



Received: 11 February 2020
Accepted: 30 August 2020

*Corresponding author: Zuhair Abbas,
Department of Business Administration,
Faculty of Management and Economics,
Tomas Bata University in Zlin, Mostni
5139, Zlin 76001, Czech Republic
E-mail: abbas@utb.cz

Reviewing editor:
Pantea Foroudi, MBT, Middlesex
University, London, UK

Additional information is available at
the end of the article

MANAGEMENT | RESEARCH ARTICLE

Examining the impact of abusive supervision on employees' psychological wellbeing and turnover intention: The mediating role of intrinsic motivation

Kanwal Hussain¹, Zuhair Abbas^{2*}, Saba Gulzar¹, Abdul Bashiru Jibril³ and Altaf Hussain⁴

Abstract: The competitiveness and sustainability of employees in service and non-service-based organizations continue to trigger scholars' interest to investigate the related factors. As per the review of literature, there are only a few studies have been conducted on abusive supervision and intrinsic motivation about employee psychological wellbeing and turnover intention. We applied the social exchange theory to abusive supervisors at the workplace. This study, therefore, explores the direct and indirect relationship between abusive supervision on subordinate psychological wellbeing and turnover in service-based organizations. This empirical study employs a quantitative research methodology to establish the mediating influence of intrinsic motivation between the underlying constructs. Out of 300

ABOUT THE AUTHOR

Kanwal Hussain is a Research Associate at the Institute of Business Management (IoBM), Pakistan. Her research area includes organizational psychology, abusive supervision, green human resource management and psychological wellbeing.

Zuhair Abbas is currently a Ph.D. candidate in the Department of Business Administration, at Tomas Bata University in Zlin, Czech Republic, Europe. His research focus on green human resource management, abusive supervision, employee wellbeing and sustainability.

Saba Gulzar is a Senior Lecturer at the Institute of Business Management (IoBM), Pakistan. She has 13 years of teaching. Her main focus: employee wellbeing, psychological contract and abusive supervision. She is also a reviewer for a few journals.

Ing. Abdul Bashiru Jibril is currently a Ph.D. candidate in the Department of Management and Marketing at TBU in Zlin, Czech Republic. His research covers; Social media marketing, brand management, and SME's development. He has several publications.

Altaf Hussain is a Lecturer at the Department of Business Administration, SBBUSBA, Nawabshah, Pakistan. His research area includes Sustainable performance and green marketing.

PUBLIC INTEREST STATEMENT

Employee's wellbeing in the organization and their retention continues to be an unexplored area of study for both scholars and practitioners. In 1915 abusive supervision concept was first introduced in the literature. This study aimed to highlight the aspects of the subordinate's psychological behaviour which tends to determine their intention to leave the organization and also measures their health issues. Abusive supervision in the workplace is quite a prevalent phenomenon, and employees should not have to suffer from this. Hence, this study aims to investigate and determine the status of the abusive behaviour of supervisors in the organizations of Pakistan as perceived by the subordinates and co-workers at the workplace during their job tenure. The study provides substantial implications to managers and leaders by redesigning existing strategies to promote a feasible culture with healthier working environment for the employees in order to improve performance.



Zuhair Abbas

research questionnaires distributed to full-time employees working in service-based organizations in Pakistan, 225 responses were successful for analysis, and validation was conducted through partial least square structural equation modelling (PLS-SEM). The results of this study demonstrate that abusive supervision (AS) positively impacting on both psychological wellbeing (PWB) and turnover intentions (TI) of the employees. More importantly, intrinsic motivation (IM) is also positively and significantly mediate the relationship between AS and PWB, and AS and TI. The study provides substantial implications to managers and leaders by redesigning existing strategies to promote a feasible culture within the working environment for the employees to improve performance. The current study enhances existing literature on employee wellbeing and human resource management by integrating intrinsic motivation (IM) as a mediation model/concept. Limitations and future research directions have been discussed in the entire paper.

Subjects: Business, Management and Accounting; Economics, Finance, Business & Industry; Social Psychology; Work & Organizational Psychology

Keywords: abusive supervision; psychological wellbeing; intrinsic motivation; turnover intention; Pakistan

JEL Classification: M1; M12; M14

1. Introduction

The bullying bosses affect heavily in terms of costs on organizations and employees that are manifold and frequently veiled. People in positions of power are showing abusive behaviour is considered as the most significant worry for the organizations. During the most 15 years, the significance of this issue is reflected which increased attention in abusive supervision. This attention is driven, to a limited extent, which damages the mental and physical well-being of the subordinates by the substantial impact of the supervisor (M. J. Martinko et al., 2013; B. J. Tepper et al., 2017). Although, Richard et al. (2018) found that abusive supervision in the workplace environment is the source that increments turnover intentions. As indicated by Pradhan et al. (2019) abusive supervision is a primary worry for workers' expectations to stop from associations.

Several researchers have found that abusive supervision is a reason to leave the company but only a few of them come up with the mechanism which relives or lessen its effect (Peltokorpi, 2019; Pradhan & Jena, 2017). Malik et al. (2020) inspected in the current study that multiple roles of supervisors clash the satisfaction of subordinated with supervision. They additionally contend earlier investigations embraced exploitation approach and they utilized the execution approach. Another interesting exploration led by Guo et al. (2020) examined dependent on the social exchange perspective; they found that reveals the worst side of proactive character by confirming the directing impact of the proactive character. Even though, Dirican and Erdil (2020) found that abusive supervision prompts destructive outcomes on the workers at the work environment under the focal point of social exchange theory. B. J. Tepper et al. (2017) also explored that around 10 % of the workforce is a complaint about experiencing abusive supervision

Further participation in social exchange has been seen late; toxic followership lets managers experience low levels of relational equity, which provokes abusive supervision sight accordingly (Camps et al., 2020). As indicated by Ghani et al. (2020) in light of social exchange and displaced aggression theories; they inspected in the large university context that abusive supervision will create knowledge hiding issues due to their psychological contract breach. Although, Ramdeo and Singh (2019) found that procedural justice interceded the connection between abusive management and coordinated to people and aim to stop under the focal point of social exchange theory in different open and private part associations in the Republic of Trinidad and Tobago. In any case,

Yan et al. (2020) depict to comprehend the mechanism which identified the antecedents between abusive supervision and team.

In spite of the fact that Hackney and Perrewé (2018) offered experimental help to find out the connection between abusive supervision and the castigatory conduct of subordinates against their abusive supervisors. All the more critically, Ahmad and Begum (2020) performed research in the banking sector, their exploration found that abusive supervision has both immediate and aberrant effect on the expectation to leave with the end goal that emotional exhaustion reinforces this relationship. In spite of the fact that Singh (2019) hypothesizes those workers who are casualties of abusive supervision are bound to create aims to find employment elsewhere. As indicated by Wu et al. (2020) analyzed solitary wolf inclinations mitigate the principle antagonistic effect of oppressive management on moral personality and the aberrant impact of harsh oversight on authoritative and relational abnormality through good character. The destructive impacts of abusive supervision on representatives' working environment perspectives and practices have been generally shown by earlier examination (Mackey et al., 2017). Representatives' troubled sentiments about their activity circumstances upgrade the probability that they attempt negative practices that can hurt their workplace, particularly when they experience abusive supervision (De Clercq et al., 2020).

Rice et al. (2020) analyzed the connection between abusive supervision, pioneer attributes, and hierarchical incorporation on representative results with regards to advanced education. However, their study missed the mediating role of intrinsic motivation on the interaction between abusive supervision and psychological wellbeing.

Until now, little importance has been given to intrinsic motivation with abusive supervision. The first reason being that motivation is the key variable that will lessen the impact or heighten the impact of abusive supervision on employee's performance. Thus, the mediating impact of employee motivation will key to explain the phenomena. The second reason being is more research call by a researcher to comprehend the contrivance of intrinsic motivation. Motivational condition is in which worker is obliged by self-interest for work is referred to as intrinsic motivation (Ryan & Deci, 2000). There is sufficient empirical evidence that advocates that employees answer reasonably negatively to abusive supervisor behaviour by involving themselves in behaviours that are injurious to the company and its members.

This study aims to examine the impact of the Supervisor's abusive behaviours that tend to generate negative outcomes on subordinate psychological wellbeing. As abusive supervision is now also becoming a sensitive issue in the service-based organizations of Pakistan. According to (P. Harvey et al., 2007) reflected that this issue would not only destroy individual capabilities but also related to the physical and psychological health of the employees. In Pakistan, there is not an aggregate number of studies on this crucial variable.

As indicated by Hofstede (1980) Pakistan is considered as a high-power distance society, contrasted with the western nations, where the vast majority of the researches on abusive supervision are concentrated. If we compared Pakistan with the Western world like US and EU, where power distance is found little, results will surely indicate great difference because abusive supervision has less destructive in Pakistani organizations since individuals are more inclined to underestimate abusive supervision, and also pay less care about how they are dealt with (Peltokorpi, 2019). Our proposed model is perceptibly different as far as the mediator is utilized. The main goal of this study is to explore abusive supervision with mediating variable intrinsic motivation and measure negative consequences on turnover intention and psychological wellbeing of employees. To find out the cost faced by the employees and understands this concept, which still faces a lack of research in organizations of Pakistan. The indicated objectives of this research study were as follows:

To determine the influence of abusive supervision on subordinate turnover intention.

To investigate the impact of abusive supervision on subordinate psychological wellbeing.

