

BARBARA JANKOWIAK  
ORCID: 0000-0002-7660-2070  
Adam Mickiewicz University, Poznań, Poland  
e-mail: [barbara.jankowiak@amu.edu.pl](mailto:barbara.jankowiak@amu.edu.pl)

SYLWIA JASKULSKA  
ORCID: 0000-0002-3454-7894  
Adam Mickiewicz University, Poznań, Poland  
e-mail: [sylwia.jaskulska@amu.edu.pl](mailto:sylwia.jaskulska@amu.edu.pl)

EMILIA SOROKO  
ORCID: 0000-0003-3527-1698  
Adam Mickiewicz University, Poznań, Poland  
e-mail: [emilia.soroko@amu.edu.pl](mailto:emilia.soroko@amu.edu.pl)

## PSYCHOLOGICAL WELL-BEING OF POLISH TEACHERS AND THEIR ATTITUDES TOWARDS DISTANCE EDUCATION DURING THE COVID-19 PANDEMIC

### INTRODUCTION

The SARS-CoV-2 coronavirus pandemic (which causes COVID-19) (He et al., 2020) has caused profound changes in social, economic, political, cultural, and educational life. The pan-demic has created a unique configuration of a health crisis, social isolation, and economic recession, which together have become a significant challenge to the health and well-being of individuals (Kimhi et al., 2020).

Well-being is conceptualized in terms of hedonics and eudaimonia (Kashdan et al., 2008). Hedonistic well-being is represented by the subjective theory of well-being, which explains the cognitive components regarding satisfaction with life and the affective components regarding the abundance of positive emotions and the absence of negative emotions. Eudaimonistic well-being represents the realization of one's potential through self-discovery, a sense of purpose and meaning in life, and intense involvement in activities (Bojanowska et al., 2021). According to the idea of adaptation, we can adjust to bad events to some extent,

but these events do not necessarily change the overall sense of well-being (Diener et al., 1999). High well-being level can translate into functioning in various situations, including crises, and affect the commitment manifested in professional work. Notably, the potential resulting from high well-being can be used to a greater or lesser extent. The use of this resource is fostered by self-discovery, in-tense involvement in various activities, and taking on challenges and effort (Bojanowska et al., 2021).

In case of our study well-being is regarded as a resource in professional reality. Job Demands-Resources Theory (Bakker & Demerouti, 2017) is inspiring here. Considering this theory effect between job demands, resources, and well-being exists and explains mutual conditions of coping at workplace. Many studies provided in frames of this theory show how job demands and personal and social resources influence each other as professional burnout triggers or inhibitors (Bakker & Demerouti, 2007; Schaufeli & Taris, 2014), also during COVID-19 outbreak. For example, Kim et al. (2021) examined how teachers' mental health and well-being declined throughout the pandemic affected by changing job demands. Job resources refer to aspects of the job that help reach goals and stimulate personal growth and development (Tummers & Bakker, 2021). According to study (Kim et al., 2021; Stang-Rabrig et al., 2020) – support from work colleagues seemed to be one of the most important resources positively related to job satisfaction during remote working time. The COVID-19 pandemic is a time of significant and rapid changes in the functioning of schools around the world. In 2020 and 2021, the everyday reality of schools was strongly affected by the pandemic, which led to school closures in many countries and periods of distance or blended learning (combining online and classroom-based learning) for many students. Many schools were ill-prepared for this unprecedented situation (European Commission/EACEA/Eurydice, 2022), so teachers had to take up the challenge of implementing a new way of teaching. We use the term distance education with the understanding that it was not a planned form of teaching but rather an emergency remote teaching. Therefore, a set of technologically mediated solutions is applied to face-to-face learning courses, which are used with the assumption that teaching will return to the classroom form (Hodges et al., 2020; Khlaif et al., 2021; Panskyi et al., 2022).

In Poland, On March 12, 2020, the activities of educational units were temporarily suspended, while the implementation of the tasks of educational units using distance learning methods began on March 25, 2020 (GOV, 2020). During the COVID-19 outbreak, primary education children had the shortest durations of distance learning. Older students mostly learned remotely from March 2020 to June 2021, performing their school obligation. In practice, this involved various forms of synchronous and asynchronous online work. Typically, students and

teachers attended the meetings through various enabling platforms. Assignments and student work were uploaded using different communication channels (Buchner et al., 2020).

Before the COVID-19 pandemic, distance education was uncommon or non-existent in Poland. Moreover, as shown by research, for example UNESCO, this regularity applies to most developed and developing countries. What distinguishes Poland from other European countries is the relatively low level of digitization. For example, according to the DESI index reports, in 2019 Poland was 23rd in Europe in this aspect (DESI, 2020). In Poland the numbers of students in schools without broadband is generally lower than the EU mean, and – according to data before pandemic – ICT in education is less used (European Schoolnet and University of Liège, 2012). Therefore, changing teaching communication from face-to-face to technology-mediated communication was a substantial challenge for Polish teachers (Jankowiak et al., 2022; Jaskulska & Jankowiak, 2020; Jaskulska et al., 2022b). First, the focus has been on performing the didactic function of school, whereas fulfilling care and upbringing obligations has become a significant challenge for teachers. The same applies to maintaining the digital hygiene of students and teachers (Jaskulska et al., 2022a). Taking it all into account it seems interesting to elaborate on what attitudes teachers working in such a reality have towards distance education.

