The Relationship between Mentor Support, Positive Emotion and Doctoral Students' Innovative Behavior

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Abstract

This study investigates the relationship between supervisor support, positive emotions, and doctoral students' innovative behaviors. Using the Supervisor Support Scale, Emotion Scale, and Innovative Behavior Scale, 73 doctoral students were surveyed. The results revealed: (1) Significant correlations exist among supervisor support, positive emotions, and innovative behaviors. (2) After controlling for demographic variables (sex), supervisor support significantly enhances positive emotions. (3) After controlling for demographic variables (sex), supervisor support significantly enhances innovative behaviors. (4) After controlling for demographic variables (sex), supervisor effectiveness within supervisor support significantly enhances innovative behaviors.

Keywords

Mentor support, Positive emotions, Doctoral candidates, Innovative behavior

Introduction

During the doctoral program, students' innovative research achievements and their eventual realization require indispensable mentorship support. Factors influencing doctoral students' innovative behaviors have become a hot topic in current research, primarily focusing on mentorship, student characteristics, or institutional factors. Mentors, who interact with doctoral candidates most frequently during their studies, are among the most significant influencing factors [1]. The innovative behaviors of graduate students determine the quality and depth of their research outputs, while doctoral students' research achievements also require positive emotional support [2]. Therefore, this study focuses on whether mentorship support actually impacts doctoral students' positive emotions and innovative behaviors. The research examines both the effect of mentorship support on positive emotions and the relationship between mentorship support and doctoral students' innovative behaviors.

Literature review

Mentorship support research

The increased time teachers spend in schools has elevated the role of school mentors in student teachers' initial professional development. A study emphasized that effectively familiarizing student teachers with mentors is crucial for them to accept mentors as friends. Researcher found that traits like "diligence", teacher - training types, initial teaching motivations, views on teacher education, and teaching efficacy can distinguish graduates with low and high teaching commitment, confirming teacher education's importance in shaping commitment.

Mentors can offer targeted guidance based on discipline and student outcomes. Research indicates that the mentorship model varies by guidance type, student outcomes, and discipline. Holt & Fifer showed that mentor self-efficacy mediates the relationship between avoidant attachment styles and support levels [3].

For women with mentors, the amount of non - mentor online support and satisfaction with it are negatively correlated with depression. Mentors can help young mothers use their networks and buffer relationship issues. Research has found that mentor support is associated with increased life optimism. Further research indicated that students' perception of mentor support is moderately correlated with academic self - concept, and for women,

it's linked to academic self - concept, family issues, and stress.

Mentoring is an emancipatory act focused on personal growth. A trusted mentor can facilitate reflection, as suggested in the literature. Studies have again pointed out that certain factors can distinguish graduates' teaching commitment. Lanzi et al. proposed a comprehensive development framework for underrepresented doctoral students and early-career scholars based on three assumptions [4].

Mentoring benefits both mentees and mentors. Establishing trust and relationships helps set short - and long-term goals. The literature also mentioned the need for clear work guidelines. Local mentoring helps teacher candidates develop career attachments, but it can be improved, as Yelbay Yilmaz & Balbay stated. Research has found that postdoctoral fellows consider network and mentor support for skill advancement, while multiple obligations and uncertainty pose challenges [5].

Research on innovative behavior

Innovation is viewed here as a multi-stage process, with distinct activities and individual behaviors at each phase. Since innovation is characterized by discontinuous activities rather than discrete, continuous stages, individuals can be expected to engage in any combination of these behaviors at any given time. By synthesizing multiple research streams on innovation antecedents, models for individual innovation behaviors have been developed and tested.

A study examined how perceived task interdependence and perceived goal interdependence among individual team members influence innovation behavior in teams with varying levels of group diversity. The Lazarus Theory has been adapted to the context of innovation, serving as a foundational framework to explain how leadership affects cognitive processes related to perceived work environment (needs and susceptibility to change), innovation behavior (idea generation, testing, and implementation), and innovation hindrance behaviors (intrinsic psychological coping and avoidance). Psychological empowerment of followers can modulate the relationship between transformational and transactional leadership and follower innovation behavior. Transformational leadership only shows a positive correlation with innovation behavior when psychological empowerment is high, whereas

transactional leadership exhibits a negative correlation under these conditions.

