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The Relationship Between Teachers' Psychological Well-Being, Coping Strategies and Intolerance of Uncertainty: A Comparative Study in Poland and Ukraine

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Abstract: Teachers' professional performance is strongly influenced by their psychological well-being, their ability to adapt to unstable and uncertain situations (especially in wartime), and their capacity to use effective strategies to manage and overcome stress. This study explored the relationships between teachers' psychological well-being, coping strategies, and intolerance of uncertainty. The Ryff Scales of Psychological Well-Being (PWB Scale), The Mental Health Continuum–Short Form (MHC-SF), The Intolerance of Uncertainty Scale–Short Form (IUS-12), Brief COPE Inventory (Brief COPE) were administered with a sample of 1936 teachers of primary and secondary school from Poland (n=927) and Ukraine (n=1009). The results showed that the psychological well-being of Polish and Ukrainian teachers is positively correlated with problem-focused coping (in particular, with active coping, positive reframing, planning, and use of instrumental support) and emotion-focused coping (such as the use of emotional support, humor, acceptance, and religion). A negative correlation was found between teachers' psychological well-being and avoidant coping (such as denial, substance use, behavioral disengagement) and intolerance of uncertainty (prospective anxiety, inhibitory anxiety). A multiple regression analysis was used to identify statistically significant predictors of psychological well-being for teachers in Poland and Ukraine. As a result, both common and distinct factors that influence teachers' psychological well-being were identified, considering the socio-cultural differences that arise from the unique characteristics of the education systems in each country and the sensitivity of teachers' well-being to various socio-political changes. The findings can be used in developing programs that support teachers' psychological well-being and create conditions conducive to enhancing their professional functioning.

Keywords: *Coping strategies, intolerance of uncertainty, psychological well-being, teachers.*

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Introduction

Modern educational systems are undergoing rapid transformations driven by technological progress, policy reforms, and shifting societal demands (Prenger et al., 2022; Stevens et al., 2023). These dynamics increase uncertainty in teachers' professional lives and require adaptability, resilience, and effective stress management (Rodymenko et al., 2023). Teachers often face high workloads, emotional pressure, and role ambiguity, which heighten their risk of stress and burnout (Alegre & Labajo, 2023; Dhar & Magotra, 2018; Kaur et al., 2024; Kidger et al., 2016; McLean et al., 2017; Wengel-Woźny et al., 2015). In this context, psychological well-being, coping strategies, and intolerance of uncertainty emerge as key constructs for understanding teachers' functioning and mental health.

Psychological well-being is essential for teaching effectiveness, job satisfaction, and student outcomes (Dreer, 2021; Orines, Dequitos, et al., 2023; Song et al., 2020; Wang et al., 2024). Coping strategies – whether adaptive (e.g., planning, positive reframing) or maladaptive (e.g., denial, substance use) – influence how teachers manage stress (Gustems-Carnicer & Calderón, 2013; McLean et al., 2017). Meanwhile, intolerance of uncertainty can undermine teachers' capacity to adapt to change and increase psychological strain (Farley & Chamberlain, 2021).

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However, few studies have examined the combined influence of coping strategies and intolerance of uncertainty on teachers' psychological well-being, especially in comparative or cross-cultural contexts.

To address this gap, the present study investigates the relationships among psychological well-being, coping strategies, and intolerance of uncertainty among teachers in Poland and Ukraine – two neighboring countries with distinct educational systems and socio-political environments. Poland offers a relatively stable system within the EU framework, while Ukrainian teachers work under conditions of heightened uncertainty, exacerbated by the ongoing war. Comparing these two contexts provides insights into both universal and culture-specific factors that influence teacher well-being and can inform the development of targeted support strategies in diverse educational settings.

Literature Review

The teaching profession is widely recognized as highly demanding and stress-inducing, with numerous studies documenting its impact on teachers' health, well-being, and productivity (Agyapong et al., 2022; Kabito & Wami, 2020; Kaur et al., 2024; Rothland, 2013; Wengel-Woźny et al., 2015; Wettstein et al., 2021). While these studies consistently link stress to decreased occupational well-being (Bidi et al., 2024; Dhar & Magotra, 2018; McLean et al., 2017), there is less consensus on the root causes and mediating mechanisms. For instance, Kaur et al. (2024) emphasize skill mismatches as stressors, whereas Rothland (2013) focuses on contextual factors, such as fragmented workspaces and a lack of advancement. Such differences suggest the need for a more nuanced understanding of occupational stress in teaching.

Methodologically, many of these studies rely on cross-sectional self-report data, which can introduce bias and limit causal interpretations (e.g., Alegre & Labajo, 2023). Nevertheless, converging evidence from multiple regions confirms that teachers often report lower psychological well-being than professionals in other fields (Nübling et al., 2012), with emotional demands cited as particularly taxing. Notably, Paliga's (2023) national survey underscores the emotional toll of teaching in Poland, where over half of teachers report frequent negative emotions at work. Kaczmarczyk (2024) further quantifies this, revealing alarmingly low well-being scores.

