



**THE RIPPLE EFFECTS OF TOXIC SUPERVISION ON  
ACADEMIC PERFORMANCE IN DOCTORAL PROGRAMS:  
INVESTIGATING MEDIATION AND MODERATION  
MECHANISMS**

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**ABSTRACT**

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Aim/Purpose	This study examines the role of psychological capital (PsyCap) as a moderating variable and burnout as a mediator in the relationship between toxic supervision on academic performance in doctoral programs.
Background	Academic supervision is important in supporting students' success in completing the doctoral program. However, there is a dark side that needs to be more widely revealed in the literature related to this process. Toxic academic supervision (TAS) for doctoral students is toxic leadership, which manifests as being associated with burnout, academic performance, and dropout rates. PsyCap, with the main elements of self-efficacy, hope, optimism, and resilience, plays an important role in helping reduce negative and positive academic impacts. However, empirical evidence is needed to show the role of PsyCap in academic supervision of doctoral programs.
Methodology	The choice of research method is based on the aim to generalize knowledge in solving fundamental problems and challenges in supervision as a managerial issue in the super academic vision of the hypothetico-deductive method with a

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	survey involving 221 doctoral students from social disciplines selected randomly, inferential analysis using Structural Equation Modeling (SEM).
Contribution	This study contributes significantly to understanding the role of PsyCap in the context of toxic academic supervision and its implications for the mental well-being and academic success of postgraduate students. Furthermore, it offers a new approach to mitigating the negative effects of toxic leadership through PsyCap. This study reinforces the core idea of the Stress-as-Offense-to-Self (SOS) theory, which suggests that negative perceptions of how one is treated, particularly in academic supervision, can trigger feelings of humiliation and failure, ultimately leading to burnout and diminished academic performance.
Findings	PsyCap reduces the negative impact of toxic supervision on the academic performance of doctoral students. Even though toxic supervision significantly increases burnout and decreases academic performance, doctoral students with high levels of PsyCap tend to be more resilient to these negative impacts. Self-efficacy, hope, optimism, and resilience mitigate the negative impact of toxic supervision on burnout and academic performance.
Recommendations for Practitioners	Universities need to develop policies and programs that support the quality of supervision and student well-being. Interventions to enhance PsyCap among students, such as developing self-efficacy, optimism, and resilience, can help mitigate the negative effects of toxic academic supervision and maintain academic performance. These findings reinforce the importance of building PsyCap as a moderating variable to mitigate the negative effects of toxic supervision.
Recommendations for Researchers	Exploration of other factors besides PsyCap that may play a role as moderators in the relationship between toxic academic supervision and burnout, such as academic culture, social support, academic environment, or coping styles, is suggested for further studies in relation to toxic supervision, burnout, and academic performance.
Impact on Society	This study extends the scope of the SOS theory by incorporating resource scarcity as one of the stress triggers.
Future Research	Future studies should also explore differences among PsyCap elements (self-efficacy, optimism, and resilience) that influence the impact of toxic supervision.
Keywords	burnout, academic performance, higher education, PsyCap, stress-as-offense-to-self theory, toxic supervision

## INTRODUCTION

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Studies on the dark side of leadership are much less common compared to the positive aspects of leadership (Hattab et al., 2022; Li et al., 2023; Mackey et al., 2020; Milosevic et al., 2020; Tannenbaum & Schmidt, 2009), especially in higher education. Toxic leadership is an approach that harms both individuals and organizations (Fahie, 2020; Herbst & Roux, 2023; Mahlangu, 2020). It is characterized by power without accountability, high pressure, and lack of skill (Snow et al., 2021). Toxic leadership involves narcissistic, authoritarian behavior that disregards well-being (Klahn Acuña & Male, 2024), negatively impacting the roles and functions of higher education institutions (Klahn Acuña & Male, 2024; Olabiyi et al., 2024; Smith & Fredricks-Lowman, 2020), toxic leadership can spread across various levels due to imitation processes (Liu et al., 2012).

Toxic leadership occurs not only in general organizations but also in academic settings, manifesting as toxic academic supervision (Shahnawaz & Siddiqi, 2023), which is associated with dropout rates (Okere, 2024; Wollast et al., 2018), students' mental health (Deem, 2020). According to Shahnawaz and Siddiqi (2023), common indications of toxic supervision include poor mentoring and professional incompetence in research supervision. Although there are positive aspects of academic research supervision, such as intellectual stimulation that motivates students to continue their studies, several factors increase stress levels. Co-supervision, a significant factor related to mental health issues (Lemée et al., 2020), indicates that doctoral students receiving authentic guidance feel more motivated and satisfied. In contrast, those experiencing poor or toxic supervision feel stressed and exhausted (Al Makhamreh & Stockley, 2020; Martinko et al., 2013) impacting their performance (Fischer et al., 2021).

The issue of toxic supervision is a complex and serious problem that is not widely recognized in the academic world. This situation also exists in Indonesian higher education postgraduate programs. An extreme example that attracted public attention was the 2024 suicide of a medical student in the Diponegoro University Anesthesiology Specialist Program (BBC News Indonesia, 2024). Bullying by seniors who should provide supervision to support further studies is described as the tip of the iceberg. Various reactions range from rejecting this fact to demands for transparent problem-solving. For students, these conditions can reduce their interest in continuing and completing their studies, illustrating that there needs to be a change in the guidance process for students, including doctoral programs. Various harmful practices in academic institutions and research undermine well-being and research development (Rajakumar et al., 2024).

One of the frequently reported consequences of doctoral programs is burnout (Löfström & Pyhältö, 2020; Park et al., 2021; Shahnawaz & Siddiqi, 2023; Shin et al., 2022). Burnout is mental, physical, and emotional exhaustion experienced by academics due to long-term work stress, triggered by significant changes in higher education, such as disrupted teaching and research processes (de Villiers Scheepers et al., 2023; Küçük & Demirtaş, 2021). Jagodics and Szabó (2023) argue that it is a serious issue in higher education

The problem of toxic academic supervision and its impact can be minimized with PsyCap (Fischer et al., 2021; Raza et al., 2019). PsyCap acts as a buffer against burnout (Al-Zyoud & Mert, 2019; Leon-Perez et al., 2016; Loghman et al., 2023; Virga et al., 2020). PsyCap, initially studied in the workplace, plays an essential role in facilitating positive outcomes for students (Carmona-Halty et al., 2021; Li et al., 2023; Nambudiri et al., 2020; Ratnaningsih et al., 2024). However, Küçük and Demirtaş (2021) argue that PsyCap interacts synergistically to produce different outcomes across various contexts and times, and there is a contradiction regarding the role of PsyCap in relation to toxic supervision and its impact on individuals.

PsyCap, introduced by Luthans et al. (2006) in the early 2000s, comprises four main elements: self-efficacy, hope, psychological resilience, and optimism (Luthans et al., 2006; Luthans & Youssef-Morgan, 2017). Martínez et al. (2019) state that self-efficacy, hope, optimism, and resilience are positive beliefs and motivation to achieve goals and the ability to rise from challenges. Further studies are needed to explore the role of PsyCap in the context of toxic supervision and individual outcomes, especially in higher education contexts.

This study contributes to filling the gap regarding the position of PsyCap in the relationship between toxic academic supervision, burnout, and academic performance. The author uses the SOS theory to explain PsyCap's role (Julmi et al., 2022). SOS theory offers a broad and integrative theoretical framework to combine existing research on stress in studies, especially related to toxic supervision, which is often a common theme in context. This theory is relevant to understanding burnout, particularly because leaders play a critical role in how identity-related stress forms. The author also employs Latent Profile Analysis (LPA) to examine how combinations or profiles of PsyCap elements can have

different impacts on burnout and academic performance outcomes in higher education. The research objectives are based on the following problem formulation:

RQ1: How does toxic supervision affect academic performance, both directly and through burnout?

RQ2: Does PsyCap moderate the influence of toxic supervision on burnout, which ultimately determines academic performance?