- *To study the mediating role of intrinsic motivation between abusive supervision and subordinate psychological wellbeing.*
- *To study the mediating role of intrinsic motivation among abusive supervision and turnover intention.*

This study follows these research questions:

RQ1: What is the role of abusive supervision on employees' behaviours?

RQ2: How does abusive supervision affect the productivity of the organization?

2. Literature Review

2.1. Abusive Supervision

The theme of abusive supervision has pulled in analysts' consideration in recent decades. Tepper (2000) described abusive supervision as a perception of a supervisor of the degree to which its superiors engage in the continuous delivery of threatening verbal sentences and nonverbal actions, without physical touch. Instances of practices that fall inside the area of abusive supervision incorporate open disparagement (Tepper, 2000), invades privacy, took credit of subordinate work, assigning blame, and show rudeness (Tepper et al., 2006) just as yelling, humiliating, and screaming on their employees (Mitchell & Ambrose, 2007). View of abusive supervision is a hierarchical stressor, equipped for burdening or surpassing a worker's asset (Restubog et al., 2011).

A few types of research consider having upheld this declaration, appearing abusive supervision is related with mental pain and stress-related results, for example, expanded disappointment, vulnerability (Ashforth, 1997), strong wellbeing protests, and reduced self-confidence (Burton & Hoobler, 2006). However, there is a need to develop literature that can identify the relationship between abusive behaviour of Supervisor and employee wellbeing and develop an understanding of how the employee can appraise such impacts. The researchers have studied the impact of abusive behaviour of supervisors at the workplace comprehensively. Many researchers have categorically founded the strong correlation between abusive behaviour of Supervisor higher turnover, work-life imbalance, and greater intensity of stress and emotional tiredness (M. J. Martinko et al., 2013; B. J. Tepper et al., 2017). Significantly in the current research, such researchers are also pointing towards the inferior psychological wellbeing (Lin et al., 2013).

Burton (1930) explains supervision as "an expert, technical service designed in which group of people work together to increase the effectiveness of group under trained mentor"; he also demonstrates that mostly supervision emphasizes planning and managing time. However, Callan (1970) contended that it is collectively about the association's vital assets usage to accomplish its long-and momentary objectives and destinations. (Neuman & Baron, 1998) further stated that abusive supervision is mortifying and scorns coworkers in front of others. Abusive leaders say, "Let them hate me as long as they're scared of me." These leaders may be anxious to (a) warn followers to be cautious at the workplace (Frazier & Bowler, 2015), (b) prevent deviance or bad results (e.g., Lian et al., 2014; Walter et al., 2015), or (c) monitor the productivity of followers at aspirational levels (Khan et al., 2018).

Abusive supervision has been observed in the workforce for a long time, studies have recently started to note its effects and supervisory activity is related to lower job and personal satisfaction, emotional engagement and lower expectations, the greater conflict between work and family and mental distress (Ashforth, 1997; Tepper, 2000), and increased interpersonal confrontation to

administrative power (Tepper et al., 2001). According to Gilbreath and Benson (2004) there is a sufficient explanation for the supervisor attitude that is a leading construct for employee psychological conditions, and such behaviour of Supervisor develops a measure role to forecast the psychological issues. Also suggested that subordinate does not neglect the impact of the behaviour of the Supervisor to have a healthier workplace environment and emphasizes that such behaviour strongly put stresses on employee wellbeing. There is a positive association between emotional labour and perceptions of abusive supervision (Wu, 2008). Tepper (2000) further suggested that abusive supervision is an emerging problem in many workplaces, and also this burning issue affected a large number of organizations' outcomes.

H:1 *Abusive Supervision has a significant influence on intrinsic motivation in service-based organizations.*

2.2. Mediating role of Intrinsic Motivation

An individual who is driven by self-enthusiasm for the work and takes part in it for their interests that condition is referred to as intrinsic motivation (Ryan & Deci, 2000). Intrinsic motivation is a standout amongst the most important determinant, which can elaborate the difference between “what an individual be able to do and what an individual determination of doing” (Amabile, 1993). People who have high levels of intrinsic motivation blend effort with delight, become charmed in performing their responsibilities and are probable to accept challenges, to take task risks, to prevent them from obstacles and also tries to find the best solution for their tasks in every manner (Amabile, 1993; Zhou and Shalley, 2003).

Also, the literature on abusive supervision offers the utmost relevant theoretical trend linking the violent or adverse social atmosphere with a decreased intrinsic incentive (H. Zhang et al., 2014). Employee satisfaction is impaired by poor innate commitment (Grant, 2008). (Liu et al., 2012) also noted that abstract claims made can only be proved by the execution of experimental programs. To do this, we set up a paradigm in which inherent motivation was manipulated as a mediating element, through which we empirically evaluated the indirect impact of coercive control on psychological health and turnover intention. Intrinsic motivation can be described as the desire of an employee to throw his/her energy into the job itself for the sake of enjoyment (Ryan & Deci, 2000). An adverse social environment can harm employees' intrinsic motivation (Amabile et al., 1996). Therefore, to resolve the constraint of (Liu et al., 2012), we pose intrinsic motivation as an important fundamental method that clarifies the indirect relationship of coercive control of the job activities of sub-behaviours.

Previous results suggest that victims of abusive supervision are frustrated (Hoobler Abused employees may unlikely spot abusive supervisors retaliating abused employees or occasionally displaying behavior that is not supposed to be punishable. Employees restricted their intrinsic motivation to one of those states that may occur (X. X. Zhang & Bartol, 2010). When workers are manipulated and compelled to act and work, particularly when they are unable to regain their self-interest due to power disparity or discrepancy in status leads to a decrease in employee's intrinsic motivation.

Past research suggests that the cooperative interaction between supervisor and subordinate can improve the subordinate's inherent morale (Shin & Zhou, 2003), even when coercive behaviour involves a curbing and controlling supervisor. Subordinate relationships (Tepper, 2007) can trigger intrinsic commitment among subordinates to deteriorate “(Deci et al., 1989). Diminishing supervisor satisfaction in their employment which ultimately triggered busting intrinsic morale in the workplace by brutalizing Supervisor's actions (Liu et al., 2012). In the conditions of power inequalities or discrepancies in status amongst supervisor-subordinate relationships, we expect that the perpetrators in abusive supervision are unable to respond/retaliate (Lord, 1998) and become

unproductive in recovering their self-interest at the workplace (Tepper et al., 2009), which eventually contributes to low intrinsic motivation. (Amabile, 1988) describes an individual's capacity to do, and what a person can do, changes by inherent motivation. Employees lose self-interest and satisfaction at the office as they sense the absence of inherent motivation (Grant, 2008) they make a limited effort to find a solution to the work-related difficulties. We must give marginal attention to jobs (X. X. Zhang & Bartol, 2010) that eventually lead to poor job profitability (Piccolo & Colquitt, 2006). Employees are ready to do well because they are self-motivated at work (Menges et al., 2017) (Rich et al., 2010).

To sum up, researchers (Dysvik & Kuvaas, 2010) revealed that there is a negative relation between employees' turnover intention and intrinsic motivation. Hence, we foretell that when employees are undergoing low intrinsic motivation due to their less self-interest at work, it will weaken their productivity and stimulate them to quit from their positions.

H2: *Intrinsic motivation mediates the relationship between psychological wellbeing in service-based organizations.*

H3: *Intrinsic motivation mediates the relationship between turnover intention in service-based organizations*

2.3. Social Exchange Theory

Social exchange theory sends convincing conceptual patterns by understanding the behaviour of subordinates at the workplace (Cropanzano & Mitchell, 2005). Also, social exchange theory describes that it is a mechanism in which substantial imputation occurs on employee behaviour due to the exchange of diverse relationships which ultimately affect the performance of the organization (Jiwen Song et al., 2009). According to the perspectives of this theory (Tepper et al., 2009), it describes adverse behaviour or unpleasant responses by its subordinates triggered by the aggressive conduct of superiors due to the rule of reciprocity, since it is regarded to be one of the most important canons of this theory (Gouldner, 1960; Harris et al., 2007).

Moreover (Cropanzano & Mitchell, 2005) then claims that reciprocity is usually referred to as positive reciprocity, besides adverse reciprocity can be similar wherever adverse behavior is returned or reimbursed with negative outcome behaviour. Supervisors must strive to respond favorably to their subordinates who believe they are getting rewards in return. Furthermore, by expressing negative responses, any of those subordinates who have the interest of being deceived by their superiors will try to reciprocate. (Tepper, 2000) described subordinates as accelerating turnover intentions and diminishing their job performance (Harris et al., 2007) in addition to compensating for abusive behaviour.

Negative reciprocity in contradiction of the foundation of maltreatment gratifies the abused employees' egoism suggest by these results (Tepper et al., 2009). Not all the sufferers of the abusive behavior of the battle for revenge of supervisors listed in the literature on retaliation and revenge (Tepper et al., 2009), since immediate retribution is not desirable or probable against their foundation (Mitchell & Ambrose, 2007), especially for individuals with low power positions about the source of violence.

2.4. Psychological wellbeing and abusive supervision

The idea of Psychological wellbeing was first identified by Jahoda and known for fundamentally introduced these ideas as clinical viewpoints which are a condition of Physical wellness. Ryff (1989) additionally expanded the work done by Jahoda on Psychological wellbeing and gave its measures. In the current, there are many indications of the significance of psychological wellbeing in the work environment. Many researchers have established consistently that employee's wellbeing is

decidedly and also a solid indicator of high individual work execution just as of certain results at the organizational level (for example, consumer loyalty, efficiency, productivity, and representative). In general, it is realized that employees with high amounts of psychological wellbeing perform greater at work than those with lower dimensions of psychological wellbeing.