Beyond individual stressors, systemic issues such as administrative burdens, a lack of support, and disciplinary challenges compound psychological strain (Alegre & Labajo, 2023; Wengel-Woźny et al., 2015). These findings reflect international trends, although cultural and policy contexts play a significant role in shaping how stress is experienced and addressed. Kidger et al. (2016) identified low social support and poor workplace relationships as risk factors for depression, thereby reinforcing the importance of organizational climate.

Issues relating to stress and well-being also extend to teacher training. Zimmermann et al. (2012) and Gardner (2010) have documented a decline in the mental health of pre-service teachers in the early stages of their training. High expectations, difficulties adapting to the classroom environment, and personal insecurities have been identified as contributing factors to this distress. However, longitudinal studies are scarce, which leaves many questions unanswered about how these early stressors evolve over time.

Recent work has broadened the scope to encompass geopolitical instability, with a particular focus on Ukraine. Studies have highlighted the detrimental effects that war-related trauma can have on mental health, including increased rates of post-traumatic stress disorder (PTSD), depression, and anxiety (Johnson et al., 2022; Karamushka et al., 2022; Khan & Altalbe, 2023; Kurapov et al., 2023; Seleznova et al., 2023). While these findings are consistent with global trends in conflict zones, they also raise questions about how such macro-level stressors intersect with professional roles in education. A comparison of data sets reveals that populations not directly involved in conflict report elevated levels of psychological distress (Chudzicka-Czupała et al., 2023; Görner et al., 2023; Mottola et al., 2023; Predoiu et al., 2024; Szepietowska, 2023). This phenomenon suggests the presence of a transnational ripple effect, indicating that the impact of conflict extends beyond the immediate affected populations.

In the context of wartime, characterized by heightened uncertainty, it is imperative to examine how teachers manage to cope with unpredictability. Tolerance for uncertainty has emerged as a critical soft skill, with implications for resilience and effectiveness (Anderson et al., 2020; Friedel & Dalbert, 2003; Tsyura et al., 2022). Nevertheless, empirical studies demonstrate conflicting results with regard to the question of whether uncertainty is inherently detrimental or potentially transformative. Helsing (2007) illustrates this duality, showing that while some teachers experience uncertainty as a source of anxiety and burnout, others embrace it as a catalyst for growth.

The construct of intolerance of uncertainty has gained prominence as a predictor of emotional dysregulation. Dugas et al. (1997, 2004) define intolerance of uncertainty as the tendency to perceive ambiguous situations as threatening, which may hinder adaptive responses. Despite its relevance, few studies integrate intolerance of uncertainty into broader models of teacher stress and coping.

Promoting psychological well-being in uncertain contexts also entails examining coping strategies. A growing body of research suggests that problem-focused coping is positively correlated with well-being, whereas avoidant strategies, especially behavioral avoidance, may exacerbate distress (Aulén et al., 2021; Gustems-Carnicer & Calderón, 2013; Gustems-Carnicer et al., 2019; Kiyas, 2010; Orines, Dy, et al., 2023). Coping strategies can either reduce or increase the

effects of stressors, depending on their characteristics (Bidi et al., 2024; Rajesh et al., 2022). However, the field lacks consensus on which strategies are most effective across diverse educational settings.

Finally, it was found that environmental and organizational factors also play a mediating role. Studies emphasize the importance of supportive school climates, mentoring, and administrative support in enhancing teachers' resilience (Brady & Wilson, 2020; Dhar & Magotra, 2018; McLean et al., 2017). Emotional stability, job satisfaction, and intrinsic motivations such as self-efficacy and altruism also contribute to psychological well-being (Dreer, 2021; Espinoza-Díaz et al., 2023; Song et al., 2020; Wang et al., 2024).

In summary, the literature reveals that teacher psychological well-being is shaped by a complex interplay of personal, professional, and contextual factors. While prior research has established a foundational understanding of stressors and coping in teaching, gaps remain regarding the roles of intolerance of uncertainty and cross-cultural differences, particularly in crisis contexts such as war. Moreover, theoretical integration suggests that intolerance of uncertainty may undermine the effectiveness of coping strategies, which in turn impacts psychological well-being. Thus, exploring the dynamic interconnections between these three constructs can offer deeper insights into teachers' adaptive capacities. By synthesizing these themes, the present study contributes a comparative perspective on how Polish and Ukrainian teachers navigate psychological challenges, with particular attention to their coping strategies and tolerance for uncertainty. This integrative framework informs both the study's research questions and its methodological approach.

Methodology

Research Design

The current study aimed to investigate the relationship between the psychological well-being of teachers, coping strategies, and intolerance of uncertainty. The study used a quantitative questionnaire approach (Patten & Newhart, 2018), and a descriptive correlation survey design (Fraenkel et al., 2011). The instrument used comprised one survey and four questionnaires.