## LITERATURE REVIEW

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### *STRESS-AS-OFFENSE-TO-SELF THEORY*

The SOS theory, developed by (Semmer et al., 2007), emphasizes the importance of self-esteem and personal identity factors in one's response to stress in social environments. The SOS theory explains that two pathways, SIN (Stress-Induced Negative) and SAD (Stress-as-Disrespect), can lead to serious stress, affecting an individual's mental and physical health. The core of the SIN pathway is that stress arises from feeling inadequate or incompetent in meeting expectations, both personally and professionally, leading to feelings of failure and low self-esteem. The SAD mechanism occurs when one feels insulted by others' actions or words, directly impacting their self-concept and self-esteem (Semmer et al., 2019, 2021). The SOS theory is not about a stressful situation's objectivity but how individuals perceive and compare what they receive with what they expect. This subjective mismatch can lead to stress (Opstrup & Pihl-Thingvad, 2016).

### *TOXIC SUPERVISION IN ACADEMIC BURNOUT AND PERFORMANCE*

Toxic supervision is defined by key traits such as a pressuring management style, abuse of authority, lack of adequate guidance, and emotional instability. Additionally, secondary traits include interaction incapability, low competence levels, and high prejudice and bias (Okere, 2024; Shahnawaz & Siddiqi, 2023). The concept involves a subjective assessment of hostile behavior rather than merely the behavior itself (Fischer et al., 2021). Toxic supervision practices are identified as a major reason for the termination of doctoral programs (Okere, 2024). Proposed Hypotheses:

*H1a: Toxic academic supervision is associated with academic performance.*

The influence of toxic leadership triggers a series of consequences that spread gradually to burnout and academic performance. While support from supervisors has positive effects on emotional well-being and the intention to continue academic pursuits (Lemée et al., 2020; Peltonen et al., 2017; Pyhäältö et al., 2015; Wollast et al., 2018, 2023), toxic supervision leads to exhaustion (Fischer et al., 2021; Wu & Changya Hu, 2009). The intention to discontinue studies is influenced by supervisory sources and inadequate supervision frequency, resulting in burnout experiences (Cornér et al., 2017; Sverdlik et al., 2018). Insufficient supervision is a cause of burnout and low academic achievement (Andrade et al., 2023). Conversely, positive supervision is a key driver of academic success and low stress (Tikkanen et al., 2024). In the educational context, academic supervision is a complex and dynamic process that increases burnout and decreases academic performance. Proposed Hypotheses:

*H1b: Toxic academic supervision is associated with burnout which in turn is associated with academic performance.*

### *TOXIC SUPERVISION, PSYCAP, AND BURNOUT*

According to Luthans et al. (2006), PsyCap has several components that are stable over time, although not as stable as personality or self-evaluation, making it more state-like, meaning it can change and develop but is able to reduce stress and ensure balance, thereby preventing burnout. PsyCap minimizes the risk of mental and emotional exhaustion (Hazan-Liran & Karni-Vizer, 2024).

Burnout is a psychological syndrome caused by exposure to stressful work contexts, including demanding tasks and inadequate resources (Dias et al., 2021). Burnout is associated with self-related

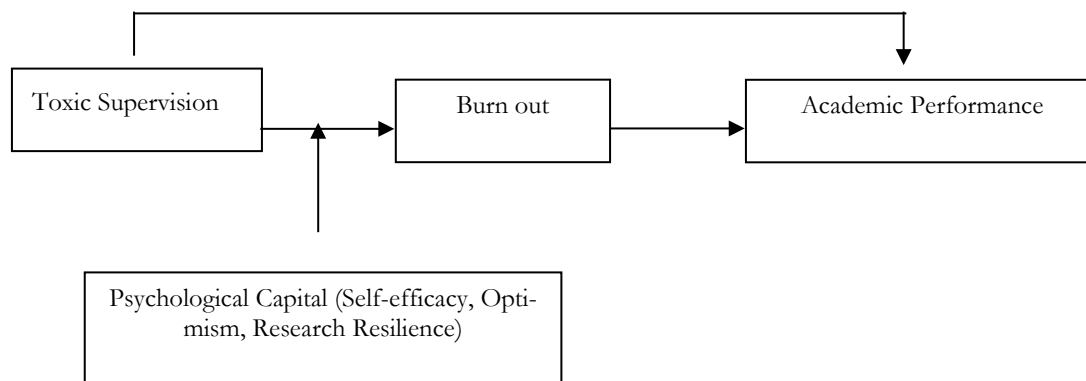
factors, such as negative evaluations of personal ability (Hazan-Liran & Karni-Vizer, 2024). Burnout is caused by an imbalance between job pressures and resources, resulting in disrupted motivational processes and increased health impairment (Jagodics & Szabó, 2023). PsyCap, which includes self-efficacy, optimism, and hope, acts as a crucial personal resource in coping with high demands and preventing burnout (Barratt & Duran, 2021; Nabais et al., 2024; Schaufeli et al., 2002; Vîrga et al., 2020). Popa-Velea et al. (2021) suggested that the element of PsyCap as a protector or trigger of burnout depends on how individuals face academic challenges. Galindo-Domínguez and Bezanilla (2021) stated that the lower the PsyCap, the higher the potential for burnout, while psychological endurance decreases. Chen et al. (2023) showed one of the elements, self-efficacy, as a variable that reduces burnout. Meanwhile, Pua et al. (2024) suggested that self-efficacy and resilience reduce burnout in the education process. Proposed Hypothesis:

*H2a: PsyCap (self-efficacy, optimism, and resilience) is associated with levels of burnout among doctoral students.*

PsyCap, as a personal resource, can counterbalance the negative effects of toxic supervision on burnout. PsyCap helps individuals stay focused on work and avoid negative behaviors as a reaction to abusive supervision (Raza et al., 2019). High self-efficacy reduces emotional exhaustion, allowing individuals to handle challenging tasks effectively. Optimism decreases depersonalization and helps individuals stay engaged in work or studies, thereby not feeling isolated and avoiding burnout. Hope functions as a driving force to set and achieve goals despite obstacles posed by toxic supervision, such as burnout conditions. Psychological resilience enables individuals to recover from failures or heavy pressures, even those arising from toxic supervision that causes burnout. PsyCap serves as a mechanism to maintain balance and avoid burnout. Radack et al. (2022) state that PsyCap protects against academic burnout. Chronic emotional and interpersonal stress experiences without sufficient psychological resources increase the risk of burnout (Hazan-Liran & Karni-Vizer, 2024). Although initially developed in an organizational context, students can benefit from PsyCap by maintaining a positive perspective, striving hard, persisting in achieving goals, and learning and growing despite facing severe challenges (Matos & De Andrade, 2023). PsyCap functions as a psychological resource that aids students in tackling academic challenges and achieving success (Tho, 2023). In a different context, Ahmed and Mohamed Makhbul (2024) emphasized that PsyCap functions as a buffer that protects individuals from the negative impact of abusive supervision that interferes with outcomes. Proposed Hypotheses:

*H2b: PsyCap is associated with reduced levels of burnout in the presence of toxic supervision.*

The proposed model is shown in Figure 1.



**Figure 1. Proposed Model**

## RESEARCH METHODS

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The research approach uses hypothetical deductive logic (Bougie & Sekaran, 2019) in accordance with the research objectives.

### *POPULATION AND SAMPLE*

The research population consists of doctoral students from various universities in Indonesia. The population size is based on students who have begun working on their final assignments. The accessible sample, selected using simple random sampling based on inclusion criteria, consists of 392 students from various cohorts who are currently working on their final assignments or have completed their studies. However, after the data cleaning process, 171 respondents with incomplete or invalid data were excluded from the analysis, which was discontinued because the data collection was carried out in stages, so the final sample size was 221.

The sample selection is based on the results of a network search through peers, colleagues pursuing further studies, and alum communities from various universities offering doctoral programs. Respondents were recruited through a network search method involving contacts from coworkers, graduate student associations at several universities, and doctoral associations as a community for university alumni. This approach aimed to obtain participants from various backgrounds and with various levels of expertise. To reduce sample bias, efforts were made to invite participants from different sectors, geographical locations, and demographic groups.

