Detrimental impact of abusive leadership on knowledge workers' productivity: evidence from higher education sector

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Abstract

Purpose – Drawing on Nonaka's knowledge creation (KC) theory, this study aims to argue and examine how hampered knowledge sharing (KS) decreases KC and knowledge utilization (KU), which, in turn, mitigates KU to inhibit productivity. Accordingly, this study also aim to investigate how KS and KC mediate between the impact of abusive leadership on KU to hamper knowledge-worker productivity (KWP).

Design/methodology/approach – Data were collected from 263 faculty members across Higher Education Institutions in Pakistan. The Covariance-based Structural Equation Modelling technique was used in AMOS v.26 to test the proposed hypothesis.

Findings – The results revealed that abusive supervision impedes KU directly and indirectly via KC and KS, decreasing KWP.

Originality/value – Through Drucker's KWP, this study delves into mechanisms on how abusive leadership directly mitigates KU, leading to hampered KWP. We further contribute to the knowledge-management literature through Nonaka's theory of how KS and KC mediate the negative relationship between abusive leadership and KU, leading to hampered KWP.

Keywords Abusive leadership, Higher education, Abusive supervision, Knowledge-worker productivity, Knowledge management, Knowledge creation, Knowledge sharing, Knowledge utilization

1. Introduction

The productivity of knowledge workers is crucial for organizational innovation and performance (Sumbal *et al*., 2024b; Khaksar *et al*., 2023; Shujahat *et al*., 2019). This is because a significant portion of occupations nowadays comprises knowledge workers in developed and emerging markets because of the predominant existence of knowledge

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work (Sahibzada *et al*., 2022; Ahmed *et al*., 2021). Knowledge work refers to the unstructured and intellectual/cognitive tasks that require innovation. Examples include teaching and researching in higher education institutions (HEI), software development, medical experiments, drug development, etc. This knowledge work is executed through three processes: knowledge creation, sharing and utilization. Knowledge workers perform the knowledge work by engaging in these three processes to enhance their productivity. Consequently, knowledge workers refer to workers who utilize the created and shared knowledge to improve productivity (Sumbal *et al*., 2025a; Nezafati *et al*., 2023). Faculty members in HEIs are renowned knowledge workers because they continuously create, acquire, share and utilize knowledge as part of their research, teaching and administrative responsibilities (Kianto *et al*., 2019).

There is an ongoing interest, but limited understanding of how counterproductive leadership behaviours determine knowledge worker productivity in emerging markets (Sumbal *et al*., 2024b; Ahmed *et al*., 2021). Effective leadership stimulates knowledge workers to create, share and utilize knowledge to improve productivity (Sumbal *et al*., 2024a). Abusive leadership is one of the essential but counterproductive managerial or human resource practices. It refers to the leadership at the workplace, which is marked with bitterness, aggression and hostile behaviour without posing physical harm to the employee or subordinate (Santos *et al*., 2023). In this vein, a notable study by Ahmed *et al*. (2021) found that abusive leadership directly hampers knowledge creation, sharing and utilization, individually, to hamper KWP. Consequently, they suggest that (1) three knowledge management processes – knowledge creation, sharing and utilization – enhance productivity; (2) mediate between abusive leadership and knowledge-worker productivity (KWP). Nevertheless, Nonaka's organizational KC theory and KWP literature suggest that while abusive leadership directly hampers knowledge utilization (KU), to decrease KWP. It does so indirectly via the mediating effects of KC and KS.

Drawing on the KWP theory, the literature highlights KU as the core process affecting the productivity of knowledge workers. Consequently, abusive leadership hampers KU and decreases productivity. In this vein, Nonaka's organizational KC theory (Nonaka, 1994) suggests that workers create, and colleagues share plenty of innovative knowledge. Nonetheless, created or shared pieces of knowledge impact productivity when workers utilize them (Sumbal and Amber, 2025). According to previous research, each component of the knowledge management process individually improves the KWP in isolation. Whereas KU, supported and supplemented by KC and KS, has been empirically proven to be the primary driver of improving the productivity of the knowledge worker in the emerging economy of Pakistan (Umer *et al*., 2023).

Nonaka's theory further suggests that KC and KS are the two processes that determine the knowledge available for utilization. First, knowledge workers use shared knowledge from colleagues to create new knowledge that is idiosyncratic to their job. Consequently, the worker makes use of the created knowledge to improve productivity. Second, knowledge workers create knowledge based on their existing expertise to have sufficient knowledge for work productivity (Nazeer *et al*., 2023). Knowledge sharing (KS) creates the intellectual capital to sustain the competitive advantage in emerging markets, ultimately reducing costs, improving innovative capabilities and enhancing performance (Ullah *et al*., 2022). With the continuous increasing competition and the need for innovative performance in the educational landscape, the productivity of the knowledge worker has been marked as critical (Sahibzada *et al*., 2022). HEIs have the pressure to contribute to impactful research and produce quality graduates, specifically in emerging markets like Pakistan (Shahid *et al*., 2024). However, the supervision when abusive can severely undermine the efforts, leading to obstruction in the knowledge management processes (Ahmed *et al*., 2021). Understanding of these dynamics is not only important to enhance the performance in academia but to promote a positive work environment nurturing creativity and collaboration among the members (Sumbal *et al*., 2025b).

Although knowledge management processes have been recognized in enhancing productivity, but research lacks the exploration of abusive supervision (AS) affecting knowledge management processes within HEIs in emerging markets. Past research extensively examined the impact of AS on the knowledge hiding processes (Anand *et al*., 2024), mainly in large corporations overlooking the unique dynamics of HEIs, particularly in developing economies context. Nevertheless, the existing literature on abusive leadership and KWP, including the study by Ahmed *et al*. (2021) and Sumbal *et al*. (2024b), is limited in its ability to address these mechanisms or nuances of Nonaka's theory. The objective of the research is: "To investigate how knowledge sharing and knowledge creation mediate the effects of abusive supervision on knowledge utilization, thereby impacting knowledge worker productivity in Higher Education Institutions". Consequently, we address the following research question (RQ).

RQ. How does KS and KC mediate between AS and KU to hamper KWP?

Drawing on Drucker's theory of KWP and Nonaka's organizational KC theory, the research can provide insight into how AS influences the knowledge management process, which ultimately hinders KWP in knowledge-intensive organizations. We make three theoretical contributions to the abusive leadership and knowledge management literature in emerging markets. First, we contribute to the knowledge-management literature in emerging economies (Ahmed *et al*., 2021) on how abusive leadership hampers KWP. Through Drucker's KWP, we indicate how abusive leadership directly mitigates KU, leading to hampered KWP. Second, we contribute to the knowledge-management literature through Nonaka's theory of how KS and KC mediate the negative relationship between abusive leadership and KU, leading to hampered KWP. Finally, we contribute to how abusive leadership in the emerging market hampers knowledge-management processes and KWP.

We conducted our study on knowledge workers in Pakistani HEIs. The Pakistani HEI sector and faculty members have shown more significant research and teaching productivity, for example, as per the recent QS and Times Higher Education rankings. Previously, the knowledge management processes in research-intensive institutions have been proven to help in the enhancement of academic efficacy and ranking, research quality and output and the number of graduates, ultimately improving the productivity level in emerging economies, i.e. China and Pakistan (Sahibzada *et al*., 2021). Emerging markets are continuously interested in implementing knowledge management processes to improve faculty productivity. We implicate the emerging markets that they develop the mechanisms to control abusive leadership practices, cultivating and fostering knowledge management processes, leading to the firm and market growth.

2. Theoretical background and hypothesis development

2.1 Abusive supervision and knowledge management processes

AS refers to the behaviour and attitude towards a subordinate that is offensive, aggressive and hostile without physical harm (Ahmed *et al*., 2021). Behaviour conducted in such a manner includes using rough and harsh language, sometimes also consisting of bullying the subordinate publicly or privately (Quinn *et al*., 2024). When considering various types of leadership, AS is one of the most damaging aspects influencing the efficiency of overall performance. As well as it also influences the reactionary behaviour of the employee (Cai *et al*., 2024). As per past research, the results show that subordinates working in any organization are facing this problem (Ahmed *et al*., 2021). Thus, much research has been limited to addressing AS, which alleviates the employees' knowledge resources in an organization (Wu and Hu, 2009). Some other adverse effects of AS on employees are the production of stress. The stress can then result in poor performance while dealing with

knowledge management processes (Kaur and Mittal, 2024) such as sharing, creating and applying knowledge.

In a social environment, people are accustomed to sharing knowledge and skills with employees in an organization with an interactive culture (Khaksar *et al*., 2023). Similarly, KS is conducted when the employees are willing to attain their organizational goals (Ullah *et al*., 2022). For this purpose, they start using and reusing previously available knowledge, creating new knowledge developed in the organization. AS negatively affects the process of KS (Anand *et al*., 2024; Santos *et al*., 2023). Workers who experience abusive supervision deliberately withhold and hide information from other subordinates (Ahmed and Mohamed Makhbul, 2024). Such behaviour may be primarily due to aggressive behaviours from the side of the supervisor and the corresponding organizational climate. The negative consequences that come with it can hinder from an organization's learning capability and performance (Anand *et al*., 2024). Likewise, after such an experience, a subordinate face the most probable reaction is the limited sharing of knowledge (Choi *et al*., 2019). Research also indicates a negative relationship between AS and KS in different organizational contexts by academic staff in knowledge-intensive organizations (Bashir *et al*., 2021).

