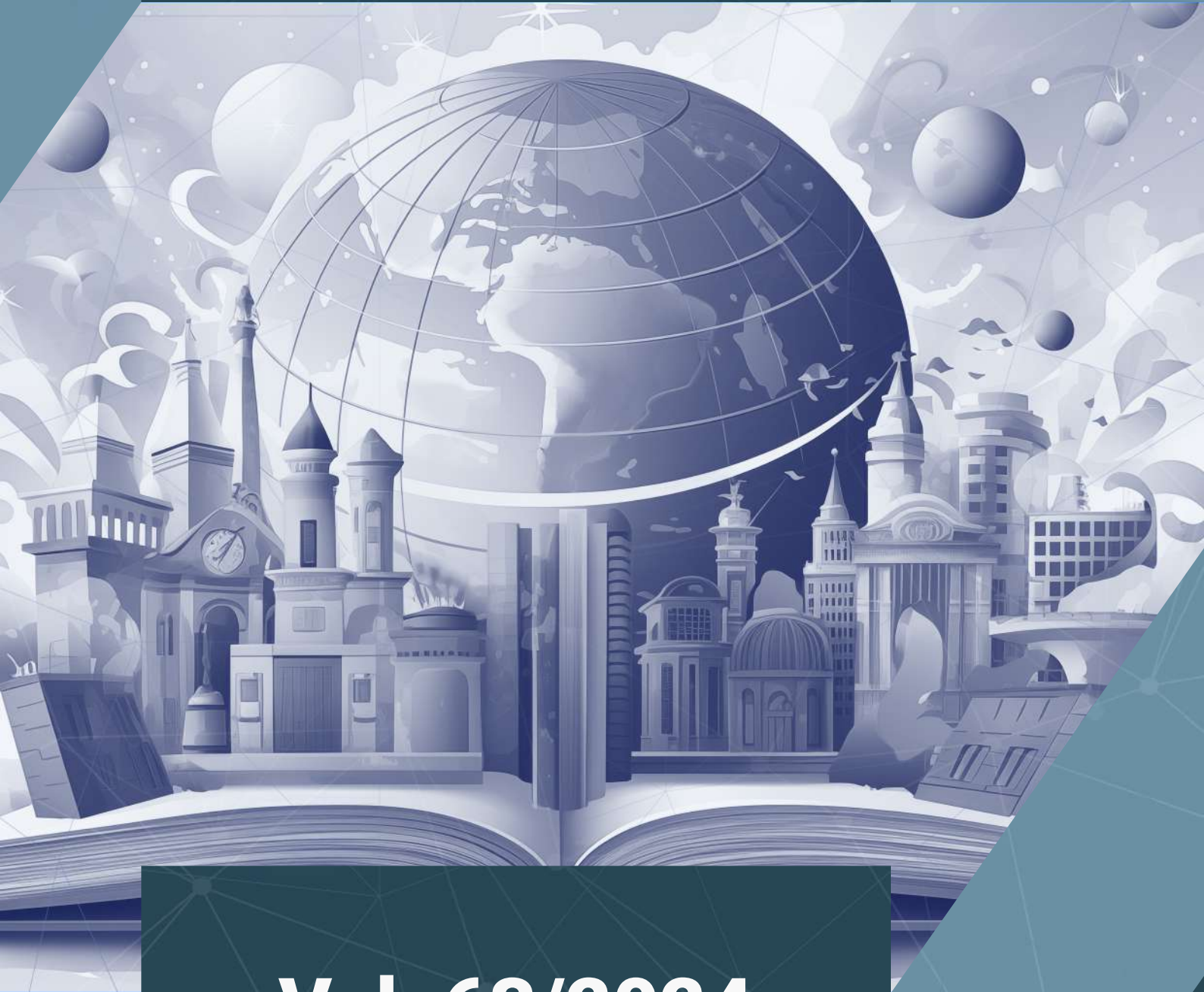




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## **The Azerbaijani Adaptation of the Utrecht Work Engagement Scale: Investigating Its Influence on Psychological Distress and Life-Job Satisfaction**

