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**PERCEIVED DIFFICULTIES RELATED  
TO THE COVID-19 PANDEMIC  
AND RESILIENCE AMONG SCHOOL  
AND ACADEMIC TEACHERS IN POLAND**

**Postrzeganie trudności związanych  
z pandemią COVID-19 i resilience wśród  
nauczycieli szkolnych i akademickich w Polsce**

**Streszczenie**

Celem niniejszej pracy było zbadanie, czy istnieją różnice między nauczycielami szkolnymi a nauczycielami akademickimi w Polsce w zakresie postrzeganych trudności związanych z pandemią COVID-19 oraz w zakresie resilience ujmowanym jako prężność psychiczna, a jeśli tak, to sprawdzenie, na czym one polegają. Badaniem objęto 139 nauczycieli, w tym nauczycieli szkolnych (n = 68) i akademickich (n = 71), którzy wypełnili Skalę Prężności Psychiczej.

nej (SPP-25) oraz Skalę Odczuwanych Trudności Związanych z Pandemią COVID-19 (SOTCov19). W celu ustalenia, czy istnieją różnice między nauczycielami szkolnymi a nauczycielami akademickimi w zakresie postrzeganych trudności związanych z pandemią COVID-19 i resilience, zastosowano współczynnik korelacji dwuseryjnej Glassa z wielkością efektu dla testu sumy rang Manna-Whitneya. Z przeprowadzonych badań wynika, że nauczyciele szkolni i nauczyciele akademicy różnią się istotnie pod względem postrzeganych trudności związanych z pandemią COVID-19 i resilience. Nauczyciele szkolni doświadczają istotnie większych trudności w związku z pandemią COVID-19 i niższy poziom resilience w porównaniu z nauczycielami akademickimi.

**Słowa kluczowe:** resilience, resilience nauczycieli, postrzeganie trudności, nauczyciele akademicy, nauczyciele szkolni, pandemia COVID-19

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### Abstract

The current study aimed to investigate whether there are any differences between school teachers and academic teachers in Poland concerning perceived difficulties linked to the COVID-19 pandemic and resilience; and if so, to identify the differences. The respondents included 139 teachers, including school ( $n = 68$ ) and academic teachers ( $n = 71$ ) who completed The Resilience Assessment Scale (SPP-25) and the Scale of Perceived Difficulties Associated with the COVID-19 Pandemic (SOTCov19). Glass rank biserial correlation coefficient effect size for Mann-Whitney two-sample rank-sum test was used to determine whether there were any differences between school and academic teachers relating to perceived difficulties linked to the COVID-19 pandemic and resilience. The study shows that school and academic teachers differ significantly in terms of perceived difficulties related to the COVID-19 pandemic and resilience. Further, school teachers experience significantly greater difficulties relating to the COVID-19 pandemic and show less resilience than academic teachers.

**Key words:** resilience, teachers' resilience, perceived difficulties, academic teachers, school teachers, COVID-19 pandemic

## Introduction

COVID-19 spread to all continents in a relatively short time. Globally, as of 23 November 2021, there were 257 469 528 confirmed cases of COVID-19, including 5 158 211 deaths, as reported by WHO.<sup>1</sup> In Poland, on 12 March 2020, it was decided to close all care and educational institutions, including schools and universities, to prevent the spread of the pandemic.<sup>2</sup> The pandemic posed significant challenges to education worldwide. One of them was the need to conduct online courses for students. Teachers had to change their teaching methods overnight from the traditional classroom system to an online format. The urgent need to turn digital increased the stress and workload, not only for school teachers<sup>3</sup> but also for scientific and didactic university staff. The pandemic posed a variety of challenges to teachers related to both their private and professional lives. Teachers are responsible for children and their educational achievements and have to prepare them for functioning in modern society and coping with unpredictable situations.<sup>4</sup> Concerning the COVID-19 pandemic, teachers perceive difficulties such as increased workload, poor internet connectivity, and inability to adapt their home environment to perform their professional work.<sup>5</sup> The main challenges for teachers include a sense of inauthenticity of interactions, a lack of the spontaneity of face-to-face

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<sup>1</sup> World Health Organization, *WHO coronavirus disease (COVID-19) dashboard*, 2021, <https://covid19.who.int/>.