KC enhances learning and is considered one of the most crucial aspects of an organization. Previously, researchers defined knowledge as devising a new concept or creating a new product (Kianto *et al*., 2016). However, the linkage between AS and KC is still under-researched, except for Ahmed *et al*. (2021). In many cases, KC can be an enabling factor to enhance productivity and improve novelty. However, this hard work can be overshadowed by stress as a reactionary element of this destructive behaviour. Such an environment can suppress and hinder the ability of the knowledge worker to engage in knowledge-intensive activities, which can also hamper employees' creativity. According to social exchange theory, AS can cause fewer interactions and exchanges of innovative ideas to create new knowledge in knowledge-intensive organizations (Kim *et al*., 2015).

New knowledge created or transferred by knowledge workers to attain greater productivity is basically empowered through KU (Teo and Bhattacherjee, 2014). Previous research indicates that different leadership styles impact KU, e.g. transformation leadership (Gelard *et al*., 2014). Apart from other organizational factors, which are essential for the effective and efficient running of knowledge management processes (Sahibzada *et al*., 2022), leadership can be considered the vital factor in devising a progressive strategy for the knowledge workers. As the leader is solely responsible for devising such an environment for the knowledge workers to perform knowledge management activities, including KC, KS, KU, application, etc. (Sahibzada *et al*., 2022). Specifically, when the employees feel AS, their willingness to apply their knowledge expeditiously will decrease (Zampetakis, 2024). The hostile work environment demotivates them to be committed and engage in the use of knowledge for changes that would benefit organizational processes and outcomes (Tufail *et al*., 2024). Moreover, because AS has negative effects on the stress and anxiety of the employees, the efficiency of their cognitive function may be reduced. This inefficiency makes it impossible to apply effectively the available knowledge they possess (Li *et al*., 2024). Zaim *et al*. (2018) proposed that leadership can significantly impact knowledge-related activities. For instance, KU, by lowering the motivation level of the employees in using the shared knowledge.

2.2 Interrelationships between knowledge management processes from Nonaka's organizational knowledge creation theory perspective

According to the organizational KC theory, the fundamental purpose of any organization is to create knowledge through sharing and then applying it in relevant contexts to attain competitive advantage (Nonaka, 1994). The knowledge management process comprises

knowledge sharing, creation and utilization (Umer *et al*., 2023; Shujahat *et al*., 2019; Kianto *et al*., 2019). KS is capturing and moving knowledge from one source to another. For example, sharing knowledge among employees to perform tasks (Nezafati *et al*., 2023). The KC process continuously involves producing new knowledge for the organization (Nonaka *et al*., 2000). Finally, KU is using existing knowledge in the organization to generate innovative ideas and products (KC) for sustainable competitive advantage (Umer *et al*., 2023; Kianto *et al*., 2019).

Nonaka (1994) claims that knowledge cannot be utilized unless shared. Hence, the processes are dependent upon one another. The Socialization, Externalization, Combination and Internalization (SECI) model (Figure 1) demonstrates the dependence of these processes such that the process of KC begins with socialization (exchange of knowledge between the people) (Nonaka, 1994). According to organizational KC theory (Nonaka and Takeuchi, 1995; Nonaka, 1994), "ba" is the essential element of the SECI model, which specifies the context in which knowledge sharing, creation, and utilization occur. "Ba" can be a physical or a virtual place of interaction among the knowledge workers. The application of the SECI model is indispensable to enhancing the productivity of an organization (Kianto *et al*., 2019).

Nonaka *et al*. (2000) stated that knowledge is created when different stakeholders interact/socialize (share knowledge) in an environment influenced by different enabling factors and constraints. According to the KC theory, the KC process cannot start without KS or the socialization mechanism in an organization (Nonaka, 1994). KS can lead to creating of new knowledge through interactions among individuals. In the context of HEIs, the KC is fundament and the interlink between KS and KC is imperative. The culture of KS, continuous learning and innovation drives academic excellence through KC (Basit *et al*., 2024), hence the following hypothesis has been proposed:

H1. There is a positive association between KS and KC.

The relationship between KS and KU has been studied several times, directly or indirectly. Both processes were studied side by side for the better performance of the organization and to sustain the knowledge management process (Umer *et al*., 2023). The theory of organizational KC explains that until tacit knowledge is shared, the cycle will not start, inhibiting knowledge generation and, thus, KU (Nonaka, 1994). In HEIs, the symbiotic relationship between KS and KU is crucial to enhance the overall productivity. To drive innovation and inculcate academic growth, a dynamic learning environment should be maintained. This environment can be

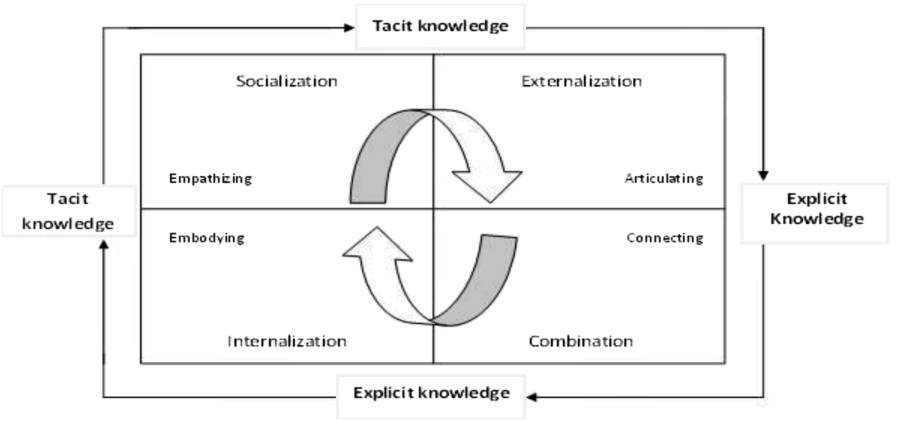

Figure 1. "The SECI model". Source: Nonaka and Takeuchi (1995)

inculcated through effective KS and then utilized for continuous learning (Farooq Sahibzada *et al.*, 2023). So, we hypothesize that:

H2. There is a positive association between KS and KU.

Both KC and KU can be considered essential in the vital operations of a knowledge-intensive organization to engage in knowledge-related innovative tasks. KC explores knowledge in an organization. Whereas KU exploits that knowledge to produce creative ideas and products. KC includes all the steps in generating new knowledge, from discovering the resources to integrating the ideas (Nonaka *et al.*, 2006). Moreover, KC also involves the development of creative ideas and practices to follow (Nonaka, 1994). This newly created knowledge is then used for further utilization in the organization. This aspect explains that KU transforms knowledge into the products and services the organization offers. The interplay between KC and KU is fundamental to facilitate innovation in HEIs. KC is exploring new avenues of ideas and practices for academic growth and research development. This aspect is ultimately harnessed by KU practices to shape the institutions' strategic direction (Rehman and Iqbal, 2020). Based on this discussion, we hypothesize that:

H3. KC positively leads to KU.

2.3 Knowledge utilization and knowledge-worker productivity

The knowledge management process includes the flow of knowledge from KC to utilization (Shujahat *et al.*, 2021). KC and KU are considered essential contributors to the productivity of knowledge workers. In contrast, KU is comparatively the most vital element because even the most brilliant ideas, if not applied effectively, cannot impact performance and productivity in the organization (Umer *et al.*, 2023). As per Nonaka's theory (Nonaka, 1994), KS does not directly impact KWP. As shared knowledge must be applied to produce output, or it can be used to create new knowledge that, in turn, can be used with increased productivity (Kianto *et al.*, 2019). In HEIs, knowledge management practices can be helpful in the initiation and effectiveness of research and development-related activities (Shahid *et al.*, 2024). These practices can enhance the overall performance and productivity of the organization (Sahibzada *et al.*, 2022). Previous research has supported this proposition by demonstrating a positive relationship between KU and KWP in diverse organizational contexts, including knowledge-intensive organizations (Umer *et al.*, 2023; Kianto *et al.*, 2016). Hence, we hypothesize that:

H4. KU positively impacts KWP.

2.4 Mediating role of knowledge-management processes between abusive supervision and knowledge-worker productivity

If a knowledge worker faces destructive supervisory behaviour, he/she tends to transfer the behaviour to others by withholding knowledge and curbing the process of KC (Manaa, 2022; Khalid *et al.*, 2018). Past research has shown that deteriorating leadership behaviour is an obstructing factor in knowledge-related behaviour, ultimately hindering the productivity of knowledge workers (Lanre-Babalola *et al.*, 2024). KC theory postulates that the environment of the knowledge worker matters a lot in the process of creating new knowledge. The leader plays a key role in significantly impacting performance (Nonaka *et al.*, 2006). AS can create a toxic work environment, which can significantly hinder the sharing and creation of knowledge, which is vital for the productivity of knowledge workers (Sumbal *et al.*, 2024b; Ahmed *et al.*, 2021). When the employees are supervised in such a hostile behaviour their psychological safety is compromised, resulting in emotional distress. This distress can make the employee reluctant to share knowledge or collaborate with peers (Yang *et al.*, 2023). In such cases, employees are afraid of negative judgements from the supervisors for their

contributions. This withdrawal from sharing knowledge among team members not only halts the creativity but also overall productivity of the team (Sumbal *et al*., 2024b). Likewise, the lack of trust can impede brainstorming and innovation, creating a culture of silence. In this culture, the knowledge workers focus on self-preservation rather than on the organizational goal, ultimately impeding the creation of new knowledge (Wang *et al*., 2024). As the organizations miss out on the synergies arising from the KC and KS, the overall productivity of the knowledge workers also decreases.