### *MEASUREMENT*

The measurement of the toxic supervision variable is based on Shahnawaz and Siddiqi (2023), who operationalized it as a series of actions by supervisors that directly reduce students' self-confidence, academic progress, and psychological well-being. Indicators include negative personality, abusive supervision and abuse of power. In previous studies, the instrument was found to have satisfactory validity and reliability (Shahnawaz & Siddiqi, 2023).

PsyCap is measured based on Ratnaningsih et al. (2024) and Luthans et al. (2006) within the context of supervision during study completion. PsyCap, as a positive psychological state of students, affects academic performance, research completion, and the ability to face challenges during the doctoral study process. PsyCap consists of:

- 1) Self-efficacy, confidence in managing and completing complex research tasks.
- 2) Hope, the ability to set goals, make plans, and find alternatives when faced with research obstacles.
- 3) Resilience, the ability to bounce back from failure or rejection in research and academia.
- 4) Optimism, optimism that research and doctoral studies will succeed and confidence in the academic future.

In previous studies, the instrument was tested for validity and reliability. The Indonesian version has an adequate level of reliability and validity, namely Cronbach's alpha: 0.81 with a high validity value with a minimum item of 0.61 and items are independent and do not influence each other (Ratnaningsih et al., 2024).

The instrument to measure burnout is developed based on the Maslach Burnout Inventory-Student Survey (MBI-SS) (Jagodics & Szabó, 2023; Schaufeli et al., 2002). It focuses on two dimensions that indicate burnout within the context of this study. Burnout, as a condition of mental and physical exhaustion due to prolonged academic and research pressures, is characterized by three main symptoms, as adapted from (Jackson & Maslach, 1982): emotional exhaustion, depersonalization, and decreased personal accomplishment. These symptoms indicate frustration with unsatisfactory results and a decline in academic productivity. In previous studies, the instrument was tested for validity and reliability (Chirkowska-Smolak et al., 2023; Jagodics & Szabó, 2023). Wongtrakul et al. (2023) suggested that the

validity > 0.5 and reliability of the instrument are good enough to measure burnout in students > 0.877 even after 3 weeks of retesting.

Academic performance is measured based on (Alhadabi & Karpinski, 2020) within the context of:

- 1) Performance Approach Goal: I need to produce research that surpasses that of my peers (reputable international publications)
- 2) Mastery Goal: I want to gain as much insight as possible from my research to contribute to my field of study
- 3) Performance Avoidance Goal: Frequently thinking, "What if my research is not recognized or rejected by reputable journals?"

In previous studies, the instrument was tested for validity and reliability of the three dimensions, and the results were between 0.77 and 0.91. Instrument validity > 0.4 means adequate.

Data collection was done using a questionnaire, with answers ranging from 1 (never) to 5 (always) and for negative sentences, the answer was the opposite. According to the statement, answers varied, including strongly agree (5) or strongly disagree (1).

### ***COMMON BIAS METHOD***

Researchers attempted to reduce bias by ensuring respondents provided honest answers, even if socially undesirable. Respondents were given sufficient time to consider the statements, and instructions were communicated clearly. To avoid bias, some items included both positive and negative statements. The questionnaire distribution was divided into three stages. The first week of data collection was for the toxic academic supervision (TAS) variable, and the second week was for PsyCap. The third week focused on burnout (BO) and academic performance (AP). The researchers collected data on students' study periods without leave of absence to reduce self-reported bias. The research was conducted after obtaining ethical approval from the university. Respondents were asked to fill out the questionnaires anonymously, informed of the risks and benefits of participation, and allowed to withdraw if they felt uncomfortable or unsafe completing the survey. Respondents could access the research results. Each questionnaire was coded according to the distribution time and respondents to avoid errors in respondent responses.

### ***DATA ANALYSIS AND HYPOTHESIS TESTING***

Data analysis and hypothesis testing were carried out using the SEM Covariant procedure, following the steps outlined by Hair et al. (2019) from defining individual constructs to hypothesis testing.

## **RESULTS**

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### ***DEMOGRAPHIC CHARACTERISTICS***

The results of the descriptive analysis of the research variables are presented in Table 1.

**Table 1. Descriptive Statistics of Research Variables**

VARIABLES	AVERAGE	STANDARD DEVIATION	RATINGS 1-5
Toxic Academic Supervision (TAS)	3.20	1.08	Less
Psychological Capital (PsyCap)	3.56	0.85	Medium
Burnout (BO)	3.34	1.20	Medium
Academic Performance (AP)	2.97	1.14	Less

TAS refers to a form of unsupportive supervision that can include behaviors such as neglect, unfairness, or excessive criticism. An average score of 3.20 indicates that students experience supervision that is slightly worse than a moderate level. A standard deviation of 1.08 indicates variation in student experiences related to toxic supervision.

PsyCap includes psychological aspects such as self-resilience, optimism, hope, and self-efficacy. An average score of 3.56 indicates that students have a moderate level of PsyCap. A standard deviation of 0.85 indicates that some students have lower PsyCap while others have higher PsyCap. The average burnout score is 3.34, indicating that students generally experience a moderate level of burnout. However, a relatively large standard deviation (1.20) shows significant variation among students, with some experiencing higher or lower burnout. Students' academic performance is rated at an average of 2.97, indicating that their performance tends to be unsatisfactory. A standard deviation of 1.14 indicates variation in academic performance among students.

### ***DESCRIPTION OF VARIABLES AND INFERENCES***

The description of the research variables, based on previous studies, is as follows:

#### **Defining individual constructs**

Following the formulated model, the variables used in this study have clear and precise definitions, as described in the research methods section. The development of measurement constructs began with a theoretical definition to reflect its meaning, then tested using a pilot sample of 30 master's and doctoral students from various universities selected randomly and not included in the actual research sample. The number of items and dimensions refers to proven valid (with validity value  $> 0.30$ ) and reliable (with reliability value  $> 0.70$ ) references. With these results, the instrument is considered appropriate. The GOF (Goodness of Fit) test results for each construct indicate that the constructs match the field data. Each construct has a GOF value indicating acceptance as a concept that can be used in the study.

#### **Developing the overall measurement model**

The measurement model describes how variables are related through specific indicators. The test results of each indicator related to latent variables show varying degrees of correlation as reflected in Figure 2.

The results of Confirmatory Factor Analysis (CFA) show the relationships between several latent variables and observed variables. The latent variables include toxic supervision, burnout, PsyCap, and performance, each measured by their respective observed variables. Eight indicators (TAS1 to TAS8) describe toxic supervision. BO1 measures burnout to BO11, while PsyCap is measured by RL1 to RL6, HP1 to HP6, OP1 to OP6, and WSE1 to WSE6. AP1 measures performance to AP11. The loading factor for each observed variable is greater than 0.5, indicating a strong and adequate explanation of the changes in the latent variables being measured. For example, TAS1 has a loading factor of 0.58 towards the toxic variable, which means that TAS1 sufficiently explains the variance in the toxic variable. There is a negative correlation of -0.26 between toxic and PsyCap, indicating that as toxic levels increase, PsyCap tends to decrease, and vice versa. A similar pattern is observed between burnout and PsyCap, with a negative correlation of -0.26. The CFA model testing results show that the observed data aligns with the hypothesized relationship model. The relationship between observed variables and latent variables aligns with theoretical expectations.

#### **Designing a study to produce empirical results (Sample size model estimation using MLE, missing data, identification issues)**

The Maximum Likelihood Estimation (MLE) method is used with a sample size  $> 200$ , which meets the requirements of this method. The data distribution is normal, with a p-value of 0.371 ( $p > 0.05$ ), indicating normal distribution. There is no missing data, and no identification issues hinder the SEM Covariance-Based testing process. The test results also show that the data is normally distributed and



linear. Furthermore, no outliers were found, allowing the analysis to proceed without data-related issues.

