

Patterns of Work Behavior and the Role of Employees' Psychological Status in the Face of Occupational Stressors

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ABSTRACT

Employees' work behavior patterns are associated with their psychological status, especially in the face of work stressors. Among employees with healthy and unhealthy work behavior patterns, the present study aimed to compare psychological disorders and their symptoms in an industrial organization in Mashhad. Through convenience sampling, 144 employees were selected and responded to demographic information questionnaires, work-related behavior and experience patterns questionnaire (AVEM), and Symptom Checklist-90 (SCL-90). Data analysis was performed using a one-way analysis of variance in SPSS software version 26. The findings indicated that psychological symptoms and disorders were significantly higher in employees with unhealthy work behavior patterns, especially the burnout pattern, than in employees with healthy work behavior patterns. The findings highlight the importance of focusing on the mental health of employees who adopt unhealthy work behavior patterns in the face of occupational stressors. In line with existing research evidence, psychological intervention programs that include training in adopting healthy work behavior patterns and enhancing mental health impact employees' well-being and demand further research. Developing and implementing prevention policies and mental health programs in the workplace in favor of employees' well-being is associated with increased organizational productivity and community welfare.

Introduction

Health, safety, and well-being are central to the functioning and social development of the workplace and society (Leka & Nicholson, 2019). Employees' mental health is a crucial determinant of job performance and overall well-being. It is a state of well-being in which individuals can realize their potential capabilities, cope effectively with daily psychological pressures and work productively (Fusar-Poli et al., 2021; Ghebreyesus, 2019). In recent years, an increasing number of studies have highlighted the role of work in enhancing mental health, considering employment as beneficial for sustaining well-being. From this perspective, an individual's employment status likely plays a significant role in their overall physical and psychological health (Johnson et al., 2020). Just as the lack of healthcare services, social support, and organizational justice alongside rapid technological advances may exacerbate mental health issues and amplify the vulnerability of employees, especially in developing countries (Spoorthy et al., 2020; Chopra,



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2009), some significant personal, social, and economic costs associated with poor employees' mental health in developed countries include decreased job performance, workplace turnover, illness, and long-term disability (Pallich et al., 2021), which can potentially lead to job burnout and seriously impact employees' ability to participate in both personal and professional aspects of life (Kalani et al., 2017; Zhang et al., 2023). Poor mental health and workplace stressors can also contribute to various physical illnesses such as hypertension, diabetes, and cardiovascular diseases (Whicher et al., 2020). On the other hand, work-related stress can manifest itself in the form of lower back pain, headaches, gastrointestinal disorders, as well as various psychological problems such as anxiety, depression, lack of concentration, and impaired decision-making (Shi et al., 2022).

The research indicates employees' various behavior patterns in coping with psychological stress, workplace challenges, and their interactions with other domains, which have diverse consequences for individual and organizational performance (Kalani & Oreizi, 2017). According to the Schaubach and Fischer model (1996), work-related experiences and behaviors can be categorized into three broad domains: professional commitment (consisting of five dimensions: subjective importance of work, professional ambition, tendency to exert, striving for perfection, and emotional distancing), resistance to stress (consisting of three dimensions: resignation tendencies, offensive coping with problems, and mental stability), and subjective well-being (consisting of three dimensions: satisfaction with work, satisfaction with life, and experience of social support) (Schaarschmidt & Fischer, 1996; Voltmer et al., 2011). Different combinations of these three domains and a cluster analysis of the data yield four distinct patterns of work behavior in response to job stress (Schaarschmidt & Fischer, 2003):

1. **Healthy Pattern G:** This pattern represents a positive and constructive attitude towards work, indicating good mental health and a favorable approach to one's job (Kieschke & Schaubach, 2008).
2. **Healthy Pattern S:** This pattern signifies a prudent and somewhat non-ambitious approach to work. Individuals with this pattern tend to score highest in emotional detachment and lowest in dimensions related to professional commitment (Kalani & Oreizi, 2017).
3. **Risk Pattern A:** This pattern reflects ambition and a limited ability to emotionally detach from work, similar to the Type A behavior pattern. Individuals with this pattern may exhibit lower psychological flexibility and life dissatisfaction (Kalani et al., 2017).
4. **Risk Pattern B:** This pattern is indicative of burnout, withdrawal, low professional commitment, and an excessive experience of challenges (Voltmer et al., 2011).