In this article we define an attitude as evaluates an object of thought (Linne et al., 2020; Bohner & Dickel, 2011) and influence thought and action (Bohner & Wänke, 2013). Evaluating the object of the attitude is expressed in a certain amount of favor or disfavor. The study of the attitudes of individuals makes it possible to know the individual attitude of each person, which, however, under certain conditions, can turn into public opinion, beginning to determine the social climate, political and cultural climate, which in turn affects the lives of individuals (Bohner & Wänke, 2013). Therefore, learning about human attitudes is a condition for explaining and predicting the actions of individuals and social groups. Investigating teachers' attitudes toward distance education seems crucial for the school's ability to perform during the COVID-19 pandemic and for the school's future created by teachers after the remote education experience.

The following research questions were asked: What attitudes towards distance education are shared by Polish school teachers?

According to previous studies, we assumed (and tested in a research project conducted in 2020–2021) (Jaskulska & Jankowiak, 2020) that teachers' attitudes towards distance learning can be defined by assessment: the possibility of achieving the goals of school education in the essential areas: didactic (implementation of the core curriculum), upbringing and connected with care activities; the process of exacerbates/equalizes differences between students; experienced difficulties;

experienced limitation/develop of professional competencies; the level of familiarity with distance learning before the pandemic and planning to use it in the future as a consequence of the positive teaching experience during the pandemic; emotions in relations with students and their parents; perceived school principal support. Our previous results show that at the beginning of the COVID-19 outbreak (spring 2020), teachers in Poland believed that there was a possibility of implementing the core curriculum in the form of distance learning, but they expressed doubts about the implementation of educational and caring activities. Although teachers did not have much experience with remote learning before the COVID-19 pandemic, they declared a desire to use their new skills in the future and had a sense of developing their own professional competence. Moreover, distance learning was unlikely to cause them any difficulties. Distance learning aroused relatively positive emotions in teachers (Bojanowska et al., 2021). The question of what attitudes towards distance education Polish teachers had in 2021, after the first year of remote working, has an exploratory status for us and is aimed at the qualitative comparison.

Whether psychological well-being is associated with attitudes toward remote education?

We expected that a global score indicating an accepting (positive) attitude would positively correlate with well-being. We will assume that psychological well-being can help cope with professional challenges (Bojanowska et al., 2021), as a resource in demanding situation (Bakker & Demerouti, 2017). Additionally, we examined the relationships between particular questions about attitudes toward distance education and well-being.

Are attitudes toward distance education differentiated by sociodemographic characteristics (gender, seniority, employment at various levels of education, location of school)? Does the level of well-being play a role in these differences?

Research conducted in Poland on distance education during the pandemic indicated differences in rating distance education experiences by different groups of students in the case of gender, age, and school localization. Boys rated distance education better than girls, older students better than younger, and students from urban schools better than rural students. In addition, previous studies of teachers' attitudes toward distance education have shown that the type of school and the level of education were associated with attitudes toward distance education. Special school teachers had the worst experiences with distance education (Bojanowska et al., 2021). These relationships can be explained in the light of the Job Demands-Resources model. Research – also conducted before the pandemic – showed that certain factors related to, for example, different career stages, as well as other sociodemo-graphic characteristics, are related to coping with the demands of the workplace (Admiraal & Kittelsen Røberg, 2023).

We decided to check on how specific job demands connected with the COVID-19 pandemic time and emergency remote teaching necessity (Hodges et al., 2020) affects the relationship between attitudes towards these professional experiences, well-being, and sociodemographic characteristics of teachers, what is reliably recognized for the time before the pandemic in research embedded, for example in theory of Job Demands-Resources (Simbula, 2010).

Thus, we assumed that sociodemographic variables could differentiate teachers' attitudes. In particular, teachers working with older students and working in schools located in urban areas would have more positive attitudes toward remote work than those working with younger students and those working in rural schools. Working with children with special educational needs can be associated with negative attitudes toward distance education.

## MATERIALS AND METHODS

### *Participants*

We conducted a sample size calculation a posteriori to determine our power to detect the true sample size. The observed effect size difference in our study was found to be  $\sigma = 0.33$  (based on  $\eta^2 = 0.02$ ). Our analyses indicate that a design with group sample sizes of 100 and 160 (the two smallest groups), respectively, can detect effect sizes of  $\sigma \geq 0.33$  with a probability of at least 0.826, assuming a one-sided criterion for detection that allows for a maximum Type I error rate of  $\alpha = 0.05$ .

The selection for the study group was purposive (male/female remote teachers) and voluntary. The sample consisted of 447 women (87.99%) and 61 men (12.01%). This disproportion reflects the actual state of employment in Poland, taking into account gender. Women represented 83% of new entrants to the field of education, this sector is traditionally dominated by women (OECD, 2021). Teachers in our study group were employed in primary school, grades 1–3 ( $n = 50$ , 9.84%), grades 4–8 ( $n = 195$ , 38.39%); and also a general secondary school ( $n = 76$ , 14.96%), technical secondary school ( $n = 58$ , 11.42%), and sectoral vocational school ( $n = 7$ , 1.38%). Of the total group, 122 (24.02%) teachers worked in more than one type of school.