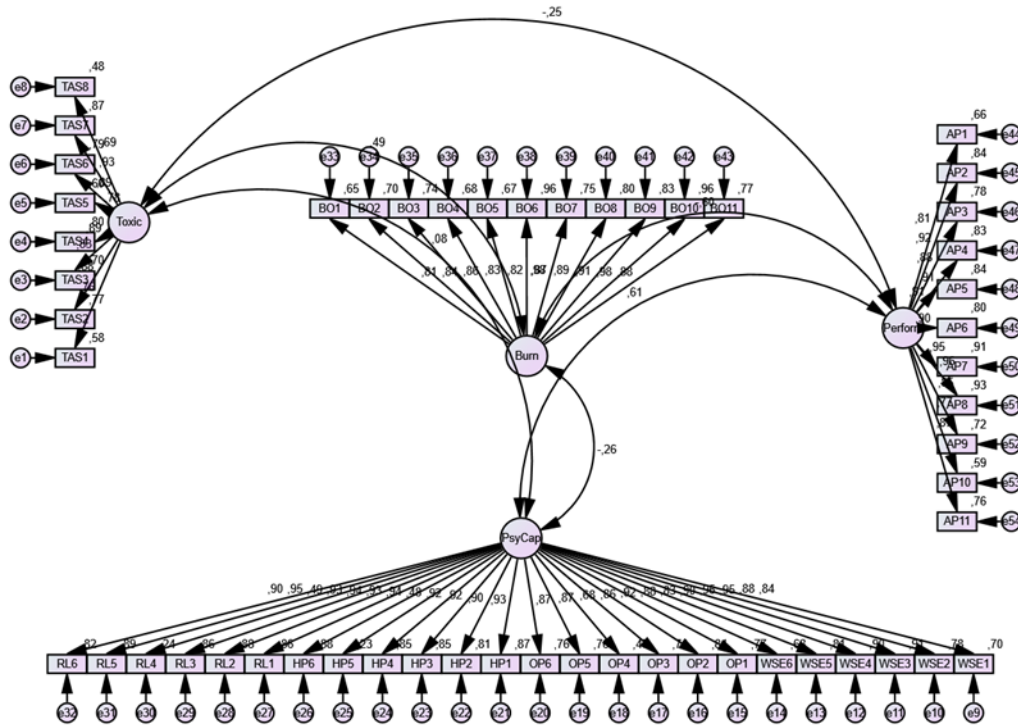


Figure 2. Measurement Theory Model (CFA)

### Assessing the measurement model validity

The measurement results indicate that the model is valid according to the established GOF standards. The overall fit test results show that each GOF criterion is met as reflected in Table 2.

Table 2. Goodness of Fit Test Index

TYPE OF MEASUREMENT	MEASUREMENT	STAGE 1	CORRECTION	CONCLUSION
Absolute fit measures	p-value-	0.000	0.001	Moderate
	RMSEA	0.072	0.035	Fit
	GFI	0.880	0.952	Fit
Incremental fit measure	NFI	0.891	0.952	Fit
	TLI	0.783	0.967	Fit
	RFI	0.821	0.952	Fit
	CFI	0.862	0.961	Fit
	AGFI	0.881	0.925	Fit
Parsimonious fit measure	PNFI	0.787	0.832	Fit
	PGFI	0.622	0.727	Moderate

**Construct validity**

The result of construct validity shown at Table 3.

**Table 3. Standardized Factor Loadings, Average Variance Extracted, Reliability Estimates**

LATENT VARIABLE	INDICATOR CODE	Standard Loading Factor	VALIDITY OF DISCRIMINAT			
			TAS	PsyCap	Bo	AP
Toxic Academic supervision (TAS)	TAS1 - TAS8	0.699-0.935	1.000			
Psychological Capital (PsyCap)	RL1 -RL6, HP1-HP6, OP1 - OP6, WSE1 - WSE6.	0.742-0.948 0.726-0.945 0.780-0.901 0.841-0.926	0.113	1.000		
Burnout (BO)	BO1-BO11	0.836-0.986	0.113	0.01	1.000	
Academic Performance (AP)	AP1 - AP11.	0.778-0.966	0.03	0.02	0.32	1.000
Average variance extracted			0.699	0.772	0.775	0.786
Composite reliability			0.929	0.946	0.950	0.937

The factor loading values are acceptable ( $> 0.7$ ) as seen in Table 3 in the Standard Loading Factor column. For example, the loading factor for the observed variable TAS ranges from 0.699-0.935.

The AVE shows how much the latent variable explains its indicator variables. Ave value for TAS, 0.772 for PsyCap, 0.775 for BO, and 0.786 for AP), indicating good convergent validity for these variables. Composite reliability values (0.929 for TAS, 0.946 for PsyCap, 0.950 for BO, and 0.937 for AP) indicate excellent reliability for all composite reliability (above 0.7).

The correlation between TAS and PsyCap, BO, and AP is very low (0.113, 0.113, and 0.03), indicating good discriminant validity. This shows that TAS is a distinct construct from PsyCap, BO, and AP. However, this correlation is still low enough to be considered good discriminant validity.

This indicates that AP measures a unique construct and does not overlap with other latent variables. The construct of correlation matrix shown in Table 4.

**Table 4. Construct Correlation Matrix (Standardized)**

Path	ESTIMATE	S.E.	C.R.	P
Burn <--- Toxic	0.614	0.099	9,404	***
Burn <--- PsyCap	-0.251	0.092	-4,535	***
Perform <--- Burnout	-0.687	0.059	-10,925	***
Perform <--- Toxic	0.062	0.066	1,319	0.187

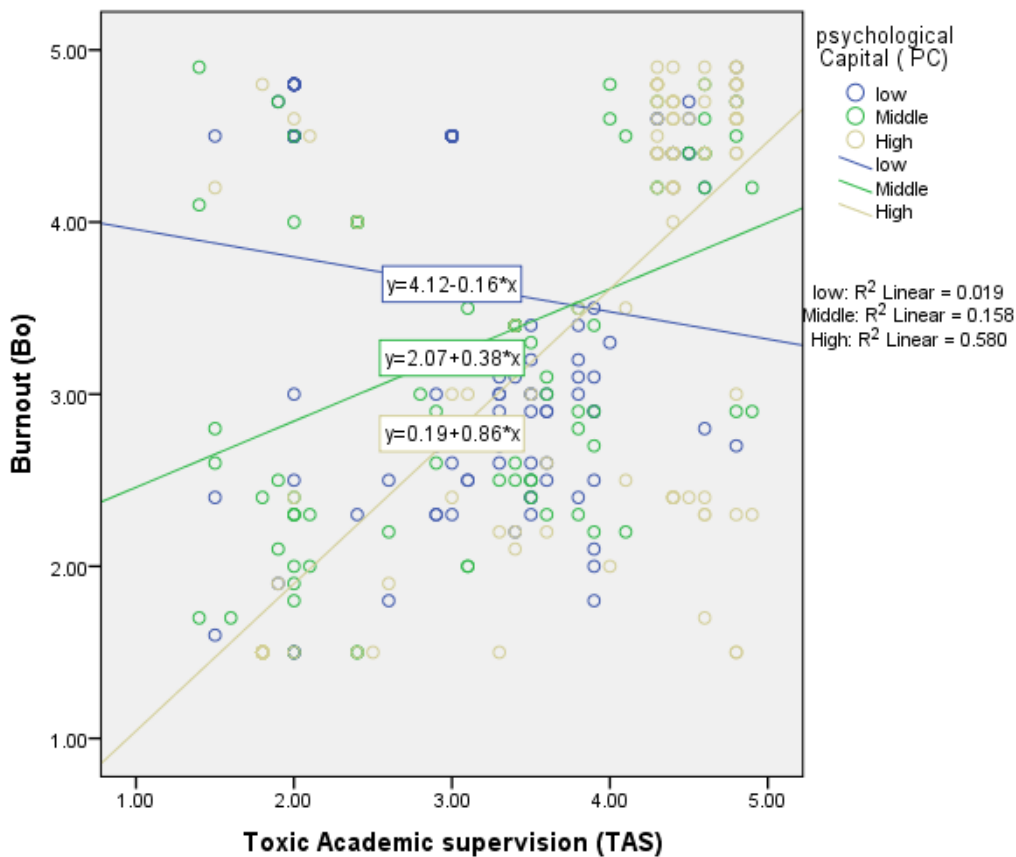
The test results indicate a relationship between variables with varying degrees of influence. TAS has a significant positive relationship with burnout, meaning that higher levels of toxic academic supervision lead to higher levels of burnout among students. Burnout has a significant negative relationship

with academic performance, with an estimated -0.687 indicating that higher burnout levels lead to lower academic performance. The estimate of 0.062 shows that TAS has a very small and insignificant direct relationship with AP, meaning that TAS does not have a significant direct impact on students' academic performance. The mediation test result shown in Table 5.