Unlike healthy patterns, risk patterns encompass unhealthy behaviors and psychological health problems (Hedderich, 2022). Paying attention to psychological characteristics related to work behavior patterns is of great importance, and the use of theoretical and practical classifications in the early stages can enhance the success of interventions for individuals dealing with these behavioral issues (Pallich et al., 2021). In particular, risky and maladaptive work behavior patterns are among the most common causes of psychological stress in the workplace and administrative environments. These patterns are associated with poor performance, human errors, physical and psychological issues among employees, and an increased risk of absenteeism due to illness, employee turnover, poor organizational performance, and accidents resulting from human error (Rajgopal, 2010). In a systematic review study, while confirming the relationship between risk pattern B and stress, burnout, and other psychological outcomes, the effectiveness of mindfulness-based interventions in reducing stress, job burnout, and improving emotional regulation in teachers was demonstrated (Hidajat et al., 2023). Schulz et al. (2011), in a study involving 356 nurses in four hospitals in Germany, found that nurses with unhealthy work-related behaviors and experiences were at a higher risk of experiencing a decline in psychological and physical health (such as anxiety, depression, and physical symptoms) (Schulz et al., 2011). In Iran, according to the findings of the study conducted by Kalani, Esnajrani, and Rajabi (2023), various forms of rumination related to work significantly influenced unhealthy work behavior patterns and stress-coping responses of employees, and they were notably associated with various aspects of mental health and professional commitment (Kalani et al., 2023). Promoting mental health in the workplace has become a strategic and crucial area; however,

in the research literature, there is still a relative lack of studies focused on the relationship between employees' behavior patterns and their psychological well-being ([Leka & Nicholson, 2019](#)). Given the multitude of determinants of mental health issues in the workplace ([La Torre et al., 2020](#)), despite collecting organizational-level research evidence to promote healthy work behavior patterns and create favorable work conditions in recent years, the evaluation of this issue remains complicated and challenging. Therefore, the current research was conducted to enhance knowledge in this area by investigating the relationship between work behavior patterns and psychological well-being in an industrial setting.

Method

Sample and Sampling Method

This cross-sectional and descriptive study was conducted in the year 2023. A total of 144 employees from an industrial organization in Mashhad were selected using convenience sampling. They completed questionnaires related to demographic information, work-related behavior and experience patterns questionnaire, and the Symptom Checklist-90 (SCL-90), which assesses symptoms of psychological disorders. In this research, ethical considerations, including confidentiality and data protection, were observed. Data analysis was performed using descriptive statistics and a one-way analysis of variance (ANOVA) test in SPSS software version 26.

Tools Used

Demographic Information Questionnaire: This questionnaire collected demographic information, including age, gender, education, and marital status.