Teachers worked in integrated schools ( $n = 6$ , 1.18%), mainstream schools ( $n = 417$ , 82.09%), mainstream schools with special classes ( $n = 47$ , 9.25%), special schools ( $n = 12$ , 2.36%), more than one type of school in case of special need students participation ( $n = 26$ , 5.12%). The seniority of the survey participants was as follows: over 11 years ( $n = 363$ , 71.65%), 6–10 years ( $n = 66$ , 12.99%),

2–5 years ( $n = 48$ , 9.45%), and less than two years ( $n = 30$ , 5.91%). Teachers taught various subjects with a predominance of languages – Polish and English, and maths (as shown in the word cloud chart, Figure 1).

In terms of the location of the school, the least number of teachers worked in the countryside ( $n = 100$ , 19.69%), more in small towns ( $n = 164$ , 32.28%), and the most in big cities ( $n = 226$ , 44.49%), while 18 people (3.54%) worked in more than one location (e.g., both big and small city).

Figure 1

*Frequency of school subjects mentioned by teachers as having been taught during the survey period*



Source: own elaboration.

### *Procedure*

The questionnaire was sent in January 2021 to the selected schools in all provinces in Poland. We randomly selected five schools from each voivodeship and sent the research invitation to the survey to the headteachers. The questionnaire was also available on Facebook on the closed groups of teachers' associations. Both during the research planning and implementation, we followed the principles stated in the Declaration of Helsinki and the requirements set out in this journal regarding survey studies.

The questionnaire consisted of a metric, a section on attitudes toward distance education (12 questions), and the Flourishing Scale (8 questions). At the beginning of the questionnaire, information was included on whom the survey was ad-

dressed to (in-service teachers teaching remote classes), the purpose of the survey, the duration, and the rights of survey participants, such as information that the survey is anonymous, voluntary and that you can withdraw from the survey at any time without giving a reason, and that all the information provided is confidential, and that by email (contact for the re-searchers was provided) questions can be asked about the participant's role in the study being conducted. In the end, information was given that if someone agreed to participate in the study, they should proceed to the questions properly. Informed consent was obtained by informing that clicking the "start" button is unambiguous with giving it. It did take 10–15 minutes to fill in the questionnaire, teachers were informed about the amount of time needed.

### *Measures*

Well-being was assessed using the Flourishing Scale. The Flourishing Scale is a commonly utilized evaluation instrument for measuring an individual's self-reported psychological well-being. The scale consists of 8 items that refer to important aspects of human functioning as positive relationships, feelings of competence, and having meaning and purpose in life. The exemplary items are as follows: "I lead a purposeful and meaningful life"; "My social relationships are supportive and rewarding"; "I am engaged and interested in my daily activities" (Diener et al., 2010). One can agree or disagree with those items, using a scale from 1 to 7. A high score indicates that the participants perceive themselves positively regarding significant aspects of their performance. In the present study the Cronbach's alpha was 0.86. Across other studies there are high reliabilities reported and the validity is confirmed (e.g., high convergence with similar scales) across countries and populations (Carmona-Halty et al., 2022; Khan & Adil, 2020; Salama-Younes, 2017) the Polish version prepared by Kaczmarek and Baran (Kaczmarek, 2014) was used.

Attitudes toward distance education scale: Teachers' attitudes toward distance education were studied using a questionnaire containing 12 pairs of statements. The scale was created by the two authors of this article (S.J. and B.J.) based on theoretical assumptions about the social aspect of attitudes, where attitudes consist of cognitive, emotional, and behavioral components. An attitude is always directed to the specific object (here: the distance education) more or less homogeneous set of dispositions to behave in a certain way towards the attitude object and an emotional disposition which is expressed in the form of positive and negative emotions accompanying the image of the attitude object.

In selecting the items for the attitudes scale, we were guided by the results of research conducted in Poland on how teachers cope with distance education and what problems they perceive in this field (Buchner et al., 2020; Ptaszek et al.,

2020). Analysis of this data allowed us to identify the most important areas, which included: implementation of the core curriculum, upbringing, caring, the varying abilities of students and their families to provide hardware to implement distance learning, nurturing relationships with students, parents, receiving/lacking support from school management and other teachers, technical difficulties associated with the new way of working, and developing digital competence (Buchner et al., 2020; Ptaszek et al., 2020). Also, the basic functions of schools – caring, upbringing and didactic – were considered (Smolińska-Theiss, 2015).