This study examines how employees' innovative behaviors can be interpreted through expectations, which influence both job performance (anticipated positive outcomes) and organizational image (anticipated image risks and image benefits). It investigates the structural relationship between two distinct goal orientations - learning goal orientation and performance goal orientation - as intrinsic motivational factors, alongside two unique knowledge-sharing behaviors (knowledge harvesting and knowledge donation) and employee service innovation behaviors.

This study examines the unique influence of entrepreneurial leadership on the relationship between employees' creative self-efficacy (CSE) and innovative behaviors. It investigates the relative impact of two distinct leadership styles - servant leadership and entrepreneurial leadership - on organizational commitment and innovative behaviors among employees in social enterprises [6]. Utilizing resource protection and psychological ownership theories, the research explores the mediating role of employee cynicism in the relationship between tolerance for workplace misconduct in the hospitality industry and outcome variables (i.e., service innovation behaviors, knowledge concealment behaviors, and job-seeking behaviors) [7]. The study also investigates the influence of perceived human resource practices on individual workers' innovative work behaviors and examines the role of innovation climate in this relationship [8]. Additionally, it analyzes the relationship between motivational forms in self-determination theory and the concept of personal organizational (PO) fit to better understand factors potentially affecting high-tech R&D employees [9].

A comprehensive conceptual framework was constructed based on empirically validated factors, their relationships, and relevant theories [10]. This study investigates the impact of constructive leadership practices on service innovation behaviors among hotel employees through a continuous mediation system that incorporates employee psychological safety and creativity as mediators. The research aims to examine the relationship between spiritual leadership and employee innovation behaviors by testing the mediating role of intrinsic motivation and the moderating effect of power distance. The authors further explore the indirect relationship between spiritual

leadership and employee innovation behaviors through intrinsic motivation [11]. Utilizing motivational and competency-based theoretical approaches, the study summarizes research on the antecedents (demographic influences, personality traits, relational influences, job characteristics) and outcomes (personal health and well-being, turnover intention and turnover, job performance, organizational citizenship behavior, interpersonal relationships, innovative behaviors, counterproductive work behaviors, and career success) of overqualification [12].

Research on positive emotions

Planned problem-solving can directly influence emotional states, even when adaptive issues remain unresolved. Alternatively, effective planned problem-solving may improve human-environment relationships, which in turn should lead to more favorable cognitive evaluations and consequently more positive emotional responses. Positive emotions are associated with accelerated recovery of cardiovascular reactivity in resilient individuals when confronted with negative emotions. Consistent with the failure effect of positive emotions, experiencing positive emotions may be crucial for helping resilient individuals rapidly recover from cardiovascular activation linked to negative emotions, thereby partially enhancing their ability to regulate negative emotions in other domains. Positive emotions may serve as a critical buffer against adverse health outcomes resulting from poor personal adaptation.

With the rise of the affective revolution and positive organizational scholarship in organizational research, positive emotions have garnered increasing attention in organizational science. Researchers are exploring innovative approaches to studying positive emotions, supported by growing evidence of their critical role in workplace outcomes, including job performance and creativity.

High task value, strong success expectations, and positive emotions before task initiation contribute to higher effort levels during task execution, which in turn correlates with improved task performance. High success expectations predict increased positive emotions during tasks, which are associated with better task performance. Conversely, negative emotions during tasks correlate with poorer performance. High task performance is linked to greater effort, stronger attribution of success to competence, and enhanced positive emotions after task completion. Furthermore, high task performance and competence-based success are associated with better subsequent academic achievements [13]. Positive emotions can also yield other positive outcomes, including personal and social benefits [14].