Work-Related Behaviors and Experience Patterns Questionnaire (AVEM): The AVEM test, initially introduced by Schaarschmidt and Fischer in 2003 in German, is also known as the Measure of Coping Capacity Questionnaire (MECCA) in English. However, in most English-language research, the German acronym is commonly used ([Bauer et al., 2006](#)). This questionnaire assesses four work-related behavior patterns (Healthy Pattern G, Healthy Pattern S, Risk Pattern A, and Risk Pattern B) within three broad domains (professional commitment, resilience to stress, and mental health) and consists of eleven dimensions ([Schaarschmidt & Fischer, 2003](#)). Each dimension has six items, which are rated on a Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree), with a score range of 0 to 36 ([Kalani & Oreizi, 2017](#)). In addition to the reported moderate to good correlations with the related scales ([Voltmer et al., 2021](#)), the reliability and validity of the AVEM test have been confirmed in numerous studies, such as Schaarschmidt and Fischer (2003) and Gencer et al. (2010) ([Gencer et al., 2010](#); [Schaarschmidt & Fischer, 2003](#)). The range of Cronbach's alpha for the scales of this questionnaire has been reported from 0.72 to 0.85, and in the first validation of this questionnaire in Iran, the reliability of the test scales using the Cronbach's alpha method ranged from 0.76 to 0.81 ([Kalani et al., 2016](#)). Furthermore, the validity and reliability of this tool have been confirmed in another sample of Iranian employees in the Persian language by Kalani and Maleki (2023). They reported Cronbach's alpha for the eleven subscales of this tool to be between 0.69 and 0.87. Additional information related to the four mentioned patterns is provided in Table 1 ([Bauer et al., 2006](#); [Kalani & Oreizi, 2017](#); [Voltmer et al., 2021](#)).

Table 1- Additional Details on Work-Related Coping Behavior Patterns in the AVEM Questionnaire.

Pattern Type	Description and Characteristics
Healthy Pattern G	Good health Pattern: Active work engagement without excessive emotional involvement (high scores in emotional distancing), low scores in the tendency to surrender to failure, high coping capacity for dealing with challenges, resilience to pressure, high scores in mental health dimensions, and a positive outlook on life.
Healthy Pattern S	Economical Pattern: Non-involvement with work accompanied by severe detachment from work-related issues, mental resilience under work pressure, low scores in social support, and a relatively low tendency to surrender to problems.
Risk Pattern A	Ambitious Risk Pattern: Intense involvement and non-detachment from work-related

	problems, reduced psychological flexibility, low scores in mental stability, limited enjoyment of life, and low scores in mental health dimensions.
Risk Pattern B	Burnout Pattern: Low professional commitment, reduced participation with limited capacity to detach from work-related issues, a strong tendency toward resignation, reduced psychological flexibility, low scores in scales related to job satisfaction, and limited enjoyment of life.

Symptom Checklist-90 (SCL-90): The initial version of the SCL-90 was introduced by Derogatis, Lipman, and Covi in 1973 to identify psychological aspects of physical and mental problems (Derogatis et al., 1973), and it was revised by Derogatis and colleagues in 1984 based on clinical experiences and psychometric analyses (Derogatis, 2000). This checklist, one of the most widely used diagnostic tools in psychiatry, consists of 90 questions and nine subscales for assessing psychological symptoms, allowing differentiation between healthy individuals and patients. The subscales include somatization, obsession, interpersonal sensitivity, depression, anxiety, hostility, phobia, paranoid ideation, and psychoticism. Additionally, seven questions are unrelated to any dimensions and are only considered significant clinically (Derogatis et al., 1977). Responses are measured on a 5-point scale, ranging from "not at all" to "extremely," determining the degree of distress. Scoring and interpretation are based on three indices: the Global Severity Index (GSI), which indicates an individual's overall psychological status without emphasizing a specific disorder, calculated by summing the scores of the 90 questions and dividing the result by 90; the Positive Symptom Distress Index (PSDI), calculated by dividing the sum of scores for the 90 questions by the sum of scores for the positive symptom total (PST), which provides a measure of symptom distress; and the Positive Symptom Total (PST), which assesses the number of positive symptoms present. In most studies, a cutoff point of 0.7 is reported as an indicator of symptom severity, and a mean score above one implies the presence of a disorder (Anisi et al., 2016). The test's ability to differentiate and diagnose healthy individuals from patients is supported by research evidence (Derogatis, 2000). Concurrent validity coefficients for the nine dimensions of this test, compared to the Minnesota Multiphasic Personality Inventory (MMPI), have been calculated and the convergence of their dimensions is reported between 0.36 to 0.74. Reliability for this test, with a one-week interval on 32 subjects, was reported as 0.91 (Chegini et al., 2002). Moreover, the reliability, sensitivity, and efficiency coefficients were reported as 0.94, 0.98, and 0.96, respectively (Bagheriyazdi et al., 1994).

