for increasing social job resources) (α = .59), "I try to develop myself professionally" (for increasing structural job resources) (α = .61) "When there is not much work to do, I see it as a chance to start a new project." (for increasing challenging job demands) (α = .61).

Job satisfaction was measured using a 3-item scale adapted from the Michigan Organizational Assessment Questionnaire (MOAQ; Cook et al., 1981). Participants indicated their level of overall satisfaction with their job on a 5-point Likert scale ranging from 1 (totally disagree) to 5 (totally agree). Sample item includes "I am satisfied with my current work." (α = .88).

Service performance was assessed using a 7-item self-report scale (Liao & Chuang 2004). Participants rated their service performance on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Sample items include "I am friendly and helpful to customers." (α = .79).

Control variables. The participant's age and gender were controlled for in all subsequent analyses, because of their potential influence on service performance and job satisfaction. (Shin & Hur 2022)

Data Analysis

Data were analyzed using SPSS 29.0. Multiple regression analyses, using PROCESS by Andrew F. Hayes, were conducted to test the moderating effects of avoidance job crafting and promotion job crafting on the relationships between customer incivility and job satisfaction, and customer incivility and service performance. Furthermore, multiple variables were computed, to average the scores of each measured construct. An age variable was computed, by subtracting the year of birth of the participant from our present year. The new age variable and the sex variable were used as control variables for each of the multiple regression analyses. Results were tested at a significance level of .05. To test for the relationships between customer incivility, service performance and job satisfaction, one-tailed pearson correlations were used. One-tailed was used, due to the high amount of studies that have found significant negative relationships between customer incivility, job satisfaction and service performance. The relationships were tested at a significance level of .05.

Results

Table 1 showcases the means, standard deviations and correlations among the used variables.

Table 1. *Descriptive Statistics and Correlations*

M	Sd	1	2	3	4	5	6	7		
1. Age	37.57	14.6	1	-	-	-	-	-	-	
2. Gender	1.67	0.86	.098	1	-	-	-	-	-	
3. Customer Incivility	2.46	1.14	-.329**	.059	1	-	-	-	-	
4. Job Satisfaction	3.95	0.99	.21**	.051	-.11*	1	-	-	-	
5. Service performance	4.33	0.54	.105	-.065	.071	0.19**	1	-	-	
6. Approach Crafting	3.15	0.53	-.119*	.043	.072	.265**	.206**	1	-	
7. Avoidance Crafting	2.73	0.68	-.182**	-.007	.240**	-.008	.034	.44**	1	

Note. N = 245
**p < .05; **p < .01*

Hypothesis Testing

Table 2. *Regression Coefficients for Predicting Overall Satisfaction*

Effect	Estimate	*SE*	95% CI		*p*
			LL	*UL*	
(Constant)	—	0.177	3.993	4.693	.001
Customer Incivility	-0.169	0.065	-.269	-.014	.030

Table 3. *Regression Coefficients for Predicting Overall Performance*

Effect	Estimate	*SE*	95% CI		*p*
			LL	*UL*	
(Constant)	—	0.092	4.226	4.589	.001
Customer Incivility	-0.029	0.033	-.078	0.54	.715

Hypothesis 1 predicted that customer incivility will have a negative effect on job satisfaction. A simple linear regression was conducted to examine this (Table 2). The regression model revealed that customer incivility was a significant negative predictor of overall satisfaction, B = -0.141, SE = 0.065, β = -0.169, t(df) = -2.185, p = .030. This indicates that higher levels of customer incivility were associated with lower levels of overall satisfaction, providing support for hypothesis 1.

Hypothesis 2 predicted that customer incivility will have a negative effect on service

performance. A simple linear regression was conducted to examine this (table 3). The regression model revealed that customer incivility was not a significant negative predictor of service performance, *B = -0.012, SE = 0.033, β = -0.029, t(df) = -0.366, p = .715*. Thus hypothesis 2 is rejected.

Hypothesis 3a and 3b predicted the moderation effect that avoidance crafting had on the relationship between customer incivility and service performance and between customer incivility and job satisfaction. To test hypothesis 3a, a SPSS macro process by Andrew F. Hayes was used, which performed a multiple regression analysis. Customer incivility and avoidance crafting did not account for a significant amount of variance in service performance (*F*(2,242) = .648, p = .524; R^2 = .005). The interaction between customer incivility and avoidance crafting was not significant (*F*(3,241) = .722, p = 0.54; R^2 = .009). Thus, avoidance crafting does not moderate the relationship between customer incivility and service performance, rejecting hypothesis 3a.

To test hypothesis 3b, a SPSS macro process by Andrew F. Hayes was used, which performed a multiple regression analysis. Customer incivility and avoidance crafting did not account for a significant amount of variance in service performance (*F*(2,242) = 1.464; p = .228; R^2 = .012). The interaction between customer incivility and avoidance crafting was not significant (*F* (3,241) = 1.24, p = 0.29; R^2 = .015). Hypothesis 3b was rejected, showing that avoidance crafting has no moderation effect on the relationship between customer incivility and job satisfaction.

Hypothesis 4a and 4b predicted the moderation effect that approach crafting had on the relationship between customer incivility and service performance and between customer incivility and job satisfaction. To test hypothesis 4a, a SPSS macro process by Andrew F. Hayes was used, which performed a multiple regression analysis. Customer incivility and approach crafting accounted for a significant amount of variance in service performance (*F*(2, 242) = 5.644; p = .003; R^2 = .045). The interaction between customer incivility and approach crafting was significant (*F*(3,241) = .027, p = .039; R^2 = .062). Thus, approach crafting does have a positive moderation effect on the relationship between customer incivility and service performance, providing support for hypothesis 4a.

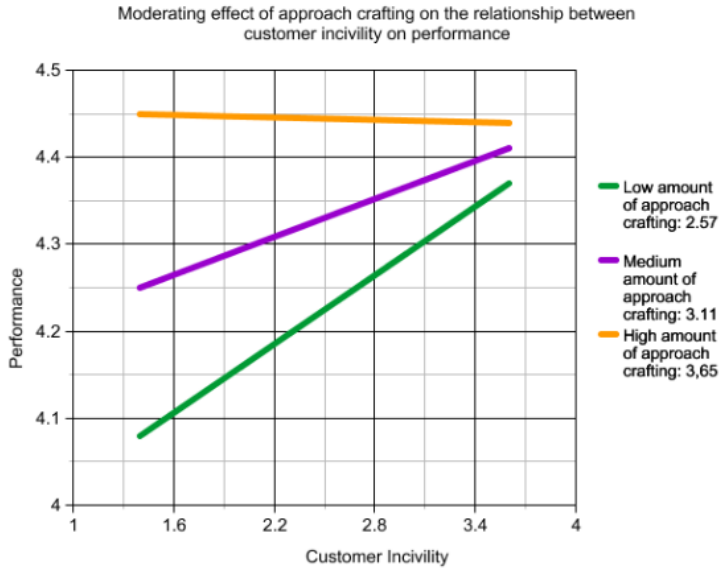

Figure 2. Moderation effect of approach crafting on customer incivility and service performance.

To test hypothesis 4b, a SPSS macro process by Andrew F. Hayes was used, which performed a multiple regression analysis. Customer incivility and approach crafting accounted for a significant amount of variance in job satisfaction ($F(2, 242) = 10.116$; $p < .001$; $R^2 = .077$). The interaction between customer incivility and approach crafting in relation to job satisfaction was not significant (F (3,241) = .121, p = .728; R^2 = .078). Hypothesis 4b was rejected, showing that approach crafting has no moderation effect on the relationship between customer incivility and job satisfaction.

Discussion

This study investigated the effects that different types of job crafting have on the relationships between customer incivility, service performance, and job satisfaction. The goal of this study was to contribute to the customer incivility literature by firstly reestablishing the already found negative relationships between customer incivility, service performance and job satisfaction. Secondly, it wanted to find proof for the moderation effect that different types of job crafting (approach and avoidance) had on the relationships between customer incivility, service performance and job satisfaction. The study did find a moderation effect of approach crafting, on the relationship between customer incivility and job performance. Furthermore, a negative relationship was found between customer incivility and job satisfaction. However, contrary to the expectations, the study found no existing relationship between customer incivility and service performance, and subsequently no moderation effects for avoidance crafting.

Customer Incivility and Service Performance

The correlation between customer incivility and service performance was non-significant. This means that customer incivility had no effect on the service performance of the employees. This contradicts findings from earlier research (Cho et al., 2016; Shin & Hur, 2022; Wenzhu et al., 2022). Seeing as this relationship had been previously reported multiple times, the result is surprising. A possible explanation for this is the overall low score of customer incivility. On average, the sample of the study had reported that they experienced rude customer behavior only once or twice during their career. This could explain the lack of a significant relationship between customer incivility and service performance, as there are overall close to zero customer incivility experiences in the population of the study.

Customer Incivility and Job Satisfaction

Customer incivility was associated with lower job satisfaction. This means that employees were less satisfied with their job, when they were dealing with rude customers. This is the case due to the nature of customer incivility as a hindrance demands. Findings from customer incivility literature have already established this relationship in previous research (Hwang et al., 2022; Pap et al., 2021).

Avoidance Crafting

Avoidance crafting had no effect on service performance and job satisfaction. Furthermore, when tested for moderation, avoidance crafting had no significant impact on the relationships between customer incivility, job satisfaction and service performance. Previous scholars have found inconsistent results during their research on avoidance crafting and its influence on job satisfaction and job performance (Boehnlein & Baum, 2020). Their study show that avoidance crafting either has no significant influence or negatively influences job satisfaction and job performance. Prior research has shown that approach crafting can have a buffer effect on avoidance crafting (Petrou & Xanthopoulou, 2020), eliminating the negative influence the latter has on job dimensions (i.e., satisfaction and performance). As such, a possible explanation for this lack of significant relationships could be the somewhat high degree of approach

crafting that the participants already engage in. This is further backed by the high degree of correlation between the two types of job crafting, in the dataset. This shows that, when a participant engaged in avoidance crafting, they also engaged in approach crafting. Thus, it is reasonable to conclude that approach crafting had a buffering effect on avoidance crafting. This means that an employee engaging in approach crafting strategies, while simultaneously engaging in avoidance crafting strategies, would not be negatively impacted by his avoidance strategies.

Approach crafting

Approach crafting was positively associated with both job dimensions. This means that employees who engaged in approach crafting had better service performance and job satisfaction. This shows that approach crafting strategies are a viable solution to increase both service performance and job satisfaction.

When testing the relationship between customer incivility and service performance, approach crafting had a significant negative moderation effect. This means that approach crafting buffered the negative influence that customer incivility has on service performance. Figure 2 shows that, even at a low-level, approach crafting moderated the relationship between customer incivility and service performance. This means that, even when an employee rarely engages in approach crafting strategies, it buffered the negative effect that customer incivility has on his service performance. This is a highly valuable finding, as this study is the only one to have found such a moderation effect. Most findings in the job crafting literature have found the beneficial effects of approach crafting only at high levels (Dierdorff & Jensen, 2018).

In contrast to expected findings, approach crafting showed no significant moderation in the relationship between customer incivility and job satisfaction. This means that, no matter the level of approach crafting, it will not change the existing relationship between customer incivility and job satisfaction. A possible explanation for this result could be that, on average, participants reported very high degrees of job satisfaction. As such, there is little to no room for improvement in their job satisfaction, thus limiting the effect that approach crafting could have on it.

Limitations and Future Research

An advantage of this study is that it gathered data from all different sections of the service industry, ranging from waiters to job advisors. However, some limitations of this study must also be noticed. First, the study was a self-report survey. This means that participants could have not paid attention when filling out the survey, resulting in potential response biases to some of the questions (Furr, 2021). Secondly, participants may have engaged in social desirability bias (Furr, 2021). The nature of some of the questions made it seem like they should answer highly on those, to appear as better employees (i.e. “I voluntarily assist customers even if it means going beyond job requirements”). Last but not least, participants had reported that they had, on average, little to no experience with uncivil customers. This may be due to the high variation of different jobs that our participants had. Future research should consider employing longitudinal studies. This would allow for a better understanding of the effects of job crafting and customer incivility. Furthermore, two groups of employees could be created, one getting trained in approach crafting strategies while the other one getting trained in avoidance crafting strategies, to further highlight the differences in what results do the different type of job crafting have. Even more, it would be ideal for data to be obtained daily. This would help show the evolution of the influence the different types of job crafting have on the relationships between customer incivility, service performance and job satisfaction. This would provide a clear view of the difference in influences that the two types of job crafting could have on the relationship between customer incivility and other job dimensions. The overall findings suggest further research on the moderating properties of job crafting, in relation to customer incivility and its influence on service performance and job satisfaction.

Practical implications and Conclusions

To conclude, it was expected that the different types of job crafting would moderate the relationships between customer incivility, service performance and job satisfaction. In contrast to the expectations, most of the expected moderations did not take place, and there was no existing relationship between customer incivility and service performance. Approach crafting was found to moderate the relationship between customer incivility and service performance, even when participants engaged in lower levels of approach crafting. This is an important finding for both the customer incivility and job crafting literature, as it shows that, even when the amount of approach crafting is low, it can be beneficial for service performance, increasing it. Furthermore, the positive influence that approach crafting had on the two job dimensions is still a valuable result.

A practical implication for managers would be to promote the use of approach crafting as there was a significant positive correlation between approach crafting, service performance and job satisfaction, and it had a positive moderation effect on the relationship between customer incivility and service performance. To help their employees engage in approach crafting, when dealing with customer incivility, they could employ the use of certified coaches. An example of approach crafting when dealing with an uncivil customer would be to make use of your existing relationships with coworkers and supervisor, reaching out to them to back you up in the difficult conversation with the rude client. This way, you would increase your available social resources.