Respondents indicated to what extent they agreed with the statements using a Likert-type scale with levels from 1 to 7. The content of the Scale is as follows: Distance education: (1) prevents the successful implementation of the core curriculum/ allows successful implementation of the core curriculum; (2) prevents the successful implementation of the upbringing activity of the school/ allows the successful implementation of the up-bringing activity of the school; (3) prevents the successful implementation of the school's caring activities/allows the successful implementation of the school's caring activities; (4) exacerbates differences between students/equalizes differences between students; (5) causes some difficulties/ does not cause any difficulties; (6) limits the development of my professional competencies/ allows me to develop my professional competencies; (7) before the COVID-19 pandemic was unfamiliar to me – I had never implemented it in my work/ before the COVID-19 pandemic was not unfamiliar to me – I had implemented it in my work; (8) I will definitely not use it in my work in the future unless there is a need to do so again/ I will definitely use it in my work in the future, even if there is no need to do so; (9) evokes negative emotions in me/evokes positive emotions in me; (10) evokes negative emotions in my relationships with students/evokes positive emotions in my relationships with students; (11) evokes negative emotions in my relationships with students' parents/ evokes positive emotions in my relationships with students' parents; (12) makes me feel unsupported by the school principal/ makes me feel supported by the school principal. The scale was used in research on a sample of Polish teachers (Jaskulska & Jankowiak, 2020) at the beginning of the COVID-19 pandemic. In our study, exploratory factor analysis with Oblimrotation in this study showed that the Scale should be treated as unidimensional, with factor loadings taking values from 0.8 to 0.34. The exception is item “makes me feel unsupported by the school principal/ makes me feel supported by the school principal”, which does not load on this factor. However, this item has been retained for theoretical reasons – it supplements the measurement of attitudes with perceptions of school management and is also useful as a separate index of the attitude. Besides, the reliability



coefficient of the Scale determined by Cronbach's alpha is high ( $\alpha = 0.83$ ) and the validity can be described as sufficient.

Sociodemographic characteristics: Teachers' age, sex (male/female), seniority (over 11 years, 6–10 years, 2–5 years, less than two years), stage of education (primary school, grades 1–3, grades 4–8, general secondary school, technical secondary school, sectoral vocational school, more than one type of school) type of school (mainstream, integrational special, mainstream with special/integration classes, more than one type of school), school location (countryside, small town, big city).

#### *Statistical Analyses*

Descriptive statistics tailored to variable characteristics were used to illustrate the variables under study. Correlations were determined using Spearman's rho, as the distributions of the variables were not normal. To analyze the relationship between school location and attitudes toward remote education, when controlling for well-being, the ANCOVA was used, for which one of the preconditions (normality of distribution) was not fully met, so the results should be treated with caution.

## RESULTS

### *Descriptive statistics*

The descriptive statistics analysis allowed us to answer what attitudes toward distance education teachers share. The results show that the most positive attitudes are expressed towards the possibility of achieving the goals of school education in the didactic area ("allows successful implementation of the core curriculum") and experienced difficulties ("does not cause any difficulties"). The most negative attitudes are expressed by teachers regarding the possibility of achieving the goals of school education in the area connected with care ("prevents the successful implementation of the school's caring activities") and up-bring activities ("prevents the successful implementation of the upbringing activity of the school"), and process of exacerbates/equalizes differences between students ("exacerbates differences between students" – cf. more in Table 1).

Psychological well-being was described by teachers as high ( $M = 5.82$ ,  $Md = 6$ ; min. = 2.2, max. = 7). The descriptive statistics analysis prompts attention to the distributions deviating from normal.

Table 1  
*Descriptive statistics for study variables: well-being and attitude questions and global score of attitudes towards distance education (N = 508)*

| Variable  | M    | Median | MIN. | MAX. | SD   | Skew-ness | Kurtosis | Shapiro-Wilk W | Shapiro-Wilk p |
|---|------|--------|------|------|------|-----------|----------|----------------|----------------|
| the possibility of implementation of the school's didactic (implementation of the core curriculum) function | 4.43 | 5.00   | 0.00 | 7.00 | 1.55 | -0.21     | -0.58    | 0.95           | <.0001         |
| the possibility of implementation of the upbringing function  | 3.11 | 3.00   | 0.00 | 7.00 | 1.43 | 0.59      | -0.04    | 0.92           | <.0001         |
| the possibility of implementation of the school's caring function   | 2.37 | 2.00   | 0.00 | 7.00 | 1.36 | 1.22      | 1.45     | 0.84           | <.0001         |
| process of exacerbates/equalizes differences between students   | 3.07 | 3.00   | 0.00 | 7.00 | 1.57 | 0.50      | -0.42    | 0.92           | <.0001         |
| experienced difficulties  | 4.76 | 5.00   | 0.00 | 7.00 | 1.75 | -0.38     | -0.85    | 0.92           | <.0001         |
| experienced limitation/develop of professional competencies   | 4.94 | 5.00   | 0.00 | 7.00 | 1.61 | -0.52     | -0.39    | 0.92           | <.0001         |
| previous experiences with distance education  | 3.32 | 3.00   | 0.00 | 7.00 | 2.07 | 0.43      | -1.14    | 0.88           | <.0001         |
| willingness to use distance education in the future   | 5.10 | 5.00   | 0.00 | 7.00 | 1.86 | -0.74     | -0.51    | 0.87           | <.0001         |
| emotions towards distance education   | 3.97 | 4.00   | 0.00 | 7.00 | 1.62 | 0.01      | -0.61    | 0.95           | <.0001         |
| emotions in relations with students   | 4.48 | 4.00   | 0.00 | 7.00 | 1.49 | -0.23     | -0.25    | 0.94           | <.0001         |
| emotions in relations with parents of students  | 4.23 | 4.00   | 0.00 | 7.00 | 1.40 | -0.05     | -0.03    | 0.93           | <.0001         |
| support from the school principal   | 4.21 | 4.00   | 0.00 | 7.00 | 1.84 | -0.17     | -1.01    | 0.93           | <.0001         |
| attitudes total   | 4.00 | 3.92   | 1.42 | 6.75 | 0.98 | 0.17      | -0.03    | 0.99           | 0.06           |
| well-being  | 5.82 | 6.00   | 2.20 | 7.00 | 0.94 | -1.10     | 1.16     | 0.91           | <.0001         |