Results

A total of 144 participants took part in this study, consisting of 135 males (93.8%) and nine females (6.2%) with an average age of 33.15 years. Regarding education levels, 20 individuals (13.9%) had not finished high school, 39 (27.1%) had secondary education, 21 (14.6%) had an associate degree, 60 (41.7%) had a bachelor's degree, and 4 (2.8%) had a master's degree or higher. Regarding employment type, 130 individuals (90.3%) were on contract, and 13 (9.0%) were on temporary contracts. Descriptive findings indicate an average work experience of 6.13 years with a standard deviation of 3.74 years, ranging from the lowest to the highest scores of 5.0 and 28.0, respectively. Table 2 presents the descriptive findings of the research variables.

Table 2- Descriptive Statistics.

	Variable	Mean	Std. Deviation	Cronbach's alpha
SCL-90	Somatization	20.36	7.15	.92
	Interpersonal Sensitivity	15.69	5.76	.91
	Obsession Compulsion	18.63	6.16	.91
	Depression	23.16	9.21	.91
	Anxiety	15.24	5.75	.91
	Paranoid Ideation	13.84	4.97	.92
	Hostility	9.51	3.23	.92
	Phobic anxiety	11.27	3.17	.93
	Psychoticism	16.05	7.12	.92

AVEM	Subjective significance of work	17.80	4.56	.75
	Professional ambition	23.00	2.89	.67
	Tendency to exert	21.70	3.79	.70
	Striving for perfection	25.91	2.79	.67
	Emotional distancing	18.08	3.35	.74
	Resignation tendencies	19.31	3.90	.72
	Offensive coping with problems	24.22	3.28	.65
	Balance an disability	20.29	2.95	.71
	Satisfaction with work	22.89	3.37	.65
	Satisfaction with life	21.99	3.89	.67
	Experience of social support	19.88	3.75	.72

As shown in Table 2, the highest average in the SCL-90 questionnaire belongs to the subscale of depression, and in the AVEM questionnaire, the highest average pertains to the subscale of "Striving for perfection."

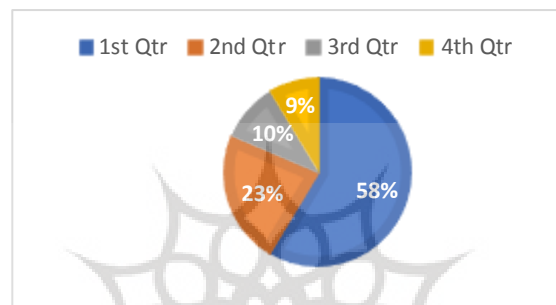


Figure 1. Distribution of work behavior patterns among the sample

Table 3- Correlation Coefficients Between Research Variables.

variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Somatization	1																			
Interpersonal Sensitivity	.55*	1																		
Obsession Compulsion	.59*	.75*	1																	
Depression	.60*	.85*	.79*	1																
Anxiety	.68*	.78*	.78*	.84*	1															
Paranoid Ideation	.53*	.81*	.73*	.76*	.75*	1														
Hostility	.51*	.66*	.65*	.69*	.68*	.65*	1													
Phobic anxiety	.54*	.53*	.63*	.58*	.60*	.50*	.44*	1												
Psychoticism	.48*	.67*	.58*	.68*	.59*	.61*	.54*	.49*	1											
Subjective significance of work	.12	-.03	-.01	-.03	-.02	-.04	-.15	.10	-.00	1										
Professional ambition	-.06	-.07	-.08	-.05	-.09	.00	-.20*	.03	-.093	.26*	1									
Tendency to exert	.02	-.02	-.02	-.03	-.07	-.01	-.12	.04	-.09	.43*	.48*	1								
Striving for perfection	-.02	-.13	-.15	-.07	-.10	-.04	-.16*	.04	-.10	.14*	.56*	.50*	1							