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RESEARCH ARTICLE

Expressions of workplace collective aggression. Navigating through concepts and views on mobbing, bullying and harassment

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Abstract

Aggression at the workplace has been defined under many forms and instances across the scholarly literature, and also throughout time, the organizational sector constantly systematizing incoming approaches, paradigms, theories and trends. Since the early '80s and all the way through the '90s the concept development and expansion on the specific collective aggression at work have led to numerous discussions and term approval. This theoretical article presents in short the major trends and updates on most known forms of collective aggression at work, in order to structure concisely several acceptances and interpretations of organizational pathology expressions such as mobbing, workplace bullying and workplace harassment, updating the existing state of the art. The overview results highlight several directions of comprehension and analysis outcomes, which in turn solicit a conceptual refining and the establishment of a unitary acceptance in addressing collective aggression at work, sources and effects, term similarities and distinctions.

Keywords

collective aggression, workplace, mobbing, bullying, harassment, organizational pathology

Concept trends of collective aggression at work

With the start of pioneering research on individuals, groups and their interactions in a specific environment, the initial findings of Karl Lorenz, on collective aggression from a group towards one of its members, were transferred and given attention in the organizational sector by numerous researchers and explicative works. In this view, Leyman explored and explained the behavioral aggression patterns against fellow employees by their work groups, uncovering for the first time the mechanisms, sources and effects of the mobbing concept at the workplace. As a general trend, most studies on mobbing focused later on frequency indicators, risks and outcomes (Grzesiuk et al., 2022).

From another point of view, other studies started to embrace the idea of bullying, which emerged from research conducted into educational sectors first, where the phenomenon explained an aggression towards a fellow pupil. The bullying concept expanded towards the work environment as well, and caught the attention of most English-speaking countries, being associated with numerous concepts such as emotional abuse, workplace abuse or aggression, mistreatment or harassment (Einarsen et al., 2003).

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With the start of 1980 and throughout 1990, the research development lead to various concept approaches, raising the complexity of appropriate usage and debates. Either bullying or mobbing, harassment or victimization, all the way to psychological terror, the attributes seemed to describe the same mistreatment of employees but with subtle distinctions (Einarsen et al., 2003).In a meta-analysis, İbiloğlu (2020) indicated that there is a concept specific usage in the scholarly literature sources, with a preference for the term mobbing, more present in areas such as Germany, Austria, Sweden, Italy, Spain and Turkey while in England, Denmark or the United States of America, there is a prevalence for the term usage of workplace bullying. The same author mentions the presence of moral or psychological harassment concepts, more present in areas such as France or Canada (İbiloğlu, 2020).

In time, numerous research works defined the term in relation with its manifestations, intensity and frequency, type of aggression and outcomes. For example, Davenport et al. (1999) consider mobbing as an abusive group behavior towards the employee which is facing prolonged emotional abuse.

Other authors associated the collective aggression at the workplace with distinct features such as work violence, bossing, abusive leadership, workplace harassment, persecution or simply work aggression or abusive behavior (Hershcovis, 2011; Çoban, 2018; Góralewska-Słońska, 2019; İbiloğlu, 2020; Romero Starke et al., 2020; Ilieva et al., 2024). As part of the developments in organizational pathology, and following the start of 1990, mobbing or workplace bullying have become of interest and concern for the human resources management and organizational psychology domains as such.

In the article's next sections, the three major concepts are presented systematically and concisely, based on specific views over their presence in the organizational sector, following terminologies, sources and outcomes, for a better understanding upon workplace collective aggression and organizational pathology expressions.

Mobbing

As an organizational phenomenon, deemed to imply three type of "actors" present in the process, from victims to abusers, alongside viewers or bystanders (Mulder et al., 2014), mobbing has been perceived mostly as a collective aggression, by a group of workers on a fellow employee, in various forms and manifestations, with particular degrees of impact on the victim and consequences (Davenport et al., 1999; Yildirim et al., 2007; Nielsen & Einarsen, 2018; Boudrias, 2021). Perceived as a stage process, mobbing can develop due to a wide range of causes (e.g. personal background, organizational culture and climate, role conflict, leadership styles, work relations and competition, communication rules and habits, group or team roles and functioning, organizational change etc.).

Davenport et al. (1999) described the phases to which the victim is exposed, underlining three major directions: 1. a first level which comprises "mild" attacks and to which the victim can stand against; 2. a constant and increased second level of attacks which generate physical and psychological negative outcomes for the victim; 3. a third level where the negative mobbing effects overwhelm the victim's resources to respond and defend, affecting performance, work life, well-being and the overall situation.

Quite early, Leymann (1996) indicated a series of behaviors that describe mobbing in terms of collective aggression on several dimensions such as: employee's personal expression, social relations, reputation, professional and personal projects and health. As a brief example for the personal expression, the employee victim can be denied the freedom of speech or be limited in their discourse, receive frequent threats and interruptions, facing non-verbal denial or various innuendos. In the case of social relations, the victim tends to be isolated by the mobbing co-workers, while the reputation is constantly challenged by rumors, gossip and myths, core private elements such as values, beliefs and identity being assaulted. For the professional and personal domains of the victim, mobbing will target task overloading

or underusage, misinformation, lack of support, sabotage.

The entire process can culminate with more direct violent abuses, harassment and mistreatments which put the employee mental and physical health at risk. Davenport et al. (1999), based on Leymann's mobbing behaviors, offered a structured grid of specific conducts that define certain typologies, facilitating identification, prevention and management from the leadership level. Some examples reside in (Davenport et al., 1999): systematic interruptions, negative imitation, co-worker interaction limitations, meaningless activities, harassment etc.

Beyond types of conduct and expressions, several features remain constant in defining mobbing at the workplace: the systematic abuse and repetition, intentionality, the prolonged ordeal and negative acts frequency, as well as the participation of several aggressors who function as a group even though some research works define also a one to one relation as in the case of bullying. The impact can be observed individual, cultural and environment levels of the organization (Arnejčič, 2016).

As an organizational pathology "product", mobbing represents a dysfunctional work setting, in which numerous causes lead towards capitalizing aggression in a collective stance, where usually the victim bares the responsibility for the group failure, power seek or need to compete and perform at all costs of co-workers and lead management. In another study, Pheko (2018) mentioned the social dominance and undermining drives as examples of rationales behind action motives, while Bershadskyy and Seidel (2024) highlighted the personal benefits as one of the main drives for the process development, which at times can reside into attaining specific goals or avoiding sanctions through "sacrificing" others reputation, work and performance. In this view, mobbing becomes an image of today's frequent pathologies inside the modern organization (Vandekerckhove & Commers, 2003).

Bencsik et al. (2024) showed that mobbing as a major psychological harassment at the workplace should receive more attention at management level, with a focus on prevention and intervention programs, awareness campaigns, training for resilience, raising efforts to build a healthy organizational culture and code of ethics.

Based on these representative studies, certain directions for more future research can be advanced as presented in Table 1, useful for projecting particular management and intervention strategies in tackling aggression phenomenon at work.

Table 1. *Future research directions on mobbing management at the workplace*

Areas	**Research directions**
Themes	• Mobbing stage development and process • Leadership style, mobbing and follower effects • Bystander effect and participation dilemma • New organizational cultures and climates specificity • Digital workplace and new forms of mobbing
Methodology	• Longitudinal studies on long term mobbing effects • New mobbing evaluation instruments validation • Experimental approach on mobbing phases and responses • Qualitative analysis on mobbing coping behavior
Intervention outcomes	• Policy and regulations on mobbing behavior and acts • Support programs for mobbing victims • Employee perception and awareness on mobbing • Management guidelines and action strategy for mobbing prevention and intervention

In conclusion, mobbing as a collective aggression at the workplace, still needs further exploration and concept clarification, besides the usual definitions, classifications, frequency and phases, taking into consideration the new digital workplace challenges, team dynamics and pressure points on resilience, fast adaptation or change in organizations.

Workplace bullying

The concept of workplace bullying has been widely associated with a workplace aggression, often conducted against a worker victim or a group of victims, by a single or multiple aggressors. As a term it is highly preferred in the English speaking areas of research, but not limited to it, knowing an increase in its usage in the scholarly literature lately. Often used as a replacement for mobbing, the concept is viewed by certain works as being more specific in defining a psychological aggression in a professional setting (Galanis et al., 2024; Ullah & Ribeiro, 2024).

Bullying as a classical term originates from the education sector research, a topic that caught the public attention since 1970 (Olweus, 1993; Espinosa, 2018; Crețu & Morândău, 2024; Slonje et al., 2025), where it describes the school violence, as an imbalanced power relation act, both intentional and repetitive, usually as a one to one interaction. The adoption of workplace bullying was quickly integrated in the organizational research from the late '80s, continuing and developing a specific path, apart from the educational field as expected.

At the workplace, bullying could be identified by either direct or indirect attacks (e.g. harassment, offence, exclusion etc.) on an employee victim with lesser resources or inferior position to respond, on a repeated and regular manner (Einarsen et al., 2003; Einarsen et al., 2010), with direct negative outcomes on the individual (e.g. low performance, burnout, occupational stress, workaholism, absenteeism, conflict, chronic illnesses, high turnover rates etc.) (Xu et al., 2018; Galanis et al., 2024 ; Léné, 2024).

Same as in the case of mobbing, the workplace bullying can be analyzed as a process, in which stages and escalation shape the impact and consequences (Krishna et al., 2023). Some perspectives on bullying inside the organization highlight the psychological aggression and the mechanisms of abuse in terms of the aggressor profile and behavior, harm strategies, victim response and state of learned helplessness if the situation can't be de-escalated or resolved (Matthiesen & Einarsen, 2010; Krishna et al., 2023), while in other works, by using the term mobbing, the authors underline the victim, the mistreatment experience and victimization process (Matthiesen & Einarsen, 2010; Mota, 2024).

Several authors, including Leymann (1996), Matthiesen and Einarsen (2010) conclude that the term bullying implies a more direct, confrontational approach while mobbing can engulf both, straightforward and subtle, indirect aggressions, making the latter more comprehensive and inclusive, covering a wide range of behaviors and acts.

The debate is ongoing, plenty of publications using the term workplace bullying, others considering the two concepts as overlapping. Moreover, numerous other articles refer to various other labels that fall in the same conceptual category (e.g. workplace harassment, group bullying, psychological terror at work, work abuse etc.) (Faldetta & Gervasi, 2024; Bencsik et al., 2024; Ilieva et al., 2024). Supplementary, workplace bullying may reveal more complex systematic associations and structuring, than previously thought to be, according to Matthiesen and Einarsen (2010), the concept can be classified as a subtype of workplace aggression, while questioning intent.

At the same time, aggression is a mark of bullying, either at micro or macro level (Sue & Spanierman, 2020; Mota, 2024). Covering a wide range of types, just as in the case of mobbing, bullying can be verbal, psychological, physical, social, sexual, institutional, and lately cybernetic (De Obesso Arias, 2023; Mota, 2024; Trudgett-Klose & McLinton, 2024) with multiple effects on the employee, work group and organization, from anxiety, depression, low self-esteem, low

motivation to various illnesses, absenteeism and resignation (Verkuil, 2015; Kallman et al., 2021; Nielsen et al., 2022; Galanis et al., 2024; Ullah & Ribeiro, 2024; Nielsen et al., 2024).

When analyzing the bullying pathology at work, various researchers have underlined the study importance of organizational environment and factors, previous experiences and history with bullying, as well as latent conflicts and job and roles design, culture and climate, team functioning, leadership features and individual differences (Zachariadou et al., 2018; Özer & Escartin, 2023).

The process of research is ongoing, many causal relations remaining unknown between variables associated within the aggression at work. Bullying at work, similar to mobbing brings extra pressure and urgency on the prevention and intervention management plan, due to the risks it brings on core human rights inside the labor market (e.g. dignity and respect, safe and healthy work environment, freedom from discrimination and harassment etc.), challenging the correct application of legislation, regulations, legal obligations and international human rights (Vijayakumar & Rajagopal, 2023; Munro & Phillips, 2023).

Due to its frequency in presence, urgency and risks, the scholar literature has indicated on many occasions, the need for employee centered strategies and support measures. In Table 2, several such strategies are proposed, as a useful tool for managerial interventions. Workplace bullying can be associated, as presented before, with a variety of sources and organizational context circumstances, from role conflict, power and resource competition, to "toxic" work climate and dysfunctional work relations and leadership. Focusing on practical interventions at work, both at employee and management levels, organizations can withstand a phenomenon that tends to engulf, if not addressed, crucial activities of employees, their health and professional status, work group interactions, performance objectives and well-being, possessing the capacity to extend from isolated events to constant and continuous state of work and negative environment.

Table 2. *Employee centered strategies regarding workplace bullying*

Level	**Strategy**
Employee	• Information and awareness campaigns on bullying
	• Support services and groups for victims of bullying
	• Counselling and psychotherapy with focus on bullying sources, mechanisms and effects
	• Topic related prevention and education programs for employees
	• Guidelines for managing resilience, healthy work and well-being at the workplace
	• Education on public perception and attitudes towards work abuse
Manager	• Information access, processing and comprehension on national and European legislation concerning work aggression
	• Measure sets for legislation, regulations, obligations and human rights applications
	• Managerial guidelines for workplace bullying context prevention and intervention
	• Managerial training
	• Internal prevention policies
	• Strategies for safeguarding healthy work environments and culture
	• Leadership training and group coordination to tackle bullying at work

In the near future, in parallel with in-depth research about mobbing or bullying at the workplace, profiling better intervention programs should be the norm, giving priority to employee support, well-being at work, refining and educating leadership conducts, monitoring data and developing adequate practices, regulations and policies with regard to these organizational pathologies.

Workplace harassment

Throughout the scholarly literature databases, the term of workplace harassment has been used alongside mobbing, bullying, aggression, hostility, psychological terror and many more, often overlapping and depicting the same hostile interaction between a employee perpetrator and the co-worker victim. As in the debate case over workplace bullying, concerning the number of participants to the aggression and its specificity, some works present this particular pathology as a one to one aggression, just as the case of workplace bullying, while others perceive a much broader sense of the term, where a group of people in the company may exercise their aggression repeatedly and persistent on one or more victims (Khubchandani & Price, 2015; Österman & Boström, 2022; Bencsik et al., 2024). However, even if, for a longer time, singular, isolated acts of aggression at the workplace did not make the headlines for being included in harassment category, lately the International Labour Organization (2019) defined the concept in terms of actions, behaviors or threats, singular or repetitive, that are unacceptable and which generate physical, psychological, organizational negative effects and mistreatment.