**Table 5. Mediation Test Result (Standardized)**

PATH			ESTIMATE	SOBEL TEST/Z-SCORE		
Perform	<---	Burn	<---	Toxic	-0.687	-5.47

Burnout is an important mediator between toxic academic supervision and academic performance. Academic supervision can indirectly damage academic performance. PsyCap can help reduce the impact of burnout on academic performance and minimize the effects of toxic academic supervision on burnout. The results of the moderation test, as shown in Figure 3.



**Figure 3. Moderation Test**

The study results indicate that psychological factors moderate the negative effects of TAS on individual well-being. The graph shows that the level of PsyCap can moderate how TAS affects burnout. Interestingly, individuals with high PsyCap are more sensitive to toxic supervision than those with low PsyCap, who may already experience higher levels of burnout initially. When PsyCap is low, an increase in TAS slightly reduces burnout within this category, but with a very weak negative slope. In the moderate PsyCap group, increasing TAS moderately increases burnout, and this relationship is more evident compared to low PsyCap. In the high PsyCap group, a significant increase in burnout occurs as TAS increases, indicating that individuals with high PsyCap are more vulnerable to TAS. A negative estimate (-0.174) indicates that PsyCap, which includes self-efficacy, optimism, and

resilience, reduces the negative effects of TAS on burnout. PsyCap can function as a buffer, so students with higher levels of PsyCap experience lower burnout even under toxic supervision.

**CFA SUMMARY**

All SEM stages have been completed, and the Confirmatory Factor Analysis (CFA) results support the validity of the measurement model used. The chi-square ( $\chi^2$ ) value shows significance above 0.01, which is acceptable given the large sample size (effective 117 from various doctoral programs using the all-available method). Additionally, the CFI and RMSEA indices are at satisfactory levels, indicating that the model adequately represents the sample covariance matrix. There is strong evidence regarding construct validity, particularly convergent, discriminant, and nomological validity. The measurement instruments are proven to function as expected, particularly in ensuring unidimensionality of the four measured constructs and their relationships with other variables.

**Hypothesis testing results**

The results of the hypothesis testing indicate that all hypotheses are accepted, as shown in Table 6. TAS directly affects students’ academic performance, but the effect is relatively small. However, when mediated by burnout, its impact on academic performance becomes much more significant and negative. PsyCap plays an important role as a buffer, reducing the negative effects of toxic supervision on burnout and directly reducing burnout.

**Table 6. The Hypothesis Test Results (Standardized Regression Weight)**

HYPOTHESIS	ESTIMATE	CONCLUSION
Toxic Academic Supervision, affecting Academic Performance	0.062	Supported
Toxic Academic Supervision has an influence on Academic Performance through Burnout.	-0.687	Supported
PsyCap weakens the influence of Toxic Supervision on Burnout	-0.174	Supported
PsyCap (Self-efficacy, Optimism, Resilience) has a relationship with Burnout	-0.251	Supported

**DISCUSSION**

This study shows that TAS significantly affects burnout, and its impact becomes stronger when students have low PsyCap. Although TAS does not significantly impact academic performance, it has a diffuse effect that affects burnout and academic performance. There is a reluctance among students to point out that the supervisor has acted like a toxic leader. Although it is rarely openly acknowledged, it has a pervasive effect on students. Toxic supervision disrupts the learning and guidance process, especially if supervision is ineffective or demoralizing. TAS can increase burnout and decrease academic performance. Low academic performance could result from toxic supervision, burnout, and suboptimal PsyCap. In doctoral supervision, low academic performance can extend the time to complete the program or even lead to dropout.

This is consistent with the SOS theory, which emphasizes the mismatch between students’ expectations and supervisory reality as the main source of stress. TAS does not directly show a significant effect on academic performance; its impact becomes clearer through burnout in students with high burnout levels. The study shows that TAS positively affects burnout, which, in turn, affects academic performance. Some studies even associate this with dropouts (Okere, 2024; Wollast et al., 2018).

Unlike previous research, this study confirms that toxic supervision increases burnout, in line (Deem, 2020; Lemée et al., 2020; Shah Nawaz & Siddiqi, 2023). Students experiencing toxic supervision face pressure and exhaustion that impact academic performance. PsyCap which can change over time, may decrease due to toxic supervision, ultimately minimizing PsyCap's ability to protect against burnout. These findings underscore the importance of building PsyCap among doctoral students to mitigate the negative effects of toxic supervision.

The scarcity of resources is a consequence of student participation in doctoral programs; however, this does not entirely trigger burnout and high stress. Students recognize that doctoral programs require readiness in various aspects, particularly PsyCap. Along with the demand to complete studies, students face supervision processes that are often hindered, such as supervisors being perceived as subjective or contradictory. This study also found that toxic supervision does not significantly affect academic performance unless students experience high burnout. This study shows that toxic supervision does not significantly negatively impact academic performance. There is even a positive but insignificant effect, suggesting that toxic supervision can trigger improved academic performance in students with strong self-defense mechanisms.

There are contradictions regarding the role of supervisors in academic advising for doctoral programs. Previous studies, such as those by Sverdlík et al. (2018), revealed that supervisors play an important role in the success of doctoral students as academic advisors, mentors, managers, protectors, and links to future career opportunities. Tikkanen et al. (2024) and Haider and Dasti (2022) also revealed the importance of supervision for well-being and self-efficacy in completing studies. However, the opposite study stated by Cornér et al. (2017) that supervision activities cause various effects and even burnout (Al Makhamreh & Stockley, 2020; Martinko et al., 2013). These conditions are a reality that requires problem-solving for students themselves and policymakers in higher education. This means that readiness is needed to face various possible forms and activities of positive and referring supervision. The existence of PsyCap solves this problem. In this research, PsyCap weakens the influence of TAS on burnout across various diversities.

However, each group varies based on Latent Profile Analysis (LPA). This study differs from (Al-Zyoud & Mert, 2019; Leon-Perez et al., 2016; Loghman et al., 2023; Virga et al., 2020), who argue that PsyCap serves as a protective factor against burnout. In contrast, Fischer et al. (2021) and Raza et al. (2019) generally reveal that PsyCap moderates the effects of toxic supervision. Students with low PsyCap do not moderate the influence of toxic academic supervision on burnout. There are two possibilities: first, burnout in this group is already high; second, students may develop release strategies to reduce burnout caused by TAS. They perceive TAS as common and not overly damaging to their self-concept, unlike students with moderate and high PsyCap. PsyCap plays an essential role in helping students cope with academic pressures

PsyCap functions as a buffer in the moderate and high PsyCap groups, reducing burnout and protecting students from achieving academic success despite experiencing toxic supervision. According to the SOS theory, unsupportive academic supervision can lead to burnout and decreased academic performance. For students with high PsyCap, failure to meet academic expectations does not undermine their self-concept. They recognize that such situations may be damaging, leading to increased stress. With high PsyCap, respondents strive to protect themselves and their self-concept by mitigating burnout caused by TAS. SOS theory helps us understand that stress experienced during supervision often stems from the mismatch between expectations and reality (Opstrup & Pihl-Thingvad, 2016). Some concrete examples of mismatches include discrepancies in research data or theory foundations in dissertation preparation. Supervisors often provide changing inputs, sometimes altering the entire proposal without argumentative reasons. Discussions are limited, especially regarding epistemological and paradigmatic issues underlying the research. Hence, efforts by the moderate and high PsyCap groups to alleviate burnout include building clear communication, consistent support, and the ability to adapt to supervisory demands and manage stress to achieve optimal academic results. This theory also highlights the importance of good stress management skills in coping with the

dynamics of supervision, which is often unpredictable. Students who can adapt to changes or mismatches in supervision are better able to manage stress and achieve academic goals.