*

Emotional distancing	-	-	-	-.14	-	-.04	-.04	-	.05	-	-	-.04	1										
	.17*	.09	.19*		.16*			.08		.28	.05	.22											
	*		*		*					*		*											
Resignation tendencies	-.16	-	-	-	-	-	-	-	-	-	.10	-	.21	.1	1								
		.25	.22*	.21*	.23*	.17*	.17*	.16	.22*	.20		.12	**	.3									
		*	*	*	*	*	*		*	**													
Offensive coping with problems	-.16	-	-	-	-	-.13	-	-	-	-.15	.51	.46	.65	.1	.20	1							
		.16	.20*	.16*	.25*		.25*	.08	.17*		*	*	*	2	*								
		*	*	*	*		*		*														
Balance and stability	-	-	-	-	-	-	-	-	-.14	-.10	.10	.01	.18	.1	.23	.29	1						
	.21*	.28	.32*	.28*	.33*	.24*	.41*	.15					**	5	*	*							
	*	*	*	*	*	*	*																
Satisfaction with work	-.05	-	-	-	-	-	-	.00	-.14	.31	.49	.41	.59	-	.22	.59	.27	1					
		.26	.25*	.16*	.22*	.21*	.29*			*	*	*	*	6	*	*	*	*	*				
		*	*	*	*	*	*																
Satisfaction with life	-	-	-	-	-	-	-	-	-	-.01	.37	.19	.35	.1	.29	.49	.23	.35	1				
	.22*	.42	.36*	.39*	.39*	.35*	.37*	.21	.39*		*	**	*	1	*	*	*	*	*				
	*	*	*	*	*	*	*	*	*														
Experience of social support	-	-	-	-	-	-	-	-	-	-.11	.10	-	.05	.1	.32	.16	.18	.15	1				
	.17*	.30	.31*	.30*	.30*	.33*	.23*	.30	.24*			.13		1	*	**	**	**	*				
	*	*	*	*	*	*	*	*	*														

**p< 0.01, *p<0.05

Table 4 also shows the results of the one-way analysis of variance (ANOVA) to examine the SCL-90 subscales across the four different patterns of work behavior.

Table 4- One-way Analysis of Variance (ANOVA) Results.

Variable	AVEM patterns								ANOVA	Post Hoc
	G		S		A		B			
	M	SD	M	SD	M	SD	M	SD		
Somatization	19.47	6.93	19.51	6.08	21.23	7.71	28.20	8.35	2.788	GS<B*
Interpersonal Sensitivity	14.39	4.77	14.64	5.23	16.82	5.86	27.20	4.87	10.239	GS<B; A<B
Obsession Compulsion	16.69	5.41	18.03	5.77	20.55	6.39	26.00	5.24	6.446	G<AB; S<B
Depression	21.17	8.24	22.05	8.73	24.54	8.75	40.00	10.32	7.945	GS<B; A<B
Anxiety	13.74	4.84	14.74	5.50	16.24	5.70	25.80	5.89	8.547	GS<B; A<B
Paranoid Ideation	12.99	4.67	13.05	4.42	14.55	5.05	22.40	3.21	6.839	GS<B; A<B
Hostility	8.29	2.33	9.44	2.76	10.28	3.15	15.85	6.27	12.114	G<A<B; S<B
Phobic anxiety	11.31	3.18	10.46	2.72	11.65	3.48	13.60	1.95	2.008	-
Psychoticism	14.82	5.48	15.50	8.99	17.04	6.21	24.20	9.83	3.227	GS<B

All F values (except for phobia) are significant at 0.01.