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**Abstract.** Teacher well-being plays a vital role in fostering a positive and productive learning environment, as it directly impacts both their professional performance and the overall success of their students. Consequently, this study aimed to adapt the Utrecht Work Engagement Scale for use among Azerbaijani school principals and to investigate the relationships between work and wellbeing, psychological distress, and life-job satisfaction. Data were gathered from 976 Azerbaijani school principals. The adaptation process involved confirmatory factor analysis, evaluations of criterion-related validity, and reliability testing. Additionally, the relationships between work and wellbeing, psychological distress, and life-job satisfaction were examined through mediational analysis. The confirmatory factor analysis revealed that the questionnaire consisted of 17 items, highlighted three factors, and demonstrated an acceptable model fit. The scale showed satisfactory reliability coefficients for both its individual factors and the overall score. Moreover, the results indicated that work and wellbeing was positively correlated with life-job satisfaction and negatively associated with psychological distress. Lastly, the findings revealed that psychological distress mediated the relationship between work and wellbeing and life-job satisfaction. These outcomes suggest that the Azerbaijani version of the Utrecht Work Engagement Scale possesses strong psychometric properties.

**Keywords.** Utrecht Work Engagement, job satisfaction, psychological distress, scale adaptation

### **Introduction**

In the context of education, a school principal serves as the leader of an incomplete secondary or high school, responsible for organizing both educational and economic activities within the institution. This role encompasses a diverse range of responsibilities and requires the individual to embody various professional identities, including that of a teacher, methodologist, state inspector, administrator, and educator for both adult and student communities (Mas et al., 2021). Effective scientific management in this position necessitates not only comprehensive expertise but also genuine dedication and unwavering loyalty to the mission at hand.

A recent study by Luthans (2002) stated that organizational psychology focuses on "the study of the strengths and psychological aspects of positively oriented human resources whose performance can be effectively measured, developed and managed, is an important

improvement factor in today's workplaces." One of these positive aspects is work engagement, which is considered the antipode of burnout.

Employee loyalty pertains to an individual's integration within a specific organization, encompassing their level of commitment and acceptance of the organization's goals and objectives. It involves the employee's dedication to actively working toward these objectives and striving to remain with the organization. Research indicates that the loyalty of employees is positively correlated with the institution's image, reputation, and perceived reliability.

Individuals in leadership roles, particularly principals, often experience considerable psychological distress. A substantial body of literature indicates that educators, notably school principals, face significant levels of psychological distress, including symptoms of depression, general stress, and job-related emotional exhaustion (e.g., Buettner et al., 2016; Katz et al., 2017). Psychological distress is characterized as a subjective experience of depression or anxiety that encompasses both emotional and physiological components (Mirowsky, 2012). The impact of psychological distress on principals has been examined from various perspectives, as these issues often contribute to environments that necessitate restrictive measures and other stress-inducing activities

It is essential to identify the factors that contribute to the deterioration of an individual's mental health, as psychological distress adversely impacts a principal's interactions with school staff, teacher job satisfaction, and student outcomes (Malmberg & Hagger, 2009).

The negative effects of stress on psychological health are known in the literature (Boscarino, 2004; Schneiderman et al., 2005). Occupational stress in particular, is negatively related to job satisfaction, life satisfaction and general health (Johnson et al., 2005).

The literature clearly distinguishes between employee loyalty and employee satisfaction. While it is possible for satisfied employees to fulfill their job responsibilities without demonstrating loyalty, research indicates that employees with high job satisfaction often exhibit similar levels of satisfaction without necessarily being engaged. Such employees tend to perform the minimum required and may lack the motivation to exceed expectations.

In contrast, loyal employees contribute more significantly to the organization. Loyalty reflects an emotional and cognitive bond that drives individuals to engage actively and go beyond their basic duties. This commitment fosters a collective effort among employees who are dedicated to achieving challenging goals aligned with the company's mission. In essence, employee engagement signifies a willingness to embrace the organization's objectives and work toward them with enthusiasm.

Research indicates that school principals who experience job satisfaction also tend to have high levels of life satisfaction. Individuals who center their life activities around a specific profession often report greater life satisfaction when they achieve success in that role.