In a systematic review, Kim (2024) concluded that definitions and measurements on the term need standardizing, alongside setting specific intervention refinement. The same author underlined the challenges of the new world frame in which organizations develop (e.g. COVID-19 pandemic, cyber work reality) and which will require more attention (Kim, 2024). Beyond the association with mobbing or bullying, the term itself encompasses the idea of aggression repetition, with a clear target and intention, which becomes more specific than in the case of mobbing, targeting the victim on a more direct manner.

Gumbus and Lyons (2011), observed through a content analysis the frequent occurrence of specific acts related to harassment, among which: verbal humiliation, intimidation, humiliation, power abuse, work abuse, physical abuse. In the same view, Berry and Yarbrough (2019), structured several themes and commentaries on women harassment, observing their prevalence in the organizational settings (e.g. promotion discrimination, sexism, verbal aggression, work abuse, benefits or rights denials, closed networks etc.). On the other hand, Bencsik et al. (2024) indicated that motives such as lack of emotional intelligence, stress, professional jealousy, lack of trust, faulty leadership are more common in generating psychological harassment at work, materializing in aggressions on well-being inside and outside the organization, community impact and mental health risks. Harassment triggers a wide range of effects, from counterproductive behaviors, sabotage, abuse, turnover, negative emotions to deteriorating work relations, low performance and efficiency, frustration, anxiety, depression and lack of trust, just to mention a few (Zhang et al., 2024).

In order to prevent workplace harassment, Khubchandani and Price (2015) suggested a three level approach in prevention (primary, secondary and tertiary type) which can capitalize policies, laws and education in the first phase, followed by clear protocols, job design and evaluation, specialty assistance and finally policy revisions, re-education and countermeasures, going through a gradual increase in operating and implementation costs. Moreover, Luong and Green (2023) suggested annual mandatory employee training on harassment topic (e.g. reporting, identification, evaluation etc.), induction courses, policy development and management action, as major measures to counter workplace harassment. As a specific view, harassment may indicate a constant stalking, with the intent of repetitive aggression in various forms, from which the victim can't escape, and the preparator keeps coming back.

More recent works have shifted research attention on newer forms of aggression at work, advocating for more analysis, comprehension and prevention on digital transformation and violence, cyber aggression and abuse in organizational contexts, following a post-pandemic era and rapid artificial intelligence and smart technologies development. In a meta-analysis by McCord, Sawhney and McHugh (2024), results indicated a series of pre-conditions in terms of age, gender, personality, support, work requirements with regard to cyber mistreatment, which in turn predicts various employee behaviors, well-being outcomes, burnout and job satisfaction. In another literature review, Mukred et al. (2024) highlighted the fact that so far, research on cyber violence has explored mainly and more frequent the factors behind the conduct intention, leaving too few studies on its effects, models, and presence in developing countries. If cyber bullying or harassment was previously investigated with preference towards adolescence and educational settings with regard to violent behaviors, deviance, various pathologies, addictions, mental health, risk behaviors, low performance, social rejection etc. (Wright & Li, 2013; Litwiller & Brausch, 2013; Mamaci, 2024), more recent studies have extended the concept towards the organizational sector, showing an impact on counterproductive behaviors, digital aggressions, work abuse and negative emotions, group norms (Richard et al., 2020; Kreuder et al., 2024).

Moreover, harassment has been observed also in telework or remote work, where abusive behaviors affect negatively the life satisfaction, deepening the work life conflict (Goswami & Jena, 2023), while taking multiple forms, under the incivility virtual workplace term, where employees resort to offensive remarks and accusations, aggressive attitudes, ignoring and isolating victims etc. (Torres, Morman & Mistry, 2024).

As a concluding remark, harassment as an individual or collective aggression at work, directed towards a fellow employee, can be difficult to identify in its indirect or subtle forms. In many situations, whether a repeating act of diminishing someone's role and effort, depriving the person of professional recognition chances or by simply denying the victim's access to information and a constant burdening with unimportant tasks or non-related solicitations, alongside frequent questioning and exaggerated control, escape the direct observation and clear spotting, making it challenging for the management to adopt intervention actions, in a situation that even the victim is not aware of its functioning or can't prove its presence, though the negative effects are visible.

Limitations and future directions

The present study follows a theoretical background argumentation and debate premises upon major developments of various forms of collective aggression at work. The perspectives, as part of the organizational pathology domain focus specifically on mobbing, workplace bullying and workplace harassment, highlighting certain directions for analysis and research outcomes, conceptual refining, practical implications and term structuring.

Despite being a comprehensive review of work mistreatment behaviors and settings, there are several limitations that can serve as directions for future research. Firstly, future studies should incorporate empirical data, either quantitative or qualitative, in order to test comparisons between the three concepts, common ground, similarities and differences, completing the theoretical frame with situational analysis in real organizational contexts.

On a second note, even though the study provides a slight insight into the regional and international specificity on the term usage, future studies may elaborate more closely on the cultural, society level and activity sectors characteristics, analyzing various mediators as such, distinct variables, definitions, preferences and trends in certain areas in association with the collective aggressions manifestation at work, its sources and effects, its approach and solutions. This may support a better understanding of concept validation in key areas, taking into consideration local, regional, national and international particularities, while generalizing theory and practice research outcomes.

The study offers the work frame for future research directions on mobbing management at the workplace alongside employee centered strategies regarding workplace bullying, and beyond concept clarification proposes specific interventions and assessment both at employee and managerial levels. However, future study approaches should expand and investigate in-depth effects of such applications, targeting the development of research based tools for prevention, intervention and education on these themes.

Even though the study main focus was on the so-called "classical" forms of aggression at work, there is a growing interest in emerging types of individual or collective aggression such as digital aggression, cyber violence or bullying, cybervictimization, remote and telework misconducts, which solicits further investigation, encompassed in today's challenging artificial intelligence dynamics and growing digitalization of work life and contexts, with crucial relevance on the organizational settings.

Last but not least, the study discusses the thematic from a human resources and organizational theory and practice perspective. As a future direction for research, the concept exploration can be tested and conducted in a broader interdisciplinary area, adding newer and more diverse introspections from public policy, law, economy and social domains with regard to its numerous applications and impact.

Conclusions

The aggression at the workplace envisages multiple forms and expressions, complicating the identification, prevention and solution driven strategies. As part of the organizational pathologies spectrum, mobbing, bullying and harassment generate negative variations and effects, operating in direct or indirect ways, confrontational or more subtle, burdening the normal functioning of company, its employees well-being and balance, putting at risk the secure, stable and optimal work future.

Depicting their mechanisms and understanding their impact on organizational settings require first of all an extensive analysis, comprehension and structuring of the concept framework. The scholarly literature so far on the matter has met numerous challenges and definitions, the collective aggression at work embracing too many instances and manifestations. Future directions in research need to address more the systemizing of major dimensions and concepts in social sciences with regard to this particular organizational pathology, refining the distinctions and similarities between terms, sources, effects and measures.

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RESEARCH ARTICLE

The Impact of Workplace Ostracism on Work-Related Ruminations: The Moderating Role of Micro-Breaks among Military Service Personnel

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Abstract

Previous literature investigated several aspects of workplace ostracism (WO). However, no prior research has explored the link between WO, work-related rumination, and the buffering role of (workplace) micro-breaks in a military context. Evidence regarding the moderating role of micro-breaks in this link is scarce, especially concerning work-related rumination. Building on the Conservation of Resources Theory and the Effort-Recovery Model, this study examined the relations between WO, work-related ruminations, and the potential moderating effect of micro-breaks among non-flight and flight crew personnel within the Romanian Air Force. A cross-sectional survey involving 210 military personnel revealed that WO is related to work-related ruminations. Micro-breaks (related to work and unrelated to work) moderated this relationship. These results' implications, theoretically and practically, are discussed along with suggestions for future research directions.

Keywords

workplace ostracism; work-related ruminations; micro-breaks; military organizations.

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Conflict of interest

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper. The authors declare no financial interests/personal relationships which may be considered potential competing interests.

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Introduction

Workplace ostracism (WO) is a common form of mistreatment that threatens a healthy organizational climate (Dhanani et al., 2021; Al-Atwi et al., 2024) and a prevalent phenomenon encountered in military settings (Wesselmann et al., 2018). Generally, WO is considered "*the extent to which an individual perceives that he or she is ignored or excluded by others*" (Ferris et al., 2008, p. 1348). In the military context, WO can take many forms. For instance, military personnel may feel ostracized when they do not receive attention from supervisors and co-workers (Hsiao et al., 2024), when they are avoided eye contact (Wesselmann et al., 2012), excluded from conversations, not invited to work-related meetings (He et al., 2020; Sanderson, 2017), or ignored during operational activities (Jahanzeb et al., 2018).

In military settings, maintaining social interactions represents a unique relational aspect and an important resource for military personnel (Du Preez et al., 2012; Telecan et al., 2024). Maintaining positive social interactions can support employees and buffer military operational demands' negative mental health consequences (Du Preez et al., 2012; Telecan et al., 2024). As military personnel perform their tasks in socially isolated or stressful work settings, these can weaken social connections and deteriorate their basic needs, ultimately leading to exclusion (Wesselmann et al., 2018).

While the outcomes related to WO are well recognized in professional and civilian contexts (e.g., Srivastava et al., 2024; Zhang et al., 2017), the military settings provide a particularly unique context for exploring WO and the related outcomes (Bedi, 2021; Howard et al., 2020; Wesselmann et al., 2018). Although previous literature has identified various psychological buffers that can alleviate the impact of social exclusion (Bedi, 2021; Howard et al., 2020), the strategies aimed to mitigate this form of mistreatment (e.g., WO; Kim et al., 2017) remain surprisingly underexplored, particularly in military settings. In this regard, we focused on a specific type of behavioral resource – micro-breaks and their potential role in helping military personnel cope with the negative experience of WO.

To our knowledge, only one study (Al-Atwi et al., 2024) that included a sample of civilian employees has previously explored the causes and consequences of non-purposeful group ostracism in the workplace and the conditions under which it intensifies. Drawing on the Job Demands-Resources Theory (JDR; Bakker & Demerouti, 2018), the study hypothesized and found that recovery opportunities (micro-breaks) and a supportive social feedback climate mitigated the effects of group time pressure and cognitive diversity on non-purposeful group ostracism. Accordingly, our study answers the constant call for research (Al-Atwi et al., 2024; Wesselmann et al., 2018) by exploring the mechanisms linking WO to behavioral resources (e.g., micro-breaks). Thus, it is even more important to identify how WO, conceptualized in the present study as a unique interpersonal stressor at work, drains military employees' resources (Bedi, 2021; Howard et al., 2020; Wang et al., 2023) and how these resources can be replenished at work – for instance, during micro-breaks (e.g., work-related and unrelated to work).

Further, the literature examining how military personnel appraise WO and how this appraisal can lead to work-related rumination is scarce. As military personnel reflect on ostracism experiences, they are more likely to focus on their work's negative rather than positive aspects (He et al., 2020). The literature on the relationship between micro-breaks and work-related ruminations among military personnel is also limited. As a result, the current study aimed to address these gaps by expanding existing knowledge and adding data on the potential moderating role of micro-breaks in the link between WO and work-related ruminations. Considering the tenets of the Conservation of Resources Theory (COR; Hobfoll, 1989) and the Effort-Recovery Model (Meijman & Mulder, 1998), our study examined the impact of WO and work-related ruminations through micro-breaks.

From a practical perspective, military organizations can establish policies and regulations, or military supervisors can signal employees that ostracizing a co-worker is

unacceptable. This approach may effectively reduce intentional ostracism (Al-Atwi et al., 2024; Mlika et al., 2017). Investigating behavioral resources (micro-breaks) is essential to effectively understand and manage WO and interpersonal dynamics in military settings.

Workplace ostracism and work-related rumination

Work-related rumination refers to the "*thought or thoughts directed to issues relating to work, that is/are repetitive in nature*" (Cropley & Zijlstra, 2011, p. 490). Previous studies highlighted that work-related rumination is identified as an antecedent that depletes the mental resources necessary for self-regulation and cognitive functioning after working hours (Jiang & Poon, 2021). When military personnel face exclusion by co-workers and supervisors, work-related ruminations may lead them to reflect on their experience of being ostracized. In other words, work-related rumination may cause the ostracized military personnel to become caught up in the negative experience while attempting to engage socially and connect with others (He et al., 2020).

Furthermore, Zhang et al. (2017) suggested that ruminating about work (at home) was positively related to work-family conflict (WFC), especially for employees who feel neglected, excluded, or ignored in the workplace. The empirical literature suggests that work-related rumination at home can create pressures that prevent employees from fully engaging in their family roles and being available during interactions with family members (He et al., 2020; Junker et al., 2021). Additionally, dealing with negative emotions triggered by persistent work-related thoughts or reflecting on work conditions (e.g., WO) while at home can escalate and extend adverse emotional reactions (Junker et al., 2021).

From the Conservation of Resources Theory (COR; Hobfoll, 1989) perspective, positive interactions between co-workers and supervisors provide military personnel with valuable social resources (Telecan et al., 2024). However, negative experiences like WO can lead to isolation and discrepancies between their desired goals (e.g., sustained connection) and reality (WO). Such dysfunctional events may deplete essential resources (e.g., time, effort, energy) and trigger work-related rumination (Hobfoll, 1989; Hobfoll et al., 2018), impairing focus and the efficient allocation of resources toward operational tasks, ultimately hindering the fulfillment of professional roles. Considering the previous arguments, we hypothesized that WO would positively relate to work-related rumination (*H1*).