<sup>2</sup> Decree of the Minister of Science and Higher Education of 11 March 2020 (2020, item 405).

<sup>3</sup> C. Rapanta, L. Botturi, P. Goodyear et al., *Online University Teaching During and After the Covid-19 Crisis: Refocusing Teacher Presence and Learning Activity*, "Postdigital Science Education," 2020 no. 2, pp. 923–945.

<sup>4</sup> A. Kruszewska, S. Nazaruk, K. Szewczyk, *Polish Teachers of Early Education in the Face of Distance Learning during the COVID-19 Pandemic – The Difficulties Experienced and Suggestions for the Future*, "Education," 2020 no. 3–13, pp. 1–12.

<sup>5</sup> R. Aliyyah, R. Rachmadtullah, A. Samsudin, E. Syaodih, M. Nurtanto, A.R.S. Tambunan, *The Perceptions of Primary School Teachers of Online Learning during the COVID-19 Pandemic Period: A Case Study in Indonesia*, "Journal of Ethnic and Cultural Studies," 2020 no. 7(2), pp. 90–109, doi: 10.29333/ejecs/38.

teaching, and concerns about students' educational progress.<sup>6</sup> Studies of primary childhood education teachers indicate that in online learning settings, teachers feel there is insufficient communication with students and their parents, with students lacking the motivation to learn.<sup>7</sup> In attempting to deal with these problems, school teachers have to make many decisions that require immediate contextual review.<sup>8</sup> Many educators do not have sufficient pedagogical content knowledge (PCK) of the technical and administrative aspects of online teaching, tools, and organising workflows.<sup>9</sup> Teachers need to address appropriately the difficulties of online learning so that learners continue to achieve their objectives.<sup>10</sup> Research reports on remote education during the COVID-19 pandemic in Poland indicate that the most common difficulties experienced by teachers were the lack of direct contact with students to control their independence and the possibility of motivating them, as well as technical problems (lack of appropriate equipment, poor availability and quality of internet connections, and lack of digital competence of both teachers and students).<sup>11</sup> It was not only the technical preparation of teachers that posed a difficulty due to the need for online classes. Online teaching requires teachers to be prepared substantively and methodologically; this area also posed

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<sup>6</sup> H.M. Niemi, P. Kousa, *A Case Study of Students' and Teachers' Perceptions in a Finnish High School during the COVID Pandemic*, "International Journal of Technology in Education and Science (IJTES)," 2020 no. 4(4), pp. 352–369, doi: 10.46328/ijtes.v4i4.167.

<sup>7</sup> A. Kruszewska et al., op. cit.

<sup>8</sup> C. Lee Shing, R. Mohd Saat, S. Heng Loke, *The Knowledge of Teaching – Pedagogical Content Knowledge (PCK)*, "MOJES: Malaysian Online Journal of Educational Sciences," 2018 no. 3(3), pp. 40–55.

<sup>9</sup> Ibidem.

<sup>10</sup> R.R. Aliyyah et al., op. cit.

<sup>11</sup> M. Plebańska, M. Sieńczewska, A. Szyller, *Edukacja zdalna w czasach COVID-19. Raport z badania* [Remote Education in the Age of COVID-19. A Survey Report], 2020.

a difficulty for many teachers who lacked experience with e-learning and various concepts of using media in education.<sup>12</sup>

These may constitute significant challenges and determine a greater sense of workload and resulting duties. Pandemic-related difficulties experienced by the school and university teachers may cause increased stress and distress symptoms, leading to lower quality of work, and professional burnout.<sup>13</sup> Stress is defined as feelings that occur when an organism is threatened and when there is a threat of loss of resources.<sup>14</sup> A high sense of danger is positively correlated with individual resilience.<sup>15</sup>

Over the decades of research on resilience, the definitions of this construct have changed and evolved. Resilience is thus defined as a capacity, processes, or the results of positive adaptation to a risk context. Regardless of how it is defined, resilience will depend on the interaction of multiple systems as they come together in the functioning or development of the individual.<sup>16</sup> In general, resilience should be understood as the ability to positively adapt to negative or even traumatic events by skilfully coping and acquiring new experiences and knowledge, often leading to a better and more satisfying life.<sup>17</sup> An integral part of resilience is the occurrence of difficult or traumatic experienc-

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<sup>12</sup> Raport "Jacy ludzie taka szkoła. Osobiste doświadczenia z pandemii" [The Report "Such People Such School. Personal Experiences of a Pandemic"], Fundacja Szkoła z Klasą, Warszawa 2021.

