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PSYCHOLOGICAL LITERACY IN FUTURE TEACHERS: A STUDY AMONG SLOVAK UNIVERSITY STUDENTS

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Abstract

Research on psychological literacy began in the early 1990s. It is defined as the ability to apply psychological principles to personal, social, and organizational issues in work, relationships, and the broader community. However, little attention has been given to psychological literacy components in teachers, and such measures have not been developed in Slovakia. This study focuses on components developed within pre-service teacher training programs to examine if their development is sufficient or if changes are needed to improve psychological preparation for teachers. Specifically, we focused on resilience, self-perception, self-control, and self-efficacy. The aim of this study was to explore whether there are differences in these variables based on the year of study (i.e., whether studying psychology-related courses improve psychological competencies). A total of 646 students – future teachers (68.4%women), aged 17 to 34 (Mage=20.89, SD=1.90), participated in the research. Of the participants, 54.6% were in their first bachelor's year, 14.7% were in their second, 3.6% in their third, and 27.1% in their first master's year. The sample was selected based on availability, with students approached directly during lectures. Data collection was anonymous and voluntary (extra points were awarded) and took place in four rounds, from February 2019 to January 2024, using a paper-based questionnaire. The questionnaire included sociodemographic data (age, gender, year of study), the Resilience Scale, the Self Perception Scale, the Self-Control Scale, and the General Self-Efficacy Scale. ANOVA for independent samples in SPSS 21.0 was used to analyze the differences. Results revealed significant differences based on the year of study in the following areas: a) resilience (social competence ($p<.001$), family cohesion ($p<.001$), social resources ($p<.001$)); b) self-perception (school competence ($p=.002$), close friendship ($p=.030$)); c) self-efficacy ($p=.015$). Post-hoc tests showed that differences predominantly manifest negatively: social competence, family cohesion, and social resources decrease in higher years. Results for school competence and close friendship were mixed, with occasional decreases and increases. The only variable showing improvement was self-efficacy, where students in higher years scored higher. These results highlight the need for improved psychological training in pre-service teacher education, with more psychology-related courses focused on enhancing key psychological competencies.

Keywords: *Psychological literacy, students, teachers.*

1. Introduction

Psychological literacy nowadays extends far beyond the field of psychology and is increasingly recognized as an important competency for students across various disciplines, including in the education of future teachers (Pownall et al., 2022). The role of psychological literacy in future teacher education has gained increasing attention in recent years, ensuring that educators are well-equipped to handle the psychological and emotional complexities of teaching. This includes, for example, understanding student behavior, regulating their own emotions, and managing stress effectively (Taylor, 2019).

The term psychological literacy is most commonly defined as the ability to apply psychological knowledge and principles to personal, professional, and societal contexts (Cranney, 2022). In the teacher education, psychological literacy encompasses key competencies, including but not limited to resilience, self-perception, self-control, and self-efficacy - skills that enable teachers to manage stress, build positive relationships with students, and foster adaptive learning environments. The development of psychological literacy throughout the university studies of pre-service teachers has been a subject of research interest. As students progress in their studies, their psychological literacy develops, suggesting that a higher level of

psychological education may contribute to a better application of psychological knowledge (Horn et al., 2024).

Resilience is the ability to adapt and cope with challenging situations, such as heavy workloads, difficult students, and negative school environments (Mansfield et al., 2016). Resilient teachers are more likely to have a positive attitude toward their work, experience less stress, and report higher job satisfaction than less resilient teachers (Daniilidou et al., 2020). Similarly, self-perception refers to an individual's awareness and evaluation of their own abilities, characteristics, and emotions. In the teaching profession, it reflects how teachers view their effectiveness and competencies (Wisniewski et al., 2022). Self-control, as another variable, involves managing one's emotions, thoughts, and behaviors in different situations. This component is essential for managing stress and responding appropriately to student behavior, which contributes to a positive classroom environment and effective teaching (Sagar, 2021). Finally, self-efficacy pertains to a teacher's belief in their ability to successfully carry out teaching tasks and responsibilities. Teachers with high levels of self-efficacy are, for example, more effective in their instructional practices, tend to be more engaged with their students, and develop better relationships with their colleagues (Zee and Koomen, 2016).

Despite its significance, research on psychological literacy among future teachers remains limited in Slovakia. Although psychology-related courses are included in many teacher education programs, little is known about how effectively these courses contribute to the development of psychological literacy among university students preparing for careers in education. By embedding psychological literacy into teacher education, universities can better equip future educators with the psychological tools necessary for professional success and personal well-being, ultimately benefiting both teachers and their students.