The moderating role of micro-breaks (related to work and unrelated to work) in the relationship between WO and work-related rumination

One potential job resource that helps buffer against WO is recovery (Meijman & Mulder, 1998). Micro-breaks are recovery opportunities, as short breaks lasting up to 10 minutes, taken from work in the course of a workday, unstructured and informal, during which employees temporarily shift their attention away from work tasks (Bosch et al., 2018; Hunter & Wu, 2016). In military settings, we identify two types of recovery opportunities: unrelated to work and work-related micro-breaks (Albulescu et al., 2022; Kim et al., 2022). For example, unrelated activities may include stretching, daydreaming, snacking, or making personal calls. Work-related micro-breaks might involve briefly reviewing mission objectives, organizing equipment, or jotting notes for upcoming tasks (Fritz et al., 2011; Zacher et al., 2014).

Emerging evidence suggests that recovery opportunities can significantly reduce strain and enhance well-being, particularly depending on their use. In one experimental study, police officers engaging in movement-based micro-breaks showed a reduction in work-related stress (Mainsbridge et al., 2020). A recent daily diary study investigated how work demands and micro-breaks relate to end-of-day well-being. Findings showed that micro-breaks were linked to reduced fatigue and increased vigor, with outcomes varying depending on whether the activity during the micro-break was work-related or unrelated

(Albulescu et al., 2025). For military personnel, lunch breaks are often "working lunches" taken at their desks instead of in the dining hall, limiting their opportunities for recovery during the workday and restricting chances for interaction with co-workers. In contrast, if military personnel had more control over their recovery opportunities, a lunch break could become a chance to replenish personal resources and develop interpersonal relationships with other co-workers.

When military personnel were allowed to ruminate on the WO experience, they reported higher levels of distress than those distracted, suggesting less engagement in recovery opportunities (Wesselmann et al., 2018). Providing military personnel recovery opportunities, such as micro-breaks (work-related or unrelated to work), during which they do not think about negative events at the workplace (e.g., WO), can be an optimum strategy for promoting recovery and engagement in positive interpersonal interactions at work.

The Effort-Recovery Model (Meijman & Mulder, 1998) complements the COR theory (Hobfoll, 1989) by emphasizing the importance of recovery processes in mitigating the effects of resource depletion caused by dysfunctional work interactions (WO). According to the E-R Model, employees' engagement in work-related activities involves an effort that places physiological and psychological strain on them, requiring adequate recovery periods to prevent cumulative stress and resource depletion. When military personnel experience WO, their opportunities to recover resources during working hours may be reduced (Sonnentag & Fritz, 2015). Based on the above arguments, we predicted that micro-breaks (related to work and unrelated to work) would moderate the relationship between WO and work-related ruminations (*H2*).

Method

Participants and procedure

This study's protocol was designed in accordance with ethical requirements specific to the Scientific Council of Babeș-Bolyai University. All participants voluntarily participated in the study and gave written informed consent following the Declaration of Helsinki and Romanian national laws regarding ethical conduct in scientific research, technological development, and innovation.

Our final convenience sample consisted of 210 participants from the Romanian Air Force. Participants ranged from 18 to 65 (M = 34.12; SD = 9.39). Most participants were males (N = 162, 77.14%), usually representing the primary workforce in the military settings. The inclusion criterion was related to age (> 18 years). The average job tenure was 101.88 months (AS = 8.49 years). Participation in this study was voluntary, with no incentives related to filling in the survey; answers were collected anonymously, and participants could withdraw at any time. After we were granted permission from the military organization to collect data, each participant answered anonymously to the instruments included in the brochure after signing the informed consent that describes the purpose of the study and ensures the confidentiality of their answers. To respect the anonymity of the participants, each participant generated a separate code according to the instructions provided by the researchers. Military participants were asked to fill in a paper-and-pencil survey. After filling out the survey, each participant handed over the instruments to one of the authors of this study. Our study used a cross-sectional design; data was collected in October 2023.

Measures

Workplace ostracism. We used the 8-item Workplace Ostracism Scale proposed by Ferris et al. (2008). Military personnel answered the items using a 5-point Likert scale ranging from 1 (never) to 5 (every day), with higher scores indicating higher WO. Example items included "*Others left the area when you entered*" and "*Others ignored you at work*". Reliability analysis resulted in a Cronbach's α value of α = .93 (95% CI [.90; .93]). Ferris et al. (2008) previously demonstrated the scale's validity. In the present study, a CFA was

performed using our data, resulting in an acceptable fitted model ($\chi^2 = 77.80$, df = 35, $p < .001$, CFI = 1, TLI = 1, SRMR = .03, RMSEA = .08, $p = .03$, 90% CI [.05, .10]).

Work-related rumination. We used the 10-item scale from The Work-Related Rumination Questionnaire (WRRQ) proposed by Cropley et al. (2012). Military participants answered on a 5-point Likert scale ranging from 1 (very seldom) to 5 (very often). This questionnaire consists of three subscales, each with 5 items: affective rumination, problem-solving pondering, and detachment. In this study, we included only two subscales, *affective rumination* (e.g., "*Do you become tense when you think about work-related issues during your free time?*", $\alpha = .89$, 95% CI [.87; .91]) and *problem-solving pondering* (e.g., "*I find solutions to work-related problems in my free time*", $\alpha = .90$, 95% CI [.88; .92]). The overall Cronbach's alpha for this scale was $\alpha = .87$ (95% CI [.84; .89]), and a CFA was performed, resulting in a very good-fitted model under the oblique assumption ($\chi^2 = 55.22$, $df = 34$, $p = .012$, $CFI = 1$, $TLI = 1$, $SRMR = .05$, $RMSEA = .05$, $p = .36$, 90% CI [.03, .08]).

Micro-breaks. The activities performed during micro-breaks were assessed with a formative measure developed by Kim et al. (2017; 2018) and Parker et al. (2017), adapted originally from Fritz et al. (2011). The instrument consists of 17 items, 10 items measuring *non-work-related micro-break activities* ($\alpha = .88$, 95% CI [.85, .90]), and 7 measuring work-related micro-break activities ($\alpha = .92$, 95% CI [.91, .94]). A 6-point Likert scale was used for collecting responses to all 17 questions, ranging from 0 (not possible at my current job) to 5 (frequently). Besides the behavioral strategies collected, we also enquired about their frequency with 1 item (e.g., "*How often do you take these short breaks*?") as well as their duration with 1 item (e.g., "*Please specify the average duration of such activity carried out*"). A CFA was performed, resulting in an acceptable fitted model under the oblique assumption ($\chi^2 = 506.61$, $df = 118$, $p < .001$, $CFI = .99$, $TLI = .98$, $SRMR = .08$, $RMSEA = .13$, $p < .001$, 90% CI [0.11, 0.14]).

Results

We used R (Version 4.3.2; R Core Team, 2023b) and the R-packages *dplyr* (Version 1.1.4; Wickham et al., 2023), *foreign* (Version 0.8.86; R Core Team, 2023a), *kableExtra* (Version 1.3.4.9000; Zhu, 2023), *papaja* (Version 0.1.2; Aust & Barth, 2023), and *tinylabels* (Version 0.2.4; Barth, 2023) for all our analyses. Descriptive statistics of the main variables are detailed in Table 1, and some high outliers were observed on variables "Ostracism" (scores over 33), "Micro-breaks - Unrelated to work" (score 100), and "Rumination" (scores over 36), without extreme values.

Table 1. *Descriptive statistics*

Variables	Mean	SD	Median	Min	Max	Skew (SE)	Kurt (SE)
Workplace Ostracism	18.10	7.36	18	10	42	1.06 (0.17)	0.89 (0.33)
Micro-breaks - Unrelated	42.06	20.07	44	0	100	-0.04 (0.17)	-0.56 (0.33)
Micro-breaks - Related	35.14	16.27	37	0	70	-0.17 (0.17)	-0.69 (0.33)
Rumination	19.37	6.45	18	10	40	0.83 (0.17)	0.08 (0.33)

The failure to meet the assumptions of univariate normality for some variables led to the use of Spearman's ρ correlation matrix. Most of Spearman's ρ correlations were statistically significant, with values between .09 and .70.

Results (see Table 2) suggested a positive association between ostracism, micro-breaks, unrelated to work *(ρ= .16, p = .017),* and rumination *(ρ= .22, p = .001),* and no association between ostracism and micro-breaks related to work *(ρ= .09, p = .189)*. Micro-breaks - unrelated to work were positively associated with micro-breaks - related to work *(ρ= .70, p < .001)* and rumination *(ρ= .28, p < .001)*, and micro-breaks - related to work were positively associated with rumination *(ρ= .32, p < .001)*.

Table 2. *Spearman zero-order correlation matrix*

	1	**2**	**3**	**4**
(1) Ostracism	.92			
(2) Micro-breaks - Unrelated	.16*	.88		
(3) Micro-breaks - Related	.09	.70***	.92	
(4) Rumination	.22**	.28***	.32***	.87
Means	18.10	42.06	35.14	19.37
Standard deviations	7.36	20.07	16.27	6.45

*Note. *** p < .001; **p < .01; * p < .05 Cronbach's Alpha on main diagonal*

We further use a moderated linear regression with residual centering (Lance, 1988) to predict rumination by ostracism, micro-breaks-unrelated to work, micro-breaks-related to work, and the interaction terms between WO and the two micro-break components. The multicollinearity was assessed, and the results indicated no correlation with other predictors on ostracism (*VIF* = 1.03, *Tol* = 0.97) the interaction term ostracism x micro-breaks - related to work (*VIF* = 1.55, *Tol* = 0.64) and the interaction term ostracism x micro-breaks - unrelated to work (*VIF* = 1.56, *Tol* = 0.64), and moderated correlations between micro-breaks - related to work (*VIF* = 2.12, *Tol* = 0.47) and other predictors and between micro-breaks - unrelated to work (*VIF* = 2.17, *Tol* = 0.46) and other predictors. Rumination was statistically significantly estimated by predictors (F (5, 204) = 15.80, p < .001), and the explained variance of the outcome was 26.20% (R^2 = .28, R^2_{adj} = .26).

Rumination was statistically significant and positively associated with ostracism (B = 0.32, t = 6.06, p < .001, β =.37) and micro-breaks - related to work (B = 0.12, t = 3.38, p < .001, β = .29) and not associated with micro-breaks - unrelated to work (B = 0.01, t = 0.32, p = .75, β= .03). High scores on ostracism and micro-breaks - related to work were associated with high scores on rumination, and the relation between ostracism and rumination was positively, statistically significantly moderated by micro-breaks - related to work (B = 0, t = 0.52, p = .6, β= .04; see Figure 1).

The range of observed values of *rumination* was between 10 and 40. When micro-breaks related to work scores were outside the predicted interval [-741.47, 20.63], the slope of ostracism was statistically significant (Figure 1). The nature of this relation is graphically displayed in Figure 2.

The simple slope at the *higher levels* of *micro-breaks - related to work* (+1 SD) was *0.44, $t_{(206)}$=5.76, p < .001*; therefore, at the high levels of *micro-breaks - related to work*, the high levels of *micro-breaks - related to work*, increases statistically significant the influence of *WO* on *rumination*, and the same conclusion was observed at the *medium levels*

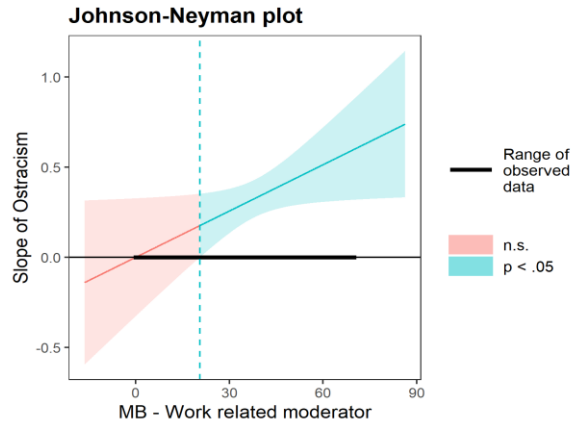

Figure 1. Ostracism slope for micro-breaks - related to work

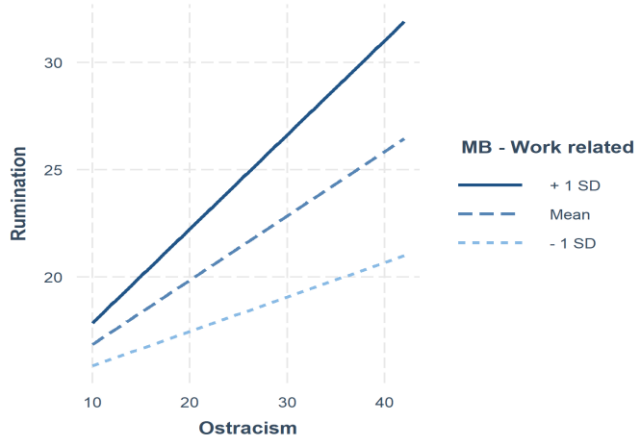

Figure 2. Relationship between rumination and ostracism for micro-breaks - related to work

of *micro-breaks - related to work* (0 SD) *(simple slope = 0.30, $t_{(206)}$= 5.56, p < .001)*. However, at the lower levels of *micro-breaks - related to work* (-1 SD) *(simple slope = 0.16, $t_{(206)}$= 1.69, p = .09)*, the moderation effect was not statistically significant (Figure 1).

A marginally significant moderation effect by micro-breaks, unrelated to work, was also found in the relation between WO and rumination (*B* = 0.01, *t* = 1.90, p = .06, β = .14). The range of observed values of *rumination* was the same, between 10 and 40. When *micro-breaks - unrelated to the work* score - were outside the predicted interval [-184.19, 24.72], the slope of *WO* was statistically significant (Figure 3), and the nature of this relation is graphically displayed in Figure 4.