The study is grounded on Ryff's (1989) model of psychological well-being. Also, the indicators of positive human functioning are associated with the concept of "mental health", which Keyes (2002) operationalized in terms of the frequency of experiencing signs of psychological, social, and emotional well-being. Intolerance of uncertainty is conceptualized as a higher-order construct that includes two lower-order dimensions (Carleton et al., 2007): the fear of unpredictable future events (prospective uncertainty intolerance) and the avoidance of uncertain events (inhibitory uncertainty intolerance). The study of coping strategies among pedagogical workers is based on Carver's (1997) model, which suggests that coping strategies consist of two components: consistent coping tendencies (dispositional coping) and methods used in a specific stressful situation (situational coping). Therefore, coping strategies are considered the result of interactions between an individual's characteristics and the situation. Different types of coping strategies can have different effects on a person depending on the nature of the stressor and individual characteristics. Problem-focused coping strategies may be more effective for managing acute stressors, while emotion-focused strategies tend to be better for managing chronic stressors or situations where the individual has limited control (Carver, 1997).

Participants

Participants included 1936 teachers of primary and secondary education [927 Polish teachers ages 27–61 (M = 43.6, SD = 7.4) and 1009 Ukrainian teachers ages 22–72 (M = 42.8, SD = 11.1)] from different regions of Poland and Ukraine. A description of the age groups, gender, locality and professional experience distribution of the study participants can be found in Table 1.

The teachers' survey was conducted via Google Forms between March and May 2024. School principals supported the distribution of the survey link to teachers. Their role was limited to logistical coordination; they did not have access to individual responses or oversee participation. To minimize potential bias and ensure voluntary participation, teachers were informed that the study was anonymous and that their responses would be treated with strict confidentiality. Participation was entirely voluntary, and the school administration did not exert any pressure or encouragement. Many teachers chose to participate due to their genuine interest in the topic and its relevance to their professional experiences.

Table 1. Sociodemographic Characteristics of Participants (N=1936)

Characteristics	Polish teachers (*N*=927)		Ukrainian teachers (*N*=1009)	
	Total	%	Total	%
Age				
21-40	252	27.1	320	31.7
41-60	604	65.2	588	58.3
61 or older	71	7.7	101	10.0
Gender				
Female	821	88.6	910	90.2
Male	106	11.4	99	9.8
Years of experience				
Less than 10 years	171	18.5	202	20.0
11-20 years	309	33.3	302	29.9
More than 20 years	447	48.2	505	50.1
Locality				
City	687	74.1	648	64.2
Village	240	25.9	361	35.8

Measuring Instruments

Adapted versions of assessment instruments (in Polish and Ukrainian) were used to measure key variables: The Ryff Scales of Psychological Well-Being (Ryff, 1989); The Mental Health Continuum–Short form (Keyes et al., 2008); The Intolerance of Uncertainty Scale–Short Form (Carleton et al., 2007); Brief COPE (Carver, 1997).

The Psychological Well-Being (PWB) Scale

The Psychological Well-Being (PWB) Scale was developed by Ryff (1989). The PWB scale included 84 statements with a 7-point Likert scale, such as Strongly disagree (1), Disagree (2), Partly disagree (3), Undecided (4), Partly agree (5), Agree (6), and Strongly agree (7). The PWB has six subscales, and each of them has fourteen items. The subscales are as follows: Self-acceptance, Positive Relations with Others, Autonomy, Environmental Mastery, Purpose in Life, and Personal Growth. Polish teachers were offered a version of the PWB scale adapted in Polish by Karas and Cieciuch (2017). For Ukrainian teachers, the PWB scale was utilized in its Ukrainian language adaptation by Karskanova (2011). The assessment instruments were adapted in accordance with ITC Guidelines for Translating and Adapting Tests (Hernández et al., 2020). The scale reliabilities (Cronbach's α) obtained in this study (separately for the Polish and Ukrainian versions) are presented in Table 2.

Table 2. Cronbach's Alpha Reliability for Psychological Well-Being (PWB) Scale

Psychological Well-Being Indicators	Polish version		Ukrainian version	
	Cronbach's Alpha	N of Items	Cronbach's Alpha	N of Items
Self-acceptance	.86	14	.85	14
Positive Relations with Others	.85	14	.83	14
Autonomy	.79	14	.78	14
Environmental Mastery	.81	14	.74	14
Purpose in Life	.84	14	.85	14
Personal Growth	.78	14	.84	14
Psychological Well-Being (General Indicator)	.95	84	.92	84

The Mental Health Continuum–Short form (MHC-SF)

The Mental Health Continuum-Short Form (MHC-SF) measures the 3 dimensions of mental health: emotional, social, and psychological well-being (Keyes et al., 2008), and consists of 14 items. Participants responded on a 5-point Likert scale, ranging from 0 "Never" to 4 "Every day". The Ukrainian language adaptation of the MHC-SF was conducted by Nosenko and Chetveryk-Burchak (2014). The MHC-SF was translated into Polish by Shvay. The scale reliabilities (Cronbach's α) obtained in this study (separately for the Polish and Ukrainian versions) are presented in Table 3.