Source: own research.

*Teachers' psychological well-being and attitudes toward distance education during the COVID-19 pandemic*

We investigated whether psychological well-being was associated with attitudes toward distance education. We expected that a global score indicating an accepting (positive) attitude would be positively correlated with well-being. The question of how particular attitudes are related to well-being was exploratory for us. We performed a correlation analysis using Spearman's rho coefficient (one-sided hypothesis of a positive relationship) to answer this question. The results show a statistically significant positive low association between the generalized outcome of attitudes towards distance education (their positivity) and well-being. For the most part, individual aspects of attitudes are also correlated with well-being according to this pattern. However, the exceptions are the implementation of the school's caring function and previous experiences with distance education which show no such relationship (Table 2).

Table 2

*Correlations between well-being and individual attitude assessment items and global attitudes towards distance education (Spearman's rho, N = 508)*

| Attitudes towards distance education                                | Psychological well-being |
|---|--------------------------|
| the possibility of implementation of the school's didactic function | 0.1865***                |
| the possibility of implementation of the upbringing function        | 0.2409***                |
| the possibility of implementation of the school's caring function   | 0.0713                   |
| process of exacerbates/equalizes differences between students       | 0.1555***                |
| experienced difficulties  | 0.2815***                |
| experienced limitation/develop of professional competencies         | 0.2798***                |
| previous experiences with distance education                        | 0.0703                   |
| willingness to use distance education in the future                 | 0.1718***                |
| emotions towards distance education                                 | 0.2721***                |
| emotions in relations with students                                 | 0.2582***                |
| emotions in relations with parents of students                      | 0.2159***                |
| support from the school principal                                   | 0.2028***                |
| attitudes total   | 0.352***                 |

\*  $p < 0,05$ ; \*\*  $p < 0,01$ ; \*\*\*  $p < 0,001$ .

Source: own research.

*Teachers' psychological well-being and attitudes toward distance education during the COVID-19 pandemic in rural and urban schools*

When answering the question about attitudes towards distance education in teachers differentiated by sociodemographic characteristics (gender, seniority, level of education where employment was, school type, and school location), we performed a One-Way ANOVA (Non-parametric, Kruskal–Wallis's test). It showed that only school location differentiated the overall score of attitudes towards remote education ( $\chi^2(3) = 8.11, p = 0.02, \varepsilon^2 = 0.02$ ) (Table 3). The Dwass-Steel-Critchlow-Fligner pairwise comparisons test showed that teachers working in large cities compared to those working in rural areas have more positive attitudes towards remote schools' working mode ( $W = 3.97, p = 0.01$ ).

Table 3

*Sociodemographic variables analyzed as factors differentiating attitudes toward distance education (non-parametric, Kruskal–Wallis test's results)*

| Variable           | $\chi^2$ | Df | p      |
|--------------------|----------|----|--------|
| Sex                | 0.3716   | 1  | 0.5422 |
| Seniority          | 4.639    | 3  | 0.2002 |
| stage of education | 3.026    | 5  | 0.6959 |
| type of the school | 1.072    | 3  | 0.7838 |
| school location    | 8.113    | 2  | 0.0173 |

Source: own research.

Since we knew that attitudes towards online education are related to psychological well-being, we set out to control for psychological well-being using analysis of covariance (ANCOVA) when investigating differences between teachers' work in different locations and attitudes towards online education. To do so, we tested assumptions (homogeneity of variances Levene's test,  $F(2, 487) = 0.24, p = 0.78$  and Shapiro–Wilk's normality test,  $W = 0.99, p < 0.01$ ). We also analyzed the associations between psychological well-being and workplace location (Figure 2). The ANCOVA results show both simple (for psychological well-being and school location) and interaction effects (Table 4). There is no relationship between psychological well-being and attitudes toward distance education in rural areas. However, in medium-sized and large cities, the higher the psychological well-being, the more positive the attitudes toward online education (Figure 3).