## LIMITATIONS

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Further research might explore that relevant to the context in which doctoral students are faced with TAS, students have social support, a conducive academic culture, or diverse individual coping styles. However, these variables have not yet been explored. Further studies could identify how these factors interact with PsyCap. This study looked at PsyCap as a whole but did not explain which elements (self-efficacy, optimism, resilience, or hope) contributed most to reducing burnout. Future studies might explore these elements individually to identify more specific interventions. Longitudinal research is possible, given that the doctoral education process in Indonesia generally lasts up to seven years. This study did not measure the long-term impact of toxic supervision and PsyCap on mental health both during and after the education process and on postdoctoral career success. Longitudinal studies might be conducted to evaluate these effects in more depth as a basis for developing and testing PsyCap-based intervention programs.

## CONCLUSION

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PsyCap mitigates the full impact of toxic leadership on academic performance. PsyCap mitigates the pervasive impact of toxic academic supervision and burnout. TAS significantly influences burnout among doctoral students, especially those with low PsyCap. The mismatch between student expectations and supervisory reality becomes a major source of stress, leading to burnout. However, toxic supervision does not directly impact academic performance unless students experience high burnout. For students with low PsyCap, toxic supervision can exacerbate burnout but does not necessarily have a significant impact on academic performance. Conversely, for students with moderate and high PsyCap, PsyCap serves as a buffer, reducing the impact of burnout and allowing students to maintain academic achievement despite experiencing toxic supervision.

### *THEORETICAL IMPLICATIONS*

This study strengthens the core idea of the SOS theory that negative perceptions of how one is treated, particularly in academic supervision, can trigger feelings of humiliation and failure, ultimately leading to burnout. This study provides a more concrete picture of how the SOS mechanism works in the context of supervision, such as through excessive criticism or unmet expectations. Toxic supervision not only causes burnout but also negatively impacts students' academic performance. PsyCap has proven effective in reducing the negative impact of toxic supervision on burnout. Students with high PsyCap are better able to cope with the challenges and pressures that arise from unhealthy supervisor-student relationships. PsyCap serves as a psychological resource that helps students manage stress and maintain mental well-being. The interaction between toxic supervision and PsyCap is dynamic. Toxic supervision can reduce PsyCap, but high PsyCap can protect individuals from the negative effects of toxic supervision. This study extends the scope of the SOS theory by incorporating resource scarcity as one of the stress triggers.

### *PRACTICAL IMPLICATIONS*

This study confirms that PsyCap (hope, self-efficacy, resilience, and optimism) plays an important role in reducing burnout and supporting doctoral students' academic success despite being faced with toxic academic supervision with its pervasive nature. The findings provide theoretical and practical contributions with several implications that can be applied in the context of higher education in doctoral programs. Universities can develop programs to increase PsyCap to mitigate the effects of TAS on burnout and increase academic performance, such as designing an academic environment that supports knowledge sharing about research experiences and digital information literacy about research where students learn independently to increase their PsyCap. On the other hand, universities

also build a climate of academic supervision that supports rather than undermines by building dialogue and argumentation and the ability to manage research between supervisors and students. Students with moderate and high PsyCap are better able to adapt, manage stress, and maintain good academic performance by developing strategies such as clear communication, consistent support, and the ability to adapt to supervisory dynamics. SOS theory emphasizes the importance of stress management skills in dealing with uncertainty and mismatches in academic supervision, which are often unpredictable. Universities provide resources to support students, such as financial assistance for joint scientific writing between lecturers and students. On the other hand, universities need to pay attention to the welfare of supervisors, functional positions, and support to improve the quality of supervision received by doctoral students to reduce burnout and improve academic performance and dropout rates.

### ***RECOMMENDATIONS FOR FUTURE RESEARCH***

Exploration of other factors besides PsyCap that may play a role as moderators in the relationship between TAS and burnout, such as academic culture, social support, academic environment, or coping styles, is suggested for further studies in relation to toxic supervision, burnout, and academic performance. Future studies should also explore differences among PsyCap elements (self-efficacy, optimism, and resilience) that influence the impact of toxic supervision. Identifying which PsyCap element is more dominant in mitigating burnout can help identify specific interventions for the most effective PsyCap development. In addition to doctoral students, future research might be expanded to other education levels, such as undergraduate or master's students. This will aid in understanding whether the effects of toxic supervision are universal across all educational levels or more specific to doctoral students.

### **REFERENCES**

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- Ahmed, I., & Mohamed Makhbul, Z. K. (2024). Abusive supervision, dehumanization, knowledge hiding behavior and psychological capital—A daily diary method study. *Journal of Knowledge Management*. <https://doi.org/10.1108/JKM-06-2022-0469>
- Alhadabi, A., & Karpinski, A. C. (2020). Grit, self-efficacy, achievement orientation goals, and academic performance in university students. *International Journal of Adolescence and Youth*, 25(1), 519–535. <https://doi.org/10.1080/02673843.2019.1679202>
- Al Makhamreh, M., & Stockley, D. (2020). Mentorship and well-being: Examining doctoral students' lived experiences in doctoral supervision context. *International Journal of Mentoring and Coaching in Education*, 9(1), 1–20. <https://doi.org/10.1108/IJMCE-02-2019-0013>
- Al-Zyoud, M. F., & Mert, İ. S. (2019). Does employees' psychological capital buffer the negative effects of incivility? *EuroMed Journal of Business*, 14(3), 239–250. <https://doi.org/10.1108/EMJB-03-2018-0021>
- Andrade, D., Ribeiro, I. J., Prémusz, V., & Maté, O. (2023). Academic burnout, family functionality, perceived social support and coping among graduate students during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 20(6), 4832. <https://doi.org/10.3390/ijerph20064832>
- Barratt, J. M., & Duran, F. (2021). Does psychological capital and social support impact engagement and burnout in online distance learning students? *Internet and Higher Education*, 51(May), 100821. <https://doi.org/10.1016/j.iheduc.2021.100821>
- BBC News Indonesia. (2024, August 17). *Undip PPDS doctor allegedly committed suicide due to bullying and heavy workload*. BBC News. <https://www.bbc.com/indonesia/articles/c8erp421xj1o>
- Bougie, R., & Sekaran, U. (2019). *Research methods for business: A skill building approach*. John Wiley & Sons.
- Carmona-Halty, M., Salanova, M., Llorens, S., & Schaufeli, W. B. (2021). Linking positive emotions and academic performance: The mediated role of academic psychological capital and academic engagement. *Current Psychology*, 40(6), 2938–2947. <https://doi.org/10.1007/s12144-019-00227-8>