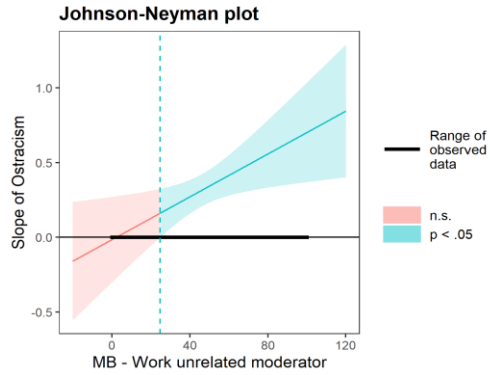

Figure 3. Ostracism slope for micro-breaks - unrelated to work

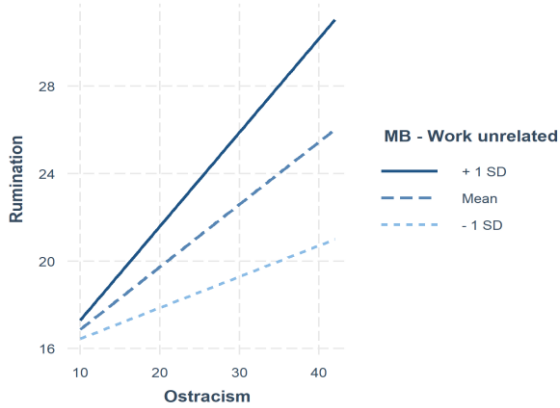

Figure 4. Relationship between rumination and ostracism for micro-breaks - unrelated to work

The simple slope at the *higher levels* of *micro-breaks - unrelated to work* (+1 SD) was *0.43, $t_{(206)}$=5.92, $p < .001$*; therefore, at the high levels of *micro-breaks - unrelated to work*, the high levels of *micro-breaks - unrelated to work*, increases statistically significant the influence of *WO* on *rumination*, and the same conclusion was observed at the *medium levels* of *micro-breaks - unrelated to work* (0 SD) *(simple slope = 0.29, $t_{(206)}$= 5.17, $p < .001$)*. At the lower levels of *micro-breaks - unrelated to work* (-1 SD) *(simple slope = 0.14, $t_{(206)}$= 1.61, $p = .11$)*, no statistically significant moderation effect was observed (see Figure 3). Figure 5 presents the overall moderated model, which investigates how both work-related and non-work-related micro—breaks interact with WO, which in turn predicts work-related rumination. The model explores potential moderation effects, highlighting how the indirect pathway from WO to work-related rumination may vary depending on the type and frequency of micro-break engagement.

Discussions

This study investigated the extent to which micro-breaks moderate WO and work-related ruminations at work among military personnel. In our investigation endeavor, we used the tenets of COR (Hobfoll, 1989) and the Effort-Recovery Model (Meijman & Mulder, 1998).

Our data empirically support the positive relationship between WO and work-related ruminations (H_1), which is consistent with previous empirical studies (He et al., 2020; Jiang & Poon, 2021; Srivastava et al., 2024) that used employee samples from civilian jobs. Empirical research has shown that WO amplifies employees' tendency to ruminate

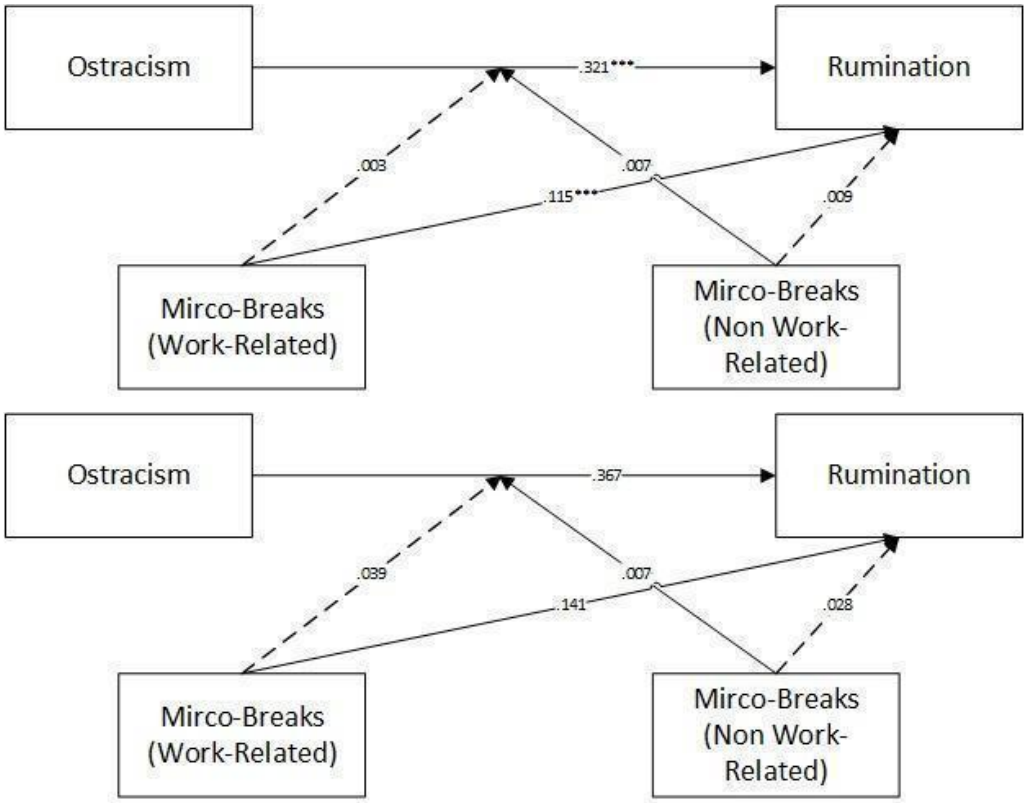

Figure 5. The overall moderated model

and dwell on negative work-related experiences and feelings (Wesselmann et al., 2013). This suggests that when military personnel perceive themselves as being ignored or excluded from operational activities, they are more likely to engage in repetitive and negative thoughts about the events of their workday while at home.

The moderating models in our study were empirically supported (H_2). We found that the micro-breaks moderated the relationship between WO and work-related ruminations. Our results show that micro-breaks related to work significantly moderated the relationship between WO and work-related rumination. In contrast, micro-breaks unrelated to work did not show a significant moderation effect. This highlights that the type of activities undertaken during micro-breaks, particularly those related to work, has a more pronounced impact on the association between WO and work-related rumination.

Military personnel who experience WO in the military context may be more likely to engage in rumination as a way of coping with the negative emotions (e.g., depression and anxiety; Yasinski et al., 2020) elicited by the ostracism experience (He et al., 2020). Military personnel may deeply introspect and frequently worry about past negative experiences (e.g., a co-worker's rude comment or exclusion from group activities) in their work settings. Micro-breaks related to work could temporarily distract from these negative emotions, providing military personnel with a brief respite from rumination (Wesselmann et al., 2013). Moreover, offering military personnel the chance to take short breaks may enable them to pay attention to interpersonal interactions and potentially clarify ambiguous social information that contributes to the growth of WO (Al-Atwi et al., 2024). Military personnel may engage in work-related micro-breaks to seek validation or reaffirm their self-worth within the group setting (Maner et al.,

2007). When ostracized, individuals may use interactions with co-workers during micro-breaks to seek acknowledgment or validation of their contributions, which could temporarily alleviate feelings of exclusion and diminish rumination. In addition, engaging in work-related activities during micro-breaks could also enhance military personnel's sense of control over their work settings, particularly in situations where they feel ostracized and powerless. The empirical literature suggests that WO is related to the experience of a significantly lowered sense of control (Warburton et al., 2006; Wesselmann et al., 2015). This perceived control may act as only a momentary buffer against the harmful effects of WO, reducing rumination by instilling a sense of agency and autonomy.

Theoretical implications

Our study is one of the first empirical attempts to show that micro-breaks can be a psychological mechanism underlying the relationship between WO and work-related rumination. In line with COR theory (Hobfoll, 1989), ruminations concerning issues relating to work (i.e., WO) may deplete considerable resources (e.g., time, effort, energy) needed for military personnel. We also test the moderating effects of micro-break activities on the relationship between stressors and strain (WO), thus investigating the main assumption of the effort-recovery model (Meijman & Mulder, 1998), which highlights that the recovery process refers to recuperation from the negative reactions to employees' work settings.

Military personnel who experience WO may suppress positive thoughts that typically serve as a protective factor against resource loss (Hobfoll, 1989). It is relatively novel to demonstrate that WO is positively related to work-related ruminations. Furthermore, the present study supported the relationship between micro-breaks moderated WO and work-related ruminations. According to Effort-Recovery Model (Meijman & Mulder, 1998) WO are a stressful situation for military personnel, can drain their vital resources for achieving work-related objectives (Wesselmann et al., 2018; Wang et al., 2023). Engagement in short breaks during the workday can provide military personnel opportunities to recover efficiently from the threat of resource loss caused by WO.

Contrary to our expectations, the current findings of the present study did not capture the protective role of micro-breaks. Our results showed that when military personnel are more ostracized, they tend to take more work-related breaks and then ruminate more in the evening about unpleasant situations. These results are also in line with the underlying ideas of the recovery paradox (Meijman & Mulder, 1998), according to which interpersonal stressors (e.g., WO) at the workplace are linked to impaired recovery processes (Sonnentag, 2018). We wanted to highlight that micro-breaks can be used to recover lost resources in the face of WO and work-related rumination. Supportive social settings help military personnel maintain and acquire resources, while negative social contexts (e.g., WO) lead to resource depletion (Hobfoll et al., 2018).

Practical implications

Our study offers several practical implications for military organizations and supervisors. First, by better understanding how WO predicts work-related rumination, military organizations can implement psychological counseling programs for military personnel to improve awareness of the negative consequences of WO (He et al., 2020). Once WO is identified, military organizations should implement supportive measures (such as encouraging a positive climate within military groups and companies). In this context, supervisors should clarify appropriate interpersonal behavior norms through the organization's internal policies and regulations. Supervisors should also encourage the development of a strong social feedback-seeking setting, motivating group members with diverse perspectives to seek optimal information about their social relationships. According to Yang and Treadway (2018), promoting effective communication through employee assistance programs should be a priority for supervisors. These programs play a key role in developing

employees' social skills, such as using appropriate body language and adopting various perspectives during communication, ultimately reducing the risk of misunderstandings (Al-Atwi et al., 2024).

Military supervisors can provide their subordinates with psycho-education sessions regarding interpersonal stressors (e.g., WO) and interpersonal dynamics relationships in military settings (Telecan et al., 2024). The findings of this study could help military practitioners develop and implement evidence-based strategies that can lessen the adverse effects of WO by investigating a possible behavioral strategy to mitigate these effects, namely micro-breaks. These operational procedures can prove compelling, and military personnel will know how to engage in micro-breaks when they feel ostracized at the workplace (WO), thereby reducing rumination.

WO can also be a transient experience that follows life events that reduce an employee's social circle (Buecker et al., 2021), such as changing positions (Büttner et al., 2024). Supervisors should be aware that changing from one position to another can disrupt previous social connections (Buecker et al., 2021), and the fear of ostracism often accompanies the challenge of revealing oneself to new co-workers. We hope tailored interventions can help military personnel navigate such life events by enhancing social integration, promoting a sense of belonging, and preventing the negative impact of WO and work-related rumination.

Given that work-related micro-breaks are associated with increased rumination following experiences of WO, military organizations should critically evaluate how these breaks are structured and encouraged. Specifically, efforts should be made to diversify the nature of breaks offered, promoting work-related micro-breaks that facilitate psychological detachment from unpleasant events within the military settings. This approach could support the recovery process impaired by interpersonal stressors like ostracism, and help to reduce the risk of persistent negative thinking after working hours.

Last, interventions targeting WO should create supportive and inclusive work settings where military personnel feel valued and respected. Thus, military supervisors may consistently promote open communication and transparency to encourage employees to express their ideas and clarify difficulties with tasks and work-related objectives (Srivastava et al., 2024). In this manner, military organizations should consider both the causes of organizational errors and social mistakes, such as WO, as these can have significant consequences for military personnel. These social mistakes can have consequences as severe as other types of human errors. Just as military organizations implement policies and programs to prevent workplace accidents, they should also establish behavioral norms and procedures to prevent unintended social errors, such as the unintentional ostracism of employees (WO).

Limitations and future directions

Our study has some limitations that open up potential future research directions. First, we used a convenience sample of participants, which denoted an imbalance regarding their self-reported gender (77.14% were men). The military personnel participating in our study were derived from two military organizations. The generalization of our findings is limited because they were not representative of the larger population of the Romanian Air Force. As our sample limits the generalizability of the findings, future studies might manage this issue by examining the proposed relationship in extended, more heterogeneous samples and including more female soldiers.

Second, we adopted a cross-sectional research design with a single point in time in data collection, limiting the possibility of establishing the causality and dynamics between variables. Future research employing a longitudinal research approach in which data is collected in multiple data points throughout the workday, with antecedents (e.g., job demands) and outcomes (e.g., in-role performance and micro-breaks engagement) having separate time points would be invaluable in unraveling the directionality of relationships and identifying more substantial evidence of causality. Also, future research could provide a more comprehensive understanding of how variables evolve,

allowing for the analysis of control loops or bidirectional causal relationships between them.

Third, all the instruments were self-reported, which might have raised some issues regarding desirability. Respondents are aware that their answers are being recorded, which can influence their responses due to perceived expectations—this makes such measurements reactive (Shaughnessy et al., 2012). To address this limitation, it is advisable to incorporate implicit assessment methods that can capture psychological constructs more accurately and are generally less prone to biases related to social desirability (Donaldson & Grant-Vallone, 2002).

Furthermore, other factors that might have interfered with WO were not accounted for, such as counterproductive work behaviors (CWB), incivility, positive and negative affect, and affective empathy, all of which can affect the micro-breaks. Future studies should expand the research to include other facets of WO (e.g., supervisor ostracism) and additional mediators/moderators (e.g., psychological safety and leader's humor; Hsiao et al., 2024). Disagreeableness or relationship conflicts (Telecan et al., 2023) can influence WO (Hales et al., 2016) and can be observed at the team level. Other team-level variables (e.g., task conflicts and team climate; Telecan et al., 2023) can also intensify WO. Therefore, we suggest considering these variables when testing similar hypotheses.