Higher levels of prioritization, deliberate rumination, and religious coping were associated with post-traumatic growth, while lower levels of intrusive rumination showed no significant correlation. Self-esteem emerged as a key predictor of life satisfaction. Prioritization was linked to the use of positive coping strategies and thoughtful yet non-intrusive reflection, particularly in managing stress and trauma. Zieba et al. found that life satisfaction and post-traumatic growth have distinct predictors [15]. After controlling for sociodemographic variables, the results demonstrated that both positive and negative event frequencies correlated with positive emotional states. Individuals with thriving development may better cope with the heightened impact of negative life events, while significant positive experiences can help build personal resources [16].

Research on mentor support, innovative behaviors, and positive emotions

The current status of research on mentorship support, innovative behaviors, and positive emotions is presented in Table 1, with the time span of articles and citations covering 1962 to 2022. The study included 405 source journals or books, 228,121 cited references, 12,546 author keywords, and 7,188 articles.

Table 1. Current research status on positive emotions in mentor support for innovative behaviors.

Description	Bear fruit
Key data information	/
Time span	1962-2022
Source of information (journals or books)	405
Article	7,188
Annual rate of growth %	0
Average document age	7.96
Average citations per document	16.47
References	228,121
File content	/
Keywords + (ID)	5,639
Author keywords (DE)	12,546

Description	Bear fruit
Author	/
Author	17,199
Single author document	1,672
Single author document	/
Co-authors of each document	1,877
Percentage of international collaborators	2.92
Essay	14.3
Article and book chapters	/
Articles, data files	6,192
Article, Get in advance	5
Articles, pleadings	345
Book review	131
Check	1
Edit materials	2
Edit materials, Get in advance	112
Letter	6
Meeting summary	1
News entry	2
Review	151
Review, Book chapters	1
Review, Get in advance	10

The top 8 most relevant authors in the research field are shown in Table 2: Karwowski (m) with 24 articles (10.07%); Kaufman (jc) with 19 articles (6.66%); Chen (hc) with 16 articles (4.52%); Liang (cy) with 16 articles (4.48%); Hwang (gj) with 15 articles (4.30%); Barak (m) with 14 articles (8.33%); Craft (a) with 14 articles (7.50%); and Chang (ys) with 13 articles (5.08%).

Table 2. Top 10 most relevant authors of the study.

Author	Article count	Percentage (%)
KARWOWSKI M	24	10.07
KAUFMAN JC	19	6.66
CHEN HC	16	4.52
LIANG CY	16	4.48
HWANG GJ	15	4.30
BARAK M	14	8.33
CRAFT A	14	7.50
CHANG YS	13	5.08

Table 3 presents the ten institutions with the highest number of published research articles, are: National Taiwan Normal University (122 articles), University of Michigan (111 articles), University of California, San Francisco (107 articles), University of Toronto (98 articles), Johns Hopkins University (85 articles), Hong Kong University of Education (80 articles), University of Pittsburgh (78 articles), University of North Carolina (75 articles), Michigan State University (69 articles), and University of Wisconsin (65 articles).

Table 3. Top 8 most relevant institutions for the study.

Academic institution	Article count
National Taiwan Normal University	122
University of Michigan	111
University of California, San Francisco	107
University of Toronto	98
Johns Hopkins University	85
Hong Kong University of Education	80
University of Pittsburgh	78
University of North Carolina	75
Michigan State University	69
University of Wisconsin	65

This study conducted a co-citation analysis of the relevant authors, yielding the following knowledge map as shown in Figure 1. Four clusters were identified, represented by four colors, with cluster areas decreasing in color intensity according to their importance: red, blue, green, and purple. Cluster 1, the red area, comprises 9 authors: Braun V. (2006), Cohen J. (1988), Hu Lt. (1999), Bandura A. (1997), Ryan Rm. (2000), Bandura A. (1986), Fornell C. (1981), Bandura A. (1977), and Tierney P. (2002) (as shown in Table 4). The blue area represents Cluster 2, which includes 6 authors: Pekrun R. (2006), Pekrun R. (2002), Fredrickson B. (2001), Pekrun R. (2011), Watson D. (1988), and Sutton Re. (2003) (as shown in Table 5). Cluster 3, the green area, consists of 24 authors, while Cluster 4, the purple area, includes 10 authors. Figure 1 illustrates the co-citation analysis of the study authors.