The findings indicate that school principals' job commitment influences their level of psychological distress. There is a significant relationship between distress and both job satisfaction and life satisfaction. Specifically, greater job commitment among managers is associated with lower psychological distress, which in turn enhances job satisfaction. Higher levels of job satisfaction are linked to increased life satisfaction.

There are currently 4431 full-time general education schools operating in Azerbaijan. The same number of school principals work in these institutions. However, there is no methodology to measure the commitment of school principals.

This study focuses on the development and psychometric evaluation of a self-report questionnaire designed to measure the commitment levels of school principals. The Utrecht Work Engagement Scale (UWES) has been adapted for use in various countries and is actively

employed to assess principals' commitment. By applying this methodology in Azerbaijan, we can evaluate the commitment of school principals while simultaneously facilitating psychoprophylactic studies on the identified issues. Additionally, training can be provided to school psychologists to assist with the implementation of this methodology in schools. Furthermore, this approach may be utilized in the recruitment and selection processes for principals.

In contrast to individuals experiencing burnout, engaged leaders exhibit a strong, energetic commitment to their work activities and believe they can effectively manage the demands of their roles. Engagement is characterized as a positive and fulfilling emotional state associated with work, marked by vitality, dedication, and a sense of acceptance (Schaufeli, 2002).

Building on the previously mentioned definition, a self-report questionnaire known as the Utrecht Work Engagement Scale (UWES) was developed, encompassing three primary dimensions of work engagement: energy, dedication, and acceptance. The initial version of the UWES contained 24 items; however, following psychometric evaluation, 7 items deemed invalid were removed, resulting in three subscales with a total of 17 items (Schaufeli et al., 2002): the Energy (VI, 6 items), Dedication (DE, 5 items), and Acceptance (AB, 6 items) scales. This paper aims to reduce the number of items in the UWES utilizing a large international database. The motivation for this abbreviation is largely pragmatic, as researchers strive to include the fewest items necessary to measure a given construct, thereby minimizing participant anxiety. Additionally, lengthy questionnaires can hinder work efficiency. The original UWES-17 demonstrates promising psychometric properties, with internal consistency (Cronbach's alpha) typically ranging from 0.80 to 0.90 (Demerouti, 2001; Durán, 2004; Montgomery, 2003; Schaufeli & Bakker, 2004). Consequently, Cronbach's alpha values consistently exceed the traditional threshold of 0.70 (Nunnally & Bernstein, 1994) and often reach the accepted standard of 0.80 (Henson, 2001).

## Methods

### Participants

The sample consisted of 976 school administrators ranging in age from 25 to 69 years, with a mean age of 47.16 (SD = 10.57). Regarding gender distribution, 56.5% were female (n = 551) and 43.5% were male (n = 425). Most of the participants were married (88.6%, n = 885), while 11.4% were single (n = 111). In terms of educational attainment, the majority held a bachelor's degree (74.4%, n = 726), followed by those with a master's degree (22.4%, n = 219), and a small minority had earned a PhD (3.2%, n = 31). Economically, 41.5% of participants reported having a sufficient economic status (n = 405), whereas 58.5% indicated their economic situation was not sufficient (n = 571). Participants were responsible for schools with student populations ranging from 5 to 5,300, with an average student population of 588.22 (SD = 754.95). They reported working between 2 and 14 hours per day in the school setting, with an average of 8.56 hours (SD = 1.32). The descriptive of the participants are given in Table 1.

**Table 1. Participants' descriptive**

	N	%
<i>Gender</i>		
Female	551	56.5
Male	425	43.5
<i>Marital status</i>		

Married	885	88.6
Single	111	11.4
<i>Educational status</i>		
Bachelor degree	726	74.4
Master degree	219	22.4
PhD	31	3.2
<i>Economic situation</i>		
Sufficient economic status	405	41.5
Economic situation is not sufficient	571	58.5

### Measures

The Utrecht Work Engagement Scale (UWES) was developed by Schaufeli, Salanova, et al., (2002). The items within the UWES are organized into three subscales that represent the primary dimensions of work engagement: VI (6 items), DE (5 items), and AB (6 items). Each item is evaluated using a 7-point frequency rating scale, with responses ranging from 0 (never) to 6 (always).