H5 is based on the concept that AS may negatively impact knowledge sharing, creation and utilization, decreasing KWP. Prior research indicates that AS can hinder employees' willingness to engage in knowledge-related behaviour (Bashir *et al*., 2021), impairing sequential knowledge-related activities. To analyse the overall effect of AS on KWP through knowledge sharing, creation and utilization, we hypothesize:

H5. KS, KC and KU sequentially mediate the negative relationship between AS and KWP.

Figure 2 shows the model based on the above developed hypothesis.

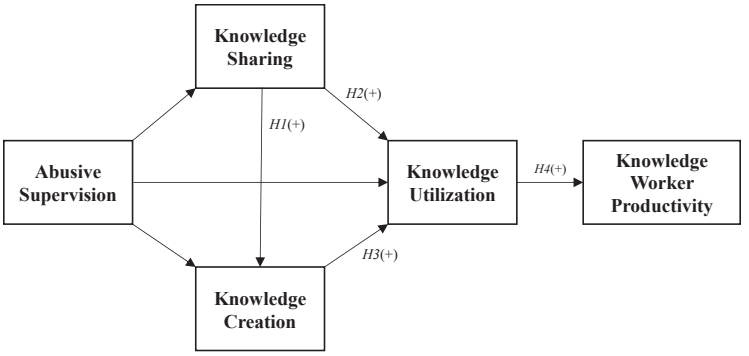

Figure 2. Conceptual model. Source: Authors' own work

3. Methodology

3.1 Research context and sampling strategy

The study focused on the knowledge workers working in HEIs of Pakistan. The knowledge workers were defined as academic and professional/managerial employees who had acquired formal education for at least 16 years, used their intellectual capabilities and knowledge assets to complete knowledge-intensive tasks and occupied key posts in an organization (Kianto *et al*., 2019). The sample included faculty members such as professors, associate professors, assistant professors, lecturers and managerial staff from the academic sector. Thus, the knowledge workers were faculty members and higher managerial staff from the academic sector. The details regarding the demographics were gathered to enhance the insights into the representativeness of the sample. The diversity of the experiences among the participants was highlighted through documentation of the distribution across various faculty members and the institution types (public/private). The study is quantitative, based upon convenience sampling, due to its practical assessment in a specific population set within the target market (HEIs). Although the sampling technique does not ensure generalizability, to address the concern of bias, the study included diverse HEIs across both public and private sectors. This practice is helpful in achieving enhanced breadth of perspectives. The reasons behind the choice of the academic sector are as follows:

Firstly, academic personnel are linked with knowledge-intensive tasks, including knowledge management processes, e.g. KS and KC, and later, they are utilized to enhance learning behaviour by building practical knowledge bases between each other. Hence, it is a knowledge-intensive sector that is totally reliant upon innovative research and developmental activities (Paudel, 2020). Secondly, the HEIs play a crucial role in building a knowledge-intensive society by engaging their knowledge workers in innovative tasks, including research and development and providing a rich environment for knowledge generation and utilization in the advancement of technologies, to attain workforce efficiency in research tasks and assignments to attain overall higher organizational productivity (Iqbal *et al*., 2019). Thirdly, in developing economies, there is often a compromise over the quality of education because of fewer or restricted resources and a lack of practical and supportive leadership skills. The support of leadership in a knowledge-intensive organization is a significant and crucial factor in promoting knowledge-based activities in the academic sector, which also contributed to the choice of this target population (Fullwood and Rowley, 2017). Fourthly, the academic staff in the HEIs play a critical role in the knowledge management processes through their interactions and collaboration providing valuable insights to enhance the productivity and overall learning outcomes. The focus on research and development in the HEIs inculcates a culture of continuous learning and development for the professional growth of both the faculty members and institutional development (Paudel, 2020; Iqbal *et al*., 2019).

3.2 Data collection and measures

The research design is conducted in "cross-sectional time horizon" during which 450 self-administered questionnaires were circulated among faculty members and managerial staff in HEIs of Pakistan, both public and private universities in the years 2021 and 2022. These questionnaires were delivered in physical and digital forms to accommodate the maximum convenient participation of the respondents. The participants were asked to complete and return the forms within a set period. Owing to the ongoing pandemic scenario, 263 responses were received, which was also the final sample size. To proactively control any common method bias issue, we followed Chang *et al*. (2020) *ex ante* best practices, such as randomized items. We detail the ex-post tests in the results section. Although the sample size is relatively low, it is based on the recommendations of Krejcie and Morgan (1970). Previous studies on the sample size indicate that ten observations for each variable are sufficient, which supports the present sample size (Cappa *et al*., 2021). The questionnaire included all the items based on the existing scale and literature. Moreover, some variables were controlled, i.e. gender, education and position, which were consistent with previous studies (Shujahat *et al*., 2019). The research study ensured the privacy and anonymity of the participants by adhering to voluntary participation and ethical considerations. The research participants were fully informed regarding the purpose and procedure of the study.

The study proactively mitigated for the non-response bias and common method bias. The study ensured that the respondents would be anonymous, encouraging the response rate. The content validity of the survey instrument was ensured through pilot testing it on a panel of knowledge-management research members. We ensure semantic validity and effective communicability of potential respondents through a panel comprised of faculty members who were not in the knowledge-management field. To proactively mitigate the non-response bias, respondents were reminded, follow-ups and emails were sent, and the compliance rate was checked regularly. The screening and cleaning helped in identifying the outliers and discrepancies in the collected data. The variables' items were measured using a 5-point Likert scale, from 1 as "strongly agree" to 5 as "strongly disagree". The scales for this study are based on established reliability and validity in past research studies (Sumbal *et al*., 2024b; Ahmed *et al*., 2021). These scales are recognized to measure the constructs related to knowledge management and organizational behaviour, providing a

base for the current study. The measures used for the variables are as follows (Please see Appendix for details).

(1) Knowledge-worker productivity (KWP)

The "Smart WoW–constructing a tool for knowledge work performance analysis" was chosen to measure KWP. It is a seven-item scale developed by Palvalin *et al*. (2015). The variable is measured on a Likert scale from 1, denoting strongly disagree, to 5, mentioning strongly agree. Cronbach's value for this scale is $\alpha = 0.97$ for measurement scale reliability or consistency.

(2) Knowledge Utilization (KU)

This is a 3-item scale adapted from Zaim *et al*. (2007) on a Likert scale, with 1: strongly disagree and 5: strongly agree. Cronbach's α is 0.95 for this scale.

(3) Knowledge sharing and Knowledge Creation (KS and KC)

The Organizational Renewal Capability Inventory survey (Kianto *et al*., 2016) was adapted to measure KC and KS. It is based on a Likert scale of 1: strongly disagree and 5: strongly agree. Cronbach's α for KC is 0.97, and for KS, it is 0.95.

(4) Abusive Supervision (AS)

For AS, the study uses a 5-item scale, which is also called as "active-aggressive abusive supervision" by Mitchell and Ambrose (2007), based on the Likert scale from 1 to 5, as 1: strongly disagree and 5: strongly agree. It has been used by previous studies (Sumbal *et al*., 2024b; Ahmed *et al*., 2021). The Cronbach's α is 0.96 for this scale.

3.3 Data analysis

The Covariance-based Structural Equation Modelling (CB-SEM) technique was used in the AMOS software to test the proposed hypothesis. The data were analysed to test the direct and indirect effects (mediation effect). For the mediation effect, the Preacher and Hayes method was used in AMOS v.26 to test the hypotheses. 5,000 bootstrap is used along with a 95% bias-corrected confidence interval for more robust indirect effects, as it helps in the estimation of the distribution of statistics when the actual sampling distribution is unknown. The reason for choosing this analytical strategy is based on the study's objectives, the nature of the research data, and the hypotheses being tested (Lopes *et al*., 2023).

4. Results

4.1 Correlation coefficients, descriptive and reliability statistics

The means, standard deviation (SD) and the reliability of data are shown in Table 1. The internal consistency of the variables is analysed through the scores of Cronbach's alphas. The scores for AS were 0.96, KS was 0.95, KC was 0.97, KU was 0.95 and KWP was 0.97. These scores depict the consistency and reliability of data. The variable, AS, negatively and significantly impacted KS ($r = -0.820$, $p < 0.01$), KC ($r = -0.919$, $p < 0.01$) and KU ($r = -0.903$, $p < 0.01$). KS positively impacted KC ($r = 0.876$, $p < 0.01$) and KU ($r = 0.856$, $p < 0.01$). In the same way, KU has a positive linkage with KWP ($r = 0.923$, $p < 0.01$). The mean and SD values in the table also indicate that the data is normally distributed.