Conclusions

Our study highlights that WO was positively related to work-related rumination among military personnel. Furthermore, micro-breaks emerged as a unique moderator in the relationship between WO and work-related rumination. Our results show that micro-breaks related to work significantly moderated the relationship between WO and work-related rumination. These findings are valuable for military organizations, supervisors, and employees, offering insights into the effectiveness of managing WO by engaging in behavioral strategies at the workplace, such as taking micro-breaks, and mitigating its related consequences, namely work-related ruminations.

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RESEARCH ARTICLE

Empowering future entrepreneurs: Testing a strengths-based mindset intervention in a quasi-experimental pilot study

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Abstract

As entrepreneurial education expands, psychological preparedness remains a critical yet often overlooked factor in ensuring the effective integration of training. This quasi-experimental pilot study investigated the effect of a brief positive psychology intervention on growth mindset and strengths use among 46 young adults in an entrepreneurial training program. The study used comparative between-subject (control vs. experimental) analyses to test the effect of the intervention, one day after the intervention, and comparative within-subject analyses to test the impact of the intervention at the two-week follow-up. Regression analyses were also performed to test whether strengths use predicts increased adherence to the entrepreneurial education program and higher entrepreneurial intentions. The results reveal that while the intervention did not significantly affect growth mindset, it led to a sustained increase in strengths use, as observed both immediately after the intervention and at a two-week follow-up. Additionally, follow-up strengths use scores predicted participants' adherence to the program and their entrepreneurial intentions. These findings underscore the potential value of integrating psychological training into entrepreneurial education, equipping participants with tools that foster enhanced engagement and long-term motivation.

Keywords

positive psychology interventions, growth mindset, strengths use, entrepreneurial education, quasi-experiment

Interest in entrepreneurial education is steadily rising among universities and governments globally, driving the creation of innovative programs and initiatives designed to empower and equip aspiring entrepreneurs for success (Martin et al., 2013). Beyond formal educational efforts, experiential programs based on the lean startup methodology (Ries, 2011), along with pre-accelerators and accelerators, have emerged as key components of the entrepreneurial ecosystem. Despite their proliferation, the

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effectiveness of these programs remains largely uncharted, with evidence suggesting their impact on concrete outcomes, such as business creation, may be modest at best (Greenberg et al., 2003; Matricano, 2017). The primary aim of entrepreneurial education remains a matter of debate, though the literature reflects growing skepticism among researchers about viewing business creation as its sole purpose (Mwasalwiba, 2010). In their meta-analytic study, Bae et al. (2014) shift the focus toward cultivating entrepreneurial attitudes and skills, broadening the lens through which diverse interventions and programs can be evaluated.

While some studies evaluate entrepreneurial education programs based on design and participant demographics (e.g., Merguei, 2022), the influence of psychological factors on outcomes remains underexplored (Martínez-Gregorio et al., 2021). Even with expert mentorship, participants often struggle to absorb and apply insights effectively, suggesting that psychological preparedness plays a crucial role in their ability to navigate challenges in such entrepreneurial education programs. Indeed, research by Tisu and Vîrgă (2022a) suggests that entrepreneurial education can become a stressor if individuals lack the psychological tools to integrate and apply the knowledge provided effectively. These findings underscore the need for interventions that enhance participants' ability to internalize and apply entrepreneurial training. This study develops and tests a positive psychology intervention designed to strengthen participants' psychological and professional resources by fostering a growth mindset (Dweck, 2006) and encouraging the proactive use of strengths (Van Woerkom et al., 2016). Specifically, we examine whether a brief micro-intervention focused on these psychological constructs leads to enhanced growth mindset and increased strengths use over time, and whether it improves adherence to the program and increases entrepreneurial intentions of young adults by its conclusion.

The intervention is rooted in the Job Demands-Resources (JD-R) theory (Bakker & Demerouti, 2017), which has proven effective in analysing how demands, resources, and workplace performance intersect. This framework is not only applicable in entrepreneurial research (Tisu et al., 2023), but also particularly relevant to lean startup-based entrepreneurship programs, where participants engage in a real-world entrepreneurial setting, iterating repeatedly to refine their business models (Shepherd & Gruber, 2021. Although JD-R theory has gained traction in educational research (e.g., Pap et al., 2021; Siu et al., 2014), its value in the entrepreneurial domain has not yet been fully recognised. Some studies have applied the JD-R model to explore psychological dynamics in entrepreneurial contexts (e.g., Liu et al., 2023; Tisu & Vîrgă, 2022a, 2022b; Tisu et al., 2023), yet experimental interventions in entrepreneurial education programs, accelerators, or pre-accelerators are scarce. Aligned with novel propositions of the JD-R theory, which posits that developable individual factors (i.e., personal resources and proactive strategies; Bakker et al., 2023; Demerouti et al., 2019) can help leverage existing resources (e.g., better relations with business mentors) and buffer against demands (e.g., coming up with innovative ideas), we argue that the proposed positive psychology intervention (PPI; Seligman et al., 2005) aimed at enhancing positive beliefs (Van den Heuvel et al., 2010) and proactive strategies (Demerouti et al., 2019) will improve program adherence and entrepreneurial intentions, offering both theoretical and practical insights for program design.

Positive psychology interventions in the context of Job Demands-Resources theory

The Job Demands–Resources (JD-R) theory integrates motivational perspectives to explain how job demands and resources influence performance through employee well-being and proactive behavior (Bakker & Demerouti, 2017; Bakker et al., 2023). This framework provides a valuable lens for entrepreneurial training by offering: 1) insights into how demands and resources drive performance, 2) guidance for adapting to business challenges, and 3) strategies for acquiring or developing essential resources. Within the JD-R model,

personal resources—such as beliefs in one's ability to influence the environment (Van den Heuvel et al., 2010)—interact dynamically with professional resources (Bakker et al., 2023). Entrepreneurs with strong personal resources are more likely to build networks, attract partners, and secure funding. Similarly, proactive behaviors, such as leveraging existing resources effectively (Demerouti et al., 2019), increase the likelihood of achieving goals and addressing challenges.

In entrepreneurial contexts, personal resources build confidence, helping individuals respond more effectively to obstacles and opportunities (Tisu & Vîrgă, 2022a; Tisu et al., 2023). At the same time, proactive behaviors help identify and capitalize on critical assets, supporting long-term success (Tisu & Vîrgă, 2022b). Both are malleable and can be developed through targeted interventions (Lupșa et al., 2019; Vîrgă et al., 2023). Positive Psychology Interventions (PPIs) are particularly suited to this purpose, as they aim to cultivate positive experiences and traits to support growth and optimal functioning (Seligman & Csikszentmihalyi, 2000; Seligman et al., 2005). In an entrepreneurial education context, a PPI can both enhance understanding of positive subjective experiences and foster the personal resources and strategies critical for thriving in a lean start-up environment. This study focuses on growth mindset (Dweck, 2006) as the personal resource and strengths use (Van Woerkom et al., 2016) as the individual strategy—both supported by empirical evidence for their developmental potential, especially among young adults (Burnette et al., 2023; Vîrgă et al., 2023).

Growth mindset in the context of entrepreneurial education programs

Recent trends emphasize interventions fostering a growth mindset, extending beyond academics to address broader challenges (Burnette et al., 2023). Dweck (2006) defines a growth mindset as the belief that abilities and skills can be developed through effort, thereby increasing resilience and persistence. Such interventions typically introduce this concept through real-world success stories, reinforcing the link between effort and achievement (Dweck, 2006). Research associates a growth mindset with enhanced learning, openness to feedback, resilience, and long-term performance (Blackwell et al., 2007; Yeager & Dweck, 2020). In entrepreneurial training, fostering a growth mindset could help participants refine skills, integrate mentor feedback, and reframe failure as a learning opportunity. Though impact varies (Yeager & Dweck, 2020), these interventions offer a cost-effective way to enhance entrepreneurial drive (Li et al., 2023). Beyond mindset shifts, they promote proactive strategies like strengths use (Dweck, 2012; Miglianico et al., 2020), equipping future entrepreneurs to navigate challenges with adaptability and confidence. As such, we expect growth mindset to also help with and sustain the integration of strengths use. Those who believe their abilities are developable (cognitive shift) should be more open to discovering and using strengths in the learning program (behavioral change) (Miglianico et al., 2020).

Strengths use in the context of entrepreneurial education programs

Linley et al. (2009, p. 9) define strengths as "a pre-existing capacity for a particular way of behaving, thinking, or feeling that is authentic and energising to the individual and enables optimal functioning, development, and performance." Building on this, Miglianico et al. (2020) highlight how tailored interventions that help individuals identify and apply their strengths—such as leadership or empathy—can unlock potential in meaningful ways. Strengths-use interventions have been shown to enhance well-being, personal resources, and short-term performance (Vîrgă et al., 2023), while also boosting positive affective states like enthusiasm and confidence (Meyers & van Woerkom, 2017). In entrepreneurial training, encouraging strengths use may help participants overcome challenges and maximize their potential. For example, entrepreneurs who recognize creativity as a strength might develop innovative solutions or optimize resource management, thus gaining a

competitive edge. Ultimately, strengths-based approaches offer not only immediate psychological benefits but also potential support for long-term entrepreneurial success.

The present study

This quasi-experimental pilot study aims to assess the effectiveness of a brief positive psychology intervention designed to enhance (a) growth mindset and (b) strengths use among participants in a lean startup-based entrepreneurial training program. To examine these effects in an applied setting, we conducted the study within "Startup Survivor", an established local entrepreneurial program. As a result, we did not have control over the sample size and aligned our study parameters with the program's requirements. Sensitivity analyses conducted in G*Power suggest that based on the number of participants included in the program, the expected effect size is strong, with Cohen's d = .98 for the between-subjects comparison, Cohen's d = .76 for the within-subjects comparison, and f^2 = .62 for the regression analyses examining the predictive effect of the independent variables on program adherence and future entrepreneurial intentions.

Given the previous arguments and existing evidence highlighting the effectiveness of growth mindset (Burnette et al., 2023) and strengths use interventions (Vîrgă et al., 2023), we expect that:

H1) Participants in the experimental group will exhibit significantly greater (a) growth mindset and (b) strengths use at post-test compared to the control group, after controlling for pre-test scores.

H2) The effect of the intervention on (a) growth mindset and (b) strengths use will remain significant at the two-week follow-up, at the conclusion of the entrepreneurial training program.

Lastly, we aim to examine whether the intervention is associated with increased program adherence and greater entrepreneurial intentions. As participants engage in the training, they will have opportunities to apply a growth mindset and leverage their strengths. We anticipate that these psychological factors will contribute to higher adherence (i.e., participants will perceive the intervention as valuable in navigating program challenges) and stronger entrepreneurial intentions (i.e., a stronger wish to start their own business).

H3) Growth mindset scores at follow-up will predict (a) greater program adherence and (b) higher entrepreneurial intentions, after controlling for baseline and post-intervention scores.

H4) Strengths use scores at follow-up will predict (a) greater program adherence and (b) higher entrepreneurial intentions, after controlling for baseline and post-intervention scores.

Method

Participants and Procedure

This study included 46 participants enrolled in the entrepreneurial program, aged 18 to 47 (M = 22.63, SD = 0.7), of whom 41.3% were women. Regarding educational background, 67.4% had completed high school, 28.3% held a Bachelor's degree, and 4.3% had a Master's degree. Only 26% reported prior entrepreneurial experience. Thus, the sample primarily consists of young individuals (82.6% of whom are students) with limited entrepreneurial experience.

The intervention was conducted within the "Startup Survivor" entrepreneurial education program, organized by Timișoara Startups. Participants were recruited through an online questionnaire. Of 98 applicants, 25 were selected for the entrepreneurial training program and psychological intervention, while 21 were assigned to a control group. Selection for the experimental group was conducted solely by the Startup Survivor organizing team, and the researchers were not involved in the decision-making process. The control group consisted of applicants who were not selected for the training program but chose to participate in the study voluntarily. As an incentive, individuals in the control group were granted priority consideration for

selection in the program's next cohort. The intervention group consisted of 8 women and 17 men (M = 21.76, SD = 2.88), with 28% having completed university education and 32% possessing entrepreneurial experience. The control group consisted of 11 women and 10 men (M = 23.67, SD = 6.33), with 38% holding university-level education and 19% reporting entrepreneurial backgrounds. The intervention was designed and implemented in compliance with the Declaration of Helsinki to ensure the well-being, confidentiality, and voluntary participation of all individuals involved. Prior to participation, all individuals provided informed consent, confirming their understanding of the study's purpose, procedures, and their right to withdraw at any time without consequence.

Participants were followed over 5 weeks. Consistent with prior research practices (Bakker & Van Wingerden, 2021), a pre-test assessment for all participants was conducted three weeks before the program started (T1), followed by the intervention for the experimental group, a post-test for all participants one day after the intervention (T2), and a follow-up for the experimental group only at the end of the entrepreneurial program, two weeks after the intervention (T3). Figure 1 illustrates the timeline of the intervention and assessment moments. The initial online questionnaire was integrated into the registration form and announced via email, which included instructions and details on data confidentiality. During selection interviews and on the program's opening day, participants received further information about the intervention's structure and content.