Table 4. Distribution of authors associated with cluster 1 in the co-citation analysis of study authors (N=9).

Panel point	Cluster	Between the two	Close	Page ranking
Braun V. (2006)	1	18.49418684	0.013333333	0.009631015
Cohen J. (1988)	1	70.44120543	0.014285714	0.012089765
Hu Lt. (1999)	1	79.79322828	0.014084507	0.016950845
Bandura A. (1997)	1	51.07263403	0.014705882	0.019538813
Ryan Rm. (2000)	1	15.05746278	0.012987013	0.011290296
Bandura A. (1986)	1	22.39488427	0.013513514	0.015698536
Fornell C. (1981)	1	6.350578501	0.010752688	0.010475369
Bandura A. (1977)	1	4.051886274	0.011627907	0.013694906
Tierney P. (2002)	1	47.34709663	0.012820513	0.014297594

Table 5. Distribution of authors associated with cluster 2 in the co-citation analysis of study authors (N=6).

| Panel point	Cluster	Between the two	Close	Page ranking
Pekrun R (2006)	2	11.782493500	0.011494253	0.033111620
Pekrun R (2002)	2	3.984187616	0.011111111	0.030314025
Fredrickson B. (2001)	2	8.671489120	0.012500000	0.017024983
Pekrun R (2011)	2	1.057928511	0.010638298	0.022154280
Watson D. (1988)	2	9.313728702	0.011904762	0.011876343
Sutton Re. (2003)	2	0.513906988	0.010752688	0.007901625
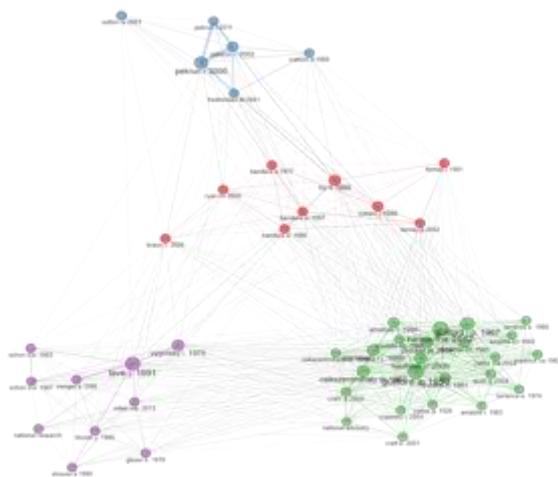
Figure 1. Co-citation analysis map of study authors.

This study examines the collaborative impact of related research worldwide, as shown in Figure 2, with relevant studies distributed across the globe. Some countries exhibit higher frequencies of international collaboration, as illustrated in Table 6, which presents 20 groups of collaborative relationships with high research frequency. Among them, the United States, as the initiating country, collaborates most frequently with China, at 71 instances; the United States collaborates with Canada at 53 instances; and the United States collaborates with Australia at 46 instances. Other high-frequency collaborations include the United Kingdom with Australia at 42 instances, the United States with the United Kingdom at 38 instances, China with the United Kingdom at 35 instances, and China with Australia at 25 instances. From the top 20 collaborative relationships, it is evident that the United States, as the initiating country, demonstrates the highest level of collaboration in related papers, with other countries showing significant gaps.

Figure 2. Global distribution of research collaborations.

Table 6. Top 20 collaborative impact of research worldwide.