The Depression, Anxiety, and Stress Scale - 21 Items (DASS-21) is a self-report instrument designed to evaluate emotional states associated with depression, anxiety, and stress (Lovibond, P. F., & Lovibond, S. H., 1995). The scale consists of three subscales, each containing 7 items, which are rated on a four-point Likert scale ranging from "Did not apply to me at all" to "Applied to me very much or most of the time." The depression subscale assesses symptoms such as dysphoria, hopelessness, self-deprecation, and lack of interest. The anxiety subscale evaluates situational anxiety and the subjective experience of anxious affect and physiological responses, while the stress subscale measures levels of chronic non-specific arousal. Total scores on the DASS-21 can range from 0 to 63.

Job Satisfaction Scale - this scale is a 32 item that measuring job satisfaction. This scale was prepared by researchers by scanning various literature and articles. It is asked how satisfied the individual is with these 32 items related to business life and them are asked to evaluate between 0% and 100%. It is a Likert-type scale scored as 0=1, 25=2, 50=3, 75%=4, and 100=5. Point range is 1-160. High scores from the scale indicates high satisfaction.

The Satisfaction with Life Scale (SWLS), developed by Diener, Emmons, Larsen, and Griffin (1985), is a tool designed to assess an individual's overall life satisfaction. The scale comprises five items that evaluate a person's cognitive appraisal of their life satisfaction, such as the statement, "In most ways, my life is close to my ideal." Respondents indicate their level of agreement with each statement on a seven-point Likert scale, where 1 signifies strong disagreement and 7 signifies strong agreement. In the current study, the internal consistency of the scale was assessed using Cronbach's alpha, revealing a satisfactory level of reliability.

### Data Analysis

This study was designed to evaluate the psychometric features of the Azerbaijani version of the Work and Well-Being Survey (UWES). Key aspects scrutinized included structural validity, reliability, criterion-related validity, and the scale's ability to predict certain outcomes. Structural validity was assessed through Confirmatory Factor Analysis (CFA) employing maximum likelihood methods, and the goodness-of-fit was gauged by metrics such as the chi-square to degrees of freedom ratio, Comparative Fit Index (CFI), Normed Fit Index (NFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), Relative Fit Index (RFI), and

Standardized Root Mean Square Residual (SRMR). Reliability testing was conducted through calculations of Cronbach's alpha, McDonald's omega, and Guttman's lambda. In addition, the study investigated the relationships between scores on the UWES and variables like life satisfaction, job satisfaction, and psychological distress using correlation analysis. The study also incorporated a mediation analysis using Hayes' PROCESS macro model 4 to explore how psychological distress might mediate the impact of UWES on life satisfaction and job satisfaction.

### Results

The Work and Well-Being Survey was adapted for Azerbaijani school administrators, and a confirmatory factor analysis was conducted to test the factor structure of the instrument. The model fit was evaluated using several indices:  $\chi^2(1168, N = 976) = 341.91$ , CFI = .941, NFI = .935, TLI = .931, RFI = .924, and SRMR = .0369. These indices suggest a good fit between the hypothesized model and the observed data, confirming the adequacy of the three-dimensional structure of the survey. For the Vigor scale, items showed factor loadings ranging from .75 (Item 1) to .92 (Item 8), with mean scores between 4.75 (Item 1) and 5.20 (Item 8), and standard deviations ranging from 1.52 to 1.71. The Dedication scale demonstrated high factor loadings, from .89 (Item 10) to .94 (Item 5), with mean scores from 5.07 (Item 7) to 5.27 (Item 5), and standard deviations ranging from 1.47 to 1.59. For the Absorption scale, factor loadings varied, with the lowest at .60 (Item 6) and the highest at .87 (Item 11). Mean scores ranged from 4.14 (Item 6, Item 14) to 5.02 (Item 11), and standard deviations from 1.59 to 2.04 (see Table 2).