Table 4

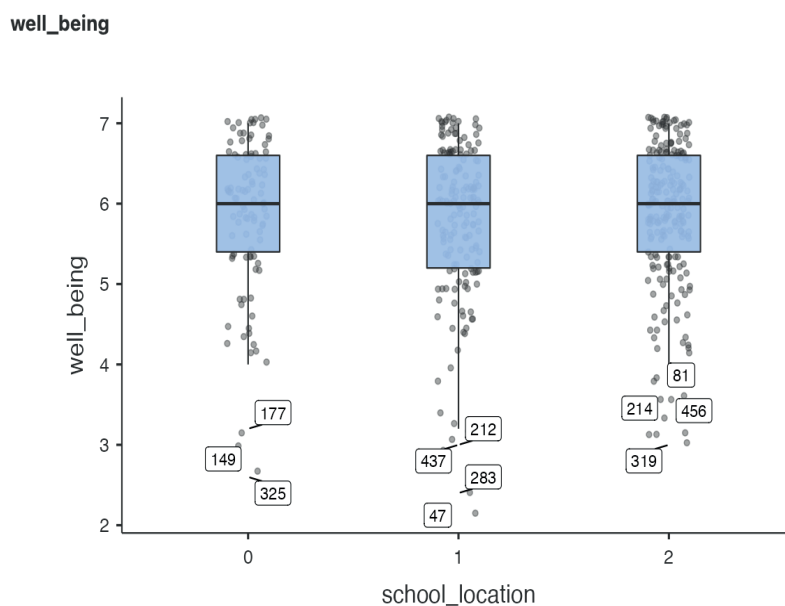
*ANCOVA and F-tests for intergroup differences (according to school location) in attitudes toward distance education when controlling for psychological well-being*

|  | Sum of Squares | df  | Mean Square | F      | p      |
|--|----------------|-----|-------------|--------|--------|
| overall model                              | 52.867         | 5   | 10.5734     | 17.787 | <.0001 |
| psychological well-being                   | 40.424         | 1   | 40.4235     | 49.183 | <.0001 |
| school location                            | 5.026          | 2   | 2.5131      | 3.058  | 0.0479 |
| psychological well-being * school location | 7.417          | 2   | 3.7086      | 4.512  | 0.0114 |
| Residuals                                  | 397.801        | 484 | 0.8219      |        |        |

Source: own elaboration.

Figure 2

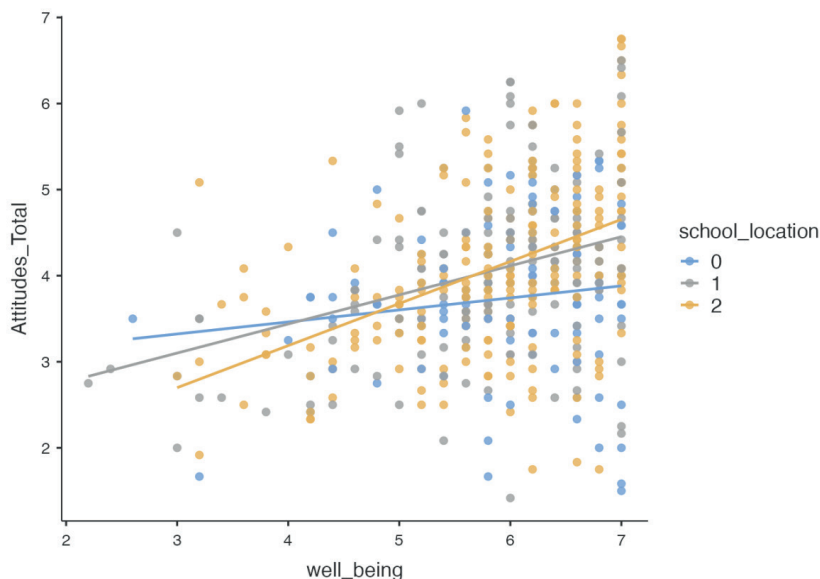
*Box plot showing the relationship between well-being and school location*



Source: own research.

Figure 3

Scatter plot showing the interaction between well-being and attitudes toward distance education with school location as a grouping variable



Adnotacja. 0 – countryside, 1 – small city, 2 – large city.

Source: own research.

## DISCUSSION

The survey results indicate that teachers' attitudes toward remote education are, in many ways, positive, which may determine future changes in the functioning of schools in Poland. Previous research suggests that teachers' attitudes should be considered to facilitate technology integration (Galvis, 2012) and could become the starting point for overcoming barriers to technology integration (Kim et al., 2013). In addition, a study by Li and Ni (2010) showed a strong correlation between teachers' attitudes toward technology and the frequency with which they use technology. According to the results obtained in this project, teachers, even though they had been previously unlikely to undertake online education, during the COVID-19 outbreak they felt that they have developed their professional competence and that remote teaching does not cause difficulties. They were confident that they will use ICT tools in the future, even if they are not will be forced by external circumstances. The survey results indicate that, according to the surveyed teachers, the main tasks of the school, which are education, care, and upbringing,

are partly possible to be implemented online. The best beliefs were about the possibility to implement the core curriculum in remote contact.