2. Objectives

The aim of this study was to explore whether differences exist in several psychological variables (resilience, self-perception, self-control, and self-efficacy) based on the year of study among future teachers. Specifically, we examined whether taking psychology-related courses enhances psychological competencies among students.

3. Methods

3.1. Sample and data collection

A total of 646 students – future teachers specializing in different fields (68.4% women), aged 17 to 34 (M = 20.89, SD = 1.90), participated in the study. Of the participants, 54.6% were in their first year of a bachelor's program, 14.7% in their second, 3.6% in their third, and 27.1% in their first year of a master's program. The sample was selected based on availability, with students being approached directly during lectures. Data collection was anonymous and voluntary, with extra points awarded for participation. The data were collected in four rounds between February 2019 and January 2024 using a paper-based questionnaire. Ethical approval for the study was granted by the Ethical Committee at the University of Presov.

3.2. Measures

The questionnaire included sociodemographic data: (a) Age (open-ended question), (b) Gender (male / female), and (c) Year of study (1st to 3rd year of a bachelor's program or 1st year of a master's program). Subsequently, the questionnaire included the following standardized psychological scales:

a) The Resilience Scale (Friborg et al., 2003) consists of 33 items rated on a 5-point scale, with 16 reverse-scored. Each item has its own endpoint. The results are 6 subscales: Perception of self (items 1-6), α = .68; Perception of future (items 7-10), α =.82; Structured style (items 11-14), α =.53; Social competence (items 15-20), α=.63; Family cohesion (items 21-26), α =.77; and Social resources (items 27-33), α=.89. The higher score indices about higher resilience in the relevant area.
b) The Self-Perception Scale (Harter, 2012) consists of 25 items rated on a 4-point Likert scale, ranging from 1 (completely disagree in a negative sense) to 4 (completely agree in a positive sense). Items 2, 3, 6, 8, 9, 10, 12, 13, 16, 19, 20, and 25 are reverse-scored. The results are 5 subscales: School competence (items 1,6,11, 16, 21), α =.63; Job competence (items 4,9,14,19,24), α =.76; Physical appearance (items 3,8,13,18,23), α =.86; Social competence (items 2,7,12,17,22), α =.76; Close Friendship (items 5,10,15,20,25), α =.64. A higher score represents a more positive self-perception in the respective domain.
c) The Self-Control Scale (Finkenauer et al., 2005) consists of 11 items rated on a 5-point Likert scale from 1 (not at all) to 5 (absolutely yes) (e.g., "I'm lazy." / "I have trouble saying no."). Items

1–8 are reverse-scored. A total score is calculated (α = .71), with a higher score indicating greater self-control.

d) The General Self-Efficacy Scale (Schwarzer, 1992; Košč et al., 1993 - Slovak version) consists of 10 items rated on a 4-point Likert scale from 1 (completely disagree) to 4 (completely agree). A total score is calculated, with a higher score indicating a greater level of self-efficacy (α = .84).

3.3. Statistical analyses

A one-way ANOVA for independent samples was conducted using SPSS 21.0 to analyze differences in the dependent variables (resilience, self-perception, self-control, and self-efficacy) across different years of study.

4. Results

We analyzed differences in the dependent variables based on the year of study using a one-way ANOVA for independent samples. The results are presented in Table 1. The statistical analysis revealed significant differences based on the year of study in the following variables: social competence, family cohesion, social resources (within resilience), school competence, close friendship (within self-perception), and self-efficacy.

Table 1. Differences in dependent variables according the year of study.

dependent variables		sum of squares	df	mean square	F	p
resilience	perception of self	26.65	3	8.88	.51	.677
	perception of future	61.68	3	20.56	1.55	.202
	structured style	17.27	3	5.76	.53	.660
	social competence	1059.41	3	353.14	20.19	**<.001**
	family cohesion	2881.74	3	960.58	38.83	**<.001**
	social resources	9970.84	3	3323.61	92.69	**<.001**
self-perception	school competence	95.37	3	31.79	4.93	**.002**
	job competence	65.64	3	21.88	2.47	.061
	physical appearance	59.53	3	19.84	1.66	.176
	social competence	31.14	3	10.38	1.33	.265
	close friendship	63.88	3	21.29	3.01	**.030**
	self-control	189.23	3	63.08	1.49	.216
	self-efficacy	230.20	3	76.73	3.54	**.015**

We further examined these significant differences using post-hoc tests (LSD test). The results are presented in Table 2. Overall, significant changes between different years of study reveal a negative trend, particularly a decline in social competence, family cohesion, and social resources in higher years. The results for school competence and close relationships are more difficult to interpret, as they fluctuate, showing an increase at one point and a decrease at another across different study years. Only in the case of self-efficacy is a positive trend observed, with self-efficacy increasing as the years of study progress.