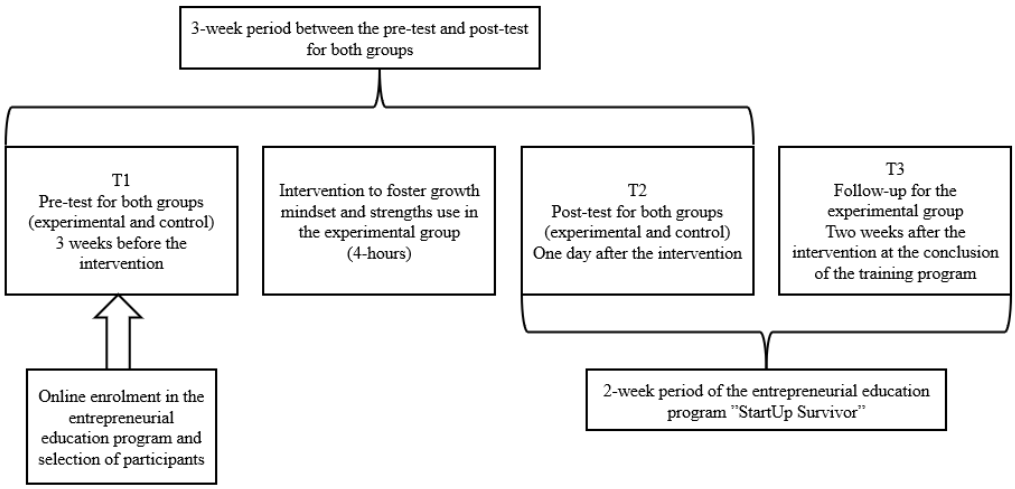

Figure 1. Timeline of the intervention

Instruments

Growth mindset was measured using the three-item Growth Mindset Scale (Rammstedt et al., 2024). Each item was rated on a 6-point Likert scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). An example item is "You can always substantially improve your abilities." The total score is the average of the items, with higher scores reflecting a higher level of the studied variable. This scale exhibits good internal consistency, with Cronbach's alpha values of .73 (T1), .86 (T2), and .92 (T3).

Strengths use was measured using nine items from the Strengths Use and Deficit Correction in Organizations Scale (SUDCO; Van Woerkom et al., 2016). Response options ranged from 1 (*almost never*) to 7 (*almost always*). Since this questionnaire was applied to a sample largely composed of students who are not employed, we adapted items referring to the workplace. An example modified item

is “I use my strengths in daily activities,” initially “I use my strengths at work.” The total score is the average of the items, with higher scores indicating greater strengths use. The scale exhibits excellent internal consistency (T1α = .93, T2α = .95, T3α = .97).

To measure program adherence, we developed a scale consisting of four items, with response options rated on a 6-point Likert scale (1 = *strongly disagree* to 6 = *strongly agree*). An example item is: "The positive psychology intervention helped me successfully cope with the two weeks of training." The total score was calculated as the mean of the item responses, with higher scores indicating a greater program adherence. The scale's internal consistency is adequate, with a Cronbach’s alpha coefficient of .68. The wording of all items is presented in the Appendix.

Entrepreneurial intention was assessed using a subscale of the Astee Measurement Tool (Moberg et al., 2014). This subscale comprises three items, rated on a 7-point Likert scale, from 1 (*strongly disagree*) to 7 (*strongly agree*). An example item is: "I often think about starting a business." The total score was computed as the mean of the item responses, with higher scores indicating a stronger entrepreneurial intention. The scale's internal consistency is good, with a Cronbach’s alpha coefficient of .80.

Intervention

Participants in the experimental group attended a training session led by trained professionals, designed to foster a growth mindset, identify personal strengths, and apply these strengths throughout the entrepreneurial program to enhance program adherence. The intervention, lasting four hours, was conducted on the second day of the program and structured in two parts: (a) promoting the adoption of a growth mindset and (b) providing tools for identifying and leveraging strengths within the training context. The session began with an overview of objectives and an open discussion to identify participants’ concerns about the program. This initial reflection encouraged introspection, allowing facilitators to tailor discussions and exercises to real-world challenges that participants might encounter.

The first part of the intervention introduced the concept of a growth mindset, emphasizing its role in learning and behavioural adaptation (Dweck, 2012; Miglianico et al., 2020). To ensure effectiveness, the session was structured based on Burnette et al.'s (2023) meta-analysis, incorporating key elements: credible information, scientific evidence of change potential, respect for participant autonomy, content designed to prevent self-blame while fostering self-compassion, and clear relevance to both personal and program-related goals. Participants then engaged in a “saying is believing” exercise (Aronson et al., 2002), identifying specific fears (e.g., “My solution won’t work”) and reframing them into constructive affirmations (e.g., “I don’t yet know if my solution will work, but this program will help me improve it.”).

The second part of the intervention transitioned from theory to practice through an interactive strengths-based session, structured after the guidelines proposed by Miglianico et al. (2020) – (1) strengths identification and (2) strengths use. The third direction suggested by Miglianico et al. (2020) – strengths development was not included, given that the aim of the study was to elicit using existing strengths, rather than developing latent ones. Participants identified their strengths using a multi-method approach, as combining different techniques offers a more comprehensive assessment (Miglianico et al., 2020). The process began with an exercise inspired by Johnson’s (2018) three-question method for strengths identification, followed by a team-based activity exploring the 24-character strengths from Peterson and Seligman's (2004) taxonomy. Finally, participants completed the online Values in Action Inventory of Strengths (VIA-IS; Peterson & Seligman, 2004), compared their results with initial self-assessments, and mapped their most relevant strengths.

In the action phase, participants developed action plans to apply their strengths within the program. This involved setting three SMART goals (Doran, 1981) and identifying potential obstacles. They then created implementation

intentions (Gollwitzer & Sheeran, 2006) using an "if-then" framework to pre-emptively plan adaptive responses to challenges, based on existing strengths. Examples included: "If I struggle to convince a mentor, then I will use my zest and enthusiasm to present my passion for the project to another mentor" or "If I encounter a creative block, then I will tap into my creativity to brainstorm new ideas or approaches." Participants refined their statements based on facilitator feedback and reinforced their intentions through repetition. These implementation intentions were designed to help participants harness their specific strengths—such as zest, leadership, and creativity—to proactively address obstacles, build resilience, and maintain focus on their goals within the program. The session concluded with a brief Q&A session.

Analytical approach

All statistical analyses were performed using IBM SPSS Statistics version 23. To assess the immediate effects of the intervention (H1a and H1b), we performed analyses of covariance (ANCOVA), controlling for pre-test scores to account for baseline differences. Due to feasibility constraints, the control group was not assessed at follow-up; therefore, we conducted repeated-measures analyses of variance (ANOVA) only within the experimental group to examine the sustainability of intervention effects over time (H2a and H2b). Lastly, to examine the predictive role of the intervention on program adherence (H3a and H4a) and entrepreneurial intentions (H3b and H4b), linear hierarchical regression analyses were employed. Prior to conducting parametric analyses, we tested and confirmed that the necessary statistical assumptions were met.

Results

Table 1 contains descriptive statistics indicators for the study's variables.

Table 1. *Descriptive statistics and reliability coefficients for the study's variables*

Variables	**T1 – baseline**		**T2 – post-intervention**		**T3 – follow-up**
	Experimental (n = 25)	Control (n = 21)	Experimental (n = 25)	Control (n = 21)	Experimental (n = 19)
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Growth mindset	5.49 (.50)	5.24 (.58)	5.48 (.62)	5.14 (.50)	5.44 (.47)
Strengths use	5.32 (1.04)	5.16 (1.00)	5.92 (.62)	5.35 (1.08)	5.95 (.76)
PA					5.09 (.59)
EI					6.15 (.76)

Note. N for T1 and T2 = 46, and for T3 = 19; PA = Program adherence; EI = Entrepreneurial intentions

Importantly, there are no statistically significant differences between the experimental and control group at baseline (growth mindset: $t(44) = -1.60$, $p = .12$; strengths use: $t(44) = -.52$, $p = .61$). As such, potential differences post-intervention can be attributed to the experimental manipulation.

To test the effect of the intervention, ANCOVAs were conducted to compare T2 scores between the experimental and control groups while controlling for T1, separately for growth mindset (H1a) and strengths use (H1b). As depicted in Table 2, there were no significant differences in terms of growth mindset ($F(1, 43) = 1.55$, $p = .22$) between the experimental and control group post-intervention. However, results showed a significant effect of the intervention for strengths use ($F(1, 43) = 5.04$, $p = .03$, $\eta p^2 = .11$), indicating that the experimental group had significantly higher strengths use scores at T2 compared to the control group. This

indicates that the strengths-based intervention led to improved strengths use among participants included in the program, with a medium-to-strong effect size (Cohen's d = 0.65).

Table 2. *ANCOVA results for differences between the experimental and control group*

Variable (post-intervention scores)	Experimental (n = 25)		Control (n = 21)				
	M	SD	M	SD	F (1, 43)	*p*	ηp^2
Growth mindset	5.48	.62	5.14	.50	1.55	.22	.04
Strengths use	5.92	.62	5.34	1.08	5.04	.03	.11

To test the effect of the intervention throughout the entrepreneurial education program, repeated-measures ANOVAs were conducted to examine changes in growth mindset (H2a) and strengths use (H2b) across three time points: baseline (T1), post-intervention (T2), and follow-up (T3), within the experimental group. While changes in growth mindset were not statistically significant ($F(2, 36) = .04$, $p = .96$), results indicate a significant main effect of time on strengths use ($F(2, 36) = 4.22$, $p = .02$, $\eta p^2 = .19$). Post hoc comparisons with LSD correction showed that strengths use increased significantly from baseline to post-intervention and remained elevated at follow-up. See Table 3 for full descriptive and inferential statistics.

Lastly, given that growth mindset in the experimental group did not show any significant changes after the intervention or at follow-up, the hypotheses suggesting that growth mindset scores predict adherence to the entrepreneurial learning program (H3a) and entrepreneurial intentions (H3b) were discarded. As such, only two hierarchical regressions were conducted to examine whether strengths use scores predict program adherence at T3 (H4a) and entrepreneurial intentions at T3 (H4b).

Table 3. *Descriptive statistics and post hoc comparisons for the repeated-measures ANOVA in the experimental group*

Strengths use measurement moment	**N**	**M (SD)**	**Comparison**	***P***	***D***
T1	25	5.37 (.85)	to T2	.04	.63
T2	25	5.85 (.56)	to T3	.58	.12
T3	19	5.95 (.76)	to T1	.02	.59

For adherence (H4a), in Step 1, baseline and post-intervention strengths use (T1, T2) were entered, and in Step 2, the T3 strengths use score was added. The final model accounted for 27% of the variance in adherence to the program, with T3 strengths use emerging as the only significant predictor ($\beta = .57$, $p = .02$). This suggests that participants with higher strengths use at follow-up were more likely to adhere to and better engage with the entrepreneurial education program.

The same process was used to predict entrepreneurial intentions (H4b). The final model accounted for 34% of the variance in entrepreneurial intentions, with T3 strengths use emerging as a positive predictor of entrepreneurial intentions ($\beta = .68$, $p = .01$),

suggesting that participants with higher strengths use at T3 were also more likely to exhibit greater entrepreneurial intentions at the end of the training program. All details for the hierarchical regression analyses are included in Table 4.

Table 4. *Results of the hierarchical regression predicting the study's outcome variables*

Predictor	Program adherence		Entrepreneurial intentions	
	β		β	
Step 1				
Strengths use T1	.10		-.14	
Strengths use T2	.29		.15	
R^2		.01		.08
F		.88		.32
Step 2				
Strengths use T1	-.03		-.29	
Strengths use T2	.14		-.02	
Strengths use T3	.59*		.68**	
R^2		.28		.34
F		3.30*		4.02*
ΔR^2		.27*		.25*

Note. N = 25 for T1 and T2, N = 19 for T3, * $p < .05$, ** $p < .01$

Discussion

This study aimed to evaluate the effectiveness of a pilot quasi-experimental positive psychology intervention in promoting growth mindset and strengths use among young adults in an entrepreneurial training program. With many entrepreneurial education initiatives failing to produce significant outcomes (Greenberg et al., 2003; Matricano, 2017), this research explored whether a PPI could support mindset development and equip participants with strategies to navigate both training and real-world business challenges. The results indicated that, while the intervention did not significantly impact growth mindset, it led to a sustained increase in strengths use. Additionally, strengths use predicted greater program adherence and increased entrepreneurial intentions. These findings emphasize the importance of leveraging strengths in entrepreneurial learning to enhance participants' ability to integrate knowledge and build confidence in launching new ventures.

Detailing our main findings, we hypothesized that the intervention would enhance growth mindset in the experimental group relative to the control group. However, the findings did not support this expectation. While previous studies have demonstrated the effectiveness of growth mindset interventions (e.g., Burnette et al., 2020; Yeager et al., 2016), one possible explanation for our findings is that such interventions are most effective for individuals who are particularly susceptible to mindset shifts—such as those facing significant stress, belonging to at-risk groups, or having low initial growth mindset levels (Burnette et al., 2023; Yeager & Dweck, 2020). In this study, participants were young adults enrolled in an entrepreneurial training program and, as such, did probably not meet these conditions, which may have limited the

effectiveness of the intervention. Our choice to include growth mindset as a relevant personal resource followed suggestions made by Miglianico et al. (2020), who argued that strengths identification and use can be boosted by enhancing growth mindset. Individuals who trust that their abilities are developable will be more inclined to seek to develop their strengths. However, it appears that participants in such training programs already exhibit increased growth mindset and maybe other personal resources, such as psychological capital might be more directly influential in such settings (Bakker & van Wingerden, 2021).

Consistent with our expectations, the intervention significantly increased strengths use among participants in the experimental group. After engaging in the intervention, these participants demonstrated a greater ability to identify, develop, and apply their strengths compared to the control group. These findings align with prior research in organizational psychology, which suggests that strengths-based interventions promote the utilisation of personal resources and enhance performance outcomes (Bakker & van Wingerden, 2021; Meyers & van Woerkom, 2017; Van Woerkom et al., 2016; Vîrgă et al., 2023). Therefore, by engaging in a PPI, future potential entrepreneurs develop individualized strategies that enable them to overcome obstacles, integrate newly acquired information more effectively, and ultimately thrive in entrepreneurial training programs.