<sup>13</sup> C. Hart, F. Nash, *Teacher Resilience during COVID: Burnout and Trauma*, 2020, retrieved from: <https://www.rti.org/insights/coaching-teacher-resilience-during-covid-19-burnout-and-trauma>.

<sup>14</sup> R.S. Lazarus, S. Folkman, *Stress, Appraisal, and Coping*, New York 1984.

<sup>15</sup> S. Kimhi, H. Marciano, Y. Eshel, B. Adini, *Resilience and Demographic Characteristics Predicting Distress during the COVID-19 Crisis*, "Social Science & Medicine," 2020 no. 265.

<sup>16</sup> A.S. Masten, *Pathways to Integrated Resilience Science*, "Psychological Inquiry," 2015 no. 26(2), pp. 187–196, doi: 10.1080/1047840X.2015.1012041.

<sup>17</sup> A.S. Masten, D. Cicchetti, *Resilience in Development: Progress and Transformation*, in: *Developmental Psychopathology: Risk, Resilience, and Intervention*, ed. D. Cicchetti, pp. 271–333, John Wiley & Sons, Inc. 2016, <https://doi.org/10.1002/9781119125556.devpsy406>.

es in the life of an individual<sup>18</sup>. In the case of teacher resilience, it is more than just the ability to adapt positively in the face of adversity or trauma. Resilience also concerns functioning in the face of everyday “normality,” as well as in individual incidents that interfere with normal functioning, or in serious adversity. Teacher resilience is defined by researchers as the ability to adapt to situations that require adaptation and to perceive difficult situations as challenges even under the most unfavourable conditions.<sup>19</sup> Teacher resilience is not innate and constant; it depends on many factors such as self- and co-worker involvement, the quality of management support at school, and the ability to cope with difficult situations.<sup>20</sup> Research on teacher resilience has evolved over the years to encompass links to such positive areas as job satisfaction, commitment, self-efficiency, motivation, and well-being.<sup>21</sup> Teaching requires high levels of resilience, which is seen by teachers themselves as a prerequisite for maintaining their ability to teach at their best.<sup>22</sup> The importance of strengthening resilience during training for future teachers and in the early stages of their professional careers is emphasised in the literature.<sup>23</sup> Research also indicates that the reasons for leaving the teaching profession are correlated with

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<sup>18</sup> M.A. Boczkowska, *Pojęcie resilience w ujęciu tradycyjnym i współczesnym*, “Lubelski Rocznik Pedagogiczny,” 2019 no. 38(4), pp. 125–141.

<sup>19</sup> S. Huisman, N.R. Singer, S. Catapano, *Resiliency to Success: Supporting Novice Urban Teachers*, “Teacher Development,” 2010 no. 14, pp. 483–499, doi: 10.1080/13664530.2010.533490.

<sup>20</sup> S.S. Luthar, P.J. Brown, *Maximizing Resilience through Diverse Levels of Inquiry: Prevailing Paradigms, Possibilities, and Priorities for the Future*, “Development and Psychopathology,” 2007 no. 19(3), pp. 931–955; Q. Gu, C. Day, *Challenges to Teacher Resilience: Conditions Count*, “British Educational Research Journal,” 2013 no. 39(1), pp. 22–44, doi: 10.1080/01411926.2011.623152.

<sup>21</sup> C. Mansfield, S. Beltman, *Promoting Resilience for Teachers: Pre-service and In-service Professional Learning*, “The Australian Educational Researcher,” 2019 no. 46, pp. 583–588, doi: 10.1007/s13384-019-00347-x.

<sup>22</sup> Q. Gu, C. Day, op. cit.