4.2 Nonresponse and common method bias

A comparative study was conducted using a paired *t*-test in the SPSS software to assess the potential impact of non-response data bias. The analysis compared the responses of participants who responded early with those who responded late. More precisely, the first group of 50 answers was compared to the last 50 answers in the dataset. The findings revealed no statistically significant disparity between the initial 50 individuals who responded early and

Table 1. Correlation coefficients, descriptive and reliability statistics

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. Current experience	3.082	1.63	–									
2. Overall experience	8.013	6.31	0.563**	–								
3. Qualification	2.49	0.824	0.333**	0.525**	–							
4. Gender	1.51	0.508	−0.064	−0.053	0.053	–						
5. Age	2.63	1.36	0.557**	0.893**	0.548**	−0.047	–					
6. KWP	2.15	1.17	−0.432**	−0.605**	−0.497**	−0.015	−0.702**	*0.977*	–			
7. KU	2.26	1.19	−0.429	−0.551**	−0.439**	0.007	−0.656**	0.923**	*0.951*	–		
8. KS	2.08	1.00	−0.381**	−0.553**	−0.421**	0.010	−0.639**	0.871**	0.856**	*0.959*		–
9. KC	2.22	1.16	−0.457**	0.591**	−0.470**	0.005	−0.686**	0.935**	0.930**	0.876**	*0.976*	–
10. AS	3.81	1.23	0.475**	0.572**	0.454**	0.028	0.662**	−0.902**	−0.903**	−0.820**	−0.919**	*0.965*

Note(s): $n = 263$; Cronbach's alpha (a) values are given in diagonal position as italic; *$p < 0.05$; **$p < 0.01$, ***$p < 0.001$, KWP: Knowledge Worker Productivity, KU: Knowledge Utilization, KS: Knowledge Sharing, KC: Knowledge creation, AS: Abusive Supervision
Source(s): Authors' own work

the final 50 who responded late. This suggests that there is no presence of this particular bias, as reported by Greco *et al*. (2015).

The common method bias was checked by comparing the five-factor model with other models (Podsakoff *et al*., 2003). It occurs when data from both independent and dependent variables is collected from the same source and used later, resulting in potential errors and biases in the results. To resolve the issue with the help of controlling and detecting common source bias, there are several tests, including Harman's single-factor test, which examines whether a single factor accounts for a majority of the variance in the data, and the marker variable technique, the full collinearity test and the latent common method factor approach (Podsakoff *et al*., 2013). In the present study, the latent common method factor approach is used to control for common source bias, involving adding a common method factor to the final measurement model and capturing the effects of common source bias on the complete variable list. The results showed that the test did not significantly impact the research results, which means there is no common method bias in the study.

4.3 Confirmatory factor analysis

The distinctiveness prevailing among the variables involved in the model was tested and analysed through "Confirmatory factor analysis" through the usage of AMOS v.26.The previous studies show the standardized values for confirmatory factor analysis (CFA), "0.05 < RMESA > 0.10 (MacCallum *et al*., 1996), CFI, NFI, GFI, IFI < 0.09" (Hooper *et al*., 2008). Table 2 shows the results of the baseline model, which are RMSEA: 0.081; CFI: 0.951, NNFI: 0.924, GFI: 0.800 and IFI: 0.951.

Table 2. Confirmatory factor analysis

Model	χ^2	Df	RMSEA	CFI	NNFI	GFI	IFI	$\Delta\chi 2$	Δdf
One-factor model	2408.513***	352	0.149	0.827	0.803	0.629	0.827	1481.95	12
Three-factor model	1313.126***	347	0.103	0.919	0.893	0.707	0.919	386.571	7
Five-factor model	926.555***	340	0.081	0.951	0.924	0.800	0.951	Baseline Model	

Note(s): $n = 263$, RMSEA, root mean square error of approximation; CFI, comparative fit index; NNFI, Non-normed fit index; GFI, goodness fit index. The five-factor model explains the actual model with the variables, AS, knowledge creation, knowledge sharing, KU and KWP. Three-factor model means that the mediating variables are combined into one variable, i.e. knowledge management process, dependent variable, KWP and independent variable, AS. Moreover, one-factor model shows that all the items are included in one latent variable. ***$p < 0.001$

Source(s): Authors' own work

4.4 Convergent validity and reliability

Table 3 illustrates the standardized variables estimates in its CFA. Cua *et al*. (2001) said that a construct with factor loadings exceeding 0.5 is deemed to be practically significant. Items with factor loadings above 0.5 were included as they are considered practically significant. According to Fornell and Larcker (1981), a reliable guideline is that an Average Variance Extracted (AVE) value of 0.5 or above suggests sufficient convergent validity. The data indicate that the AVE value over 0.50 confirms its validity. A generally accepted guideline for estimating composite reliability (CR) is that 0.7 or higher indicates good reliability (Netemeyer, 2003). The data indicate that a CR score above 0.70 signifies the reliability of the data. The Cronbach's alpha scores provided above indicate the internal consistency or reliability of each item in the questionnaire. The minimum threshold for determining the acceptability of reliability is set at ≥ 0.70, as stated by Nunnally in 1978. The data indicate that the Cronbach's alpha value exceeding 0.70 signifies the reliability of the data.

Table 3. Convergent validity and reliability

S. no	Items	Factor loading (λ)	CR	AVE	Cronbach alpha
	Knowledge Worker Productivity (KWP)				
1	KWP 1	0.929	0.977	0.860	0.977
2	KWP 2	0.934			
3	KWP 3	0.927			
4	KWP 4	0.924			
5	KWP 5	0.936			
6	KWP 6	0.927			
7	KWP 7	0.918			
	Knowledge Utilization (KU)		0.950	0.865	0.951
1	KU 1	0.935			
2	KU 2	0.931			
3	KU 3	0.925			
	Knowledge Creation (KC)		0.975	0.852	0.976
1	KC 1	0.910			
2	KC 2	0.929			
3	KC 3	0.941			
4	KC 4	0.930			
5	KC 5	0.920			
6	KC 6	0.919			
7	KC 7	0.913			
	Knowledge Sharing (KS)		0.959	0.798	0.959
1	KS 1	0.915			
2	KS 2	0.891			
3	KS 3	0.883			
4	KS 4	0.902			
5	KS 5	0.885			
6	KS 6	0.885			
	Abusive Supervision (AS)		0.965	0.849	0.965
1	AS 1	0.931			
2	AS 2	0.956			
3	AS 3	0.928			
4	AS 4	0.893			
5	AS 5	0.899			

Source(s): Authors' own work

4.5 Discriminant validity

Table 4 displays the Heterotrait-Monotrait Ratio (HTMT), providing discriminant validity evidence. This study's results validate the validity of our variables, as all HTMT values obtained are below 0.90 (Henseler *et al.*, 2015), indicating discriminant validity in our data.

Table 4. Heterotrait–Monotrait ratio (HTMT) – discriminant validity

S. no	Variables	1	2	3	4	5
1	Knowledge Worker Productivity	1				
2	Knowledge Worker Utilization	0.62	1			
3	Knowledge Sharing	0.57	0.48	1		
4	Knowledge Creation	0.52	0.39	0.56	1	
5	Abusive Supervision	0.48	0.58	0.63	0.55	1

Source(s): Authors' own work

4.6 Hypotheses testing

Table 5 portrays the results of the direct effects of the variables that test the hypotheses established in the study. In line with the hypothesis, H1 has also been proved that KS positively and significantly impacts KC [b = 0.434, SE = 0.041, 95% CI (0.352, 0.516)]. The results indicate that when knowledge workers engage in sharing knowledge, it fosters an innovative environment facilitating the creation of new ideas and knowledge. In the same way, the study proves H2, as KS has a positive significant impact on KU [b = 0.188, SE = 0.052, 95% CI (0.086, 0.291)]. The results imply that effective sharing of knowledge leads to the utilization of knowledge ultimately enhancing the performance. The study proves H3, as KC is significantly positively related to KU [b = 0.535, SE = 0.065, 95% CI (0.406, 0.663)]. This finding reflects that the generation of new knowledge directly facilitates its effective usage within the organization.

Further, knowledge utilization also poses a significant direct impact on KWP, validating H4 [b = 0.284, SE = 0.055, 95% CI (0.174, 0.394)]. This result underscores the vital importance of KU, ultimately enhancing the productivity of the knowledge worker. Finally, as per the indirect path result (Table 6), AS can lead to negative KWP through KS [b = −0.0988, SE = 0.0377, 95% CI (−0.1779, −0.0304)], KC [b = −0.1740, SE = 0.518, 95% CI (−0.2877, −0.0820)] and KU [b = −0.0821, SE = 0.0297, 95% CI (−0.1505, −0.0344)], whereas the indirect path of AS to KWP, through KS and KC [b = −0.0753, SE = 0.0217, 95% CI (−0.1204, −0.0362)] and through KS and KU [b = −0.0303, SE = 0.0145, 95% CI (−0.0648, −0.0084)], the indirect path AS to KWP through KC and KU [b = −0.786, SE = 0.0232, 95% CI (−0.1264, −0.0350)], which proves H5 for the study as the indirect path of AS to KWP through KS, KC and KU is significantly negative [b = −0.0340, SE = 0.0109,

Table 5. Results of direct effects

Direct effects	Effects	S.E.	LLCI	ULCI
KS → KC	0.434	0.041	0.352	0.516
KS → KU	0.188	0.052	0.086	0.291
KC → KU	0.535	0.065	0.406	0.663
KU → KWP	0.284	0.055	0.174	0.3938

Note(s): n = 263; KWP: Knowledge Worker Productivity, KU: Knowledge Utilization, KS: Knowledge Sharing, KC: Knowledge creation, LLCI: lower level of the 95% confidence interval; ULCI: upper level of 95% confidence interval; SE: standard error; *p < 0.05; **p < 0.01; ***p < 0.001
Source(s): Authors' own work

Table 6. Results of indirect effects

Indirect effects	Effects	S.E.	LLCI	ULCI
AS → KS → KWP	−0.098	0.037	−0.1779	−0.0304
AS → KC → KWP	−0.174	0.518	−0.2877	−0.0820
AS → KU → KWP	−0.0821	0.0297	−0.1505	−0.0344
AS → KS → KC → KWP	−0.0753	0.0217	−0.1204	−0.0362
AS → KS → KU → KWP	−0.0303	0.0145	−0.0648	−0.0084
AS → KC → KU → KWP	−0.0786	0.0232	−0.1264	−0.0350
AS → KS → KC → KU → KWP	−0.0340	0.0109	−0.0558	−0.0138

Note(s): n = 263; LLCI: lower level of the 95% confidence interval; ULCI: upper level of 95% confidence interval. SE: standard error. *p < 0.05; **p < 0.01; ***p < 0.001; KWP: Knowledge Worker Productivity, KU: Knowledge Utilization, KS: Knowledge Sharing, KC: Knowledge creation, AS: Abusive Supervision
Source(s): Authors' own work

95% CI (−0.0558, −0.0138)]. These findings reflect that if the supervision is abusive, it not only undermines the knowledge worker's productivity but also limits the ability to create, share and utilize it as well.