Country of origin of study	Cooperation countries	Frequency of study
America	China	71
America	Canada	53
America	Australia	46
Britain	Australia	42
America	Britain	38
China	Britain	35
China	Australia	25
America	Germany	25
America	Korea	23
Britain	Ireland	21
America	Holland	21
Holland	Belgium	18
Australia	Germany	16
Britain	Germany	16
Britain	Holland	16
America	Turkey	15
America	Spain	14
Britain	Spain	13
Australia	New Zealand	12
Holland	Germany	12

Research design

Research subjects

This study selected Chinese doctoral students studying in Thailand and other countries, as well as Chinese doctoral students studying domestically, as survey subjects. Questionnaires were distributed using convenience sampling and snowball sampling, with 73 questionnaires recovered. Among the survey subjects, there were 25 males (34.25%) and 48 females (65.75%); 19 first-year doctoral students (26.03%), 42 second-year doctoral students (57.53%), 9 third-year doctoral students (12.33%), and 1 each of fourth, fifth, and sixth-year doctoral students (1.73% each); 12 were in science and engineering (16.44%), 51 in social sciences (69.86%), and 10 in humanities (13.70%); 41 were Chinese mainland doctoral students (56.10%), 39 were Thai doctoral students (39.70%), and 1 each was from Japan, Denmark, and Macao, China (1.30% each).

Variable design

Supervisor support: This variable is measured using a scale, which is divided into three dimensions: academic support (11 items), supervisor effectiveness (5 items), and personal support (6 items), totaling 22 items. Academic support includes items such as "My supervisor provides clear expectations and goals I need to achieve" and "My supervisor helps me plan and manage the various research tasks I must complete." Supervisor effectiveness includes items such as "My supervisor allocates sufficient time to meet with me and discuss my research" and "My supervisor is always available to answer any questions I may have." Personal support includes items such as "My supervisor demonstrates enthusiasm when discussing my research or any issues I encounter" and "My supervisor expresses understanding and empathy when I face difficulties." The reliability of this scale is acceptable, with a Cronbach's α value of 0.917.

Positive emotions: This variable was measured using a scale developed in the literature, which consists of five items, such as "I feel excited or interested in scientific research and innovation" and "I feel happy after completing scientific research and innovation." The reliability of this scale is acceptable, with a Cronbach's α value of 0.808.

Innovative behavior: This variable is measured using a scale from existing research, which consists of 22 items, such as "The school encourages creativity here" and "This organization can be described as flexible and continuously adapting to changes". The reliability of this scale is acceptable, with a Cronbach's α value of 0.890.

Data analysis and results

(1) Correlation between variables

This study first conducted correlation analyses among three variables: mentor support, positive emotions, and innovative behavior, to determine their interrelationships and potential multicollinearity. As shown in Table 7, mentor support exhibited significant positive correlations with both positive emotions ($r=0.692$, $p<0.001$) and innovative behavior ($r=0.431$, $p<0.001$), while positive emotions also showed a significant positive correlation with innovative behavior ($r=0.438$, $p<0.001$). These results confirm statistically significant correlations

among mentor support, positive emotions, and innovative behavior. The correlation coefficients (r=0.431-0.692) indicate moderate correlations, confirming the absence of multicollinearity issues.

Table 7. Correlation analysis of tutor support, positive emotions, and innovation.

Relativity	M	SD	Tutor support (r)	Positive emotions	innovative behavior
Tutor support	4.17	0.856	1	/	/
Positive emotions	3.99	0.859	0.692***	1	/
Innovative behavior	3.34	0.417	0.431***	0.438***	1

Note: *p<0.05, **p<0.01, ***p<0.001

(2) Hypothesis test

This study then conducted regression analysis to examine the relationship between mentor support, positive emotions, and innovative behavior. As shown in Table 8, after controlling for demographic variables such as gender, mentor support had a significant positive effect on positive emotions (β=0.694, p<0.001), explaining 47% of the variance ($AdjR^2$=0.466).

Table 8. Regression analysis of mentor support and positive emotions.

Variable	Model	
	Positive emotions	
	β	t
Gender (Male)	0.043	0.502
Tutor Support	0.694***	8.056
F	32.474***	
R^2	0.481	
$Adj\ R^2$	0.466	

Note: *p<0.05, **p<0.01, ***p<0.001

Gender was treated as a dummy variable, with females in the control group.