<sup>23</sup> P.T. Ng, K.M. Lim, E.L. Low, Ch. Hui, *Provision of Early Field Experiences for Teacher Candidates in Singapore and How it Can Contribute to Teacher Resilience and Retention*, “Teacher Development,” 2018 no. 22(5), pp. 632–650, doi: 10.1080/13664530.2018.1484388.

a lack of resilience.<sup>24</sup> The findings of Polat and Iskender<sup>25</sup> reveal a significant negative association between teachers' resilience levels and job burnout, as well as significant positive associations between teachers' resilience levels and organisational commitment, job satisfaction, and perception of organisational climate. Given the many challenges and the accumulation of various individual and environmental stressors, including those caused by the COVID-19 pandemic, teachers need to display high levels of resilience to effectively achieve the objectives of teaching pupils and integrating their social and emotional development.<sup>26</sup> Although there has been substantial research on teacher resilience in the last decade, empirical and conceptual work on adult resilience, particularly teacher resilience, is still limited.<sup>27</sup>

### Materials and methods

The current study aims to ascertain whether there are any differences between school and academic teachers in Poland in perceived difficulties linked to the COVID-19 pandemic and in resilience; and if so, to explore them.

The research findings may provide answers to the following questions:

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<sup>24</sup> G. Zhang, N. Zeller, *A Longitudinal Investigation of the Relationship between Teacher Preparation and Teacher Retention*, "Teacher Education Quarterly," 2016 no. 43(2), pp. 73–92, retrieved November 19, 2020, from <http://www.jstor.org/stable/teaceducquar.43.2.73>.

<sup>25</sup> D.D. Polat, M. Iskender, *Exploring Teachers' Resilience in Relation to Job Satisfaction, Burnout, Organizational Commitment and Perception of Organizational Climate*, "International Journal of Psychology and Educational Studies," 2018 no. 5(3), pp. 1–13, doi: 10.17220/ijpes.2018.03.001.

<sup>26</sup> K. Kangas-Dick, E. O'Shaughnessy, *Interventions that Promote Resilience among Teachers: A Systematic Review of the Literature*, "International Journal of School & Educational Psychology," 2020 no. 8(2), pp. 131–146, doi.org/10.1080/21683603.2020.1734125.

<sup>27</sup> Q. Gu, *(Re)conceptualising Teacher Resilience: A Social-Ecological Approach to Understanding Teachers' Professional Worlds*, in: *Resilience in Education: Concepts, Contexts and Connections*, eds. M. Wosnitza, F. Peixoto, S. Beltman, C. Mansfield, New York 2018, pp. 13–33.

- (1) What are the differences between the surveyed school and academic teachers in terms of perceived difficulties relating to the COVID-19 pandemic, if any?
- (2) What are the differences between the surveyed school and academic teachers in terms of resilience, if any?

As far as we know, there are no studies to date that focus on differences in perceived difficulties relating to the COVID-19 pandemic and resilience among school and academic teachers.

### **Participants**

Polish school and academic teachers were recruited to the study group through email. The inclusion criteria were being an academic or a school teacher and teaching the summer semester of 2019/2020. Finally, school teachers ( $N = 68$ ) and academic teachers ( $N = 71$ ) from Poland participated in this study. The study was conducted during May and June 2020. The research was a cross-sectional study, and the present article presents its first part. Participant characteristics are presented below in Table 1 for school teachers and Table 2 for academic teachers.



**Table 1**  
***Respondent characteristics – school teachers (N = 68)***

	Characteristics	Descriptor n (%)
Sex	Men	15 (22.1)
	Women	53 (77.9)
Marital status	Single	19 (27.9)
	Married	45 (66.2)
	Divorced	4 (5.9)
	Separated	0 (0.0)
	Widowed	0 (0.0)
Place of residence	City	45 (66.2)
	Rural area	23 (33.8)
Educational level	Secondary	1 (1.5)
	Undergraduate	2 (2.9)
	Graduate	65 (95.6)
Place of employment	Kindergarten	20 (29.4)
	Primary School	34 (50.0)
	Special School	7 (10.3)
	Secondary School	3 (4.4)
	Level 1 Trade/Vocational School	2 (2.9)
	Level 2 Trade/Vocational School	2 (2.9)
Degree of professional advancement	Junior teacher	10 (14.7)
	Contract teacher	22 (32.4)
	Appointed teacher	14 (20.6)
	Certified teacher	22 (32.4)
Type of facility	State school	54 (79.4)
	Private school	14 (20.6)
Employment form	Full-time	57 (83.8)
	Part-time	9 (13.2)
	Contract	10 (3.0)
Material status assessment	Very bad	1 (1.5)
	Bad	8 (11.8)
	Average	39 (57.4)
	Good	15 (22.1)
	Very good	5 (7.4)
Age		M = 41.82, SD = 10.17
Seniority		M = 15.03, SD = 11.44