An important disadvantage of distance education, according to the respondents, is that it exacerbates student differences. Similar research results were obtained by Katić et al. (2021) in a study of students from Italy and Slovenia. As they concluded, distanced learning is not sufficiently inclusive. Only students who had good learning conditions at home (personal computer, a fast internet connection, space) benefited from distanced learning. In the discussed study, the biggest perceived problem was not the possibility of fulfilling school educational duties, but difficulties related to the educational and caring function of the school. There is no doubt that the context of the COVID-19 pandemic and the transition of schools in many countries to distance education has caused a reassessment of investments in education technology (Tzivnikou et al., 2021). Unequal access to computer equipment for students (Buchner et al., 2020), which can exacerbate differences between students from families with different incomes and the issue of care and nurturing of students during online contact. Lawmakers' focus on fulfilling the didactic function of the school and undervaluing the rest of its tasks translates into the day-to-day reality of distance education and could have long-term consequences. The problem of reducing the upbringing and caring function of schools in favor of the didactic function is not a new issue regarding school education in Poland (Jaskulska, 2015; Nawrocki, 2016; Żytko, 2020). However, at a time of epidemiological crisis, it may compound the difficult situation in which some students find themselves whose families do not provide sufficient security and care. Focusing the discourse on distance education on organizational problems and school assessment is important because these concerns teachers, school principals, parents, and students. However, this should not obscure other important threads, such as the new dimensions of exclusion associated not so much with the Internet or computer access but with the loss of upbringing and caring support of the school (Plichta, 2020; Poleszak & Pyżalski, 2020; Turczyk & Jaskulska, 2020).

In our research remote education tends to be associated with positive emotions in the relationship with students. The results describing teachers' attitudes are consistent with those obtained at the beginning of the pandemic after the first months of remote education in Poland (May and June 2020) (Jaskulska & Jankowiak, 2020). They show that teachers in Poland have taken up the challenge of remote education and are satisfied with their activities but perceive significant difficulties in this form of work. Other studies also point to the positive aspects of distance education, for example peer support from people working in the same schools (Nieduziak, 2022) or increasing the well-being of students who do not have commute and can regulate their sleep-wake patterns (Katić et al., 2021). The assump-

tion about the relationship between generalized well-being and teachers' attitudes toward distance learning proved correct. This result is consistent with other studies, for example, the relation between well-being and students' attitudes toward distance learning (Vollmann et al., 2022) and well-being and teachers' attitudes (Jankowiak & Jaskulska, 2021). Previous studies have also shown a relationship between well-being and work engagement. The greater the well-being, the greater this engagement (Shuck & Reio, 2013). This is in line with the assumptions of the Job Demands-Resources model. Research conducted within it indicates that highlighting the need of focusing on teachers' positive psychological functioning can be a solution in case of different issues connected with job demands and can even help lower the rate of leaving the profession. In case of our studies, we have tested the hypothesis on how well-being relates to coping with difficult situations and new job requirements during COVID-19 outbreak (Granziera et al., 2022).

The research results showed that a sense of well-being is statistically significantly related to attitudes toward online education globally and almost all studied aspects of attitudes. Higher respondents' sense of well-being is associated with better evaluations of re-mote education both by declaring beliefs about its effectiveness (e.g., in terms of the implementation of the core curriculum), assessments of their ability to apply it (e.g., ability to implement e-learning), and perceived positive emotions during remote education (e.g., in relationships with students). The only areas not associated with a sense of well-being are having previous experience with distance learning and beliefs about the ability to successfully implement the school's care activities. It is worth remembering that the belief that the school's caring function can be carried out successfully was one of the lowest-rated aspects of the attitudes surveyed. The research shows that the level of well-being does not change the perception of this issue by the respondents. It suggests that opinions on the limitations of education remote in the ability to provide care for students are similar among those with high and low subjective well-being.

Our hypothesis regarding the relationship between sociodemographic variables and attitudes about remote education was only partially confirmed. Sociodemographic variables – except school location – proved insignificant. Our research shows that teachers working in large cities, compared to those working in rural areas, have more positive attitudes toward remote education. In addition, our results indicate that there is no relationship between psychological well-being and attitudes toward distance education for teachers working in rural areas. However, in medium and large cities, the higher the psychological well-being, the more positive attitudes toward online education. The results of this research are consistent with data obtained in a project on Polish students' experiences with remote education, according to which those students who attended schools in large cities had better experiences than those studying in rural areas (Jaskulska et al., 2021;



Jaskulska et al., 2022c). Students from urban areas were more likely than those from rural areas to indicate that before the pandemic, technologies were very important to them, and they were very interested in them.

In contrast, although rural residents were interested in technologies, they rarely used them (Jaskulska et al., 2021). Other Polish studies also show differences in school experiences related to the pandemic among students of rural and urban schools. This results, among others, from better IT infrastructure in cities and the level of digital competencies of students and their parents – higher among city residents (Michalska, 2020). The diagnosed relationships also indicate that the presence of technology in school and the learning process is a space for supporting inequality – the experience of students from schools located in villages is poorer in this regard (Jaskulska et al., 2021), which, as the results of this research indicate, teachers are aware of. The lack of relationship between well-being and attitudes toward remote education of rural school teachers can be understood this way. Regardless of their psychological well-being, teachers are aware that their students living in rural areas experience greater objective difficulties in using remote education. Other studies conducted during the pandemic time also indicated the privilege and better results of students from cities than from the countryside (Belay, 2020), mostly because of technological inequalities (Alvarez, 2021) although it is not so evident in the case of university students (Aydin & Köse, 2021).