- Chen, C., Zhu, Y., Xiao, F., & Que, M. (2023). Academic motivation and social support: mediating and moderating the life satisfaction and learning burnout link. *Psychology Research and Behavior Management*, 4583-4598. <https://doi.org/10.2147/PRBM.S438396>
- Chirkowska-Smolak, T., Piorunek, M., Górecki, T., Garbacik, Ż., Drabik-Podgórna, V., & Klawnsiuc-Zduńczyk, A. (2023). Academic burnout of Polish students: A latent profile analysis. *International Journal of Environmental Research and Public Health*, 20(6), 4828. <https://doi.org/10.3390/ijerph20064828>
- Cornér, S., Löfström, E., & Pyhältö, K. (2017). The relationships between doctoral students' perceptions of supervision and burnout. *International Journal of Doctoral Studies*, 12, 91–106. <https://doi.org/10.28945/3754>
- Deem, R. (2020). Rethinking doctoral education: University purposes, academic cultures, mental health and the public good. *Structural and Institutional Transformations in Doctoral Education: Social, Political and Student Expectations*, 13–42. [https://doi.org/10.1007/978-3-030-38046-5\\_2](https://doi.org/10.1007/978-3-030-38046-5_2)
- de Villiers Scheepers, M., Williams, P., Schaffer, V., Grace, A., Walling, C., Campton, J., Hands, K., Fisher, D., Banks, H., Loth, J., & Scheelings, A. (2023). Creating spaces of well-being in academia to mitigate academic burnout: A collaborative auto-ethnography. *Qualitative Research Journal*, 23(5), 569–587. <https://doi.org/10.1108/QRJ-04-2023-0065>
- Dias, P. C., Peixoto, R., & Cadime, I. (2021). Associations between burnout and personal and professional characteristics: A study of Portuguese teachers. *Social Psychology of Education*, 24(4), 965-984. <https://doi.org/10.1007/s11218-021-09640-z>
- Fahie, D. (2020). The lived experience of toxic leadership in Irish higher education. *International Journal of Workplace Health Management*, 13(3), 341–355. <https://doi.org/10.1108/IJWHM-07-2019-0096>
- Fischer, T., Tian, A. W., Lee, A., & Hughes, D. J. (2021). Abusive supervision: A systematic review and fundamental rethink. *Leadership Quarterly*, 32(6), 101540. <https://doi.org/10.1016/j.leaqua.2021.101540>
- Galindo-Domínguez, H., & Bezanilla, M. J. (2021). Promoting time management and self-efficacy through digital competence in university students: A mediational model. *Contemporary Educational Technology*, 13(2), ep294. <https://doi.org/10.30935/cedtech/9607>
- Haider, Z., & Dasti, R. (2022). Mentoring, research self-efficacy, work–life balance and psychological well-being of doctoral program students. *International Journal of Mentoring and Coaching in Education*, 11(2), 170-182. <https://doi.org/10.1108/IJMCE-07-2020-0036>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hattab, S., Wirawan, H., Salam, R., Daswati, D., & Niswaty, R. (2022). The effect of toxic leadership on turnover intention and counterproductive work behaviour in Indonesia public organisations. *International Journal of Public Sector Management*, 35(3), 317–333. <https://doi.org/10.1108/IJPSM-06-2021-0142>
- Hazan-Liran, B., & Karni-Vizer, N. (2024). Psychological capital as a mediator of job satisfaction and burnout among teachers in special and standard education. *European Journal of Special Needs Education*, 39(3), 337–351. <https://doi.org/10.1080/08856257.2023.2215009>
- Herbst, T. H. H., & Roux, T. (2023). Toxic leadership: A slow poison killing women leaders in higher education in South Africa? *Higher Education Policy*, 36(1), 164–189.
- Jackson, S. E., & Maslach, C. (1982). After-effects of job-related stress: Families as victims. *Journal of Organizational Behavior*, 3(1), 63–77.
- Jagodics, B., & Szabó, É. (2023). Student burnout in higher education: A demand-resource model approach. *Trends in Psychology*, 31(4), 757–776. <https://doi.org/10.1007/s43076-021-00137-4>
- Julmi, C., Pereira, J. M., Bramlage, J. K., & Jackenkroll, B. (2022). Explaining the relationship between ethical leadership and burnout facets in the academic context: The mediating role of illegitimate tasks. *International Journal of Organization Theory and Behavior*, 25(1–2), 39–55. <https://doi.org/10.1108/IJOTB-11-2020-0204>



- Klahn Acuña, B., & Male, T. (2024). Toxic leadership and academics' work engagement in higher education: A cross-sectional study from Chile. *Educational Management Administration and Leadership*, 52(3), 757–773. <https://doi.org/10.1177/17411432221084474>
- Küçük, Ö., & Demirtaş, Z. (2021). The intermediary effect of psychological capital on the relationship between toxic leadership behaviors of school administrators and school effectiveness. *Eğitim Yansımaları*, 5(1), 1–13.
- Lemée, C., Pierre, F., Boisselier, J., Guillard, M., & Wagner, V. (2020). How can we help PhD students cope with mental health issues and drop-out? An extensive analysis of discourse. *Research Square Preprint*, 1–10. <https://doi.org/10.21203/rs.3.rs-87359/v1>
- Leon-Perez, J. M., Antino, M., & Leon-Rubio, J. M. (2016). The role of psychological capital and intragroup conflict on employees' burnout and quality of service: A multilevel approach. *Frontiers in Psychology*, 7(NOV), 1–11. <https://doi.org/10.3389/fpsyg.2016.01755>
- Li, R., Che Hassan, N., & Saharuddin, N. (2023). Psychological capital related to academic outcomes among university students: A systematic literature review. *Psychology Research and Behavior Management*, 16, 3739–3763. <https://doi.org/10.2147/PRBM.S421549>
- Liu, D., Liao, H., & Loi, R. (2012). The dark side of leadership: A three-level investigation of the cascading effect of abusive supervision on employee creativity. *Academy of Management Journal*, 55(5), 1187–1212.
- Löfström, E., & Pyhältö, K. (2020). What are ethics in doctoral supervision, and how do they matter? Doctoral Students' perspective. *Scandinavian Journal of Educational Research*, 64(4), 535–550. <https://doi.org/10.1080/00313831.2019.1595711>
- Loghman, S., Quinn, M., Dawkins, S., Woods, M., Om Sharma, S., & Scott, J. (2023). A comprehensive meta-analyses of the nomological network of psychological capital (PsyCap). *Journal of Leadership and Organizational Studies*, 30(1), 108–128. <https://doi.org/10.1177/15480518221107998>
- Luthans, F., Avey, J. B., Avolio, B. J., Norman, S. M., & Combs, G. M. (2006). Psychological capital development: Toward a micro-intervention. *Journal of Organizational Behavior*, 27(3), 387–393. <https://doi.org/10.1002/job.373>
- Luthans, F., & Youssef-Morgan, C. M. (2017). Psychological capital: An evidence-based positive approach. *Annual Review of Organizational Psychology and Organizational Behavior*, 4, 339–366. <https://doi.org/10.1146/annurev-orgpsych-032516-113324>
- Mackey, J. D., Parker Ellen, B., McAllister, C. P., & Alexander, K. C. (2020). The dark side of leadership: A systematic literature review and meta-analysis of destructive leadership research. *Journal of Business Research*, 132(November 2019), 705–718. <https://doi.org/10.1016/j.jbusres.2020.10.037>
- Mahlangu, V. P. (2020). Understanding toxic leadership in higher education work places through betrayal trauma theory. *BCEs Conference Books*, 18, 115–121.
- Martínez, I. M., Youssef-Morgan, C. M., Chambel, M. J., & Marques-Pinto, A. (2019). Antecedents of academic performance of university students: Academic engagement and psychological capital resources. *Educational Psychology*, 39(8), 1047–1067. <https://doi.org/10.1080/01443410.2019.1623382>
- Martinko, M. J., Harvey, P., Brees, J. R., & Mackey, J. (2013). A review of abusive supervision research. *Journal of Organizational Behavior*, 34(SUPPL 1). <https://doi.org/10.1002/job.1888>
- Matos, F. R., & De Andrade, A. L. (2023). Psychological resources and student burnout among pre-university students. *Psico-USF*, 28(2), 321–332. <https://doi.org/10.1590/1413-82712023280209>
- Milosevic, I., Maric, S., & Lončar, D. (2020). Defeating the Toxic Boss: The nature of toxic leadership and the role of followers. *Journal of Leadership and Organizational Studies*, 27(2), 117–137. <https://doi.org/10.1177/1548051819833374>
- Nabais, A. R., Chambel, M. J., & Carvalho, V. S. (2024). Unravelling time in higher education: Exploring the mediating role of psychological capital in burnout and academic engagement. *Education Sciences*, 14(6). <https://doi.org/10.3390/educsci14060663>