**Table 2**  
***Respondent characteristics – academic teachers (N = 71)***

	Characteristics	Descriptor n (%)
Sex	Men	23 (32.4)
	Women	48 (67.6)
Marital status	Single	12 (16.9)
	Married	50 (70.4)
	Divorced	7 (9.9)
	Separated	1 (1.4)
	Widowed	1 (1.4)
Place of residence	City	53 (74.6)
	Rural area	18 (25.4)
Academic degree	Ph.D.	47 (66.2)
	Associate professor	17 (23.9)
	Not applicable	7 (9.9)
Professor title	Yes	4 (5.6)
	No	67 (94.4)
Employment position	Assistant	15 (21.1)
	Assistant professor	26 (36.6)
	Adjunct with Ph.D. degree	14 (19.7)
	Professor at university	12 (16.9)
	Titular Professor	3 (4.2)
	Senior lecturer	1 (1.4)
Employment form	Full-time	62 (87.3)
	Part-time	7 (9.9)
	Contract	2 (2.8)
Material status assessment	Very bad	1 (1.4)
	Bad	6 (8.5)
	Average	37 (52.1)
	Good	24 (33.8)
	Very good	3 (4.2)
Age		M = 46.24, SD = 10.93
Seniority		M = 19.53, SD = 12.45

## Instruments

The research was carried out through *The Scale of Perceived Difficulties Associated with the COVID-19 Pandemic* by Boczkowska and Gabryś (constructed for this research) and *The Resilience Assessment Scale* (SPP-25) by Ogińska-Bulik and Juczyński. The first scale is a questionnaire with 45 items. It consists of a total score of perceived difficulties (T-WO) and seven categories: daily business (T-SC), family and social obligations (T-ZR), recreation and culture (T-RK), health and care (T-AZ), remote work–technical aspects (T-AT), remote work–online lessons (T-ZP), and self-development (T-SZ). These scales were created in two versions: for school teachers (SOTCov19 N) and academic teachers (SOTCov19 NA). Respondents were asked to assess the items on a five-point scale where 1 means “I don’t find it difficult,” and 5 – “I find it very difficult.” Additionally, one extra item was available, namely “This statement doesn’t apply to me.” The respondents were asked to type three major/other difficulties of their own choice at the end of the scale. The psychometric properties of the instrument are satisfactory. For SOTCov19 N (version for school teachers) Cronbach’s  $\alpha = 0.71$  (Cronbach’s  $\alpha$  for all subscales: T-SC – 0.65; T-ZR – 0.62; T-RK – 0.66; T-AZ – 0.67; T-AT – 0.69; T-ZP – 0.75; T-SZ – 0.69). For SOTCov19 NA (version for academic teachers) Cronbach’s  $\alpha = 0.79$  (Cronbach’s  $\alpha$  for all subscales: T-SC – 0.74; T-ZR – 0.76; T-RK – 0.77; T-AZ – 0.76; T-AT – 0.78; T-ZP – 0.76; T-SZ – 0.76).

*The Resilience Coping Scale* by Ogińska-Bulik and Juczyński contains 25 items rated on a 4-point scale, from 0 – “definitely not,” to 4 – “definitely yes.” This instrument has a five-factor structure: 1) perseverance and determination in action–R-WD (Cronbach’s  $\alpha = 0.82$ ); 2) openness to new experiences and a sense of humour–R-OD (Cronbach’s  $\alpha = 0.85$ ); 3) personal competencies to deal with and tolerate negative emotions–R-KO (Cronbach’s  $\alpha = 0.74$ ); 4) tolerance for failure and treating life as a challenge–R-TN (Cronbach’s  $\alpha = 0.74$ ); and 5) optimistic attitude to life and ability to mobilise in difficult situations–R-ON (Cronbach’s  $\alpha = 0.76$ ). The general level of resilience (R-WO) is the sum of the results obtained in the 5 subscales. It ranges from 0 to 100.