5. Discussion

Using Nonaka's and Drucker's theories and data from 263 academics in Pakistan's emerging market HEIs, the current study revealed that there are various mechanisms of knowledge management processes through which abusive leadership hampers knowledge workers' productivity rather than only directly through the mediating role of KS. Drawing on Drucker's KWP, we indicate how abusive leadership directly hampers KU to decrease productivity. Our results are in line with Ahmed *et al*. (2021), highlighting the abusive behaviour of the leaders, such as harassing, intimidating and bullying the subordinates, impacting the usage of knowledge negatively, which ultimately hinders the ability to accomplish the goals, hampering the commitment of the knowledge workers to their productivity (Khaksar *et al*., 2023). AS fosters an unpleasant work environment preventing the exchange of knowledge, obstructing teamwork and lowering the predacity level in the organization (Santos *et al*., 2023; Manaa, 2022; Ahmed *et al*., 2021). These findings align with the prior research by Kaur and Mittal (2024), indicating the negative impact of AS on the KS and KU by creating an environment of fear among in the organization.

Through Nonaka's theory, we indicate the varieties of KC and KS mechanisms through which abusive leadership hampers KU to decrease KWP. We find that abusive leadership hampers KU through KS and KC, individually and serially. Ahmed *et al*. (2021) indicated that three knowledge management processes mediate between abusive leadership and KWP. The study described the phenomenon of hindrance to creating new knowledge by introducing the environment of fear and mistrust. When the subordinates face abusive behaviour, they may be less likely to search for new knowledge or seek innovative information (Manaa, 2022). Therefore, abusive leaders curb knowledge-sharing behaviour (Islam *et al*., 2021), inhibiting curiosity by creating a hostile environment, which ultimately hampers KS and negatively impacts the knowledge worker's productivity. Hence, when the knowledge is not shared appropriately in the hostile climate of AS, it undermines the autonomy and decision-making power of the employee, ultimately hindering the knowledge application. Therefore, it can be said that abusive supervisors limit the power of employees to create, share, apply and utilize knowledge, resulting in decreased productivity (Ahmed *et al*., 2021).

The findings of the study reveal a significant positive link between KS and KC among the knowledge worker in the HEIs in Pakistan. The result shows that when KS is enhanced in the organizational context, it uplifts the KC as well among the knowledge workers. In the Pakistan HEIs context, KS promotes the collaborative culture, by stimulating innovation ultimately enhancing the KC among the employees. The previous study by Bartol and Srivastava (2022) explained that KS is important for KC thus it enhances innovation, trust and collaboration in organizations. Further, Carmeli *et al*. (2013) explained that the utilization of existing knowledge improves the experience and strengthens the capabilities of the staff in the organizations. The implementation of cross-functional collaboration and KS can not only improve academic outcomes but also contribute to making the work environment more vibrant and productive (Riyadh *et al*., 2023). The findings reinforce the mutual reinforcement mechanism between KS and KC in Pakistani HEIs (Basit *et al*., 2024), supporting H1.

The study supports H2 demonstrating a positive association between KS and KU among the knowledge workers in Pakistani HEIs. The data denote that when KS is enhanced, it ultimately gives an upward push to KU. According to Ouakouak and Ouedraogo (2019), sharing knowledge requires work and time. Employees must be somewhat willing to use what has been presented for them to actively participate in this process. However, Han *et al*. (2010) contend

that staff members' information-sharing practices aid in the application and utilization of knowledge. Implementing suitable systems to encourage the sharing of knowledge will lead to more formation and utilization of knowledge in the organization (Ouakouak and Ouedraogo, 2019). The results show that HEIs have a culture of open communication, information exchange and collaboration, in which the knowledge workers can leverage the shared knowledge effectively and efficiently to enhance the decision-making process (Farooq Sahibzada *et al.*, 2023). These knowledge-sharing practices facilitate operational efficiencies and contribute to a productive and innovative work environment.

The findings validate the H3, as the data indicate that active KC efforts in Pakistani HEIs contribute to enhanced KU among the knowledge workers. These findings align with the prior research by Don-Serge (2019), stating that an organization can only gain a competitive advantage when the cycle of knowledge production is sustained, and knowledge must be managed once it is created for the business to continue using it to spark innovation. This claim supports the notion that organizational learning continuously supplies information and frames the KC as a logical framework for achieving innovation and competitive advantage. The results indicate that when in HEIs the culture that promotes creativity and innovation is fostered, it empowers the workforce to effectively utilize the created knowledge in their daily tasks. This aspect highlights the significance of continuous learning through idea generation to enhance and sustain competitive advantage in Pakistani HEIs (Rehman and Iqbal, 2020).

The result of the study supports H4, i.e. there is a positive link between KU and KWP in Pakistani HEIs where knowledge workers are encouraged to leverage the available resources to enhance individual and collective productivity. The academic sector can invest in training and development programs and knowledge management processes to assist the utilization of available knowledge. Corroborating with the earlier studies, this aspect maximizes the knowledge worker's potential to drive sustainable growth in the dynamic world (Javed *et al.*, 2024). This study enhances understanding that KU is the key knowledge management process that increases the productivity of knowledge work, while the other two knowledge management processes – KC and KS – play supportive roles in it (Umer *et al.*, 2023) and do not affect the productivity of knowledge workers and other outcome variables directly (Umer *et al.*, 2023). We thereby give rise to what Kianto *et al.* (2019) proposed in the vein of Nonaka's organizational KC theory (P. 193) in their study on KS and KWP: "The lack of a statistically significant direct association between knowledge sharing and productivity might be because knowledge sharing has an indirect impact on productivity through impacting other knowledge processes" (Nonaka and Takeuchi, 1995). Furthermore, this enhanced understanding is also in line with earlier studies, which found that knowledge application mediates between other knowledge management processes and organizational performance outcomes (Ode and Ayavoo, 2020).

Finally, the study affirms the sequential mediation of knowledge management processes, i.e. KS, KC and KU on the negative link between AS and KWP (H5). Reflecting insights from Bashir *et al.* (2021), these processes mediate the link between leadership style and KWP. We contribute to how abusive leadership in the emerging market hampers knowledge-management processes and KWP. We conducted our studies on knowledge workers in Pakistani HEIs. The Pakistani HEI sector and faculty members have shown greater research and teaching productivity, for example, as per the recent QS and Times Higher Education rankings. Emerging markets are continuously interested in implementing knowledge management processes to improve faculty productivity (Umer *et al.*, 2023). We indicate how emerging markets should develop and implement mechanisms to control abusive leadership practices that would benefit knowledge management processes and lead to firm and market growth. With the help of implementing new mechanisms of controlling AS will create an inclusive environment, introducing positive collaboration and knowledge-sharing behavior, ultimately improving the overall productivity and effectiveness among the knowledge workers, which can also impact positively and enhance the research outcomes in emerging markets so that it can further help in

fostering innovation and leveraging the research capabilities elevating the global academic position ultimately sustaining the economic growth (Sahibzada *et al*., 2021).

5.1 Theoretical implications

Theoretically, the study adds to leadership literature, specifically AS and knowledge management. As knowledge is critical for progress and productivity in the academic sector, the study enhances understanding of the deteriorating impact of AS on KS, KC and KU and how the productivity of the knowledge worker is hampered. While previous research studies had identified the relationship of AS and employees performance (Tepper, 2007), the linkage between AS and knowledge management is underdeveloped, and this study fills that gap by providing empirical evidence on how AS can hinder KS, curbing the KC and KU, which negatively influences KWP among faculty members in HEIs in Pakistan. Specifically in the education sector, it presents important implications for the academic leaders running the HEIs as well as for the academicians (knowledge workers) engaged with HEIs. The stakeholders in HEIs need to curb the issues causing AS. These findings resonate with the findings from Bashir *et al*. (2021), who state that AS hinders employees from engaging in knowledge-related behaviours.

Secondly, this study gives an important input by analysing the mediation process contributed by highlighting the importance of KS by which AS can impact KC and KU, reducing KWP. This aspect can provide valuable insights for research practitioners to understand the process of attaining positive outcomes by curbing the destructive impact of AS in knowledge-intensive organizations such as HEIs. This research study extends the framework of Zhang *et al*. (2017), which emphasized the mitigation of negative leadership impact and maintaining a supportive work environment for the exchange of knowledge.