#### LIMITATIONS

It is worth pointing out several limitations of the present study. The survey was conducted on a sample of volunteers who were active on online portals and groups and affiliated teachers' associations. It is, therefore, possible that the data on attitudes toward online education relate to people who are well-embedded in online activities daily and are committed teachers. Although the main variables (attitudes and well-being) relate to conscious self-declarations, it is noteworthy that we measured them with self-report questionnaires. It may become prone to self-presentation and social approval issues; however, the study was anonymous. Moreover, we conducted the study in Poland during the specific stage of the COVID-19 pandemic. Therefore, it concerns a particular moment of adaptation to distance learning. However, the investigated relationships between attitudes and well-being can be considered more time sustainable.

When statistical analyses are concerned, we applied the ANCOVA despite the skewed distribution of the psychological well-being variable. We first looked closely at the distributions of the variables and the outliers and considered the data

sufficiently fit for this method. However, this still causes the results of the analysis of covariance to be treated with some caution.

The tools used in the research are self-reporting, which is in keeping with the nature of the variables studied (Attitudes toward distance education and Well-being). An ongoing limitation is the relevance of the Attitudes toward the distance education scale, which requires further exploration.

## CONCLUSIONS

Even though Polish teachers were unlikely to take up online education before, they now feel that they have developed their professional competence. Remote education does not cause them difficulties, and they are convinced they will use it in the future, even if they are not forced to do so by external circumstances. According to teachers, it is possible to implement the core curriculum through remote contact, but it is not possible to effectively implement care and education. According to respondents, an essential disadvantage of remote learning is that it exacerbates differences between students. Compared to those working in rural areas, teachers working in large cities have more positive attitudes toward remote education. Therefore, the guidelines for practice that we formulate concern the fact that the emphasis should be on retrofitting equipment for families (especially out of the big cities), so that technological inequalities do not determine school success. If switch schools to remote mode again is needed, one should strive for blended forms of teaching, which, on the one hand, significantly contribute to reducing the risk of infection (compared to stationary mode), but on the other help prevent deep crises related to the student's inability to maintain relationships or receiving basic care and psychological support at school. A relationship exists between teachers' well-being and attitudes toward distance learning during a pandemic. The exception is teachers working in rural areas. This group has no relationship between psychological well-being and attitudes toward distance education. However, in medium and large cities, the higher the psychological well-being, the more positive attitudes toward online education. Thus, well-being can be seen as a resource that helps deal with difficult situations, such as changing teaching during the COVID-19 pandemic from traditional teaching to distance education. Therefore, it seems important to create a climate in educational institutions conducive to strengthening teachers' well-being resources. Models such as Job Demands-Resources or job crafting should be better recognized in Polish schools' managements and in teachers training programs.

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**Authors:** Barbara Jankowiak, Sylwia Jaskulska, Emilia Soroko

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### Summary

Teachers' attitudes toward distance education are crucial not only for school operations during the COVID-19 pandemic but also for shaping the future educational landscape by teachers after experiencing distance education. According to the Job Demands–Resources Theory, well-being can be an essential resource in managing workplace challenges. This article aims to describe Polish teachers' attitudes toward distance education during the COVID-19 pandemic and how these attitudes correlate with their well-being. The study also investigates the relationship between these attitudes and sociodemographic characteristics (such as gender, seniority, employment at different levels of education, and school location). The sample consisted of 447 female (87.99%) and 61 male (12.01%) teachers across various educational institutions, including primary, general secondary,

technical secondary, and sectoral vocational schools. The geographic distribution of these schools varied, with the smallest number in rural areas ( $n = 100$ , 19.69%), bigger in small towns ( $n = 164$ , 32.28%), and the largest in big cities ( $n = 226$ , 44.49%), whereas 18 people (3.54%) worked in more than one location. The study used Spearman's rho and ANCOVA to assess correlations between school location and attitudes toward distance education, controlling for well-being. Although Polish teachers were initially reluctant about distance education, they recognized its potential in enhancing their professional competencies, which came as a smooth process. Teachers were confident about using remote education solutions in the future, regardless of external pressures. However, they noted that while remote learning could cover the core curriculum, it was less effective for care and upbringing tasks. An important disadvantage of distance learning, according to respondents, is that it exacerbates students' differences. In terms of sociodemographic variables, compared to those in rural settings, teachers in large cities held more positive views on remote education. A positive correlation was found between teachers' well-being and their attitudes toward distance learning during a pandemic, with the exception of teachers working in rural areas. However, in the cities, the higher the psychological well-being, the more positive attitudes toward online education. Well-being can be seen as a resource that helps deal with difficult situations, such as the change in teaching during the COVID-19 pandemic from traditional to distance education. Therefore, it seems important to create a climate in educational institutions that is conducive to strengthening teachers' well-being resources. In the light of the study results devising solutions to bridge the gap between privileged and underprivileged students seems to be important, especially during a pandemic or similar crises.