Abusive supervision illustrates long-term emotional or mental harassment of subordinates through actions such as teasing subordinates in front of others, required concealment details, and the use of derogatory words, demands, and bogart tactics (Zellars et al., 2002), all encountered over a long period (Tepper, 2000). Although these are not physical attacks or sexual stabbing but are nonverbal and verbal behaviors, employees at the workplace became dissatisfied by frequently psychologically damaging them from the eternal nature of abusive supervisors. From a tension point of view, through abusive supervision, the exhausting reactions of employees (such as ill mental wellbeing and workplace dissatisfaction) and it can be viewed as a social stressor. This interpretation is supported by much of historical work (Grandey et al., 2007; Tepper, 2000; Tepper et al., 2004; Yagil, 2006).

H4: *Abusive Supervision has a significant influence on psychological wellbeing in service-based organizations.*

2.5. Turnover Intention and Abusive supervision

In recent times, employee quits are now the organization's burning problems, and it often is a normal phenomenon that employee leaves. Human resource management and organizational behavior analysis have demonstrated the potential association between attrition plan and forecasted attrition (Bigliardi et al., 2005; Memon et al., 2014). The Price has described turnover intention as an employee's tendency to stay away from the current job organization. Nevertheless, it can be argued that turnover intention should not be converted into the actual actions of leaving an institution, but such turnover intention may be a significant factor that actively drives an employee to leave an organization (Memon et al., 2014) However, Carmeli and Weisberg (2006) clarified the turnover intention as an employee's subjective calculation. This was also clarified as the key component of the organization's 3-stage thought cycle of removal. The three-stage cognitive departure cycle from an organization involves "the intentions of leaving a career, the idea of finding a new job, and finally the idea of leaving" (Rahman & Nas, 2013). However, the fact remains that both real turnover and turnover intention are completely separate factors, which therefore have a more immediate which important effect on the option of redundancy for the employee. The empirical results of multiple studies indicate that turnover intention is both an optimistic and important cognitive antecedent to real turnover behavior.

Turnover propensities have also been related to abusive supervision (Tepper, 2000). Existing literature models deliver rational backed for the idea that increasing stages of abusive supervision will encourage intentions to leave the organization and empirical support of this relationship (Tepper, 2000). (Porter & Steers, 1973) recommends in his "met expectations" model that employees normally made some expectations related to the job, one of the most considerable is a good relation with supervision. Also, this model specifies that when expectations are not met then an increase in turnover. The aspects that produce adverse psychological assessments of one's job are likely to promote withdrawal suggested by numerous models (Hom et al., 1984; Price, 1977). Abusive supervision is the main cause of individuals to dislike both their Supervisor and job (Tepper, 2000). Since the most important forecaster of actual turnover is withdrawal intentions revealed by pas research (Cotton & Tuttle, 1986). Actual turnover behaviour affects the same way in which turnover intentions by abusive supervision (Griffeth et al., 2000).

H5: *Abusive supervision has a significant impact on turnover intention*

2.6. Framework and Hypotheses Development

We, therefore, proposed a conceptual model that explains the relationships between abusive supervision, psychological wellbeing, turnover intention, and the mediating effect of intrinsic motivation on turnover intention and psychological wellbeing. Therefore, the graphical structural model depicts the proposed relationship of proposed constructs, as shown in Figure 1.

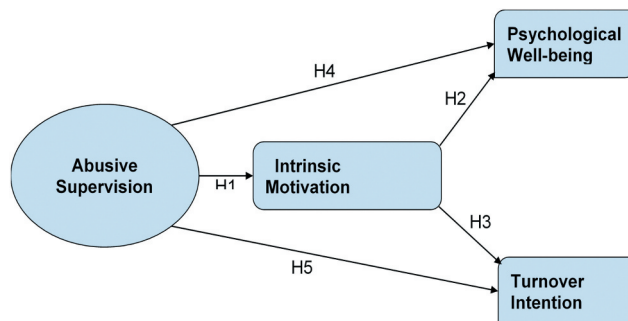
3. Research Methodology

A quantitative research approach is used in this study to deduce the uniqueness, attitude, and behaviour of the targeted sample (Creswell, 2003). The study aims to determine the relationship of abusive supervision with subordinate psychological wellbeing along with mediator intrinsic motivation in service-based organizations. The study is comprised of a survey method that is suitable in the collection of quantitative data and the ability to gauge relationships between variables (Saunders et al., 2009). To analyze the model, we used a survey-based research design technique. In this study, a novel model has tested which explaining how abusive supervision will encounter employee's psychological wellbeing and turnover intention in a Pakistan which qualifies for high power distance society.

3.1. Sample data, demography, data collection and sector composition

Four major service-based organizations in the Sindh Province of Pakistan are considered to be sampling units of this study. Notably; Banking, Health, Higher Education, and Public and Private Schools. A structured questionnaire was designed based on the proposed model (see Figure 1). Data collection, the survey questionnaire was administered by both soft and hard copy through probability and non-probability sampling techniques. The non-probability sampling technique was used to select the unit of analysis (service-based organizations) mainly due to easy access of respondents, geographical proximity, cost-effectiveness among others (Etikan et al. (2016), whereas the probability sampling technique was consequently deployed to gather responses from employees of this targeted population (Dey et al., 2020). The hard copy was used to intercept employees (respondents) of the targeted unit of analysis. While the soft copy questionnaire was sent to respondents who were not ready to answer the research questions at the time of interception. The confidentiality of information was assured after sending a letter of participation to respondents (Khuwaja et al., 2020). Out of 300 research questionnaires (soft and

Figure 1. Hypothesized Research Model.



hard copies) distributed to full-time employees working in aforementioned organizations/institutions, the filled questionnaires were thoroughly re-checked, and only 225 responses (75%) were valid for analysis.

A quick preview from Table 1 shows that most of the employees (73.8%) are female and (26.2%) male. Interestingly, it was observed that most of the employees fall within the ages between 26 to 35, Which confirms the statistical estimation of Pakistan indicating a higher percentage (64%) being youthful/young adult population (Ahmad, 2018). Most of the supervisors are male, with 75.1%, while the female ratio is 24.9%. Again, most of the respondents who took part in this survey were from the banking sector indicating 35.55% and with least 15.55% from the Public-Private Schools (Pre—Tertiary) category of the sampling population. Hence see Table1 for the socio-demographic characteristics of our study subjects.

Table 1. Sociodemographic distribution of respondents

Demography		Frequency	Percentage (%)
Gender	Male	59	26.2
	Female	166	73.8
Age	18–25	71	31.6
	26–35	126	56.0
	36 – 45	2	.9
	46 and Above	26	11.6
Educational level	Intermediate	63	28.0
	Graduation	90	40.0
	Master’s	3	1.3
	MS/MPhil	69	30.7
Work Experience	<5 Years	166	73.8
	5–10 Years	17	7.6
	11–15 Years	8	3.6
	Above16 Years	34	15.1
Position Level	Managerial	48	21.3
	Clerical	6	2.7
	Custodial	171	76.0
Supervisor Manager Gender	Female	56	24.9
	Male	169	75.1
Tenure with current Supervisor Manager	Up to1Year	116	51.6
	2–5 Years	73	32.4
	6–9 Years	6	2.7
	10 Years or above	30	13.3
Service-based organizations	Banking	80	35.55
	Health	50	22.22
	Higher Education (Universities)	60	26.66
	Public-Private Schools (Pre—Tertiary)	35	15.55
Total (respondents)		225	100

n = 225, Source: Authors' Field Survey

3.2. Measures

This study used all measures and operations from past studies except the demography profile to this; the measures (see Table 2) of abusive supervision (AS), Intrinsic Motivation (IM), Psychological wellbeing (PWB), and Turnover Intention (TI) have taken after reviewing the literature. The measurement items were taken on a five-point Likert scale with 1- Never and 5-Always.

3.3. Selection of the analytical tool

The current research has employed the Smart PLS 3.0 version along with IBM-SPSS for application of PROCESS model to conduct the mediation analysis test (Hayes & Rockwood, 2017; Preacher & Hayes, 2008a). For testing the hypothesis of the current study, Partial least squares structural equation modelling (PLS-SEM) have been used. There are two key reasons behind using PLS-SEM. The first is the main focus and purpose of the current study, which was the estimation of the dependent variable of study (Roldán & Sánchez Franco, 2012). The second reason behind using PLS-SEM was incremental personality research (i.e. Intrinsic motivation as a mediator between abusive supervision and psychological wellbeing and turnover intention) (Hair et al., 2014; Richter et al., 2016). As proposed by Anderson and Gerbing (1988), a two-stage analytical procedure was employed. The first stage encompasses the analysis of the measurement model (i.e. internal consistency reliability, convergent and discriminant validity (DV)), and the second stage involves probing the structural model (i.e. hypotheses testing). Smart PLS 3.0 version (Ringle et al., 2015), was employed to examine the data. This technique was laboured mainly owing to the absence of a comprehensible description of the constructs mentioned above used in the theme of current research. Apart from this, it is the steadiness of current research model that has generally been

Table 2. Items and Construct Validity and Reliability

Construct and Items	Factor Loadings (>0.5)	Cronbach Alpha α	Composite reliability (>0.7)	AVE (>0.5)
Abusive Supervision (AS)		0.765991	0.86493	0.682415
AS2	0.868			
AS3	0.873			
AS13	0.728			
Intrinsic Motivation (IM) ($R^2 = 0.190722$)		0.896717	0.928435	0.765035
IM2	0.914			
IM3	0.936			
IM4	0.840			
IM5	0.801			
Psychological Well-Being (PWB) ($R^2 = 0.54$)		0.884616	0.915842	0.685885
PWB4	0.766			
PWB8	0.783			
PWB11	0.889			
PWB15	0.893			
PWB16	0.832			
Turnover Intention (TI) ($R^2 = 0.22$)		0.69965	0.836077	0.634002
TI1	0.796			
TI2	0.918			
TI5	0.653			

Sources: Authors' Estimations from SmartPLS.

used widely in the arena of research, and it can be found to be used well-known researchers like (Hair et al., 2014), henceforth, it remains one of the suitable methods for empirical research which cannot be misjudged.