5.2 Practical implications

Academic personnel need to understand the interrelationship and dependence of KS, KC and KU. No single process can be completed in isolation. As per the knowledge-based view of the firm, an organization creates knowledge collectively, but in the presence of AS, the knowledge production capability of a firm will become affected, ultimately impacting the sustainability of the competitive advantage (Ahmed *et al*., 2021). For this purpose, proper supervisor-subordinate communication should be maintained, and the organizational goals and objectives should be conveyed effectively to enable a smooth flow of organizational knowledge processes, from sharing and creation to utilization. It is vital for the management of HEIs to devise and incorporate the relevant policies to avoid AS in the workplace. Training and development, when initiated among the supervisors, can enhance leadership skills by promoting a healthy work environment. Overall, this study's findings suggest that HEI management should prioritize the development and implementation of policies and practices to promote a positive work environment, encourage KS behaviour to create new knowledge and utilize it later so that management can prevent AS and enhance the productivity of their knowledge workers (Khaksar *et al*., 2023).

6. Conclusion

The study is in line with Nonaka's organizational KC theory by analysing and examining the linkage between KS, KC and KU. In this theory, KC and transfer are emphasized in the organization to attain competitive advantage. The study provides empirical evidence of the positive link between KS, KC and KU of HEIs in Pakistan. In the same way, this research also complements Drucker's theory of KWP by analysing the impact of AS on the KWP. Drucker has emphasized the vital role of knowledge workers in today's organization and focuses on the need for appropriate management strategies to maximize productivity. The

study explains the negative impact of AS on KWP and focuses on creating a positive work culture for the knowledge workers.

The research supports the importance of knowledge management and leadership in the promotion of KWP and the success of an organization, which are the key themes in both theories. This study demonstrated the adverse impact of AS on the complex interrelationships between KS, KC and KU among knowledge workers in HEIs, which may impair their work productivity. It also explained the impact of KU on KWP as well. The study suggests to leaders in HEIs and managers that AS is detrimental to organizational knowledge management processes, leading to reduced productivity and job performance among knowledge workers. Thus, top management should avoid destructive leadership behaviour and implement policies prohibiting subordinates from practicing AS. This research supports the importance of KM initiatives in HEIs, as described by Sahibzada *et al*. (2022) and Iqbal *et al*. (2019), who studied KM processes in HEIs. This work also falls in line with Ahmed *et al*. (2021), proving that AS hampers KM initiatives, which obstruct KWP in knowledge-intensive organizations.

6.1 Limitations and future research directions

This study has certain limitations, especially because of the choice of research methods. Firstly, the study's sample size and sampling technique limit the generalizability of the results. Although efforts were made to ensure a diverse sample, it is possible that the sample does not fully represent the population of interest. Secondly, the study is conducted in Pakistan's academic sector (HEIs), which also hampers generalizability. Different educational systems or diverse cultural norms can impact differently in the domain of AS and knowledge management, resulting in varying results. Thirdly, the study relies on cross-sectional data, making it difficult to conclude the long-term effect of AS on KWP. Fourthly, the study is based on self-reported single-sourced data, which can be impacted by the perception of the research participants, resulting in an inflated link between the variables, as the individual might over or underestimate the influence of AS due to social desirability or cognitive biases. Finally, the results are applicable within Pakistani HEIs, but the findings cannot be fully tailored to all the HEIs, i.e. public vs private or research-intensive vs teaching-oriented universities, due to different dynamics of knowledge management processes.

The study also opens various future avenues for the researchers. Firstly, future studies can analyse the impact of different transactional or transformational leadership on the organizational KC process and the effect on KWP. Moreover, including different organizational aspects, e.g. organizational culture, leadership styles and technological advancements, can further advance the existing body of knowledge on AS and knowledge workers' productivity as the trickle-down impact of AS influences the organizational climate which hinders the organization productivity (Osei *et al.*, 2021). This aspect can help identify situations under which the negative impact of AS can be hampered in different industries/sectors. Another future direction can be related to the relationship between KS or knowledge hiding on the productivity of students in the HEIs as there are different individual and social factors which influence the knowledge hiding behaviours (Omotayo and Akintibubo, 2024). Future studies can also demarcate between research-intensive and teaching-oriented institutes, to provide tailored recommendation and nuanced strategies to enhance knowledge-related behaviours when faced with AS. Future research can also be used by replication the study in other industries and countries. Conducting similar studies in other industries would be helpful, for example, telecom or textiles, etc. or in a different country where the economic situation is different from Pakistan, to understand the underlying factors within different contexts.

(The Appendix follows overleaf)

Appendix

Table A1. List of variables and measures used in the study

Knowledge-worker productivity (Palvalin *et al.*, 2015)
1. I achieve satisfactory results in relation to my goals
2. I am usually able to carry out my work tasks efficiently (smoothly, without problems)
3. I am able to use the majority of my working time for conducting relevant tasks related to my goals
4. My job mainly includes tasks in which I am able to exploit my knowledge and skills efficiently
5. I am able to meet customers' expectations
6. The quality of my work outputs is high
7. The work group I work in works efficiently as a whole

Knowledge utilization (Zaim *et al.*, 2007)
1. My organization has accurate and effective decision-making process
2. My organization can utilize its knowledge base
3. We are encouraged to implement what we know in our job-related activities

Knowledge sharing (Kianto *et al.*, 2016)
1. Communication with other members of my work group is efficient and beneficial
2. My colleagues are open and honest with each other
3. Our staff is interactive and exchanges ideas widely across the organization
4. I find it easy to communicate and co-operate with employees from other organizational units and functions
5. There is a mutual understanding between the various organizational units and functions
6. Our staff shares information and learns from each other

Knowledge creation (Kianto *et al.*, 2016)
1. Information about the status, results and problems of different projects is easily available
2. Employees are encouraged to seek information actively outside the organization
3. My organization constantly gathers information about the external operating environment
4. Our organization actively collects development ideas
5. Our organization develops new methods for sharing knowledge (e.g. blogs, discussion forums) and encourages using them
6. Customers often participate in our innovation processes (i.e. in developing a new product or service or other solution)
7. We have learning groups, where members can discuss their work experiences and problems

Abusive supervision (Mitchell and Ambrose, 2007)
1. My boss ridicules me
2. He/she tells me my thoughts or feelings are stupid
3. He/she puts me down in front of others
4. He/she makes negative comments about me to others
5. He/she tells me I am incompetent

Source(s): Authors' own work

References

Ahmed, I. and Mohamed Makhbul, Z.K. (2024), "Abusive supervision, dehumanization, knowledge hiding behavior and psychological capital – a daily diary method study", *Journal of Knowledge Management*, Vol. 28 No. 6, pp. 1676-1698, doi: 10.1108/JKM-06-2022-0469.

Ahmed, Q., Sumbal, M.S., Akhtar, M.N. and Tariq, H. (2021), "Abusive supervision and the knowledge-worker productivity: the mediating role of knowledge management processes", *Journal of Knowledge Management*, Vol. 25 No. 10, pp. 2506-2522, doi: 10.1108/JKM-08-2020-0632.

Anand, A., Dalmasso, A., Hungund, S., Centobelli, P., Cerchione, R. and Dumazert, J.P. (2024), "Abusive supervision effects on employee knowledge hiding behavior in academia", *Journal of the Knowledge Economy*, Vol. 15 No. 2, pp. 7375-7401, doi: 10.1007/s13132-023-01167-2.

Bartol, K.M. and Srivastava, A. (2022), "Encouraging knowledge sharing: the role of organizational reward systems", *Journal of Leadership and Organizational Studies*, Vol. 9 No. 1, pp. 64-76, doi: 10.1177/107179190200900105.

Bashir, S., Dahlman, C., Kanehira, N. and Tilmes, K. (2021), *The Converging Technology Revolution and Human Capital: Potential and Implications for South Asia*, World Bank Publications, doi: 10.1596/978-1-4648-1719-9.

Basit, A., Samdani, H. and Kamal, N. (2024), "Knowledge entrepreneurship in higher education institutions: a perspective of knowledge sharing and entrepreneurial leadership in Pakistani HEIs", *Foresight*, Vol. 26 No. 6, pp. 1001-1029, doi: 10.1108/FS-09-2023-0192.

Cai, Y., Sun, F. and Li, J. (2024), "Following the abusive leader? When and how abusive supervision influences victim's creativity through observers", *Asia Pacific Journal of Management*, Vol. 41 No. 2, pp. 679-700, doi: 10.1007/s10490-022-09869-y.

Cappa, F., Pinelli, M., Maiolini, R. and Leone, M.I. (2021), "'Pledge' me your ears! The role of narratives and narrator experience in explaining crowdfunding success", *Small Business Economics*, Vol. 57 No. 2, pp. 953-973, doi: 10.1007/s11187-020-00334-y.

Carmeli, A., Gelbard, R. and Reiter-Palmon, R. (2013), "Leadership, creative problem-solving capacity, and creative performance: the importance of knowledge sharing", *Human Resource Management*, Vol. 52 No. 1, pp. 95-121, doi: 10.1002/hrm.21514.

Chang, S.J., van Witteloostuijn, A. and Eden, L. (2020), "Common method variance in international business research", in Eden, L., Nielsen, B.B. and Verbeke, A. (Eds), *Research Methods in International Business*, Palgrave Macmillan, Cham, pp. 385-398, JIBS Special Collections, doi: 10.1007/978-3-030-22113-3_20.

Choi, W., Kim, S.L. and Yun, S. (2019), "A social exchange perspective of abusive supervision and knowledge sharing: investigating the moderating effects of psychological contract fulfillment and self-enhancement motive", *Journal of Business and Psychology*, Vol. 34 No. 3, pp. 305-319, doi: 10.1007/s10869-018-9542-0.

Cua, K.O., McKone, K.E. and Schroeder, R.G. (2001), "Relationships between implementation of TQM, JIT, and TPM and manufacturing performance", *Journal of Operations Management*, Vol. 19 No. 6, pp. 675-694, doi: 10.1016/S0272-6963(01)00066-3.