**Table 2. Factor loadings and descriptive statistics for Azerbaijani Work and Well-Being Survey**

Dimension	Item	Factor loading	Mean	SD	Skewness	Kurtosis
Vigor scale	Item 1	.75	4.75	1.71	-1.07	-.06
	Item 4	.87	5.04	1.56	-1.43	.88
	Item 8	.92	5.20	1.52	-1.78	2.13
	Item 12	.84	5.02	1.67	-1.56	1.27
	Item 15	.88	5.14	1.55	-1.67	1.65
	Item 17	.81	5.10	1.60	-1.61	1.37
Dedication scale	Item 2	.91	5.22	1.50	-1.81	2.23
	Item 5	.94	5.27	1.47	-1.89	2.52
	Item 7	.90	5.07	1.59	-1.49	.97
	Item 10	.89	5.13	1.58	-1.62	1.39
	Item 13	.90	5.11	1.54	-1.61	1.51
Absorption scale	Item 3	.78	4.90	1.65	-1.29	.44
	Item 6	.60	4.18	2.04	-.62	-1.09
	Item 9	.85	4.90	1.71	-1.28	.32

Item 11	.87	5.02	1.59	-1.44	.88
Item 14	.61	4.14	2.04	-.64	-1.03
Item 16	.75	4.83	1.83	-1.31	.36

Note. \*\*  $p < .001$

The reliability of the Azerbaijani version of the UWES was assessed using Cronbach's alpha ( $\alpha$ ), McDonald's omega ( $\omega$ ), and Guttman's lambda-6 ( $\lambda_6$ ). The overall UWES demonstrated excellent reliability, with Cronbach's  $\alpha = .969$ , McDonald's  $\omega = .969$ , and Guttman's  $\lambda_6 = .976$ . For the Vigor scale, reliability coefficients were robust, with Cronbach's  $\alpha = .938$ , McDonald's  $\omega = .938$ , and Guttman's  $\lambda_6 = .918$ . The Dedication scale also showed high reliability, with values of Cronbach's  $\alpha = .958$ , McDonald's  $\omega = .958$ , and Guttman's  $\lambda_6 = .950$ . Lastly, the Absorption scale reported satisfactory reliability, indicated by Cronbach's  $\alpha = .883$ , McDonald's  $\omega = .880$ , and Guttman's  $\lambda_6 = .900$ . These findings indicate that the adapted scales provide reliable measures for assessing the work and well-being of Azerbaijani school administrators (see Table 3).

**Table 3. Reliability coefficients for Azerbaijani UWES**

	Cronbach $\alpha$	McDonald $\omega$	Guttman $\lambda_6$
Overall UWES	.969	.969	.976
Vigor scale	.938	.938	.918
Dedication scale	.958	.958	.950
Absorption scale	.883	.880	.900

The criterion-related validity of the Azerbaijani UWES was evaluated by correlating the scales with life satisfaction, job satisfaction, and psychological distress. Each scale of the UWES showed significant correlations with these variables. The Overall UWES demonstrated significant positive correlations with life satisfaction ( $r = .227$ ,  $p < .001$ ) and job satisfaction ( $r = .316$ ,  $p < .001$ ), and a significant negative correlation with psychological distress ( $r = -.157$ ,  $p < .001$ ). For the Vigor scale, the correlations were  $r = .231$  with life satisfaction,  $r = .313$  with job satisfaction (both  $p < .001$ ), and  $r = -.183$  with psychological distress ( $p < .001$ ). The Dedication scale correlated at  $r = .200$  with life satisfaction,  $r = .300$  with job satisfaction, and  $r = -.149$  with psychological distress (all  $p < .001$ ). Lastly, the Absorption scale showed correlations of  $r = .219$  with life satisfaction,  $r = .293$  with job satisfaction, and  $r = -.119$  with psychological distress (all  $p < .001$ ). These results suggest that the UWES is a valid tool for assessing work engagement among Azerbaijani school administrators, with meaningful associations to important work-related and psychological outcomes (see Table 4).