The table above indicates a significant difference in the somatization scale between patterns G and S compared to pattern B ($p < 0.001$), and there is no significant difference between S and G. In the interpersonal sensitivity scale, there is a significant difference between patterns G and S compared to pattern B, as well as between pattern A and B ($p < 0.001$), and there is no significant difference between S and G, as well as between G and A, and between S and A. The obsession scale shows a significant difference between G and A, G and B, and S and B ($p < 0.001$). In the depression scale, there is a significant difference between G and S compared to pattern B, and between A and B ($p < 0.001$). The anxiety scale shows a significant difference between G and S compared to pattern B, and between A and B ($p < 0.001$). In the paranoid ideation scale, there is a significant difference between G and S compared to pattern B, and between A and B ($p < 0.001$). No significant difference was observed in the phobia scale. Additionally, there is a significant difference between G and S in the psychoticism scale compared to pattern B ($p < 0.001$).

Figure 2 illustrates the mean scores of the nine dimensions of the SCL-90 questionnaire in the four patterns of work behavior

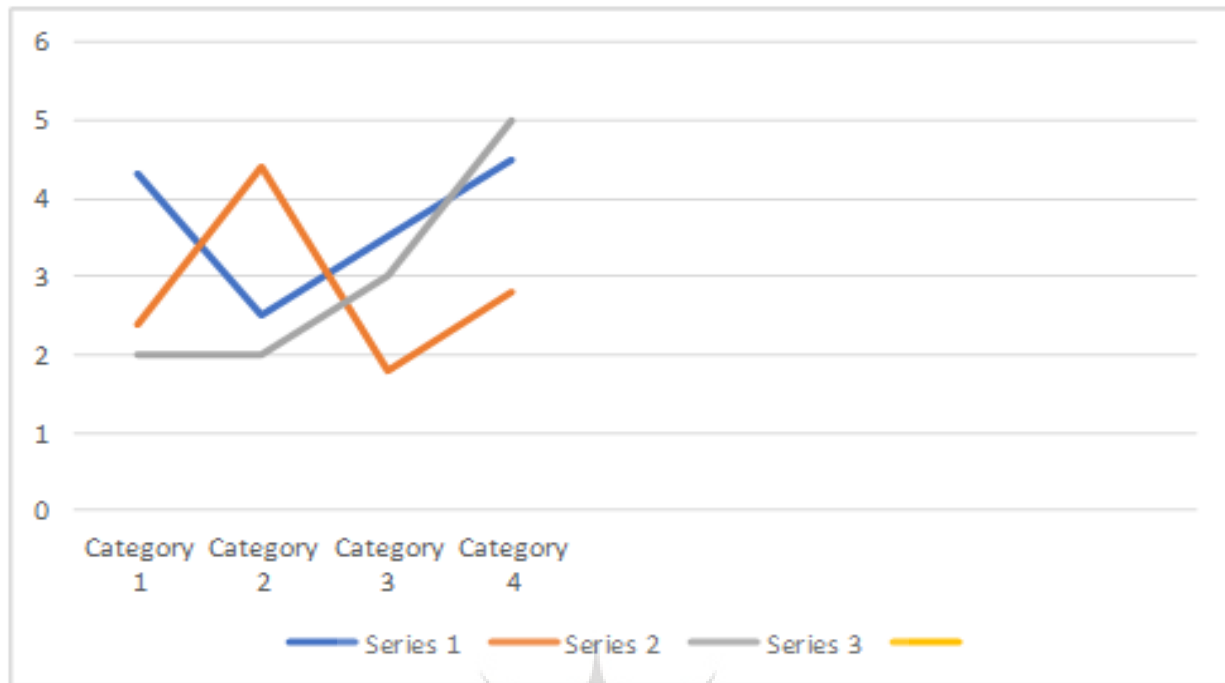


Figure 2. The Average Scores of the Nine Dimensions of the SCL-90 Questionnaire in the Four Work Behavioral Patterns