Don-Serge, H.M.O. (2019), "The role of knowledge creation, sharing and utilization to the resource based view of competitive advantage", *Global Journal of Management and Business Research*, Vol. 19 No. 9, pp. 1-30.

Farooq Sahibzada, U., Thomas, A., Sumbal, M.S.U.K. and Malik, M. (2023), "Nexus of knowledge management and organizational performance: a cross-country study of China and Pakistan higher educational institutes", *Kybernetes*, Vol. 52 No. 12, pp. 6348-6378, doi: 10.1108/K-08-2021-0768.

Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50, doi: 10.1177/002224378101800104.

Fullwood, R. and Rowley, J. (2017), "An investigation of factors affecting knowledge sharing amongst UK academics", *Journal of Knowledge Management*, Vol. 21 No. 5, pp. 1254-1271, doi: 10.1108/JKM-07-2016-0274.

Gelard, P., Boroumand, Z. and Mohammadi, A. (2014), "Relationship between transformational leadership and knowledge management", *International Journal of Integrated Supply Management*, Vol. 12 No. 2, pp. 67-82.

Greco, L.M., O'Boyle, E.H. and Walter, S.L. (2015), "Absence of malice: a meta-analysis of nonresponse bias in productive work behavior research", *Journal of Applied Psychology*, Vol. 100 No. 1, p. 75, doi: 10.1108/JKM-08-2017-0376.

Han, T.S., Chiang, H.H. and Chang, A. (2010), "Employee participation in decision making, psychological ownership and knowledge sharing: mediating role of organizational commitment in Taiwanese high-tech organizations", *The International Journal of Human Resource Management*, Vol. 21 No. 12, pp. 2218-2233, doi: 10.1080/09585192.2010.509625.

Henseler, J., Ringle, C.M. and Sarstedt, M. (2015), "A new criterion for assessing discriminant validity in variance-based structural equation modeling", *Journal of the Academy of Marketing Science*, Vol. 43 No. 1, pp. 115-135, doi: 10.1007/s11747-014-0403-8.

Hooper, D., Coughlan, J. and Mullen, M. (2008), "Evaluating model fit: a synthesis of the structural equation modelling literature", *7th European Conference on Research Methodology for Business and Management Studies*, Vol. 2008, pp. 195-200.

Iqbal, A., Latif, F., Marimon, F., Sahibzada, U.F. and Hussain, S. (2019), "From knowledge management to organizational performance", *Journal of Enterprise Information Management*, Vol. 32 No. 1, pp. 36-59, doi: 10.1108/JEIM-04-2018-0083.

Islam, T., Ahmad, S., Kaleem, A. and Mahmood, K. (2021), "Abusive supervision and knowledge sharing: moderating roles of Islamic work ethic and learning goal orientation", *Management Decision*, Vol. 59 No. 2, pp. 205-222, doi: 10.1108/MD-08-2019-1069.

Javed, A., Latif, K.F., Sahibzada, U.F. and Aslam, N. (2024), "Knowledge management towards sustainable competitive advantage in higher education: an analysis of productive and counter-productive behaviors", *Journal of Organizational Effectiveness: People and Performance*, Vol. ahead-of-print No. ahead-of-print, doi: 10.1108/JOEPP-02-2024-0048.

Kaur, P. and Mittal, E. (2024), "An investigation on the relationship of abusive supervision with knowledge hiding and organizational deviance: the mediating roles of employee silence and negative affectivity", *Human Systems Management*, Vol. 43 No. 1, pp. 65-78, doi: 10.3233/HSM-220194.

Khaksar, S.M.S., Chu, M.T., Rozario, S. and Slade, B. (2023), "Knowledge-based dynamic capabilities and knowledge worker productivity in professional service firms the moderating role of organizational culture", *Knowledge Management Research and Practice*, Vol. 21 No. 2, pp. 241-258, doi: 10.1080/14778238.2020.1794992.

Khalid, M., Bashir, S., Khan, A.K. and Abbas, N. (2018), "When and how abusive supervision leads to knowledge hiding behaviors: an Islamic work ethics perspective", *Leadership and Organization Development Journal*, Vol. 39 No. 6, pp. 794-806, doi: 10.1108/LODJ-05-2017-0140.

Kianto, A., Vanhala, M. and Heilmann, P. (2016), "The impact of knowledge management on job satisfaction", *Journal of Knowledge Management*, Vol. 20 No. 4, pp. 621-636, doi: 10.1108/JKM-10-2015-0398.

Kianto, A., Shujahat, M., Hussain, S., Nawaz, F. and Ali, M. (2019), "The impact of knowledge management on knowledge-worker productivity", *Baltic Journal of Management*, Vol. 14 No. 2, pp. 178-197, doi: 10.1108/BJM-12-2017-0404.

Kim, S.L., Kim, M. and Yun, S. (2015), "Knowledge sharing, abusive supervision, and support: a social exchange perspective", *Group and Organization Management*, Vol. 40 No. 5, pp. 599-624, doi: 10.1177/1059601115577514.

Krejcie, R.V. and Morgan, D.W. (1970), "Determining sample size for research activities", *Educational and Psychological Measurement*, Vol. 30 No. 3, pp. 607-610, doi: 10.1177/001316447003000308.

Lanre-Babalola, F.O., Oluwayemi, B., Oginni, M.O.O. and Adeyinka, J. (2024), "Influence of abusive supervision on employees' morale at work: evidence from the manufacturing organisations", *Annals of Spiru Haret University. Economic Series*, Vol. 24 No. 1, pp. 312-328, doi: 10.26458/24118.

Li, M., Wang, X. and Paşamehmetoğlu, A. (2024), "Vicarious abusive supervision among restaurant frontline employees: the role of employee industry tenure", *International Journal of Contemporary Hospitality Management*, Vol. 36 No. 7, pp. 2501-2520, doi: 10.1108/IJCHM-02-2023-0151.

Lopes, S., Dias, P.C., Sabino, A., Cesário, F. and Peixoto, R. (2023), "Employees' fit to telework and work well-being:(in) voluntariness in telework as a mediating variable?", *Employee Relations: The International Journal*, Vol. 45 No. 1, pp. 257-274, doi: 10.1108/ER-10-2021-0441.

MacCallum, R.C., Browne, M.W. and Sugawara, H.M. (1996), "Power analysis and determination of sample size for covariance structure modeling", *Psychological Methods*, Vol. 1 No. 2, pp. 130-149, doi: 10.1037/1082-989x.1.2.130.

Manaa, Y.H. (2022), "The effect of toxic leadership on counter-productive work behaviors and intention to leave: an empirical study", *International Business Research*, Vol. 15 No. 11, p. 1, doi: 10.5539/ibr.v15n11p1.

Mitchell, M.S. and Ambrose, M.L. (2007), "Abusive supervision and workplace deviance and the moderating effects of negative reciprocity beliefs", *Journal of Applied Psychology*, Vol. 92 No. 4, pp. 1159-1168, doi: 10.1037/0021-9010.92.4.1159.

Nazeer, S., Sumbal, M.S., Liu, G., Munir, H. and Tsui, E. (2023), "The next big thing: role of ChatGPT in personal knowledge management challenges and opportunities for knowledge workers across diverse disciplines", *Global Knowledge, Memory and Communication*, Vol. ahead-of-print No. ahead-of-print, doi: 10.1108/GKMC-07-2023-0246.

Netemeyer, R.G. (2003), *Scaling Procedures: Issues and Applications*, Sage Publications.

Nezafati, N., Razaghi, S., Moradi, H., Shokouhyar, S. and Jafari, S. (2023), "Promoting knowledge sharing performance in a knowledge management system: do knowledge workers' behavior patterns matter?", *VINE Journal of Information and Knowledge Management Systems*, Vol. 53 No. 4, pp. 637-662, doi: 10.1108/VJIKMS-11-2020-0202.

Nonaka, I. (1994), "A dynamic theory of organizational knowledge creation", *Organization Science*, Vol. 5 No. 1, pp. 14-37, doi: 10.1287/orsc.5.1.14.

Nonaka, I. and Takeuchi, H. (1995), *The Knowledge-Creating Company*, Oxford University Press, New York, p. 995.

Nonaka, I., Toyama, R. and Konno, N. (2000), "SECI, Ba and leadership: a unified model of dynamic knowledge creation", *Long Range Planning*, Vol. 33 No. 1, pp. 5-34, doi: 10.1016/S0024-6301(99)00115-6.

Nonaka, I., Von Krogh, G. and Voelpel, S. (2006), "Organizational knowledge creation theory: evolutionary paths and future advances", *Organization Studies*, Vol. 27 No. 8, pp. 1179-1208, doi: 10.1177/0170840606066312.

Nunnally, J.C. (1978), "An overview of psychological measurement", in *Clinical Diagnosis of Mental Disorders: A Handbook*, pp. 97-146.

Ode, E. and Ayavoo, R. (2020), "The mediating role of knowledge application in the relationship between knowledge management practices and firm innovation", *Journal of Innovation and Knowledge*, Vol. 5 No. 3, pp. 210-218, doi: 10.1016/j.jik.2019.08.002.

Omotayo, F.O. and Akintibubo, A.O. (2024), "Knowledge hiding in the academia: individual and social factors predicting knowledge hiding behaviour of undergraduates of a Nigerian university", *Journal of Librarianship and Information Science*, Vol. 56 No. 1, pp. 145-163, doi: 10.1177/09610006221133564.