4. Empirical results

To test the hypothesis and correlation of abusive supervision and mediating impact of the intrinsic motivation on psychological wellbeing and turnover intention. The initial data analysis has been carried out to assess the items of the data collection instrument needed to be correlated and regressed adequately. Further, to check the performance of the measurement model, the PLS-SEM test was shepherded to make and approve assumptions about the constraints of the population distribution of the sample. The assessment was done through Partial least square, and structural equation modelling (PLS-SEM) and multi-normality of the data was assumed automatically for the current set of data (Bolin, 2014; Hair et al., 2017). However, further importantly, the current method has been used in forecasting and elucidating multifaceted questions relating to this present study, such as modelling mediated or moderated relationships.

4.1. Reliability test and Cronbach's alpha

The tests of reliability and validity are always suggested to measure the ability of the data collection instrument. The reliability has been conducted with the help of Cronbach alpha and composite reliability while validity test has been conducted with the help of average variance extracted (AVE) (Hair et al., 2012). The reliability is measured for every item of its respective construct, as suggested by (Hair et al., 2012). To assume construct reliability through Cronbach alpha, it is necessary to accord the minimum or threshold value of 0.60 and Cronbach alpha's value of 0.70 to be considered as a good measure (Bagozzi & Yi, 1988). Interestingly, our estimations from the PLS-SEM met the thresholds mentioned above, therefore suggesting the reliability of the underlying research constructs. Further, the PLS-SEM has embedded indices for measuring both reliability and validity have been noted as composite reliability of construct and average variance extracted (AVE) in the model (Bollen, 1989; Hair et al., 2012). The composite reliability measures the internal consistency of scale while AVE measures the variance each item of construct extract within the scale. The results for both construct validity and reliability have been illustrated in Table 3. The values reported in the table for each index have confirmed that current research assumed both construct validity and reliability (Hair et al., 2012). We had deleted the items AS1, AS4, AS5, AS6, AS7, AS8, AS9, AS10, AS11, AS12, AS14, AS15, IM1, IM6, PWB1, PWB2, PWB3, PWB5, PWB6, PWB7, PWB9, PWB10, PWB12, PWB13, PWB14, PWB17, PWB18 TI3, TI4 and TI5 due to their factor loading threshold values less than 0.60.

4.1.1. Coefficient of determination (r)

Regarding the predictive power of the study constructs, the coefficient of determination (R^2) of the regression model was assessed. The coefficient indicates the percentage of variation in the

Table 3. Fornell-Larcker Criterion: Test of discriminant validity, Mean and SD

	Mean (SD)	AS	IM	PWB	TI
ABUSIVE SUPERVISION	2.66 (.887)	0.682415*			
INTRINSIC MOTIVATION	3.40 (.887)	-0.436717	0.765035*		
PSYCHO-WELL-BEING	3.47 (.535)	-0.527615	0.740982	0.685885*	
TURNOVER INTENTION	3.34 (.769)	-0.253335	0.469207	0.665834	0.634002*

N = 225. *The highlighted diagonal values (in bold) specified the square root of average variance extracted (AVE) for every variable of the study, additional values characterize the correlation among variables.

Sources: Authors' Estimations from SmartPLS.

dependent variable that has been explained by the predictor (independent) variable. On the other hand, the Adjusted R^2 shows the amount of variance in the endogenous construct explained by the exogenous constructs. (See Figure 2, the estimated R^2 of IM (0.190722) showed 19% of the variation in the IM is explained by the construct AS (as an independent). Again, the R^2 of PWB (0.54) showed a 54% variation in the construct “Psychological-wellbeing” is explained by the construct’ “Intrinsic motivation” (IM). However, the R^2 of TI (0.22) indicates 22% of the total variation of construct intrinsic motivation (IM). While model R^2 of the dependent variables PWB (0.54) indicates 54% and TI (0.22) indicates 22% of the total variation of the construct psychological wellbeing and turnover intention explained by the combined effect of individual constructs; abusive supervision and intrinsic motivation.

4.2. Structural equation modelling: Hypothetical analysis

The main objective of this study is to investigate the effect of abusive supervision on the psychological wellbeing of subordinates. Also, the current research emphasizes the role of mediation by the direct and indirect sound effects of mediator intrinsic motivation. In Table 4, We summarize the overall results of the projected model by presenting the proposed hypotheses. The direct effect path from AS → IM ($\beta = -0.437, t = 7.54$), path from IM → PWB ($\beta = 0.741, t = 20.98$), path from IM → TI ($\beta = 0.469, t = 7.46$), and indirect effect path from AS → IM → PWB ($\beta = -0.324, t = 158.29$) and path from AS → IM → TI ($\beta = 0.205, t = 56.3$) all results (see Table 4) indicates are positive and significant (see Table 4). This shows that abusive supervision (AS) affects the level of intrinsic motivation (IM) of employees, so it leads to lower productivity. The mediating effect of IM shows if the higher level of motivation so it will bring the psychological wellbeing (PWB) of employees at the workplace.

The current research has employed the outer-reflective model (Refer to Table 3). To validate construct and assume reliability, it has employed composite reliability and Cronbach alpha as a measure of construct reliability while convergent validity has assumed through average variance extracted (AVE). Further, current research has assumed the discriminant validity through Fornell-Larcker Criterion (Refer Table 3). The value reported for each test such as Cronbach alpha and composite reliability for reliability statistics and average variance extracted (AVE) for validity statistics has adhered to a minimum accepted range of value as suggested by Wong (2013).

Figure 2. Graphic report of the estimated structural model
 Source: Authors’ extracted from SmartPLS.

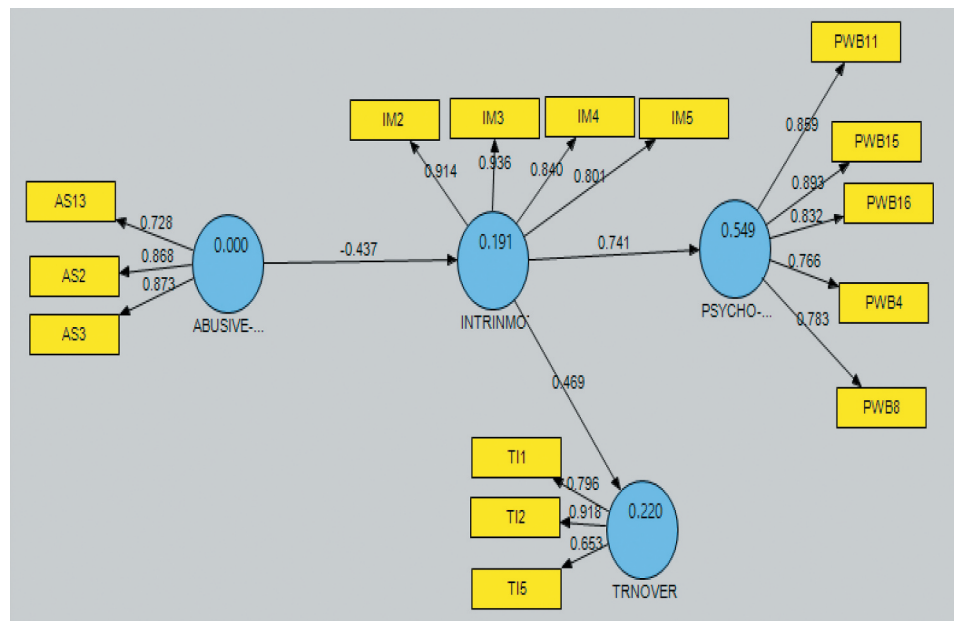


Table 4. An estimate of the hypothesized structural path model significance

Hypothesis	Hypothetical Path	Beta	T-statistics	Test Outcome
Direct Effect				
H1	AS----> IM	-0.437	7.544	Supported
H2	IM----> PWB	0.741	20.986	Supported
H3	IM----> TI	0.469	7.463	Supported
H4 H5	Indirect Effect			
	AS-->IM--> PWB	-0.324	158.296	Supported
	AS-->IM--> TI	-0.205	56.3	Supported

Source: Authors' Estimation from SmartPLS

Table 5. Mediation Process Model (Preacher & Hayes, 2008b)

"Total effect of X on Y."					
Effect	SE	t	P	LLCI	ULCI
0.4840	.0676	7.1581	.0000	.3503	.6176
"Direct effect of X on Y"					
Effect	SE	t	P	LLCI	ULCI
0.3810	.0689	5.5293	.0000	.2448	.5172
"Indirect effect(s) of X on Y"					
Intrinsic Motivation		Effect	Boot SE	BootLLCI	BootULCI
		.0130	.0362	.436	.1869

Source: Authors' Elaboration Mediation Process Macro Model extracted from SPSS Software.