Discussion

The present study aimed to investigate the relationship between work behavior patterns and employees' psychological well-being. The results of this study indicated that the level of psychological symptoms in unhealthy work behavior patterns, particularly in pattern B, is significantly higher than in healthy work behavior patterns. Furthermore, according to the obtained results, individuals in the G pattern exhibit the highest and those in the B pattern have the lowest psychological capabilities. Individuals with the B pattern are even more exposed to psychological vulnerabilities than those with the A pattern. Therefore, the highest burden of psychological symptoms was associated with the B pattern, followed by the S, A, and G patterns. It is worth noting that the relatively smaller mean difference between pattern A and pattern B compared to patterns G and S suggests the vulnerability of individuals with pattern A to transition to pattern B and an increased risk of severe consequences. This finding indicates that the relationship between unhealthy patterns, especially pattern B, and individuals' poor mental health and vulnerability in workplace environments demands particular research and clinical attention. For example, in line with the findings of the study by Hedderich (2022), risk patterns encompass mental health issues such as anxiety and depression (Hedderich, 2022), which, according to the research by Schulz et al. (2011) and Hidajat et al. (2023), underscores the need for preventive and educational interventions in promoting healthy behavioral patterns and work experiences (Hidajat et al., 2023; Schulz et al., 2011), since healthy behavior patterns play a protective role by providing effective coping strategies against psychological stressors and enhancing individuals' ability to deal with stressful situations. Therefore, in line with previous studies, it can be acknowledged that individuals with these patterns, in addition to experiencing mental health issues, also compromise their job performance and exhibit reduced self-regulation (Kalani et al., 2023). On the other hand, the lack of significant differences in phobia between the patterns in the results of this study may suggest that generalized fear and worry, rather than specific phobias (such as fear of a particular stimulus in a specific situation), are involved in the occupational functioning of employees (Zhang et al., 2023). Ineffective coping with the stress-inducing components of the B pattern may lead employees with this pattern to experience job burnout and psychological inflexibility, which can exacerbate both psychological and physical health issues (Hidajat et al., 2023). Considering the significant differences in

somatization, obsession, interpersonal sensitivity, depression, anxiety, hostility, paranoid ideation, and psychoticism between the patterns in the findings of the present study, it appears that psychological qualities such as mental balance, a low inclination towards surrendering to problems, and emotional distancing contribute to individuals with healthy patterns being less vulnerable when facing everyday work and social challenges. Therefore, it can be said that mental health issues may worsen in connection with unhealthy behavior patterns, inappropriate work conditions, weak organizational structuring, and psychosocial hazards (Leka & Nicholson, 2019). The findings of this study are in line with previous research by Bauer et al. (2006), Schulz et al. (2011), Kalani et al. (2017), and Hidajat et al. (2023), highlighting the importance of studying the relationship between psychological pathology and work experiences, and underscoring the need for more research and interventions aimed at preventing mental health consequences.

The present research faced certain limitations. Firstly, it is important to note that due to the limited number of female employees in the sample, gender differences were not adequately explored in this study, despite the necessity of considering the influence of cultural and social factors on individuals' coping patterns. Additionally, this study encountered limitations such as the need for more control over variables like social support and organizational rank.

Developing and implementing prevention policies and mental health programs in the workplace in favor of employees' well-being is associated with increased organizational productivity and community welfare. In line with existing research evidence, psychological intervention programs that include training in adopting healthy work behavior patterns, stress management, and enhancing mental health positively impact employees' well-being, which demands further research in this area. Therefore, based on the results indicating the changeability of work behavior patterns (Zhang et al., 2023), it is suggested that employee health programs, along with strengthening optimal behavior patterns and skills in the workplace as an important educational resource, should be considered not only as a strategic priority but also as an essential principle. In this way, the desirable effects of such programs can extend to other personal and social aspects of individuals' lives, ultimately enhancing the well-being of individuals across a wide spectrum. Moreover, future studies should investigate the relationship between work experiences and behaviors with psychological adaptation, desirable job performance, and psychological outcomes in both normal and clinical employee populations. These studies should provide the necessary theoretical foundations for developing empowerment, prevention, and treatment programs.

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