Table 2. Post-Hoc Differences Between Year-of-Study Categories in Significant Dependent Variables.

				post-hoc tests				descriptive statistics			
				mean difference	SE	p	95% CI		N	mean	SD
resilience	social competence	B1	B2	2.59	.51	**<.001**	(1.58) - (3.60)	B1	262	22.63	4.41
			B3	-.70	2.43	.772	(-5.48) - (4.07)	B2	90	20.04	4.02
			M1	4.58	.68	**<.001**	(3.24) - (5.92)	B3	3	23.33	5.69
		B2	B3	-3.29	2.45	.181	(-8.11) - (1.54)	M1	44	18.05	2.78
			M1	1.20	.77	**.010**	(.49) - (3.51)				
		B3	M1	5.29	2.50	**.035**	(.38) - (10.19)				
	family cohesion	B1	B2	4.88	.61	**<.001**	(3.69) - (6.08)	B1	267	22.47	5.25
			B3	-1.20	2.89	.678	(-6.88) - (4.48)	B2	89	17.58	4.70
			M1	6.96	.82	**<.001**	(5.35) - (8.56)	B3	3	23.67	8.50
		B2	B3	-6.08	2.92	**.038**	(-11.82) - (-.34)	M1	43	15.51	3.19
			M1	2.07	.92	**.025**	(.26) - (3.89)				
		B3	M1	8.16	2.97	**.006**	(2.32) - (13.99)				

self-perception	social resources	B1	B2	8.91	.73	**<.001**	(7.47) - (10.34)	B1	264	28.95	5.64
			B3	.62	3.48	.859	(-6.22) - (7.45)	B2	90	20.04	7.62
			M1	13.13	.98	**<.001**	(11.22) - (15.05)	B3	3	28.33	9.81
		B2	B3	-8.29	3.51	**.019**	(-15.20) - (-1.38)	M1	44	15.82	3.43
			M1	4.23	1.10	**<.001**	(2.06) - (6.39)				
		B3	M1	12.52	3.57	**.001**	(5.49) - (19.54)				
	school competence	B1	B2	-.79	.30	**.010**	(-1.39) - (-.19)	B1	327	13.03	2.53
			B3	1.17	.57	**.041**	(.05) - (2.29)	B2	88	13.82	2.41
			M1	-.52	.27	.057	(-1.06) - (.01)	B3	21	11.86	2.63
		B2	B3	1.96	.62	**.002**	(.75) - (3.17)	M1	116	13.55	2.63
			M1	.27	.36	.458	(-.44) - (.97)				
		B3	M1	-1.70	.60	**.005**	(-2.88) - (-.51)				
	close friendship	B1	B2	-.77	.32	**.015**	(-1.40) - (-.15)	B1	328	14.54	2.69
			B3	.82	.60	.171	(-.35) - (2.00)	B2	89	15.31	2.77
			M1	.03	,29	.923	(-.54) - (.59)	B3	21	13.71	2.53
		B2	B3	1.60	.65	**.014**	(.33) - (2.87)	M1	116	14.51	2.53
			M1	.81	.38	**.032**	(.07) - (1.54)				
		B3	M1	-.79	.63	.209	(-2.03) - (.45)				
	self-efficacy	B1	B2	1.42	1.68	.399	(-1.89) - (4.72)	B1	205	28.54	4.24
			B3	1.86	1.12	.097	(-.34) - (4.05)	B2	8	27.13	8.31
			M1	-1.18	.52	**.025**	(-2.21) - (-.15)	B3	19	26.68	4.41
		B2	B3	.44	1.96	.823	(-3.42) - (4.30)	M1	129	29.72	5.04
			M1	-2.60	1.70	.127	(-5.93) - (.74)				
		B3	M1	-3.04	1.14	**.008**	(-5.29) - (-.79)				

** Note: B1 = 1st year Bachelor; B2 = 2nd year Bachelor; B3 = 3rd year Bachelor; M1 = 1st year Master*

5. Conclusions

The results of this study reveal significant differences in examined variables among future teachers based on their year of study. While students in higher years demonstrated an increase in self-efficacy, subscales of resilience - social competence, family cohesion, and social resources, declined as students progressed. This suggests that as students advance in their studies, their ability to maintain supportive interpersonal relationships weakens. Additionally, results in self-perception (subscales school competence and close friendship) were mixed, with some students gaining confidence in their academic abilities while others struggled with maintaining strong peer connections.