- Nambudiri, R., Shaik, R., & Ghulyani, S. (2020). Student personality and academic achievement: Mediating role of psychological capital (PsyCap). *International Journal of Educational Management, 34*(4), 767–781. <https://doi.org/10.1108/IJEM-12-2018-0385>
- Okere, O. O. (2024). A content analysis of tweets on toxic doctoral supervision. *Journal of Applied Learning and Teaching, 7*(1), 226–234. <https://doi.org/10.37074/jalt.2024.7.1.26>
- Olabiyi, O. J., Du Plessis, M., & Van Vuuren, C. J. (2024). Unveiling the toxic leadership culture in south African universities: Authoritarian behaviour, cronyism and self-serving practices. *Frontiers in Education, 9*(July), 1–10. <https://doi.org/10.3389/feduc.2024.1446935>
- Opstrup, N., & Pihl-Thingvad, S. (2016). Stressing academia? Stress-as-offence-to-self at Danish universities. *Journal of Higher Education Policy and Management, 38*(1), 39–52. <https://doi.org/10.1080/1360080X.2015.1126895>
- Park, K. E., Sibalis, A., & Jamieson, B. (2021). The mental health and well-being of master's and doctoral psychology students at an urban Canadian university. *International Journal of Doctoral Studies, 16*, 429–447. <https://doi.org/10.28945/4790>
- Peltonen, J. A., Vekkaila, J., Rautio, P., Haverinen, K., & Pyhältö, K. (2017). Doctoral students' social support profiles and their relationship to burnout, drop-out intentions, and time to candidacy. *International Journal of Doctoral Studies, 12*, 157-173. <https://doi.org/10.28945/3792>
- Popa-Velea, O., Pristavu, C. A., Ionescu, C. G., Mihăilescu, A. I., & Diaconescu, L. V. (2021). Teaching style, coping strategies, stress and social support: Associations to the medical students' perception of learning during the SARS-CoV-2 pandemic. *Education Sciences, 11*(8), 414. <https://doi.org/10.3390/educsci11080414>
- Puah, S., Lim, S. M., Kok, X. F. K., & Devilly, O. (2024, July). The longitudinal study on the reciprocal effects between GPA and burnout in university students: Exploring grit, self-efficacy, and resilience as moderators. *Frontiers in Education, 9*. <https://doi.org/10.3389/feduc.2024.1408058>
- Pyhältö, K., Vekkaila, J., & Keskinen, J. (2015). Fit matters in the supervisory relationship: Doctoral students and supervisors perceptions about the supervisory activities. *Innovations in Education and Teaching International, 52*(1), 4–16. <https://doi.org/10.1080/14703297.2014.981836>
- Radack, B. M., Luckett, T., III, Fish, W. W., & Austin, G. P. (2022). The predictive relationship between psychological capital and academic burnout in postgraduate students. *Internet Journal of Allied Health Sciences and Practice, 20*(4), 2. <https://doi.org/10.46743/1540-580X/2022.2156>
- Rajakumar, H. K., Gaman, M.-A., Puyana, J. C., & Bonilla-Escobar, F. J. (2024). Transforming toxic research cultures: Protecting the future of medical students and early career researchers – Part I. *International Journal of Medical Students, 12*(2), 128–132. <https://doi.org/10.5195/ijms.2024.2763>
- Ratnaningsih, I. Z., Prihatsanti, U., Prasetyo, A. R., & Sumintono, B. (2024). Validation of the Indonesian version of the psychological capital questionnaire (PCQ) in higher education: A Rasch analysis. *Journal of Applied Research in Higher Education. https://doi.org/10.1108/JARHE-10-2023-0480*
- Raza, B., Ahmed, A., Zubair, S., & Moueed, A. (2019). Linking workplace deviance and abusive supervision: moderating role of positive psychological capital. *International Journal of Organizational Leadership, 8*(1), 95–111. <https://doi.org/10.33844/ijol.2020.60472>
- Schaufeli, W. B., Martínez, I. M., Pinto, A. M., Salanova, M., & Barker, A. B. (2002). Burnout and engagement in university students a cross-national study. *Journal of Cross-Cultural Psychology, 33*(5), 464–481. <https://doi.org/10.1177/0022022102033005003>
- Semmer, N. K., Jacobshagen, N., Keller, A. C., & Meier, L. L. (2021). Adding insult to injury: Illegitimate stressors and their association with situational well-being, social self-esteem, and desire for revenge. *Work and Stress, 35*(3), 262–282. <https://doi.org/10.1080/02678373.2020.1857465>
- Semmer, N. K., Jacobshagen, N., Meier, L., & Elfering, A. H. (2007). *Occupational stress research: The stress-as-of-fense-to-self perspective*. <https://www.researchgate.net/publication/228079612>

- Semmer, N. K., Tschan, F., Jacobshagen, N., Beehr, T. A., Elfering, A., Kälin, W., & Meier, L. L. (2019). Correction to: Stress as offense to self: A promising approach comes of age. *Occupational Health Science*, 4(1–2), 213–214. <https://doi.org/10.1007/s41542-020-00054-5>
- Shahnawaz, M. G., & Siddiqi, N. (2023). Examining toxic supervision in higher education in India. *Higher Education Evaluation and Development*, 17(1), 2–22. <https://doi.org/10.1108/heed-06-2021-0047>
- Shin, M., Goodboy, A. K., & Bolkan, S. (2022). Profiles of doctoral students' self-determination: susceptibilities to burnout and dissent. *Communication Education*, 71(2), 83–107. <https://doi.org/10.1080/03634523.2021.2001836>
- Smith, N., & Fredricks-Lowman, I. (2020). Conflict in the workplace: A 10-year review of toxic leadership in higher education. *International Journal of Leadership in Education*, 23(5), 538–551. <https://doi.org/10.1080/13603124.2019.1591512>
- Snow, N., Hickey, N., Blom, N., O'mahony, L., & Mannix-Mcnamara, P. (2021). An exploration of leadership in post-primary schools: The emergence of toxic leadership. *Societies*, 11(2). <https://doi.org/10.3390/soc11020054>
- Sverdlik, A., Hall, N. C., McAlpine, L., & Hubbard, K. (2018). The PhD experience: A review of the factors influencing doctoral students' completion, achievement, and well-being. *International Journal of Doctoral Studies*, 13, 361-388. <https://doi.org/10.28945/4113>
- Tannenbaum, R., & Schmidt, W. H. (2009). *How to choose a leadership pattern*. Harvard Business Review. [https://www.google.com/books/edition/How to Choose a Leadership Pattern/42x3CgAAQBAJ?hl=en](https://www.google.com/books/edition/How+to+Choose+a+Leadership+Pattern/42x3CgAAQBAJ?hl=en)
- Tho, N. D. (2023). Business students' psychological capital and quality of university life: The moderating role of study crafting. *Education + Training*, 65(1), 163–177. <https://doi.org/10.1108/et-05-2022-0176>
- Tikkanen, L., Anttila, H., & Pyhältö, K. (2024). How does supervision influence a doctoral supervisor's occupational wellbeing? *European Journal of Higher Education*, 1-19. <https://doi.org/10.1080/21568235.2024.2314470>
- Virga, D., Baciu, E. L., Lazar, T. A., & Lupsa, D. (2020). Psychological capital protects socialworkers from burnout and secondary traumatic stress. *Sustainability*, 12(6), 1–16. <https://doi.org/10.3390/su12062246>
- Wollast, R., Aelenei, C., Chevalère, J., Van der Linden, N., Galand, B., Azzi, A., Frenay, M., & Klein, O. (2023). Facing the dropout crisis among PhD candidates: The role of supervisor support in emotional well-being and intended doctoral persistence among men and women. *Studies in Higher Education*, 48(6), 813–828. <https://doi.org/10.1080/03075079.2023.2172151>
- Wollast, R., Boudrenghien, G., Van Der Linden, N., Galand, B., Roland, N., Devos, C., De Clercq, M., Klein, O., Azzi, A., & Frenay, M. (2018). Who are the doctoral students who drop out? Factors associated with the rate of doctoral degree completion in universities. *International Journal of Higher Education*, 7(4), 143–156. <https://doi.org/10.5430/ijhe.v7n4p143>
- Wongtrakul, W., Dangprapai, Y., Saisavoey, N., & Sa-Nguanpanich, N. (2023). Reliability and validity study of the Thai adaptation of the Maslach Burnout Inventory-Student Survey among preclinical medical students at a medical school in Thailand. *Frontiers in Psychology*, 14, 1054017. <https://doi.org/10.3389/fpsyg.2023.1054017>
- Wu, T. Y., & Changya Hu. (2009). Abusive supervision and employee emotional exhaustion: Dispositional antecedents and boundaries. *Group and Organization Management*, 34(2), 143–169. <https://doi.org/10.1177/1059601108331217>

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