Furthermore, we expected that the intervention's effect on strengths use would persist throughout the entrepreneurial training program. The data confirmed this expectation, indicating that participants continued to apply and refine their strengths over time. This sustained effect aligns with previous findings demonstrating the short-term benefits of strengths-based interventions (Forest et al., 2012; Vîrgă et al., 2023). Additionally, the person-activity fit may have contributed to these outcomes, as in-person interventions are generally more effective than online formats, particularly for individuals who may not be highly self-motivated (Duan et al., 2014; Ghielen et al., 2018). The interactive nature of the intervention likely enhanced engagement, reinforcing strengths-based behaviors beyond the initial intervention period.

Significantly, the increase in strengths use also predicted enhanced program adherence and greater entrepreneurial intentions. As participants progressed through the entrepreneurial education program, the active application of their strengths facilitated better integration of the learning material and reinforced their belief in their ability to launch their own businesses. By leveraging their strengths, participants demonstrated greater resilience and confidence, which are crucial for navigating the challenges of entrepreneurship programs (Tisu & Vîrgă, 2022a). These findings underscore the pivotal role of strengths-based interventions in fostering not only immediate engagement in the learning program but also harnessing stronger entrepreneurial aspirations.

Limitations and future directions

As with any study, certain limitations are worth noting. First, although the study examined a causal relationship, it employed a quasi-experimental design, as random assignment was not feasible due to constraints imposed by the entrepreneurial program organizers. Consequently, future research should aim to conduct randomised controlled trials with an active control group to strengthen causal inferences. Second, the reliance on self-report measures may limit the accuracy of the findings, as participants' responses might not entirely reflect their actual mindset or the extent of their strengths use (Podsakoff et al., 2012). Incorporating observational methods or behavioral assessments in future studies could provide a more objective evaluation of these constructs. Third, the study's small sample size and limited statistical power may restrict the generalizability of the results. While sensitivity analyses suggested strong effect sizes for the study, we obtained only medium-to-strong effects. This suggests that while the intervention demonstrated meaningful impacts, the findings should be replicated using a larger sample size, which could provide more robust statistical power, increasing confidence in the observed effects

and their applicability to broader populations. Additionally, replication in diverse settings would help determine whether the effects are consistent across different participant groups (e.g., seasoned entrepreneurs) and contexts (e.g., entrepreneurial development programs).

Theoretical and practical implications

This study offers several important theoretical and practical contributions. To our knowledge, this is the first experimental study to examine a PPI within a lean startup-based entrepreneurial program, thereby making a significant contribution to both entrepreneurial education research and the application of the JD-R model in intervention studies. One key theoretical contribution is the fact that strengths use in entrepreneurial learning settings can be enhanced through targeted interventions, expanding the findings of Vîrgă et al. (2023), who show that such interventions yield fruitful results in organizational settings. Second, this study validates and expands the findings of Tisu and Vîrgă (2022a), who demonstrate that strengths use plays a pivotal role in the effectiveness of development opportunities among entrepreneurs. Our results indicate that strengths use can be effectively trained and leveraged to generate positive outcomes in entrepreneurial settings, yielding positive outcomes. As such, this study highlights a crucial yet often overlooked aspect of entrepreneurial education: the importance of psychologically preparing participants to effectively integrate knowledge and succeed in these programs. In doing so, this investigation also directly addresses Matricano's (2017) call for research on strategies to enhance engagement, adherence, and deeper assimilation of knowledge in entrepreneurial training. Future studies might include relevant personality traits that can enhance or encumber the learning process in such contexts. Of relevance might be conscientiousness. As studies show, conscientious individuals persist in attaining goals (Ștefan et al., 2023) and use it as a compensatory strategy in obtaining better performance (Corbeanu, 2023).

Our findings reinforce the importance of incorporating malleable psychological variables into research on the effectiveness of entrepreneurial education programs. Addressing this gap, as highlighted in the meta-analytic review by Martínez-Gregorio et al. (2021), could significantly advance the field by providing a more comprehensive understanding of the factors that contribute to entrepreneurial success. Importantly, while growth mindset did not increase after the intervention, probably because participants who enrol in such programs already have increased beliefs that they can grow and develop, other personal resources, such as psychological capital (Lupșa et al., 2019), might also be relevant in preparing participants to better cope with demands in entrepreneurial learning programs for young adults, and represent a potential avenue of investigation. As existing studies demonstrate, incorporating the development of both personal resource and individual strategies into PPIs leads to improved outcomes and should be considered together in such interventions (Bakker & van Wingerden, 2021; Meyers & van Woerkom, 2017). Furthermore, aligned with the propositions of JD-R theory (Bakker & Demerouti, 2017), our findings also demonstrate that PPIs can be effective across diverse educational and professional contexts, highlighting the pivotal role played by individual strategies in capitalizing on existing resources (Demerouti et al., 2019).

Beyond theoretical contributions, this study also has practical implications for entrepreneurial education program designers, startup incubators, and training facilitators. By demonstrating that individual strategies can be developed through a brief, four-hour micro-intervention, our findings suggest that entrepreneurial support programs for students and young adults could integrate psychological training alongside traditional business education. While the dominant focus in entrepreneurial education has been on refining business curriculum and improving instructional methods, our study highlights the critical role of psychological preparation in optimizing entrepreneurial success.

Program designers should carefully consider how business knowledge interacts

with psychological factors, ensuring that interventions strike a balance that aligns with the program's objectives (Merguei, 2022). Rather than viewing psychological training as a secondary component, integrating a PPI could enhance participants' ability to apply business knowledge effectively, ultimately improving long-term entrepreneurial outcomes. If entrepreneurial education programs for students and young adults were to systematically incorporate psychological training, success rates might increase, as participants would be better equipped to leverage personal strengths, adopt proactive behaviors, and navigate entrepreneurial challenges more effectively.

Conclusion

This study provides empirical evidence that a strengths-based intervention can enhance entrepreneurial education by fostering behavioral strategies among future entrepreneurs. The findings suggest that these interventions not only produce immediate benefits but also yield sustained effects throughout the duration of entrepreneurial training programs, as well as greater engagement with the program, and enhanced future entrepreneurial intentions. The results highlight the importance of incorporating psychological training into entrepreneurial education for young adults, underscoring that cognitive and behavioral strategies are equally crucial as technical business knowledge in achieving positive entrepreneurial outcomes.

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Appendix

Program adherence scale – item wording and response frequency for the experimental group at follow-up

Item wording	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
The positive psychology intervention helped me successfully navigate the two weeks of training.	0%	0%	10.5%	0%	57.9%	31.6%
During the program, I found myself using the strengths identified in the intervention.	0%	0%	5.3%	21.1%	52.6%	21.1%
My strengths enabled me to achieve the program goals set during the positive psychology intervention.	0%	0%	5.3%	21.1%	42.1%	31.6%
Throughout the two weeks of training, I approached challenges and difficulties by leveraging my strengths and a growth mindset.	0%	0%	0%	15.8%	31.6%	52.6%

Psihologia Resurselor Umane, **23** (2024), 57-60

PUBLISHING STANDARDS

Psychology of Human Resources – guide for authors

THE EDITORS

This document represents the "Guide for Authors". It covers the format and language to be used for manuscripts submitted to Human Resources Psychology. Also, this document can be found on the webpage of the Romanian Association of Industrial and Organizational Psychology (www.apio.ro).

This "Guide for Authors" follows the 7th APA Publication Manual.

Manuscript Submission and Format

All manuscripts for the journal Human Resources Psychology should be submitted to the following e-mail address: revista@apio.ro.

To edit the manuscript please use Times New Roman 12-point type, 1.5 line spacing and the A4 page setting. Each page will be numbered in the upper right corner. The top and side margins should be left of at least one inch or 2.54 cm. A full example of a manuscript can be found in the 7th APA Publication Manual.

Publications

Accepted papers are copy-edited and retyped. Authors have to review edits and proofread their work. The editor of Human Resources Psychology will contact the corresponding author after the editor assigns your work to an issue.

If your work is accepted, please keep the editor informed of changes in your contact information and of long absences.

Front Page

The first page of the manuscript should include the following information:

1. Title

The title should be a concise statement of the main topic and should identify the variables or theoretical issues under investigation and the relationship between them. It should be typed in sentence case, centered between left and right margins, and positioned in the upper half of the page.

2. Author name(s) and institutional affiliation(s)

Author name(s) will be presented in the following form: first name, middle initial(s), and last name.

Institutional affiliation should reflect the institution/location where the author(s) were when the research was conducted. When an author has no institutional affiliation, the city and state of residence below the author´s name should be specified. The institutional affiliation should be centered under the author's name, on the next line.

3. Author´s note

This section should include the following:

- First paragraph should include the departmental affiliations at the time of the study for all authors as follows: name of the author as it appears in the byline, comma, department name, comma, university name, semicolon, next

author name, and so on, and end with a period.
- Second paragraph should include any changes in author affiliation subsequent to the time of the study as follows: [author´s name] is now at [affiliation].
- Third paragraph should include acknowledgments (only for grants or other financial support, any special agreements concerning authorship, thanks for personal assistance) and special circumstances (disclose them before the acknowledgements in this paragraph).
- Fourth paragraph should include information about the person to contact in terms of mailing address and e-mail.

Place the author note on the title page, below the title, byline, and affiliation. Center the label *Author Note.* Start each paragraph of the note with an indent, and type separate paragraphs for the authors' names and current affiliations, changes in affiliations, acknowledgments, and special circumstances, if any, along with the person to contact. The author note is not numbered or cited in the text.

Abstract Page

The abstract as well as the title of the work go on page 2. The abstract should be no longer than 150 words. The label *Abstract* should appear in sentence case, centered, at the top of the page. Type the abstract itself as a single paragraph without paragraph indentation. Place a running head (short title).

The abstract will be written in English. It is necessary to include 3-5 key words after each abstract, in all these three languages.

Main body text pages

In preparing your manuscript, begin the introduction on page 3. Type the title of the manuscript in sentence case centered at the top of the page, and then type the text. The remaining sections of the article follow each other without a break; do not start a new page when a new heading occurs.

This section should include the following:

- Introduction of the problem. This section will present the specific problem under the study and describe the research strategy. There is no need to label this section as Introduction.
- Explore importance of the problem. This section states why the problem deserves new research. State explicitly this problem according to the type of the study (empirical study, literature review and meta-analysis, methodological paper and case study).
- Describe relevant scholarship by discussing the relevant related literature and demonstrating the logical continuity between previous and present work.
- State each tested hypothesis clearly and provide a theoretical argument for how it was derived from theory or is logically connected to previous data and argumentation.

Method

This section describes in detail how the study was conducted, including conceptual and operational definitions of the variables used in the study. Authors should include the following:

- Sample description, by describing the main characteristics with particular emphasis on characteristics that may have bearing on the interpretation of results.
- Sampling procedure by describing the procedures for selecting participants in terms of sampling method, the percentage of the sample approached that participated, the number of participants who selected themselves into the sample.
- Sample size, power and precision.
- Measures and covariates by describing the methods used to collect data and to enhance the quality of the measurements.
- Research design.
- Experimental manipulations or procedures.
- Task description.

Results

This section summarizes the collected data and the analysis performed on the data to test the proposed hypotheses. Report the data analysis in sufficient detail to justify your conclusions. For more information please consult the 6th APA Publication Manual.

Discussion

This section evaluates and interprets the implications of the results, especially with respect to original hypotheses. Examine, interpret, and qualify the results and draw inferences and conclusions from them. Emphasize any theoretical or practical consequences of the results.

Also, the limits of the study and possible future studies can be considered in this section.

References

References are your entries in the *alphabetical list at the end* of your article or research note. This list should include all the works you have cited throughout the manuscript. The references should be formatted as follows:

1. Periodicals (selective examples)

Author, A.A, Author, B. B., & Author, C. C. (year). Title of article. *Title* of *Periodical, xx,* pp-pp. doi: xx.xxxxxxxxxx

Author, A. A., Author, B. B., Author, C. C., Author, D. D., Author, E. E., Author, F.F., … Author, Y.Y. (year). Title of article. *Title* of *Periodical, xx,* pp-pp. doi: xx.xxxxxxxxxx

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2. Books

Author, A. A. (year). *Title of work.* Publisher.

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Author, A.A., & Author, B.B. (year). Title of chapter or entry. In A. Editor, B. Editor, & C. Editor (Eds.), *Title of book* (pp. xxx-xxx). Publisher.

Author, A.A, &Author, B.B. (year). Title of chapter or entry. In A. Editor & B. Editor (Eds.), *Title of book* (pp. xxx-xxx). Retrieved from http://www.xxxxxxx

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Contributor, A.A., Contributor, B.B., Contributor, C.C., & Contributor, D.D. (Year, Month). Title of contribution. In E.E. Chairperson (Chair), *Title of symposium.* Symposium conducted at the meeting of Organization Name, Location.

Presenter, A.A. (Year, Month). *Title of paper or poster.* Paper or poster session presented at the meeting of Organization Name, Location.

5. Unpublished works (selective examples)

Author, A.A. (Year). Title of manuscript. Unpublished manuscript [or "Manuscript submitted for publication," or "Manuscript in preparation"].

For a detailed description of the procedure related to the citation of other types of work than those listed above, consult the 6th APA Publication Manual.

Footnotes

Footnotes are used to provide additional content or to acknowledge copyright permission status.

Appendices

The appendices of the manuscript (labeled APPENDIX A, APPENDIX B etc.) contain materials that supplements article content such as lengthy methodological procedures, calculations of measures, scales etc.

Tables and Figures

The author should number all tables and figures with Arabic numerals in the order in which they are first mentioned in the text, regardless of whether a more detailed discussion of the table or figure occurs later in the paper. The author should label them as Table 1, Table 2, and so on or Figure 1, Figure 2, and so on. List all tables first followed by figures. Place tables and figures after appendices at the end of the manuscript, and indicate the position of each in the text as follows:

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Each table or figure needs an introductory sentence in your text. The format agreed is the standard (canonical) one. Each table should report one type of analysis (which is identified in the title), and each vertical column and horizontal row should contain only one type of data.

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