The higher the score, the greater the resilience. Cronbach's  $\alpha$  for total SPP-25 was 0.82. Further, the total score of SPP-25 can be expressed on a standard ten scale where results in the range of 1–4 indicate low, 5–6 medium, and 7–10 high resilience.<sup>28</sup>

### Data analysis

Data were analysed using SPSS 26. The Mann-Whitney U-test was used to determine whether there are any differences between school teachers and academic teachers in perceived difficulties linked to the COVID-19 pandemic and resilience. To assess the effect size for the Mann-Whitney U-test, Glass rank biserial correlation coefficient was used, where results from 0.1 mean a small effect, from 0.3 a medium effect, and from 0.5 a large effect.

### Results

Table 3 presents the differences between school and academic teachers in Poland in perceived difficulties relating to the COVID-19 pandemic. Statistical analysis revealed that the respondents differ significantly in terms of six out of the seven subscales and the total score (T-WO) of perceived difficulties relating to the COVID-19 pandemic. Importantly, school teachers were found to experience significantly greater difficulties compared to academic teachers in all the analysed subscales. The significant differences between the surveyed groups of teachers were noticed in terms of remote work–technical aspects (T-AT) ( $d = 0.414$ ), the total score of perceived differences (T-WO) ( $d = 0.361$ ), and remote work–online lessons (T-ZP) ( $d = 0.355$ ). The effect size was medium. Smaller but significant differences were observed for daily business (T-SC) ( $d = 0.280$ ), recreation and culture (T-RK) ( $d = 0.270$ ), family and social obligations (T-ZR) ( $d = 0.247$ ), and health and care (T-AZ) ( $d = 0.192$ ). In these subscales, the effect size was small. However, no

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<sup>28</sup> N. Ogińska-Bulik, Z. Juczyński, *Skala pomiaru prężności – SPP-25*, “Nowiny Psychologiczne,” 2008 no. 3, pp. 39–56.

significant intergroup differences were found for the self-development subscale (T-SZ) alone.

**Table 3**  
*Perceived difficulties in connection with the COVID-19 pandemic –*  
*N = 139 (school teachers: N = 68, academic teachers:*  
*N = 71, U Mann-Whitney test)*

Scale/Subscale	Mean Rank		Sum of Ranks		Mann-Whitney U	Asymp. Sig. (2-sided)	2
	ST	AT	ST	AT			
Difficulties perceived Total Score (T-WO)	82.82	57.73	5631.50	4098.50	1542.500	<b>0.001***</b>	0.361
Daily business (T-SC)	81.18	59.30	5520.00	4210.00	1654.000	<b>0.001***</b>	0.280
Family and social obligations (T-ZR)	78.78	61.59	5357.00	4373.00	1817.000	<b>0.012**</b>	0.247
Recreation and culture (T-RK)	79.61	60.80	5413.50	4316.50	1760.500	<b>0.006**</b>	0.270
Health and care (T-AZ)	76.83	63.46	5224.50	4505.50	1949.500	<b>0.050*</b>	0.192
Remote work–technical aspects (T-AT)	84.68	55.94	5758.50	3971.50	1415.500	<b>0.001***</b>	0.414
Remote work – online lessons (T-ZP)	82.61	57.92	5617.50	4112.50	1556.500	<b>0.001***</b>	0.355
Self-development (T-SZ)	71.84	68.24	4885.00	4845.00	2289.000	0.597	0.051

\*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

Significant differences are indicated in bold.

ST – school teachers; AT – academic teachers

The next step of the analysis was to explore whether there are any differences between school teachers and academic teachers in Poland in resilience, and what they are. Statistical analysis revealed that the surveyed teachers differ significantly in resilience. School teachers showed a significantly lower level of resilience than academic teachers. Statistically significant differences were observed in the range of optimistic attitude to life and the ability to mobilise in difficult situations (R-ON) ( $|2 = 0.366$ ,  $p < 0.001$ ), where the effect size was medium.