Similarly, Table 9 revealed that mentor support significantly positively influenced innovative behavior (β=0.428, p<0.001), accounting for 17% of the variance ($AdjR^2$=0.169). Mentor support was categorized into three dimensions: academic support, mentor effectiveness, and personal support.

Table 9. Regression analysis of mentor support and innovative behaviors.

Variable	Model	
	innovative behavior	
	β	t
Gender (Male)	-0.082	-0.760
Tutor Support	0.428***	3.982
F	8.337***	
R^2	0.192	
$Adj\ R^2$	0.169	

Note: *p<0.05, **p<0.01, ***p<0.001

Gender was treated as a dummy variable, with females in the control group.

To identify which dimensions significantly impacted innovative behavior, multiple regression analysis was performed. The results in Table 10 demonstrated that mentor effectiveness had a significant positive effect on innovative behavior (β=0.483, p<0.05), explaining 22% of the variance ($AdjR^2$=0.215).

Table 10. Regression analysis of mentor supports dimensions and innovative behaviors.

Variable	Model	
	innovative behavior	
	β	t
Gender (Male)	-0.031	-0.287
Academic Support	-0.244	-1.267
Mentor effectiveness	0.483*	2.250
private support	0.243	1.489
F	5.940***	
R^2	0.259	
$Adj\ R^2$	0.215	

Note: *p<0.05, **p<0.01, ***p<0.001

Gender was treated as a dummy variable, with females in the control group.

(3) Research findings and discussion

This study demonstrates a significant correlation between mentor support, positive emotions, and innovative behavior. After controlling for demographic variables such as gender, mentor support showed a significant positive effect on positive emotions, consistent with previous research findings. Their path model revealed that, beyond indirect impacts on career activities and beliefs about opportunity structures, mentor support was associated with increased life optimism. Similarly, controlling for gender, mentors support significantly enhanced innovative behavior,

aligning with observation that school teacher mentors play a more crucial role in students' initial professional development. Furthermore, after adjusting for gender, the mentor's effectiveness within the support system had a significant positive impact on innovative behavior. This supports the view that mentors can facilitate the transition from familiar to unfamiliar domains by encouraging critical examination of managerial variables, while emphasizing the value of learning opportunities.

Conclusion

This study examines the positive impact of mentor support on students' positive emotions and innovative behaviors through correlation and regression analyses of three variables: mentor support, positive emotions, and innovative behavior. Due to objective limitations, the sample source is relatively limited in scope and quantity, and its representativeness requires further investigation. Future research must strictly define the overall conditions, rationally design the study framework, and ensure sufficient sample size.

Improving the academic support system for mentors

Academic support can directly enhance academic attitudes and indirectly improve academic performance. A comprehensive analysis of the evaluation criteria for supervisors' instrumental support reveals that such strategies encompass academic planning, personalized guidance, and resource assistance. To effectively foster doctoral students' academic development, emphasis should be placed on academic planning, personalized guidance, and resource support, thereby refining the supervisors' academic support system.

Enhancing mentors' educational competence

Mentors should be encouraged to provide students with additional socio-emotional support and academic assistance through small-group or one-on-one sessions, enabling personalized feedback to alleviate stress and reduce anxiety. In specific cases, mentors may consider integrating psychological capital training into relevant courses. This process requires essential training in mental health fundamentals, psychological issue identification techniques, and counseling skill enhancement. Professional development will help mentors master deep communication with students, shift their mindset to focus on students' psychological needs, and implement evidence-based strategies.

Enhancing humanistic care and psychological guidance

Mentors' emotional support directly enhances academic support, fosters positive academic attitudes, and improves academic performance. To promote students' academic growth, it is essential to create an environment that combines psychological care with spiritual motivation, while optimizing the mentorship support system. Mentors should lead by example, inspire through words and actions, and educate through both virtue and talent. Particular attention should be paid to cultivating a strong academic community ethos, strengthening students' sense of belonging and academic confidence. By engaging in targeted interactions based on students' emotional fluctuations, mentors should commend and encourage academic progress, guide students to develop a clear self-awareness and realistic academic goals, help them establish a healthy academic mindset, and enhance their ability to cope with academic challenges.