Osei, H.V., Asiedu-Appiah, F. and Anyimaduah Amoah, P.A. (2021), "The fish rots from the head down: a test of the trickle-down model of abusive supervision", *Organization Management Journal*, Vol. 18 Nos 3/4, pp. 121-144, doi: 10.1108/OMJ-11-2018-0635

Ouakouak, M.L. and Ouedraogo, N. (2019), "Fostering knowledge sharing and knowledge utilization: the impact of organizational commitment and trust", *Business Process Management Journal*, Vol. 25 No. 4, pp. 757-779, doi: 10.1108/BPMJ-05-2017-0107.

Palvalin, M., Vuolle, M., Jääskeläinen, A., Laihonen, H. and Lönnqvist, A. (2015), "SmartWoW–constructing a tool for knowledge work performance analysis", *International Journal of Productivity and Performance Management*, Vol. 64 No. 4, pp. 479-498, doi: 10.1108/IJPPM-06-2013-0122.

Paudel, K.P. (2020), "Level of knowledge management among faculty members in the context of Nepali higher educational institution", *Dhaulagiri Journal of Sociology and Anthropology*, Vol. 14, pp. 124-130, doi: 10.3126/dsaj.v14i0.27370.

Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y. and Podsakoff, N.P. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88 No. 5, pp. 879-903, doi: 10.1037/0021-9010.88.5.879.

Podsakoff, N.P., Whiting, S.W., Welsh, D.T. and Mai, K.M. (2013), "Surveying for 'artifacts': the susceptibility of the OCB–performance evaluation relationship to common rater, item, and measurement context effects", *Journal of Applied Psychology*, Vol. 98 No. 5, pp. 863-874, doi: 10.1037/a0032588.

Quinn, S., Waheduzzaman, W. and Djurkovic, N. (2024), “Impact of organizational culture on bullying behavior in public sector organizations”, *Public Personnel Management*, Vol. 54 No. 2, pp. 184-208, doi: 10.1177/00910260241287619.

Rehman, U.U. and Iqbal, A. (2020), “Nexus of knowledge-oriented leadership, knowledge management, innovation and organizational performance in higher education”, *Business Process Management Journal*, Vol. 26 No. 6, pp. 1731-1758, doi: 10.1108/BPMJ-07-2019-0274.

Riyadh, H.A., Khrais, L.T., Alfaiza, S.A. and Sultan, A.A. (2023), “Association between mass collaboration and knowledge management: a case of Jordan companies”, *International Journal of Organizational Analysis*, Vol. 31 No. 4, pp. 973-987, doi: 10.1108/IJOA-08-2021-2893.

Sahibzada, H.F., Jianfeng, C., Sahibzada, U.F., Khalid, R. and Afshan, G. (2021), “Unpacking knowledge management and organizational performance: a comparison between emerging and developing countries”, *Aslib Journal of Information Management*, Vol. 73 No. 6, pp. 793-813, doi: 10.1108/AJIM-11-2020-0358.

Sahibzada, U.F., Jianfeng, C., Latif, K.F., Shafait, Z. and Sahibzada, H.F. (2022), “Interpreting the impact of knowledge management processes on organizational performance in Chinese higher education: mediating role of knowledge-worker productivity”, *Studies in Higher Education*, Vol. 47 No. 4, pp. 713-730, doi: 10.1080/03075079.2020.1793930.

Santos, C., Coelho, A., Filipe, A. and Marques, A.M.A. (2023), “The dark side of leadership: abusive supervision and its effects on employee’s behavior and well-being”, *Journal of Strategy and Management*, Vol. 16 No. 4, pp. 672-688, doi: 10.1108/JSMA-05-2022-0086.

Shahid, D.F., Butt, D.A.J., Umar, M.Z. and Zaka, M.S. (2024), “Addressing the research deficit in Pakistan’s universities: solutions for promoting quality and originality”, *Contemporary Journal of Social Science Review*, Vol. 2 No. 4, pp. 1913-1923.

Shujahat, M., Sousa, M.J., Hussain, S., Nawaz, F., Wang, M. and Umer, M. (2019), “Translating the impact of knowledge management processes into knowledge-based innovation: the neglected and mediating role of knowledge-worker productivity”, *Journal of Business Research*, Vol. 94, pp. 442-450, doi: 10.1016/j.jbusres.2017.11.001.

Shujahat, M., Wang, M., Ali, M., Bibi, A., Razzaq, S. and Durst, S. (2021), “Idiosyncratic job-design practices for cultivating personal knowledge management among knowledge workers in organizations”, *Journal of Knowledge Management*, Vol. 25 No. 4, pp. 770-795, doi: 10.1108/JKM-03-2020-0232.

Sumbal, M.S. and Amber, Q. (2025), “ChatGPT: a game changer for knowledge management in organizations”, *Kybernetes*, Vol. 54 No. 6, pp. 3217-3237, doi: 10.1108/K-06-2023-1126.

Sumbal, M.S., Ahmed, A., Tariq, A., Raziq, M.M. and Tariq, B. (2024a), “Improvisation in turbulent environments: an exploratory case study of a rescue projects organization”, *Project Management Journal*. doi: 10.1177/87569728241267736.

Sumbal, M.S., Sahibzada, U.F., Ahmed, Q., Russo, F. and Papa, A. (2024b), “You reap what you sow–abusive leadership impact on organizational digital innovation through knowledge workers’ competence and productivity”, *European Journal of Innovation Management*, Vol. ahead-of-print No. ahead-of-print, doi: 10.1108/EJIM-01-2024-0031.

Sumbal, M.S., Amber, Q., Hashmi, F.A., Chan, F.T., Tariq, A. and Nauman, S. (2025a), “Digitalization trends and Industry 4.0: ensuring knowledge workers’ sustainable productivity and innovative capability”, *Flexible Services and Manufacturing Journal*, pp. 1-31, doi: 10.1007/s10696-025-09613-w.

Sumbal, M.S., Tariq, A., Ahmad, A., Cerchione, R. and Papa, A. (2025b), “Managing knowledge and sustainability in resource constrained disaster environments”, *Sustainable Development*, Vol. 33 No. 2, pp. 2599-2613, doi: 10.1002/sd.3232.

Teo, T.S. and Bhattacherjee, A. (2014), “Knowledge transfer and utilization in IT outsourcing partnerships: a preliminary model of antecedents and outcomes”, *Information and Management*, Vol. 51 No. 2, pp. 177-186, doi: 10.1016/j.im.2013.12.005.

Tepper, B.J. (2007), “Abusive supervision in work organizations: review, synthesis, and research agenda”, *Journal of Management*, Vol. 33 No. 3, pp. 261-289, doi: 10.1177/0149206307300812.

Tufail, U., Anwar, S.., Waseem, H.A.. and Ahmad, Z. (2024), “Investigation of how gender moderates and overall, justice mediates the impact of abusive supervision on knowledge hiding”, *International Journal of Business and Management Sciences*, Vol. 5 No. 2, pp. 68-88, doi: 10.2139/ssrn.4892195.

Ullah, Y., Ullah, H. and Jan, S. (2022), “The mediating role of employee creativity between knowledge sharing and innovative performance: empirical evidence from manufacturing firms in emerging markets”, *Management Research Review*, Vol. 45 No. 1, pp. 86-100, doi: 10.1108/MRR-03-2020-0164.

Umer, M., Nawaz, F. and Murad, A. (2023), “Reconciling the impact of knowledge management processes on knowledge worker productivity”, *Knowledge Management and E-Learning*, Vol. 15 No. 2, p. 269, doi: 10.34105/j.kmel.2023.15.015.

Wang, G., Xu, R., Liu, H. and Ghulam Murtaza, K. (2024), “The impact of abusive supervision on the postgraduate students’ team creativity in higher education institutions”, *Studies in Higher Education*, Vol. 50 No. 4, pp. 1-20, doi: 10.1080/03075079.2024.2361322.

Wu, T.Y. and Hu, C. (2009), “Abusive supervision and employee emotional exhaustion: dispositional antecedents and boundaries”, *Group and Organization Management*, Vol. 34 No. 2, pp. 143-169, doi: 10.1177/1059601108331217.

Yang, J., Shen, C., Jiang, C. and He, P. (2023), “Abusive supervision and employee knowledge sharing: the roles of psychological safety and perceived motivational climate”, *Sage Open*, Vol. 13 No. 1, doi: 10.1177/21582440231158256.

Zaim, H., Tatoglu, E. and Zaim, S. (2007), “Performance of knowledge management practices: a causal analysis”, *Journal of Knowledge Management*, Vol. 11 No. 6, pp. 54-67, doi: 10.1108/13673270710832163.

Zaim, H., Keceli, Y., Jaradat, A. and Kastrati, S. (2018), “The effects of knowledge management processes on human resource management: mediating role of knowledge utilization”, *Journal of Science and Technology Policy Management*, Vol. 9 No. 3, pp. 310-328, doi: 10.1108/JSTPM-02-2018-0011.

Zampetakis, L.A. (2024), “Using indirect survey techniques to investigate the relationship between employee personal experience of abusive supervision and job performance”, *International Journal of Manpower*, Vol. 45 No. 7, pp. 1309-1325, doi: 10.1108/IJM-10-2023-0595.

Zhang, X., Zhang, Y., Sun, Y., Lytras, M., Ordonez de Pablos, P. and He, W. (2017), “Exploring the effect of transformational leadership on individual creativity in e-learning: a perspective of social exchange theory”, *Studies in Higher Education*, Vol. 43 No. 11, pp. 1964-1978, doi: 10.1080/03075079.2017.1296824.