Further, statistically significant differences were observed in the range of personal competencies to deal with and tolerate negative emotions (R-KO) ( $d^2 = 0.296, p < 0.002$ ), and in the Resilience Total Score (R-WO) ( $d^2 = 0.207, p < 0.035$ ) where the effect size was small. However, no significant intergroup differences were seen for the following subscales: perseverance and determination in action (R-WD), openness to new experiences and a sense of humour (R-OD), tolerance for failure and treating life as a challenge (R-TN).

**Table 4**  
*The level of resilience – N = 139*  
*(school teachers: N = 68, academic teachers: N = 71, U Mann-Whitney test)*

Scale/Subscale	Mean Rank		Sum of Ranks		Mann-Whitney U	Asymp. Sig. (2-sided)	$d^2$
	ST	AT	ST	AT			
Resilience Total Score (R-WO)	62.63	77.06	4259.00	5471.00	1913.000	<b>0.035*</b>	0.207
Perseverance and determination in action (R-WD)	71.11	68.94	4835.50	4894.50	2338.500	0.749	0.031
Openness to new experiences and a sense of humour (R-OD)	64.12	75.63	4360.00	5370.00	2014.000	0.090	0.166
Personal competencies to deal with and tolerance of negative emotions (R-KO)	59.48	80.08	4044.50	5685.50	1698.500	<b>0.002**</b>	0.296
Tolerance of failure and treating life as a challenge (R-TN)	65.03	74.76	4422.00	5308.00	2076.000	0.151	0.140
Optimistic attitude to life and ability to mobilise in difficult situations (R-ON)	57.01	82.44	3876.50	5853.50	1530.500	<b>0.001***</b>	0.366

\*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

Significant differences are indicated in bold.

ST – school teachers; AT – academic teachers

Table 5 presents the resilience levels of Polish school and academic teachers. The largest group of surveyed academic teachers (42.26%) is characterised by a high level of resilience, and 23.94% by a low level of resilience. The largest group of surveyed school teachers (38.24%) is characterised by medium levels of resilience. The same number of surveyed school teachers (30.88%) is characterised by high and low levels of resilience.

**Table 5**  
*Resilience in academic teachers and school teachers*

Level of resilience	Academic teachers		School teachers	
	N	%	N	%
Low	17	23.94	21	30.88
Medium	24	33.80	26	38.24
High	30	42.26	21	30.88
Total	71	100	68	100

## Discussion

The current study aimed to ascertain whether there are any differences between school and academic teachers in Poland in the perceived difficulties linked to the COVID-19 pandemic and in resilience and if so, to explore what they are. To our knowledge, this is the first study of its kind focusing on the perceived difficulties linked to the COVID-19 pandemic and resilience in these groups. Therefore, our research goal was not only to observe the perceived difficulties related to the COVID-19 pandemic and resilience, but also to ascertain whether any differences exist between the surveyed groups in these areas/aspects, and what they are.

The present study revealed that school teachers experienced significantly greater difficulties in connection with the COVID-19 pandemic than academic teachers. The surveyed school teachers experienced significantly greater difficulties in the dimension of remote work–technical aspects, remote work–online lessons, daily business, recreation and

culture, family and social obligations, and health and care. In addition, statistically significant differences were found between the mean scores of school and university teachers on resilience and its components – personal competencies to deal with and tolerance of negative emotions and optimistic attitude to life and ability to mobilise in difficult situations. School teachers scored significantly lower than university teachers in these ranges. In a way, these findings correspond with Eldridge's (2013) conclusions that school teachers have low levels of resilience even when faced with low levels of stress at work. Interestingly, research indicates that teachers in secondary schools have significantly lower levels of resilience than those working in primary and secondary schools.<sup>29</sup> In contrast, research on a group of Greek primary school teachers indicates medium to high levels of resilience despite the economic crisis they are experiencing.<sup>30</sup> Considering this variance, it is difficult to discuss the resilience results obtained in different countries, which may suggest that resilience is influenced by the context in which teachers live and work as well.<sup>31</sup>

Both academic and school teachers faced the challenge of transferring the education of pupils and students online. Not all schools, universities, or teachers were prepared for this scenario.<sup>32</sup> In this new reality, a lot of difficulties emerged connected to everyday life, professional work, and self-development. In such a difficult, stressful situation, everyone, as much as they could, mobilised their resources to cope with the various difficulties and adapt positively to the new conditions. Immunity is a personality characteristic that explains the phenomenon of positive adaptation. Analyses show that most academics have high

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<sup>29</sup> D.D. Polat, M. İskender, op. cit.