**Table 4. Criterion-related validity of the UWES**

Variable	Life satisfaction	Job satisfaction	Psychological distress
Overall UWES	.227**	.316**	-.157**
Vigor scale	.231**	.313**	-.183**
Dedication scale	.200**	.300**	-.149**
Absorption scale	.219**	.293**	-.119**

Note. \*\*  $p < .001$

The research further explored the potential role of psychological distress as a mediating factor in the relationship between work and wellbeing (UWES) and life satisfaction, as illustrated in Figure 1. To assess the mediation effect, bootstrap analysis techniques were utilized, confirming that psychological distress significantly mediated this relationship. The bootstrap coefficient was found to be .043, with a confidence interval of 95% ranging from .021 to .079, thereby affirming the statistical significance of the mediation. Additionally, a direct and significant relationship was established between UWES and psychological distress ( $\beta = -0.162$ ,  $p < 0.001$ ), underscoring a definitive connection between these variables. Furthermore, the analysis identified a strong link between psychological distress and life satisfaction ( $\beta = -.291$ ,  $p < 0.001$ ), which further supports the scale's predictive validity within these parameters.

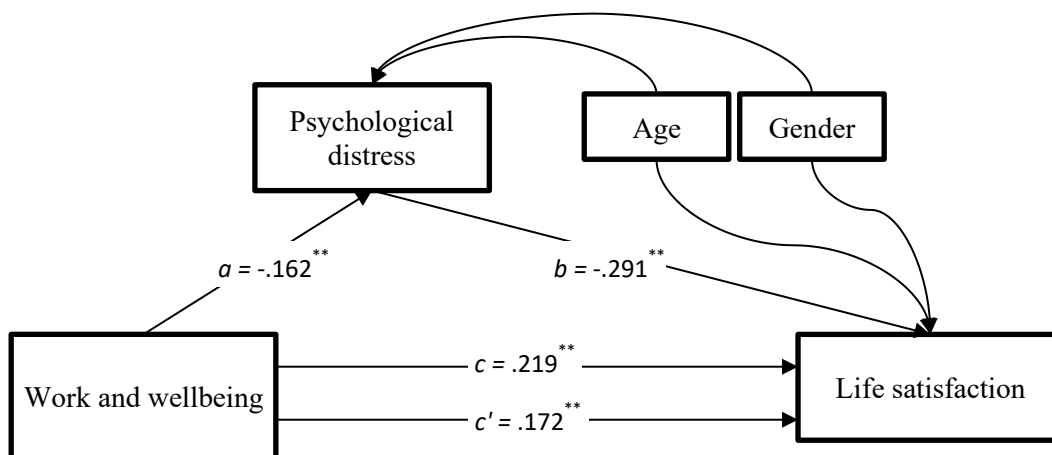


Figure 1. Predictive validity of Azerbaijani UWES

The investigation additionally examined how psychological distress might mediate the association between UWES and job satisfaction, as shown in Figure 2. Bootstrap analysis was utilized to assess the mediation effect, which confirmed that psychological distress significantly mediated this association. The bootstrap coefficient was determined to be .043, with a 95% confidence interval from .017 to .073, verifying the statistical significance of the mediation. Moreover, there was a statistically significant direct correlation between psychological distress and job satisfaction ( $\beta = -0.281$ ,  $p < 0.001$ ), clearly indicating a direct connection between these variables.