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Conflicts of Interest

The authors declare no conflict of interest.

References

[1] Deng, Z., Xiang, H., Tang, W., Cheng, H., Qin, Q. (2024) BP neural network-enhanced system for employment and mental health support for college students. *International Journal of Information and Communication Technology Education (IJICTE)*, 20(1), 1-19.

[2] Arasli, H., Arici, H. E., Kole, E. (2020) Constructive leadership and employee innovative behaviors: a serial mediation model. *Sustainability*, 12(7), 2592.

[3] Holt, L. J., Fifer, J. E. (2018) Peer mentor characteristics that predict supportive relationships with first-year students: implications for peer mentor programming and first-year student retention. *Journal of College Student Retention: Research, Theory & Practice*, 20(1), 67-91.

[4] Lanzi, R. G., Footman, A. P., Washington, T., Ramey, S. L. (2019) Effective mentoring of

underrepresented doctoral trainees and early career scholars in the biobehavioral and health sciences: a developmental framework to maximize professional growth. *American Journal of Orthopsychiatry*, 89(3), 378.

[5] Yelbay Yilmaz, Y., Balbay, S. (2021) An evaluation of local mentor support in AE E-teacher educational technology integration online teacher training course. *Journal of Educational Research and Practice*, 11(1), 20.

[6] Newman, A., Neesham, C., Manville, G., Tse, H. H. (2018) Examining the influence of servant and entrepreneurial leadership on the work outcomes of employees in social enterprises. *The International Journal of Human Resource Management*, 29(20), 2905-2926.

[7] Aljawarneh, N. M. S., Atan, T. (2018) Linking tolerance to workplace incivility, service innovative, knowledge hiding, and job search behavior: the mediating role of employee cynicism. *Negotiation and Conflict Management Research*, 11(4), 298-320.

[8] Bos-Nehles, A. C., Veenendaal, A. A. (2019) Perceptions of HR practices and innovative work behavior: the moderating effect of an innovative climate. *The International Journal of Human Resource Management*, 30(18), 2661-2683.

[9] Saether, E. A. (2019) Motivational antecedents to high-tech R&D employees' innovative work behavior: self-determined motivation, person-organization fit, organization support of creativity, and pay justice. *The Journal of High Technology Management Research*, 30(2), 100350.

[10] Kwon, K., Kim, T. (2020) An integrative literature review of employee engagement and innovative behavior: Revisiting the JD-R model. *Human Resource Management Review*, 30(2), 100704.

[11] Zhang, Y., Yang, F. (2021) How and when spiritual leadership enhances employee innovative behavior. *Personnel Review*, 50(2), 596-609.

[12] Erdogan, B., Bauer, T. N. (2021) Overqualification at work: a review and synthesis of the literature. *Annual Review of Organizational Psychology and Organizational Behavior*, 8(1), 259-283.

[13] Kiuru, N., Spinath, B., Clem, A. L., Eklund, K., Ahonen, T., Hirvonen, R. (2020) The dynamics of motivation, emotion, and task performance in simulated achievement situations. *Learning and Individual Differences*, 80, 101873.

[14] Diener, E., Thapa, S., Tay, L. (2020) Positive emotions at work. *Annual Review of Organizational Psychology and Organizational Behavior*, 7(1), 451-477.

[15] Zięba, M., Wiecheć, K., Wójcik, N. E., Zięba, M. J. (2022) Prioritizing positivity, styles of rumination, coping strategies, and posttraumatic growth: Examining their patterns and correlations in a prospective study. *Frontiers in Psychology*, 13, 842979.

[16] Prizmić-Larsen, Z., Kaliterna-Lipovčan, L., Larsen, R., Brkljačić, T., Brajša-Žganec, A. (2020) The role of flourishing in relationship between positive and negative life events and affective well-being. *Applied Research in Quality of Life*, 15(5), 1413-1431.