Table 3. Cronbach's Alpha Reliability for Mental Health Continuum–Short Form (MHC-SF)

Mental Health Indicators	Polish version		Ukrainian version	
	Cronbach's Alpha	N of Items	Cronbach's Alpha	N of Items
Emotional Well-Being	.90	3	.89	3
Social Well-Being	.89	5	.90	5
Psychological Well-Being	.91	6	.92	6
Mental Health General Indicator	.93	14	.94	14

The Intolerance of Uncertainty Scale–Short Form (IUS-12)

A short version of the Intolerance to Uncertainty Scale (IUS-12) was developed by Carleton et al. (2007), which consists of 12 questions and has 2 subscales - Prospective Anxiety and Inhibitory Anxiety. Each item was rated on a Likert scale from 1 (not at all characteristic of me) to 5 (entirely characteristic of me). The IUS-12 was adapted into Polish by Mudyń (2019), while the Ukrainian-language adaptation was conducted by Hromova (2021). The scale reliabilities (Cronbach's α) obtained in this study (separately for the Polish and Ukrainian versions) are presented in Table 4.

Table 4. Cronbach's Alpha Reliability for Intolerance of Uncertainty Scale–Short Form

Intolerance of Uncertainty Indicators	Polish version		Ukrainian version	
	Cronbach's Alpha	N of Items	Cronbach's Alpha	N of Items
Prospective Anxiety	.82	7	.76	7
Inhibitory Anxiety	.79	5	.74	5
Intolerance of Uncertainty (Total)	.86	12	.82	12

Brief COPE Inventory

Brief COPE inventory (Carver, 1997) consists of 28 questions rated on a Likert scale from 1 ("I haven't done this") to 4 ("This is exactly what I have done"). The Brief-COPE includes 14 subscales: self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioral disengagement, venting, positive reframing, planning, humor, acceptance, religion, and self-blame. These subscales can be categorized into three higher-order dimensions: problem-focused coping; emotion-focused coping; and avoidant coping. The Brief-COPE Questionnaire was adapted into Ukrainian by Yablonska et al. (2023), while the Polish-language adaptation was conducted by Shvay. The scale reliabilities (Cronbach's α) obtained in this study (separately for the Polish and Ukrainian versions) are presented in Table 5.

Table 5. Cronbach's Alpha Reliability for Brief COPE Inventory

Coping strategies	Polish version		Ukrainian version	
	Cronbach's Alpha	N of Items	Cronbach's Alpha	N of Items
Problem-focused	.75	8	.76	8
Active coping	.70	2	.65	2
Use of instrumental support	.77	2	.82	2
Positive reframing	.66	2	.75	2
Planning	.67	2	.70	2
Emotion-focused	.81	12	.75	12
Use of emotional support	.78	2	.76	2
Venting	.74	2	.69	2
Humor	.83	2	.79	2
Acceptance	.68	2	.64	2
Self-blame	.70	2	.66	2
Religion	.82	2	.78	2
Avoidant	.79	8	.77	8
Self-distraction	.68	2	.65	2
Denial	.75	2	.78	2
Substance use	.85	2	.92	2
Behavioral disengagement	.61	2	.67	2
Total		28		28

Analyzing of Data

The data gathered by the PWB, MHC-SF scales, IUS-12 and Brief COPE inventory have been analyzed by using IBM SPSS Statistics (version 29). Percentages and frequencies were used to analyze demographic variables. Descriptive statistics (i.e., mean and standard deviation) were used to describe teachers' psychological well-being, coping strategies, and

intolerance of uncertainty. The Kolmogorov–Smirnov normality test was used to test the empirical data for normality. Given that the data follow the normal distribution, a parametric *t*-test was used to compare the indicators of psychological well-being and mental health among Polish and Ukrainian teachers. Also, Pearson's correlation coefficient was used to describe the relationship between teachers' psychological well-being, coping strategies, and intolerance of uncertainty. To examine how accurately the independent variables (coping strategies, intolerance of uncertainty) predicted teachers' psychological well-being as a dependent variable, multiple linear regression (stepwise) analysis was used.

Prior to conducting statistical analyses, the dataset was screened for missing values and outliers. No missing data were identified for the variables included in the analyses; therefore, no imputation or deletion procedures were required. Outliers were assessed using standardized residuals, leverage statistics, and Mahalanobis distance within SPSS. No influential cases were found to violate regression assumptions or significantly distort the results.

Results

The empirical study shows the distribution of psychological well-being levels (high, medium, and low) among Polish and Ukrainian teachers (Table 6). More than half (55%) of Polish teachers exhibit a high level of psychological well-being, while the majority of Ukrainian teachers (63%) demonstrate an average level of psychological well-being.

Table 6. Percentage Distribution of Teachers' Psychological Well-Being Levels (N = 1936)

	Polish teachers (n=927)		**Ukrainian teachers (n=1009)**	
Psychological Well-Being Levels	**%**	**Total**	**%**	**Total**
High	55.02	510	23.98	242
Average	33.98	315	63.03	636
Low	11.00	102	12.99	131

A comparative analysis (using the *t*-test) of psychological well-being indicators of Polish and Ukrainian teachers revealed statistically significant differences in several characteristics: *autonomy* (t = 3.84, p = .005, d = 0.55), *environmental mastery* (t = 2.82, p = .019, d = 0.53), and *psychological well-being general indicator* (t = 2.09, p = .039, d = 0.60) (Table 7). These differences were not only statistically significant but also practically meaningful, as indicated by the medium effect sizes (Cohen's d).