These findings indicate that the current structure of future teacher education may not provide sufficient psychological support as students' progress. The observed increase in self-efficacy among students in higher years is encouraging, as it suggests that with more experience and academic progression, students gain greater confidence in their ability to handle challenges. However, the decline in resilience-related variables raises important concerns. These aspects of resilience play a crucial role in managing stress and adapting to challenges. The decrease in these areas may reflect the growing academic and professional pressures that students face as they advance in their studies, potentially leading to social withdrawal or a reduced focus on interpersonal relationships. The mixed results in self-perception further highlight the need to address the social and emotional well-being of future teachers to ensure they are well-prepared for the interpersonal challenges of their profession.

These results highlight the need for improved psychological training in future teacher education, with a greater focus on psychology-related courses aimed at enhancing key psychological competencies. Targeted interventions, such as resilience training, or emotional intelligence development could help counteract these declines and better equip future teachers with the psychological tools needed to navigate both their professional and personal challenges. Future research should explore the long-term impact of these psychological variables on teaching performance and identify strategies to reinforce psychological literacy throughout teacher training programs.

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References

Cranney J., Dunn D. S., Hulme J. A., Nolan S. A., Morris S., & Norris K. (2022). Psychological Literacy and Undergraduate Psychology Education: An International Provocation. *Frontiers in Education, 7*, 790600.

Daniilidou, A., Platsidou, M., & Gonida, E. (2020). Primary school teachers resilience: association with teacher self-efficacy, burnout and stress. *Electronic Journal of Research in Education Psychology, 18*(52), 549-582.

Finkenauer, C., Engels, R. C. M. E., & Baumeister, R. F. (2005). Parenting behaviour and adolescent behavioural and emotional problems: The role of self-control. *International Journal of Behavioral Development, 29*(1), 58-69.

Friborg, O., Hjemdal, O., Rosenvinge, J. H., & Martinussen, M. (2003). A new rating scale for adult resilience: what are the central protective resources behind healthy adjustment? *International Journal of Methods in Psychiatric Research, 12*(2), 65-76.

Harter, S. (2012). *Self-perception profile for adolescents: Manual and questionnaires*. Denver, CO: University of Denver, Department of Psychology.

Horn, D., Paetsch, J., & Drechsel, B. (2024). Better with Practice: Changes in Preservice Teachers' Psychological Literacy by Counseling Pupils on Their Self-Regulated Learning. *Psychology Learning & Teaching, 23*(2), 189–206.

Košč, M., Heftyová, E., Schwarzer, R., & Jerusalem, M. (1993). *Slovakian Adaptation of the General Self- Efficacy Scale* [online]. Retrieved June 1, 2013, from http://userpage.fu-berlin.de/~health/slovak.htm

Mansfield, C. F., Beltman, S., Broadley, T., & Weatherby-Fell, N. (2016). Building resilience in teacher education: An evidenced informed framework. *Teaching and Teacher Education, 54*, 77-87.

Pownall, M., Thompson, C., Blundell-Birtill, P., Newell, S. J., & Harris, R. (2022). Does "Psychological Literacy" Feature in Non-Psychology Degrees? A Cross-Discipline Study of Student Perceptions. *Teaching of Psychology, 51*(4), 453-460.

Sagar, E. (2021). Emotion Regulation Skills and Self-Control as Predictors of Resilience in Teachers Candidates. *International Education Studies, 14*(6), 103-111.

Schwarzer, R. (1992). Self-efficacy in the adoption and maintenance of health behaviors: Theoretical approaches and a new model. In R. Schwarzer (Ed.), *Self-efficacy: Thought control of action* (pp. 217-242). Washington, DC: Hemisphere.

Taylor, J. (2019) Psychological Literacy for All: An Overview of This 'Literacy' And How It Is Relevant for Students of All Disciplines. In *EDULEARN19: Conference Proceedings of the 11th International Conference on Education and New Learning Technologies, Palma, Spain, 1st-3rd of July, 2019* (pp. 4497–4501). IATED Academy.

Wisniewski, B., Röhl, S., & Fauth, B. (2022). The perception problem: a comparison of teachers' self-perceptions and students' perceptions of instructional quality. *Learning Environments Research, 25*, 775-802.

Zee, M., & Koomen, H. M. (2016). Teacher self-efficacy and its effects on classroom processes, student academic adjustment, and teacher well-being: A synthesis of 40 years of research. *Review of Educational Research, 86*(4), 981-1015.