<sup>30</sup> A. Botou, I. Mylonakou-Keke, O. Kalouri, N. Tsergas, *Primary School Teachers' Resilience during the Economic Crisis in Greece*, "Psychology," 2017 no. 8(1), p. 131, doi: 10.4236/psych.2017.81009.

<sup>31</sup> F. Peixoto, M. Wosnitza, J. Pipa, M. Morgan, C. Cefai, *A Multidimensional View on Pre-service Teacher Resilience in Germany, Ireland, Malta and Portugal*, in: *Resilience in Education*, Springer, Cham 2018, pp. 73–89.

<sup>32</sup> S. Dhavan, *Online Learning: A Panacea in the Time of COVID-19 Crisis*, "Journal of Educational Technology Systems," 2020, Advance online publication, doi: 10.1177/0047239520934018.



levels of resilience while school teachers have medium levels thereof. Thus, it can be assumed that school teachers are less able to cope and adapt to difficult situations with unpleasant feelings.<sup>33</sup> School teachers may also find it more difficult to concentrate and think clearly in stressful situations. In addition, school teachers are presumably less likely to constructively find many solutions to the problems they encounter, mobilise to deal with them, and see difficult challenges as a source of satisfaction. Perhaps one of the factors relevant to such a behavioural pattern is that school teachers, besides their typical teaching tasks, are obliged to express concern and support for their students, which is necessary but extremely difficult during the COVID-19 pandemic. The burden of parents' expectations of distance learning can also be significant here.<sup>34</sup>

The present research provides new knowledge on the functioning of school teachers and academic teachers in difficult situations. Although valuable for cognitive and practical reasons, the presented results are not free from certain limitations that are noteworthy. Firstly, the present study is quantitative; thus, the unique experiences of school and academic teachers were not captured here. Qualitative research should complement the present findings. Secondly, the low response rate is also a significant limitation. In future research, the question of how to encourage potential respondents to complete the survey should be considered. Therefore, the presented study should be treated as a preliminary recognition of the phenomenon. Due to the preliminary nature of this research, the role of socio-demographic factors (such as age, marital status, place of residence, or length of service) was also not included in the analyses conducted.

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<sup>33</sup> M. Eldridge, *Understanding the Factors that Build Teacher Resilience*, London 2013.

<sup>34</sup> Ch. Dong, S. Cao, H. Li, *Young Children's Online Learning during COVID-19 Pandemic: Chinese Parents' Beliefs and Attitudes*, "Child Youth Services Review Journal," 2020, Advance online publication, doi: 10.1016 /j.chilyouth.2020.105440; S. Bhamani, A.Z. Makhdoom, V. Bharuchi, N. Ali, S. Kaleem, D. Ahmed, *Home Learning in Times of COVID: Experiences of Parents*, "Journal of Education and Educational Development," 2020 no. 7(1), pp. 9–26, doi: 10.22555/joed.v7i1.3260.

Despite the indicated limitations, the present research can be used for practical purposes to create models of support offered especially for school teachers who experience greater difficulties relating to the COVID-19 pandemic and have less resilience than academic teachers. The need to build and enhance resilience in teacher training<sup>35</sup> to educate “classroom-ready teachers” should be emphasised. In addition, there is a need for interventions to develop teachers’ resilience. These should focus on improving the professional environment as well as finding ways to strengthen teachers’ personal resources.<sup>36</sup> The results of this study may also form the basis for future research on the difficulties experienced by teachers related to remote education, as well as on teachers’ ICT competencies and the need to develop them as early as during university teaching studies.

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<sup>35</sup> C.F. Mansfield, S. Beltman, T. Broadley, N. Weatherby-Fell, *Building Resilience in Teacher Education: An Evidenced Informed Framework*, “Teaching and Teacher Education,” 2016 no. 54, pp. 77–87, doi:10.1016/j.tate.2015.11.016.

<sup>36</sup> S. Ainsworth, J. Oldfield, *Quantifying Teacher Resilience: Context Matters*, “Teaching and Teacher Education,” 2019 no. 82, pp. 117–128, doi: 10.1016/j.tate.2019.03.012.

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