Table 7. Results of Comparative Analysis of Psychological Well-Being Indicators among Polish (n = 927) and Ukrainian Teachers (n = 1009)

Psychological Well-Being Indicators	**Polish teachers**		**Ukrainian teachers**		***p***	**Cohen's *d***
	M	***SD***	***M***	***SD***		
Self-acceptance	64.44	13.65	62.19	10.87	.287	0.18
Positive Relations with Others	66.89	11.90	64.12	10.05	.156	0.25
Autonomy	64.30	10.61	58.72	9.58	.005	0.55
Environmental Mastery	64.67	11.91	59.11	9.92	.019	0.53
Purpose in Life	67.00	10.74	64.81	9.55	.248	0.22
Personal Growth	66.81	9.76	65.52	9.37	.475	0.13
Psychological Well-Being (General Indicator)	399.11	39.80	375.48	38.82	.039	0.60

Also, there are significant differences between Polish and Ukrainian teachers in terms of mental health (each with a medium effect size), where Ukrainian teachers have lower values of *emotional well-being* (M_{POL} = 10.52, M_{UKR} = 9.28, p = .032, d = 0.58), *psychological well-being* (M_{POL} = 22.85, M_{UKR} = 20.33, p = .022, d = 0.69), and *mental health general indicator* (M_{POL} = 47.44, M_{UKR} = 43.85, p = .017, d = 0.76) than Polish teachers. No statistically significant differences (with a small effect size) were found in the *social well-being* of Polish and Ukrainian teachers (M_{POL}= 15.07, M_{UKR} = 15.32, p = .079, d = 0.09).

Pearson's correlation coefficient was used to detect the relationship between teachers' psychological well-being, coping strategies, and intolerance of uncertainty. The findings of the correlation analysis are presented for the total group of teachers under study, as the analysis of the results separately for the groups of Polish and Ukrainian teachers demonstrates the presence of the same relationships. The correlations of the psychological well-being general indicator with intolerance to uncertainty are presented in Table 8, and coping strategies in Table 9.

Table 9. Correlations between Psychological Well-Being and Coping Strategies (N = 1936)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Psychological Well-Being	–																	
2. Problem-focused coping	.43**	–																
3. Active coping	.38**	.73**	–															
4. Use of instrumental support	.16**	.66**	.29**	–														
5. Positive reframing	.39**	.73**	.38**	.26**	–													
6. Planning	.31**	.75**	.50**	.29**	.42**	–												
7. Emotion-focused coping	.10**	.58**	.73**	.46**	.42**	.40**	–											
8. Use of emotional support	.36**	.57**	.38**	.58**	.34**	.30**	.50**	–										
9. Venting	.04	.30**	.24**	.29**	.15**	.19**	.61**	.20**	–									
10. Humor	.16**	.30**	.14**	.13**	.40**	.17**	.54**	.18**	.15**	–								
11. Acceptance	.27**	.50**	.40**	.23**	.37**	.45**	.56**	.29**	.27**	.21**	–							
12. Self-blame	-.41**	.05	-.04	.11**	-.02	.09**	.42**	-.04	.22**	.04	.01	–						
13. Religion	.07**	.23**	.15**	.20**	.14**	.16**	.57**	.12**	.20**	.09**	.17**	.05	–					
14. Avoidant coping	-.38**	.02	-.02	.10**	-.03	-.00	.29**	-.00	.28**	.07**	-.01	.41**	.12**	–				
15. Self-distraction	.18**	.44**	.43**	.22**	.32**	.32**	.34**	.26**	.25**	.15**	.35**	.04	.12**	.34**	–			
16. Denial	-.37**	-.01	-.04	.11**	-.08**	-.03	.19**	-.02	.22**	-.03	-.05	.39**	.06**	.72**	.06**	–		
17. Substance use	-.26**	-.13**	-.16**	-.02	-.12**	-.10**	.11**	-.07**	.12**	.09**	-.13**	.21**	.06**	.61**	-.08**	.21**	–	
18. Behavioral disengagement	-.44**	-.21**	-.23**	-.05	-.17**	-.17**	.06**	-.15**	.09**	-.02	-.17**	.32**	.06**	.71**	-.09**	.43**	.32**	–

** *p < .01*

Table 8. Correlations between Psychological Well-Being and Intolerance to Uncertainty (N = 1936)

Variable	1	2	3	4
1. Psychological Well-Being	–			
2. Prospective Anxiety	−.21***	–		
3. Inhibitory Anxiety	−.49***	.70***	–	
4. Intolerance of Uncertainty (Total)	−.36***	.94***	.91***	–

*** *p* < .001

The stepwise linear regression analysis was used to explain teachers' psychological well-being (PWB), with PWB as a dependent variable and coping strategies and intolerance of uncertainty being the independent variable. Results of multiple linear regression (stepwise) analysis for Polish teachers are presented in Table 10 and for Ukrainian teachers in Table 11.