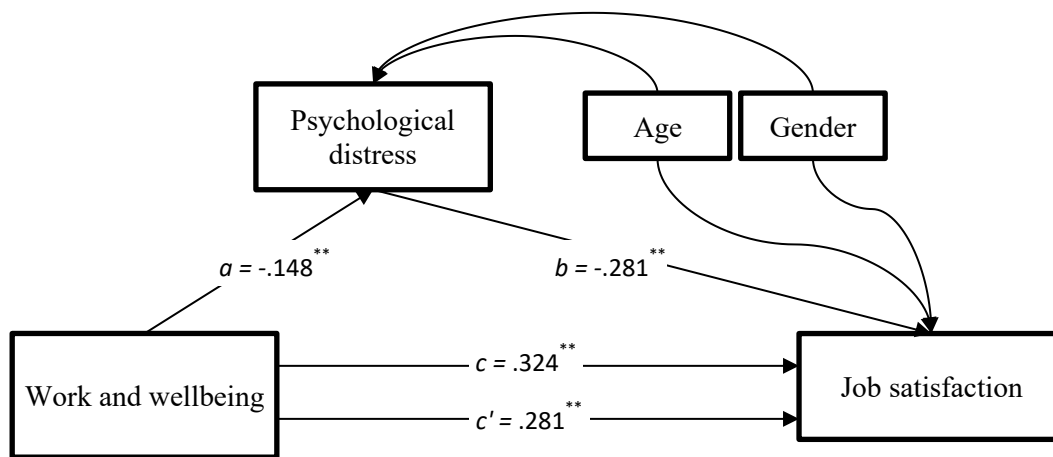


Figure 1. Predictive validity of Azerbaijani UWES

### Discussion

The Utrecht Work Engagement Scale (UWES) is a globally recognized instrument used to assess work engagement levels. It has been translated into various languages, and its validity and reliability have been previously examined. In this study, the attitudes of school principals in Azerbaijani schools towards their work were evaluated. To achieve this, research was conducted, yielding specific findings.

The findings of this study indicated that psychological distress mediates the relationship between job commitment and both job and life satisfaction among school principals in Azerbaijan. This result aligns with recent research in this area (Jiang et al., 2020; Qiu et al., 2020; Wang et al., 2020).

The results of the Confirmatory Factor Analysis (CFA) indicated that the Utrecht Work Engagement Scale (UWES) exhibited acceptable fit indices. Specifically, all fit indices were deemed satisfactory, and the standardized factor analysis was significant. Consequently, a one-dimensional version of the UWES was tested and adapted for use in Azerbaijan. The scale was administered to school principals in Azerbaijan, confirming its alignment with the original version and yielding results consistent with those found in other studies. The internal consistency of the UWES items was found to be satisfactory, with a Cronbach's alpha of 0.70.

In Item Response Theory (IRT), the properties and reliability of survey items are assessed to evaluate their compatibility. The IRT analysis of the Azerbaijan version of the Utrecht Work Engagement Scale (UWES) indicated that the items were appropriate for school principals in Azerbaijan. This study marks the first application of IRT for this survey, and the consistency of the results has been established.

The concurrent validity analysis of the Utrecht Work Engagement Scale (UWES) demonstrated a direct relationship between work engagement and psychological distress among school principals. Additionally, the analysis indicated an inverse relationship between psychological distress and both job and life satisfaction. Consequently, greater work commitment among school principals is associated with lower levels of psychological distress, ultimately resulting in increased job and life satisfaction.

In conclusion, various methods were employed to assess the validity of the Utrecht Work Engagement Scale. The survey yielded a reliability coefficient exceeding 0.70, thereby

satisfying the criterion for acceptable reliability. Consequently, we can assert that this methodology is a reliable measurement tool for use in Azerbaijan.

The criterion-related validity assessment of the Utrecht Work Engagement Scale in Azerbaijan revealed a direct relationship between work engagement and psychological distress among school principals, alongside an inverse relationship between psychological distress and both work and life satisfaction. These findings align with existing literature and further support the criterion-related validity of the Utrecht Work Engagement Scale. Additionally, a network analysis was conducted to elucidate these relationships. The results of the network analysis corroborated the dependencies identified in the criterion-related validity assessment, reinforcing the connections among the variables.

### **Limitation**

The study has several specific limitations that should be taken into account when interpreting the results. First, the data were collected through self-reported surveys, which are susceptible to subjective methodological biases, such as memory recall and social desirability. Second, the sample was predominantly composed of women, which may affect the generalizability of the findings. Third, the data were cross-sectional, meaning that all results are associative and do not allow for the establishment of causal relationships between variables. Fourth, the participants were school principals without any clinical characteristics, which limits the applicability of the findings to the broader population. Fifth, the study did not assess test-retest reliability. Finally, certain types of validity, such as convergent and divergent validity, were not evaluated.

### **Conclusion**

The initial study conducted on school principals in Azerbaijan yielded insights into their work commitment, psychological distress, job satisfaction, and life satisfaction. The findings indicated that psychological distress acts as a mediator between work commitment and both job and life satisfaction. Specifically, there is a direct relationship between work commitment and psychological distress among school principals, while an inverse relationship exists between psychological distress and both job and life satisfaction. In essence, as school principals' work commitment increases, their psychological distress decreases, which subsequently enhances their levels of job and life satisfaction.

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