The Preacher and Hayes (2008b) model of indirect effect was applied. The results identified that the indirect effect of (AS) abusive supervision on psychological wellbeing was only a significant through the mediating path of intrinsic motivation (0.0130, $p < .05$, LL: .436, UL: .1869). Surprisingly, the results for indirect shows there is a mediating relationship between intrinsic motivation and abusive supervision as a focal predictor and psychological wellbeing as a criterion variable. In our study mediator, which is Intrinsic motivation plays a vital role in abusive supervision, psychological wellbeing, and turnover intention. Because of the abusive attitude of a supervisor with the employee, this will bring down their motivation level that will bring out negative feelings for their supervisors and organizations.

5. Discussion

In past researches led in the field of Abusive Supervision in Pakistani service, the sector has discovered confirmations of the existence of this supervision style (e.g. Khalid et al., 2018; Khan et al., 2017, 2018). In any case, the predetermined number of studies requires more consideration towards examinations in this domain, since Pakistan is a power distance culture and people are habitual of to this style of management and most investigations directed in this area are led in western culture. There is a need to lead more researches in Pakistan, not exclusively to feature the way that abusive supervision is rehearsed in the nation, yet in addition to getting the consideration of the policymakers, to destroy this negative marvel from the organizational practices.

Training programs encourage employees and supervisors to promote friendly culture at the workplace, especially in the service-based organization. As per Ma et al. (2020), with regards to hotels, their investigation found that abusive supervision influences in a way that service employees feel, through bringing down their organizational identification. Considering this, our examination found that abusive supervision was decidedly related to turnover expectations. Strangely, our

investigation is additionally by exact exploration by (Ahmad & Begum, 2020; S. Xu et al., 2018) in regards to the current examination subject. Once more, it worth taking note of that our exploration discoveries exhibited to show that abusive supervision is emphatically related to the psychological well-being of representatives in the working environment. The consequences of this speculation anyway show an opposite view from the past investigations (Lin et al., 2013; Morsch et al., 2020; Naz, 2020) that abusive supervision contrarily influences the psychological well-being of representatives.

However, abusive supervision research has increased the intentions of research scholars (Tepper, 2007) intensely because of its impact on organizational expenditures and productivity in preserving competitive advantage through human resources in the service organizations. In this study; we present the central underlying mediator through which we investigate the influence of abusive supervision on intrinsic motivation. With the help of empirical data, we tested a mediation model, and as predicted. As has been hypothesized in the literature review, our research found that abusive supervision has a negative relation to job satisfaction and the employees who were the victim of this abusive supervision style have low job satisfaction and confirms the earlier work of Tepper (2000). The abusive supervisory behaviour leads to boring the work of subordinates, which finally weakens their intrinsic motivation. We have reviewed the literature; we found there are only a few studies have investigated intrinsic motivation as a mediator factor on psychological well-being and turnover intention.

In the same vein, employees in organizations who suffer from abusive supervision have less intrinsic motivation, and this can be manifested directly from the abusive behaviour of the Supervisor. (Liu et al., 2012; Tepper, 2000) have found in their studies that abusive supervision positively affects the turnover intention of employees working in an organization. Therefore, increasing the abusive supervision in the organization affects turnover intention among employees, and this will also trigger employees' intention to leave the organization and start hunting another job. This study shows that abusive supervisor behaviour determines the negative outcome as an employee turnover intention and corroborates the work of (Khan, 2015).

5.1. Theoretical implications

This study makes several contributions to the existing body of literature. First, this study extends the literature on employee wellbeing by examined abusive supervision with psychological wellbeing, which brings psychological issues due to the abusive behaviour of supervisors towards employees at the workplace. Second, this study is novel in the sense that it applied a mediation model to know the combined direct and indirect effects of intrinsic motivation between abusive supervision, psychological wellbeing, and turnover intention. By introducing the mediating effect of intrinsic motivation, it offers is an important and original contribution to the present and future studies of this kind. Third, this study also enriches the literature by applying social exchange theoretical perspectives from abusive supervisors'. Our research is in line with recent studies (Camps et al., 2020; Dirican & Erdil, 2020; Ghani et al., 2020; Guo et al., 2020). Fourth, this study is no doubt offer a relevant contribution to multi-sectoral management and employees since the current survey took into consideration a multi-sector unit of analysis. Fifth, whilst the study also expands the human resources management (HRM) literature, it gives deeper insights to scholars and potential researchers about the new line of research so far as abusive supervision in the working environment is concerned. Hence, the research model would offer a basic understanding and serves as leverage to researchers in a new study concerning the current theme under study. By introducing the mediating effect of intrinsic motivation, we expanded the abusive supervision research topic in the content domain. Our research adds to the past decade of works that suggest that abusive supervision is an organizational phenomenon of both practical and scholarly importance (M. J. Martinko et al., 2013).

5.2. Practical implications for managers

This study has numerous important managerial implications for industries and private-public sector organizations. The results suggest that the behaviour of abusive supervisors should be condensed. Perceived abuse and injustice, stress, conflict are antecedents of abusive supervision indicated by research (M.J. Martinko et al., 2011). Therefore, Supervisors should keep in attention to the adverse consequences that abusive supervision might carry and discover pathways to release pressure and control their sentiments in the expression of conflict. In terms of practical implications, employees and managers play an imperative contribution in the implementation procedure of HRM within the organization. Tepper et al., (2009) argued that employees develop interpersonal relationships with their immediate Supervisor is one of the most significant relationships in the workplace. However, employees that make their contribution in their lives but many companies and managers were failed to provide the chance to them. (Grant, 2008); Leana and Meuris (2015) particularly for persons who are suffering in bumpy working settings. This study presented a distinctive type of intrinsic motivation that can alter a task from boring to mean for the reason that it gives workers an imperative motive to make an effort at work.

With abusing subordinates, managers must check out other methods to curtail their hindrance or adverse moods (Y. Y. Zhang & Liao, 2015) because there is no good and ethical explanation for abuse at the workplace (Khan et al., 2018). To achieve this, companies must launch initiatives to develop an optimist working culture and focus on employees and supervisors. For instance, researchers (Tepper et al., 2006, 2011) showed the occurrence of abusive behaviour of supervisors due to depression and relationship conflicts. Organizations must organize pieces of training to their managers on the prevention of abuse (Liu et al., 2012), Organizations formulate ethical codes for their employees and Supervisor to reduce the conflicts between supervisors and employees and it eventually reduced the productivity of the organization.

This study validates that abusive supervision has a significant relationship with the employee's psychological wellbeing and turnover intention. Organizations should adopt employee-friendly practices at the workplace to boost their performance in the cut-throat competition. Top Management should organize ethics-based training for their abusive supervisors to improve the organizational culture for the betterment of the organization. Furthermore, to address the importance of abusive supervision destruction, this study points out the mediation role of intrinsic motivation towards turnover intention and psychological wellbeing in the working environment. Managers, policymakers, and political leaders can get insight from our findings for their policy documentation and strategies to increase the employee level of motivation. This study will be helpful to industries which are working in developing nations across the globe to understand the role of supervisors related to subordinates and thus formulate effective organizational policies for employees to ensure employee's progress as a whole. It will also be fruitful for managers, supervisors, and policymakers to be very attentive to the employee's behaviour and turnover intention. It will be valuable for the top-management to know the real picture of destructive leader's behaviour which leads to organizational goals deviance and with the help to form prior strategies to promote equal justice behaviour and have zero tolerance on such attitudes.

Again, the positive attitude of supervisors can bring a strong relationship among its subordinate; it may lead to an increase in motivation and satisfaction level of employees which results in better productivity in organizations due to the high performance of employees. The results of this study support that there is a positive relationship between abusive supervision and psychological wellbeing and turnover intention. Personal inspiration as a middle person assumes a significant job in damaging supervision, mental strains, and turnover aim. Because of the oppressive mentality of a chief with the representative, this will bring down their inspiration level that will make a negative disposition of workers towards managers and associations. In our study mediator, which is Intrinsic motivation plays a vital role in abusive supervision, psychological wellbeing, and turnover intention. Because of the abusive attitude of a supervisor with the employee, this will bring down their motivation level that will bring out negative feelings for their supervisors and organizations.

5.3. Limitations and Future research direction

This study has several limitations. The main limitation that highlighted in this study relates to the generalizability of the main findings. This study only comprises few respondents from a service-based organization; notably the banking sector, education, and health in Pakistan. In the future, the study can be conducted by gathering information from other industries to get adequate and accurate data to generalize the result. Second, we conducted our study only in one geographical setting (Karachi city) in Pakistan; this research should be extended to other countries as well as to have a greater sample size to get the generalized data. In the shed of limitation, future research work should investigate this research's hypothesis in other cultural settings to ensure the applicability of the research model in a different cultural context. It would be interesting if future scholars will consider longitudinal studies to check the frequent occurrence of psychological wellbeing and turnover intention of employees at a different time related to abusive supervision to determine whether the phenomenon increases or decreases. This study suggests that future researchers should examine the team level on abusive supervision. To this end, the generalizing of our study may be questionable in western countries because our results are based on the sample collected from private and public organizations of Pakistan.

6. Conclusions

Employees' mental health and job satisfaction are affected due to abusive supervision, and it is an important social problem in the workplace. We explored the relationship between construct abusive supervision on subordinate psychological wellbeing and turnover in service-based organizations. However, a survey was conducted in different sectors such as Banking, Health, Higher Education, Government, Semi-government schools located at Karachi, Pakistan, in South Asia. This empirical inquiry employs a quantitative research methodology to establish the mediating influence of intrinsic motivation between the underlying research constructs. Out of 300 research questionnaires distributed to full-time employees working in service-based organizations in the South Asian region (Pakistan), 225 responses were successful for analysis and validation. This study has investigated and applied PL-SEM to discuss the positive effects of abusive supervision of subordinates on psychological wellbeing and turnover intention of employees within the service-based organization of Pakistan.