Table 10. Results of Multiple Linear Regression Analysis for Polish Teachers (N=927)

Variable	*B*	*SE*	β	*t*	*p*	95% CI
Constant	287.89	7.92		36.33	<.001	[272.3, 303.5]
Behavioral disengagement	−4.09	.92	−.091	−4.48	<.001	[−5.9, −2.3]
Inhibitory anxiety	−1.94	.39	−.147	−5.03	<.001	[−2.7, −1.2]
Planning	14.10	.92	.289	15.28	<.001	[12.3, 15.9]
Venting	−3.47	.59	−.091	−5.83	<.001	[−4.6, −2.3]
Use of instrumental support	10.65	.62	.264	17.20	<.001	[9.4, 11.7]
Acceptance	6.79	.66	.173	10.32	<.001	[5.5, 8.1]
Prospective anxiety	−3.40	.28	−.312	−12.22	<.001	[−3.9, −2.9]
Positive reframing	9.10	.69	.212	13.05	<.001	[7.7, 10.5]
Self-blame	−6.57	.61	−.193	−10.71	<.001	[−7.8, −5.4]
Humor	2.90	.46	.090	6.35	<.001	[2.0, 3.8]
Self-distraction	2.09	.55	.063	3.84	<.001	[1.0, 3.2]
Active coping	2.54	.85	.054	2.99	.003	[0.8, 4.19]

Note. R= .833*; R²*= .694*; Adjusted R²*= .670*; F*(12, 914) = 563.36, *p* < .000; *Std. Error of Estimate* = 20.419

The overall model is statistically significant, $F(12, 914) = 563.36$, $p < .000$, and explained 69.4% of the variance in psychological well-being among Polish teachers ($R^2 = .694$), suggesting a substantial predictive relationship.

Among the predictors, *planning* ($\beta = .289$, $p < .001$), *use of instrumental support* ($\beta = .264$, $p < .001$), *positive reframing* ($\beta = .212$, $p < .001$), *acceptance* ($\beta = .173$, $p < .001$) and *humor* ($\beta = .090$, $p < .001$), were significantly and positively associated with higher levels of psychological well-being.

In contrast, *prospective anxiety* ($\beta = -.312$, $p < .001$) and *inhibitory anxiety* ($\beta = -.147$, $p < .001$) were significant negative predictors. Additional maladaptive coping strategies, including *self-blame* ($\beta = -.193$, $p < .001$), *venting* ($\beta = -.091$, $p < .001$), and *behavioral disengagement* ($\beta = -.091$, $p < .001$), were also associated with lower psychological well-being.

Furthermore, *self-distraction* ($\beta = .063$, $p < .001$) and *active coping* ($\beta = .054$, $p = .003$) demonstrated statistically significant, albeit modest, positive effects.

Table 11. Results of Multiple Linear Regression Analysis for Ukrainian Teachers (N = 1009)

Variable	*B*	*SE*	β	*t*	*p*	95% CI
Constant	349.11	6.40		54.53	.000	[336.6, 361.67]
Inhibitory anxiety	−4.12	.26	−.377	−15.73	<.001	[−4.6, −3.6]
Active coping	4.39	.76	.117	5.79	<.001	[2.9, 5.9]
Self-blame	−5.99	50	−.213	−11.91	<.001	[−6.9, −5.0]
Use of emotional support	5.64	.60	.163	9.88	<.001	[4.5, 6.8]
Planning	4.50	.73	.122	6.21	<.001	[3.1, 5.9]
Behavioral disengagement	−4.08	.58	−.130	−6.99	<.001	[−5.2, −2.9]
Positive reframing	3.96	.59	.125	6.73	<.001	[2.8, 5.1]
Substance use	−1.85	.54	−.057	−3.41	<.001	[−2.9, −0.8]
Denial	−2.10	.59	−.067	−3.54	<.001	[−3.3, −0.9]
Prospective anxiety	−.74	.21	−.080	−3.48	<.001	[−1.3, −0.2]
Religion	.89	.39	.037	2.31	.021	[0.1, 1.6]
Self-distraction	1.23	.63	.035	1.96	.050	[0.0, 2.5]

Note. R= .741*; R²*= .549*; Adjusted R²*= .546*; F*(12, 1896) = 188.77, *p* < .000; *Std. Error of Estimate* = 33.064

The model is statistically significant, $F(12, 1896) = 563.36$, $p < .000$, and explained 55% of the variance in psychological well-being among Ukrainian teachers ($R^2 = .549$), suggesting a substantial predictive power.

The analysis identified several significant predictors. *Inhibitory anxiety* was the strongest negative predictor ($\beta = -.377$, $p < .001$), suggesting that individuals with higher levels of emotional inhibition tend to report lower psychological well-being. Other significant negative predictors included *self-blame* ($\beta = -.213$, $p < .001$), *behavioral disengagement* ($\beta = -.130$, $p < .001$), *prospective anxiety* ($\beta = -.080$, $p < .001$), *denial* ($\beta = -.067$, $p < .001$), and *substance use* ($\beta = -.057$, $p < .001$).

Positive predictors of psychological well-being Ukrainian teachers included *use of emotional support* ($\beta = .163$, $p < .001$), *positive reframing* ($\beta = .125$, $p < .001$), *planning* ($\beta = .122$, $p < .001$), and *active coping* ($\beta = .117$, $p < .001$), indicating that the use of these adaptive coping strategies is associated with better psychological outcomes.

The variable *self-distraction* ($\beta = .035$, $p = .050$) reached marginal significance, suggesting a small but potentially meaningful contribution. *Religion* ($\beta = .037$, $p < .001$) was also statistically significant, although its effect size was relatively small.

Discussion

The findings of this comparative study demonstrate notable disparities in psychological well-being between Polish and Ukrainian teachers, with Ukrainian participants reporting significantly lower levels of *autonomy*, *environmental mastery*, and *emotional well-being*. These results support Ryff's (1989) multidimensional model of psychological well-being, which emphasizes autonomy and environmental mastery as central components of mental health.

Compared to their Polish counterparts, Ukrainian teachers have a lower capacity to regulate their behaviour in accordance with personal values. They also find it more challenging to resist social or administrative pressure and tend to rely more on external evaluations and expectations. This may be partly attributed to structural features of the Ukrainian educational system, which currently limit professional autonomy and academic freedom. Moreover, Ukrainian teachers report greater insecurity in managing their daily and professional responsibilities, along with a sense of helplessness regarding their ability to improve life or work conditions. This diminished sense of control over one's environment may be significantly influenced by the ongoing Russian–Ukrainian war, during which teachers have continued to work under extreme uncertainty and chronic stress. These differences may also reflect broader cross-cultural variations in institutional structures, socio-political stability, and cultural attitudes toward autonomy and self-efficacy. Poland's integration into the European Union, with its emphasis on democratic governance and individual agency, may provide a more supportive context for teacher well-being. In contrast, Ukrainian educators continue to operate within a transitional system, shaped by historical centralization, limited decentralization of power, and the ongoing effects of armed conflict. These structural and cultural differences resonate with Hofstede's cultural dimensions, particularly Ukraine's higher levels of uncertainty avoidance and power distance, which may exacerbate stress under conditions of ambiguity (Hofstede, 2001).

The role of intolerance of uncertainty emerged as a significant psychological predictor across both groups, but with particular salience for Ukrainian teachers. Defined as a dispositional tendency to interpret ambiguous or unpredictable situations as threatening (Dugas et al., 1997, 2004), intolerance of uncertainty was inversely related to psychological well-being in both samples. These findings align with prior research on the emotional and cognitive dysregulation associated with intolerance of uncertainty (Tsyura et al., 2022), and they support theoretical claims that intolerance of uncertainty undermines the deployment of effective coping mechanisms, especially under chronic stress (Anderson et al., 2020). In the Ukrainian context, heightened intolerance of uncertainty (primarily inhibitory anxiety) may reflect both personal vulnerability and war-induced existential uncertainty (Johnson et al., 2022; Seleznova et al., 2023).

The importance of coping strategies in teachers' psychological well-being was emphasized. For Polish and Ukrainian teachers, their psychological well-being benefits from such coping strategies as *planning* (developing a strategy for future actions), *positive reframing* (positive reassessing or rethinking various situations, which helps to identify new opportunities, and shift negative thinking to a positive), *active coping* (taking steps to alleviate stress and solve problems), and *self-distraction* (engaging in different pleasurable activities to distract from the stressful event). Conversely, their psychological well-being is negatively impacted by coping strategies such as *self-blame* (self-criticism, feelings of guilt) and *behavioral disengagement* (giving up any attempts to manage stressors). These findings align with studies by Gustems-Carnicer and Calderón (2013) and Parker and Martin (2009), which examine the effects of coping mechanisms on teachers' well-being and engagement in their work. Effective coping strategies, such as active problem-solving and positive reframing of situations, are related to higher levels of motivation, job satisfaction, and overall well-being. Ineffective coping mechanisms (avoiding problems or passively accepting difficulties) can lead to increased stress, burnout, and decreased work engagement (Gustems-Carnicer & Calderón, 2013; Parker & Martin, 2009).

The identified differences in factors affecting psychological well-being show that for Polish teachers, the predictor of psychological well-being is the *use of instrumental support* (gaining advice or help from others about what to do), while for Ukrainian teachers, it is the *use of emotional support* (gaining comfort and understanding from others). Also, Polish teachers' psychological well-being benefits from *acceptance* (willingness to face a reality that does not fit one's

expectations or desires and to deal with that reality nevertheless), *humor* (making fun and jokes about the stressful situation), while Ukrainian teachers' psychological well-being benefits from *religion* (prayer, meditation). The barriers for Polish teachers' psychological well-being are *venting of emotions* (expressing negative feelings), while for Ukrainian teachers, it is *denial* (ignoring the reality of a situation) and *substance use* (using alcohol, drugs, or medications to manage stress, emotions, or difficult situations).