Our empirical results revealed that abusive supervision significantly affects psychological wellbeing and employee's intention of turnover at the workplace. This study found that abusive supervision considerably impacts the behaviours of employees which reduces their performance level and enhances the turnover. These negative behaviours (abusive supervision) of supervisors affect the overall organizational productivity and create hurdles for their survival in the industries. An important finding to emerge in this study is intrinsic motivation which plays a vital role for the organizations in the reduction of the turnover of employees also it raises their psychological wellbeing. All hypotheses are supported in this study. This study has a very interesting finding that abusive supervision can harm employees' wellbeing and they are moving to quit the organization. This study suggests organizations have to take care of all those factors which can reduce employee's wellbeing and launch wellbeing programs for employees to improve their lifestyle at the workplace. Moreover, the majority of respondents felt that abusive supervision is a major destructive factor so, for the environment of the organization, it is very important to create such an environment where collective measures will be taken to avoid such circumstances so that they can give maximum output for the organization. This research is consistent with previous findings and contributes to our understanding of psychological-wellbeing and intrinsic motivation through the behaviour of abusive supervision in which turnover intention is regarded as a major issue for service-based organizations.

Acknowledgements

The authors are thankful to the Internal Grant Agency of FaME TBU No. IGA/FaME/2020/010. Project Title: "The Measurement of Performance in Selected Sectors with The Emphasis on Human Resources Indicators" for financial support towards carrying out this research. IGA/FaME/2019/008.

Funding

This work was supported by the Tomas Bata University in Zlin (IGA/FaME/2020/010) and (IGA/FaME/2019/008).

Author details

Kanwal Hussain¹

E-mail: Kanwal.hussain@iobm.edu.pk

ORCID ID: <http://orcid.org/0000-0002-1232-8412>

Zuhair Abbas²

E-mail: abbas@utb.cz

ORCID ID: <http://orcid.org/0000-0003-2242-2848>

Saba Gulzar¹

E-mail: saba.gulzar@iobm.edu.pk

ORCID ID: <http://orcid.org/0000-0003-0639-6475>

Abdul Bashiru Jibril³

E-mail: jibril@utb.cz

ORCID ID: <http://orcid.org/0000-0003-4554-0150>

Altaf Hussain⁴

E-mail: altafhussain@sbbusba.edu.pk

ORCID ID: <http://orcid.org/0000-0002-3953-6094>

¹ Department of Management and HRM, Academic Blocks, Institute of Business Management, Near Korangi Creek, Karachi 75190, Pakistan.

² Department of Business Administration, Faculty of Management and Economics, Tomas Bata University in Zin, Mostni 5139, Zlin 76001, Czech Republic.

³ Department of Management and Marketing, Faculty of Management and Economics, Tomas Bata University in Zin, Mostni 5139, Zlin 76001, Czech Republic.

⁴ Department of Business Administration, Shaheed Benazir Bhutto University, Shaheed Benazirabad, Pakistan.

Disclosure of interest

On behalf of all authors, the corresponding author states that there is no conflict of interest in whatsoever.

Citation information

Cite this article as: Examining the impact of abusive supervision on employees' psychological wellbeing and turnover intention: The mediating role of intrinsic motivation, Kanwal Hussain, Zuhair Abbas, Saba Gulzar, Abdul Bashiru Jibril & Altaf Hussain, *Cogent Business & Management* (2020), 7: 1818998.

References

- Ahmad, I., & Begum, K. (2020). Impact of abusive supervision on intention to leave: A moderated mediation model of organizational-based self esteem and emotional exhaustion. *Asian Business & Management*, 1–20. <https://doi.org/10.1057/s41291-020-00116-0>
- Ahmad, S. (2018). *Unleashing the potential of a young Pakistan*. United Nations Development Programme. Human Development Reports. <http://hdr.undp.org/en/content/unleashing-potential-young-pakistan#:~:text=Currently%2C%2064%20percent%20of%20the,increase%20until%20at%20least%202050>
- Amabile, T. M. (1988). A model of creativity and innovation in organizations. *Research in Organizational Behaviour*, 10(1), 123–167. http://web.mit.edu/curhan/www/docs/Articles/15341_Readings/Group_Performance/Amabile_A_Model_of_CreativityOrg.Beh_v10_pp123-167.pdf
- Amabile, T. M. (1993). Motivational synergy: Toward new conceptualizations of intrinsic and extrinsic motivation in the workplace. *Human Resource Management Review*, 31, 185–201. [https://doi.org/10.1016/1053-4822\(93\)90012-5](https://doi.org/10.1016/1053-4822(93)90012-5)
- Amabile, T. M., Collins, M. A., Conti, R., & Phillips, E. (1996). *Creativity in context. Update to the social psychology of creativity*. Westview Press Inc. <https://doi.org/10.4324/9780429501234>
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411.
- Ashforth, B. E. (1997). Petty tyranny in organizations: A preliminary examination of antecedents and consequences. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, 14(2), 126–140. <https://doi.org/10.1111/j.1936-4490.1997.tb00124.x>
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74–94. <https://doi.org/10.1007/BF02723327>
- Bigliardi, B., Petroni, A., & Dormio, A. I. (2005). Organizational socialization, career aspirations and turnover intentions among design engineers. *Leadership & Organization Development Journal*. <https://doi.org/10.1108/01437730510617645>
- Bolin, J. H. (2014). *Introduction to mediation, moderation, and conditional process analysis: a regression-based approach*. <https://www.jstor.org/stable/24018134>
- Bollen, K. A. (1989). A new incremental fit index for general structural equation models. *Sociological Methods & Research*, 17(3), 303–316. <https://doi.org/10.1177/2F0049124189017003004>
- Burton, J. P., & Hoobler, J. M. (2006). Subordinate self-esteem and abusive supervision. *Journal of Managerial Issues*, 340–355. <https://doi.org/10.2307/40604544>
- Burton, W. H. (1930). Probable next steps in the progress of supervision. *Educational Method*, 9(401–405).
- Callan, H. (1970). *Ethology and society: Towards an anthropological view*.
- Camps, J., Stouten, J., Euwema, M., & De Cremer, D. (2020). Abusive supervision as a response to follower hostility: A moderated mediation model. *Journal of Business Ethics*, 164(3), 495–514. <https://doi.org/10.1007/s10551-018-4058-0>
- Carmeli, A., & Weisberg, J. (2006). Exploring turnover intentions among three professional groups of employees. *Human Resource Development International*, 9(2), 191–206. <https://doi.org/10.1080/13678860600616305>
- Cotton, J. L., & Tuttle, J. M. (1986). Employee turnover: A meta-analysis and review with implications for research. *Academy of Management Review*, 11(1), 55–70. <https://doi.org/10.2307/258331>
- Creswell, J. W. (2003). *Research design: Qualitative, Quantitative, and Mixed Methods*.
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31(6), 874–900. <https://doi.org/10.1177/2F0149206305279602>
- De Clercq, D., Haq, I. U., & Azeem, M. U. (2020). When does job dissatisfaction lead to deviant behaviour? The critical roles of abusive supervision and adaptive humour. *Australian Journal of Management*, 45(2), 294–316. <https://doi.org/10.1177/0312896219877679>
- Deci, E. L., Connell, J. P., & Ryan, R. M. (1989). Self-determination in a work organization. *Journal of Applied Psychology*, 74(4), 580. <https://doi.org/10.1037/0021-9010.74.4.580>
- Dey, S. K., Khan, K. A., Tučkova, Z., & Jibril, A. B. (2020). Motivation among travel agents in India: The

- moderating role of employee's expertise and marital status. *Problems and Perspectives in Management*, 18(2), 453. [https://doi.org/10.21511/ppm.18\(2\).2020.37](https://doi.org/10.21511/ppm.18(2).2020.37)
- Dirican, A. H., & Erdil, O. (2020). Linking abusive supervision to job embeddedness: The mediating role of perceived organizational support. *Current Psychology*, 1–16. <https://doi.org/10.1007/s12144-020-00716-1>
- Dysvik, A., & Kuvaas, B. (2010). Exploring the relative and combined influence of mastery approach goals and work intrinsic motivation on employee turnover intention. *Personnel Review*, 39(5), 622–638. <https://doi.org/10.1108/00483481011064172>
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4. <https://doi.org/10.11648/j.ajtas.20160501.11>
- Frazier, M. L., & Bowler, W. M. (2015). Voice climate, supervisor undermining, and work outcomes: A group-level examination. *Journal of Management*, 41(3), 841–863. <https://doi.org/10.1177/2F0149206311434533>
- Ghani, U., Teo, T., Li, Y., Usman, M., Islam, Z. U., Gul, H., Naeem, R. M., Bahadar, H., Yuan, J., & Zhai, X. (2020). Tit for tat: Abusive supervision and knowledge hiding—the role of psychological contract breach and psychological ownership. *International Journal of Environmental Research and Public Health*, 17(4), 1240. <https://doi.org/10.3390/ijerph17041240>
- Gilbreath, B., & Benson, P. G. (2004). The contribution of supervisor behaviour to employee psychological well-being. *Work & Stress*, 18(3), 255–266. <https://doi.org/10.1080/02678370412331317499>
- Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review*, 25(2), 161–178. <https://doi.org/10.2307/2092623>
- Grandey, A. A., Kern, J. H., & Frone, M. R. (2007). Verbal abuse from outsiders versus insiders: Comparing frequency, impact on emotional exhaustion, and the role of emotional labor. *Journal of Occupational Health Psychology*, 12(1), 63. <https://doi.org/10.1037/1076-8998.12.1.63>
- Grant, A. M. (2008). Does intrinsic motivation fuel the prosocial fire? Motivational synergy in predicting persistence, performance, and productivity. *Journal of Applied Psychology*, 93(1), 48. <https://doi.org/10.1037/0021-9010.93.1.48>
- Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of Management*, 26(3), 463–488. <https://doi.org/10.1177/2F014920630002600305>
- Guo, L., Zhao, H., Cheng, K., & Luo, J. (2020). The relationship between abusive supervision and unethical pro-organizational behavior: Linear or curvilinear? *Leadership & Organization Development Journal*, 41(3), 369–381. <https://doi.org/10.1108/LODJ-05-2019-0214>
- Hackney, K. J., & Perrewé, P. L. (2018). A review of abusive behaviors at work: The development of a process model for studying abuse. *Organizational Psychology Review*, 8(1), 70–92. <https://doi.org/10.1177/2041386618755724>
- Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017). An updated and expanded assessment of PLS-SEM in information systems research. *Industrial Management & Data Systems*. <https://doi.org/10.1108/IMDS-04-2016-0130>
- Hair, J. F., Sarstedt, M., Pieper, T. M., & Ringle, C. M. (2012). The use of partial least squares structural equation modeling in strategic management research: A review of past practices and recommendations for future applications. *Long Range Planning*, 45(5–6), 320–340. <https://doi.org/10.1016/j.lrp.2012.09.008>
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM). *European Business Review*. <https://doi.org/10.1108/EBR-10-2013-0128>
- Harris, K. J., Kacmar, K. M., & Zivnuska, S. (2007). An investigation of abusive supervision as a predictor of performance and the meaning of work as a moderator of the relationship. *The Leadership Quarterly*, 18(3), 252–263. <https://doi.org/10.1016/j.leaqua.2007.03.007>
- Harvey, P., Stoner, J., Hochwarter, W., & Kacmar, C. (2007). Coping with abusive supervision: The neutralizing effects of ingratiation and positive affect on negative employee outcomes. *The Leadership Quarterly*, 18(3), 264–280. <https://doi.org/10.1016/j.leaqua.2007.03.008>
- Hayes, A. F., & Rockwood, N. J. (2017). Regression-based statistical mediation and moderation analysis in clinical research: Observations, recommendations, and implementation. *Behaviour Research and Therapy*, 98, 39–57. <https://doi.org/10.1016/j.brat.2016.11.001>
- Hofstede, G. (1980). Culture and organizations. *International Studies of Management & Organization*, 10(4), 15–41. <https://doi.org/10.1080/00208825.1980.11656300>
- Hom, P. W., Griffeth, R. W., & Sellaro, C. L. (1984). The validity of Mobley's (1977) model of employee turnover. *Organizational Behavior and Human Performance*, 34(2), 141–174. [https://doi.org/10.1016/0030-5073\(84\)90001-1](https://doi.org/10.1016/0030-5073(84)90001-1)
- Jiwen song, L., Tsui, A. S., & Law, K. S. (2009). Unpacking employee responses to organizational exchange mechanisms: The role of social and economic exchange perceptions. *Journal of Management*, 35(1), 56–93. <https://doi.org/10.1177/0149206308321544>
- Khalid, M., Bashir, S., Khan, A. K., & Abbas, N. (2018). When and how abusive supervision leads to knowledge hiding behaviors. *Leadership & Organization Development Journal*. <https://doi.org/10.1108/LODJ-05-2017-0140>
- Khan, A. K., Moss, S., Quratulain, S., & Hameed, I. (2018). When and how subordinate performance leads to abusive supervision: A social dominance perspective. *Journal of Management*, 44(7), 2801–2826. <https://doi.org/10.1177/2F0149206316653930>
- Khan, S. (2015). Abusive supervision and negative employee outcomes: The moderating effects of intimidation and recognition. *Journal of General Management*, 41(1), 61–81. <https://doi.org/10.1177/2F030630701504100105>
- Khan, S., Kiazad, K., Sendjaya, S., & Cooper, B. R. (2017). Cross-level effects of abusive supervision climate. In *Academy of management proceedings* (Vol. 2017, No. 1, p. 15488). Briarcliff Manor, NY: Academy of Management. <https://doi.org/10.5465/AMBPP.2017.15488abstract>
- Khuwaja, U., Ahmed, D. K., Abid, G., & Adeel, A. (2020). Leadership and employee attitudes: The mediating role of perception of organizational politics. *Cogent Business & Management*, 7(1), 1720066. <https://doi.org/10.1080/23311975.2020.1720066>
- Leana, C. R., & Meuris, J. (2015). Living to work and working to live: Income as a driver of organizational behavior. *The Academy of Management Annals*, 9(1), 55–95. <https://doi.org/10.5465/19416520.2015.1007654>

- Lian, H., Ferris, D. L., Morrison, R., & Brown, D. J. (2014). Blame it on the supervisor or the subordinate? Reciprocal relations between abusive supervision and organizational deviance. *Journal of applied psychology*, 99(4), 651. <https://doi.org/10.1037/a0035498>
- Lin, W., Wang, L., & Chen, S. (2013). Abusive supervision and employee well-being: The moderating effect of power distance orientation. *Applied Psychology*, 62(2), 308–329. <https://doi.org/10.1111/j.1464-0597.2012.00520.x>
- 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. <https://doi.org/10.5465/amj.2010.0400>
- Lord, V. B. (1998). Characteristics of violence in state government. *Journal of Interpersonal Violence*, 13(4), 489–503. <https://doi.org/10.1177/088626098013004005>
- Ma, J., Zhou, X., & Mu, Z. (2020). Can abusive supervision motivate customer-oriented service sabotage? A multilevel research. *The Service Industries Journal*, 1–22. <https://doi.org/10.1080/02642069.2020.1715949>
- Mackey, J. D., Frieder, R. E., Brees, J. R., & Martinko, M. J. (2017). Abusive supervision: A meta-analysis and empirical review. *Journal of Management*, 43(6), 1940–1965. <https://doi.org/10.1177/0149206315573997>
- Malik, A. H., Iqbal, M. Z., & Haq, M. I. U. (2020). Supervisees' reactions to a concatenation of supervisors' resource drain, ego depletion and abusive supervision. *International Journal of Conflict Management*, 1–22. Advance online publication. <https://doi.org/10.1108/IJCM-09-2019-0158>
- Martinko, M. J., Harvey, P., Brees, J., & Mackey, J. (2013). A review of abusive supervision research. *Journal of Organizational Behavior*, 34(S1), 120–137. <https://doi.org/10.1002/job.1888>
- Martinko, M. J., Harvey, P., Sikora, D., & Douglas, S. C. (2011). Perceptions of abusive supervision: The role of subordinates' attribution styles. *The Leadership Quarterly*, 22(4), 751–764. <https://doi.org/10.1016/j.leaqua.2011.05.013>
- Memon, M. A., Salleh, R., Baharom, M. N. R., & Harun, H. (2014). Person-organization fit and turnover intention: The mediating role of employee engagement. *Global Business & Management Research*, 6(3).
- Menges, J. I., Tussing, D. V., Wihler, A., & Grant, A. M. (2017). When job performance is all relative: How family motivation energizes effort and compensates for intrinsic motivation. *Academy of Management Journal*, 60(2), 695–719. <https://doi.org/10.5465/amj.2014.0898>
- Mitchell, M. S., & Ambrose, M. L. (2007). Abusive supervision and workplace deviance and the moderating effects of negative reciprocity beliefs. *Journal of Applied Psychology*, 92(4), 1159. <https://doi.org/10.1037/0021-9010.92.4.1159>
- Morsch, J., van Dijk, D., & Kodden, B. (2020). The Impact of Perceived Psychological Contract Breach, Abusive Supervision, and Silence on Employee Well-being. *Journal of Applied Business and Economics*, 22, 2. <https://doi.org/10.33423/jabe.v22i2.2799>
- Naz, N. (2020). *Impact of Abusive Supervision on Employee Well-being with the Mediating Role of Perceived Job Insecurity and Moderating Role of Resilience* [Doctoral dissertation]. CAPITAL UNIVERSITY.
- Neuman, J. H., & Baron, R. A. (1998). Workplace violence and workplace aggression: Evidence concerning specific forms, potential causes, and preferred targets. *Journal of Management*, 24(3), 391–419. <https://doi.org/10.1177%2F014920639802400305>
- Peltokorpi, V. (2019). Abusive supervision and emotional exhaustion: The moderating role of power distance orientation and the mediating role of interaction avoidance. *Asia Pacific Journal of Human Resources*, 57(3), 251–275.
- Piccolo, R. F., & Colquitt, J. A. (2006). Transformational leadership and job behaviors: The mediating role of core job characteristics. *Academy of Management Journal*, 49(2), 327–340. <https://doi.org/10.5465/amj.2006.20786079>
- Porter, L. W., & Steers, R. M. (1973). Organizational, work, and personal factors in employee turnover and absenteeism. *Psychological Bulletin*, 80(2), 151. <https://doi.org/10.1037/h0034829>
- Pradhan, S., & Jena, L. K. (2017). Effect of abusive supervision on employee's intention to quit and the neutralizing role of meaningful work in Indian IT organizations. *International Journal of Organizational Analysis*, 25(5), 825–838. <https://doi.org/10.1108/IJOA-01-2017-1107>
- Pradhan, S., Srivastava, A., & Jena, L. K. (2019). Abusive supervision and intention to quit: Exploring multi-mediational approaches. *Personnel Review*. <https://doi.org/10.1108/PR-12-2018-0496>
- Preacher, K. J., & Hayes, A. F. (2008a). Assessing mediation in communication research (pp. 13–54). London: The Sage Sourcebook of Advanced Data Analysis Methods for Communication Research.
- Preacher, K. J., & Hayes, A. F. (2008b). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891. <https://doi.org/10.3758/BRM.40.3.879>
- Price, J. L. (1977). *The study of turnover*. Ames Iowa State University Press.
- Rahman, W., & Nas, Z. (2013). Employee development and turnover intention: theory validation. *European Journal of Training and Development*. <https://doi.org/10.1108/EJTD-May-2012-0015>
- Ramdeo, S., & Singh, R. (2019). Abusive supervision, co-worker abuse and work outcomes: Procedural justice as a mediator. *Evidence-based HRM*, 7(3), 325–341. <https://doi.org/10.1108/EBHRM-09-2018-0060>
- Restubog, S. L. D., Scott, K. L., & Zagenczyk, T. J. (2011). When distress hits home: The role of contextual factors and psychological distress in predicting employees' responses to abusive supervision. *Journal of Applied Psychology*, 96(4), 713–729. <https://doi.org/10.1037/a0021593>
- Rice, D. B., Taylor, R., & Forrester, J. K. (2020). The unwelcoming experience of abusive supervision and the impact of leader characteristics: Turning employees into poor organizational citizens and future quitters. *European Journal of Work and Organizational Psychology*, 1–18. <https://doi.org/10.1080/1359432X.2020.1737521>
- Rich, B. L., Lepine, J. A., & Crawford, E. R. (2010). Job engagement: Antecedents and effects on job performance. *Academy of Management Journal*, 53(3), 617–635. <https://doi.org/10.5465/amj.2010.51468988>
- Richard, O. C., Boncoeur, O. D., Chen, H., & Ford, D. L. (2018). Supervisor abuse effects on subordinate turnover intentions and subsequent interpersonal aggression: The role of power-distance orientation and perceived human resource support climate. *Journal of Business Ethics*, 1(164), 1–15. <https://doi.org/10.1007/s10551-018-4019-7>