This distinction suggests not only personal preference but socio-cultural necessity. Emotional support in the Ukrainian context likely reflects collective responses to trauma and aligns with collectivist cultural norms that emphasize communal resilience in the face of adversity (Bohdan, 2024; Oleksenko & Khomenko, 2024; Piankivska, 2022). In contrast, the Polish emphasis on instrumental support may reflect a more individualistic orientation, with greater expectations placed on self-directed problem-solving. Further socio-cultural nuances emerged in the differential roles of acceptance, humor, and religion. Polish teachers showed improved well-being through acceptance and humor, potentially reflecting a cultural climate where emotional expression and cognitive reframing are socially reinforced (Iavorovska & Cherkaska, 2023; Simione & Gnagnarella, 2023). Ukrainian teachers, meanwhile, benefited more from religious coping, which may reflect both personal belief systems and the role of religion as a source of existential meaning and psychological refuge in a context of national crisis. This pattern underscores the importance of culturally congruent coping resources, echoing theoretical models that emphasize the role of meaning-making in trauma recovery (Park & Folkman, 1997).

Conclusion

This study deepens our understanding of how individual psychological resources, such as coping strategies and tolerance of uncertainty, interact with broader socio-cultural and institutional contexts to influence teachers' psychological well-being. Through a comparative analysis of educators in Poland and Ukraine, the research identifies universal predictors of well-being, as well as influences embedded in the educators' respective cultural, educational, and socio-political contexts.

The markedly lower psychological well-being observed among Ukrainian teachers highlights the significant impact of chronic instability and armed conflict. Such conditions compromise teachers' autonomy, emotional regulation and sense of environmental mastery – core dimensions of psychological health. Furthermore, the findings reveal that structural constraints, such as centralized governance and limited institutional support, exacerbate psychological distress, especially in regions affected by war.

This study also illustrates the pivotal role of coping strategies. While problem-focused and emotion-focused coping strategies are associated with higher well-being, a reliance on avoidant strategies appears to be detrimental. While the Ukrainian reliance on emotional and religious coping may be adaptive in the short term, it may not provide sufficient protection against the long-term psychological effects of prolonged stress without broader systemic support.

These insights have important implications for policy and practice. Interventions aimed at strengthening adaptive coping mechanisms and building tolerance for uncertainty should be prioritized in teacher training and professional development, particularly in high-stress environments. However, such initiatives must be tailored to the local culture and context, as well as to the needs and institutional realities of the specific setting. Educational policy must also recognize teacher well-being as a systemic concern integral to social resilience, institutional stability and the sustainability of quality education.

In this regard, promoting teacher well-being is not just a response to occupational stress, but also a strategic investment in the long-term health and effectiveness of education systems around the world.

Recommendations

The obtained results confirm that comprehensive programs aimed at enhancing the psychological well-being of educators should include training in the following areas: a) positive reframing skills, which involve learning to identify and utilize positive resources in any situation; b) tolerance for uncertainty, which means recognizing the harmful effects of anxiety associated with situations beyond our control; c) positive self-attitude and self-acceptance (the mindset of "Who says I have to be perfect?"), reinforcing self-esteem and belief/confidence in one's abilities; d) skills in clear organization and work planning.

To promote the psychological well-being of teachers at the institutional level, it is important to focus on the following key areas: a) enhance the prestige/value/social significance of the teaching profession, which includes ensuring a decent and competitive salary (this especially applies to teachers' salaries in Ukraine); b) promote teachers professional autonomy and academic freedom (as it leads to increased job satisfaction and higher levels of professional engagement); c) ensure workload control and work-life balance (excessive workload of education professionals needs immediate solution, especially the issue of unpaid overtime); d) acknowledge and value the teachers practical experience when developing educational policies and reforming educational processes.

Limitations

Our study has several limitations. Firstly, the research involved only school teachers, leaving out college and university teachers. Secondly, the study results were obtained from a sample of Polish and Ukrainian teachers, which limits the possibility of generalizing the findings to school teachers in other countries. Thirdly, the survey was conducted during the Russia-Ukraine war, which may have significantly influenced the psychological well-being indicators, particularly among Ukrainian teachers. These limitations highlight the need for further research (including cross-cultural studies) on psychological well-being, coping strategies, and tolerance for uncertainty among teachers to develop targeted programs to improve their professional functioning.

Also, we recognize that the use of multiple, potentially interrelated psychological variables may introduce some degree of multicollinearity. Future studies employing longitudinal designs and confirmatory modeling approaches could provide a more robust test of the relationships observed.

Ethics Statements

The authors obtained ethical approval from the Pomeranian Higher School in Starogard Gdański research ethical committee (no 2/2024, 21.03.2024). The participants provided their written informed consent to participate in this study.

Conflict of Interest

The authors declare that they have no known competing interests.

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