- Richter, N. F., Cepeda-Carión, G., Roldán Salgueiro, J. L., & Ringle, C. M. (2016). European management research using partial least squares structural equation modeling (PLS-SEM). *European Management Journal*, 34(6), 589–597.
- Ringle, C., Da Silva, D., & Bido, D. (2015). Structural equation modeling with the SmartPLS. Bido, D., da Silva, D., & Ringle, C. (2014). *Structural Equation Modeling with the Smartpls*. *Brazilian Journal Of Marketing*, 13(2). <https://ssrn.com/abstract=2676422>
- Roldán, J. L., & Sánchez-Franco, M. J. (2012). Variance-based structural equation modeling: Guidelines for using partial least squares in information systems research. In *Research methodologies, innovations and philosophies in software systems engineering and information systems* (pp. 193–221). IGI Global. <https://doi.org/10.4018/978-1-4666-0179-6.ch010>
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68. <https://doi.org/10.1037/0003-066X.55.1.68>
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*. Pearson education.
- Shin, S. J., & Zhou, J. (2003). Transformational leadership, conservation, and creativity: Evidence from Korea. *Academy of Management Journal*, 46(6), 703–714. <https://doi.org/10.5465/30040662>
- Singh, R. (2019). I want to leave, but there is nowhere to go. *International Journal of Organizational Analysis*, 28(2), 474–487. <https://doi.org/10.1108/IJOA-05-2019-1778>
- Tepper, B. J. (2000). Consequences of abusive supervision. *Academy of Management Journal*, 43(2), 178–190. <https://doi.org/10.5465/1556375> doi:10.2307/1556375
- Tepper, B. J. (2007). Abusive supervision in work organizations: Review, synthesis, and research agenda. *Journal of Management*, 33(3), 261–289. <https://doi.org/10.1177%2F0149206307300812>
- Tepper, B. J., Carr, J. C., Breaux, D. M., Geider, S., Hu, C., & Hua, W. (2009). Abusive supervision, intentions to quit, and employees' workplace deviance: A power/dependence analysis. *Organizational behaviour and human decision processes*, 109(2), 156–167. <https://doi.org/10.1016/j.obhdp.2009.03.004>
- Tepper, B. J., Duffy, M. K., Henle, C. A., & Lambert, L. S. (2006). Procedural injustice, victim precipitation, and abusive supervision. *Personnel Psychology*, 59(1), 101–123. <https://doi.org/10.1111/j.1744-6570.2006.00725.x>
- Tepper, B. J., Duffy, M. K., Hoobler, J., & Ensley, M. D. (2004). Moderators of the relationships between coworkers' organizational citizenship behavior and fellow employees' attitudes. *Journal of Applied Psychology*, 89(3), 455. <https://doi.org/10.1037/0021-9010.89.3.455>
- Tepper, B. J., Duffy, M. K., & Shaw, J. D. (2001). Personality moderators of the relationship between abusive supervision and subordinates' resistance. *Journal of Applied Psychology*, 86(5), 974. <https://doi.org/10.1037/0021-9010.86.5.974>
- Tepper, B. J., Moss, S. E., & Duffy, M. K. (2011). Predictors of abusive supervision: Supervisor perceptions of deep-level dissimilarity, relationship conflict, and subordinate performance. *Academy of Management Journal*, 54(2), 279–294. <https://doi.org/10.5465/amj.2011.60263085>
- Tepper, B. J., Simon, L., & Park, H. M. (2017). Abusive supervision. *Annual Review of Organizational Psychology and Organizational Behavior*, 4(1), 123–152. <https://doi.org/10.1146/annurev-orgpsych-041015-062539>
- Walter, F., Lam, C. K., Van Der Vegt, G. S., Huang, X., & Miao, Q. (2015). Abusive supervision and subordinate performance: Instrumentality considerations in the emergence and consequences of abusive supervision. *Journal of Applied Psychology*, 100(4), 1056. <https://doi.org/10.1037/a0038513>
- Wong, K. K. K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, 24(1), 1–32.
- Wu, T. Y. (2008). Abusive supervision and emotional exhaustion: The mediating effects of subordinate justice perception and emotional labor. *Chinese Journal of Psychology*.
- Wu, X., Kwan, H. K., Ma, Y., Lai, G., & Yim, F. H. K. (2020). Lone wolves reciprocate less deviance: A moral identity model of abusive supervision. *The International Journal of Human Resource Management*, 31(7), 859–885. <https://doi.org/10.1080/09585192.2017.1384929>
- Xu, S., Martinez, L. R., Van Hoof, H., Tews, M., Torres, L., & Farf_an, K. (2018). The impact of abusive supervision and co-worker support on hospitality and tourism student employees' turnover intentions in Ecuador. *Current Issues in Tourism*, 21(7), 775–790. <https://doi.org/10.1080/13683500.2015.1076771>
- Yagil, D. (2006). The relationship of abusive and supportive workplace supervision to employee burnout and upward influence tactics. *Journal of Emotional Abuse*, 6(1), 49–65. https://doi.org/10.1300/J135v06n01_03
- Yan, X., Wang, Z., Su, J., & Luo, Z. (2020). Relationship between core self-evaluations and team identification: The perception of abusive supervision and work engagement. *Current Psychology*, 39(1), 121–127. <https://doi.org/10.1007/s12144-017-9749-7>
- Zellars, K. L., Tepper, B. J., & Duffy, M. K. (2002). Abusive supervision and subordinates' organizational citizenship behavior. *Journal of Applied Psychology*, 87(6), 1068. <https://doi.org/10.1037/0021-9010.87.6.1068>
- Zhang, H., Kwan, H. K., Zhang, X., & Wu, L. Z. (2014). High core self-evaluators maintain creativity: A motivational model of abusive supervision. *Journal of Management*, 40(4), 1151–1174. <https://doi.org/10.1177%2F0149206312460681>
- Zhang, X., & Bartol, K. M. (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of Management Journal*, 53(1), 107–128. <https://doi.org/10.5465/amj.2010.48037118>
- Zhang, Y., & Liao, Z. (2015). Consequences of abusive supervision: A meta-analytic review. *Asia Pacific Journal of Management*, 32(4), 959–987. <https://doi.org/10.1007/s10490-015-9425-0>



© 2020 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.

You are free to:

Share — copy and redistribute the material in any medium or format.

Adapt — remix, transform, and build upon the material for any purpose, even commercially.

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made.

You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

No additional restrictions

You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.



***Cogent Business & Management* (ISSN:) is published by Cogent OA, part of Taylor & Francis Group.**

Publishing with Cogent OA ensures:

- Immediate, universal access to your article on publication
- High visibility and discoverability via the Cogent OA website as well as Taylor & Francis Online
- Download and citation statistics for your article
- Rapid online publication
- Input from, and dialog with, expert editors and editorial boards
- Retention of full copyright of your article
- Guaranteed legacy preservation of your article
- Discounts and waivers for authors in developing regions

Submit your manuscript to a Cogent OA journal at www.CogentOA.com

