

Assessment of job satisfaction, self-efficacy, and the level of professional burnout of Polish teachers during the COVID-19 pandemic

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Abstract

Background.

Teachers' work during the COVID-19 pandemic created additional challenges and required them to go beyond conventional teaching methods, which required teachers to be more resilient and hard-working.

Methods.

456 teachers from randomly selected schools in the Podkarpacie region in Poland participated in the study. The questionnaire contained socio-demographic data of the respondents and three standardized scales: The Satisfaction with Job Scale (SSP), General Self-Efficacy Scale (GSES) and AVEM.

Results.

The teachers' job satisfaction was on average level. The vast majority of the surveyed teachers presented type B of work-related behavior, i.e., burnout, and type A in which the probability of burnout is very high. The feeling of self-effectiveness determines the level of job satisfaction and the level of professional burnout among the surveyed teachers.

Conclusion.

There is a close relationship between teachers' level of self-effectiveness, job satisfaction and predispose them to the occurrence of burnout syndrome. The period of COVID-19 pandemic is a difficult time for teachers.

Keywords: burnout, COVID-19, job satisfaction, self-efficacy, teachers

Comment [DIM1]: Whic level?

Comment [DIM2]: Why? If appropriate facilities in place it should not cause additional burden given that the teachers received training. Your argument should focussed on illpreparation which caused stress and excessive workload.

Comment [DIM3]: Add analysis methods

Comment [DIM4]: Which level?

Comment [DIM5]: What does it mean? operationalize

Comment [DIM6]: In abstract instead of Type B and A, mention the exact behavior easy to understand by the readers such as burnout.

Comment [DIM7]: You assessed self-efficacy. Efficacy and effectiveness are different.

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Comment [DIM9]: The methods you used can not claim causality. Rephrase

Comment [DIM10]: No need to use empty words.

Introduction

Teaching profession widely recognized as a profession of public trust, requires certain ethical and moral standards and high-quality services from people who carry it out (CBOS, 2019). As assumed in the Teacher's Charter, the teacher's duty is not only to provide the appropriate scope of knowledge, but also to care for the student's well-being, their development and preparation for making decisions in adulthood (ISAP, 2019). Therefore, the nature of this profession indicates the need for the teacher to have appropriate personality traits and high mental resilience. A modern teacher plays the role of a specialist who not only helps to acquire knowledge, but also motivates to learn and helps with didactic and educational difficulties (Jazukiewicz, 2017; Liu, Li & Zou, 2019). Taking into account the different age of teachers and their personal predispositions, for some of them schoolwork may be a heavy burden and will not always be able to meet the requirements of the profession (Makowiec-Dąbrowska et al., 2021). The teacher's work consists of creating didactic and educational situations, the results of which reflect not only the teacher's level of knowledge, but also their commitment and the ability to inspire to learn (Makowiec-Dąbrowska et al., 2021; Piróg, 2018; Elwick & Jerome, 2019). The specificity of the teacher's work predisposes to the occurrence of severe and chronic fatigue and professional burnout in this occupational group (Springer & Oleksa, 2017; Bortkiewicz et al., 2020; Khezerlou, 2013). In a study conducted in Japan among teachers, it was shown that the chronic fatigue syndrome found among the surveyed teachers was significantly higher than in the population of other working people across the country (Shimizu et al., 2011). The level of job satisfaction, which among teachers is related to their belief in a special role and professional mission, has a great impact on proper functioning (Bajcar et al., 2011). According to the analyzed studies, teachers with a low sense of job satisfaction are not satisfied with their personal development and their relations with the environment are dominated by a critical attitude causing uncertainty in everyday work and difficulties in establishing relationships. On the other hand, teachers with high job satisfaction have a positive self-image and are able to make a good impression on the environment. They are characterized by a great sense of responsibility, persistence, and consistency in everyday work. In relations with others, they are open and ready to provide help and support (Jakimiuk, 2018). Another important factor in the work of every teacher is his or her belief in self-efficacy, which is defined as the belief that they have sufficient opportunities to influence the achievements of their students. Many studies on teacher self-efficacy have shown that self-efficacy in teachers makes it much easier to cope with difficult situations and stress, which has a significant impact on the well-being and health of this professional group. It has been shown that beliefs about self-efficacy are negatively associated with mental tension, burnout, and depression, and positively with pro-health behaviors (Baka, 2017; Juczyński, 2001).

Teachers' work during the COVID-19 pandemic was a great challenge for teachers and required them to abandon conventional teaching methods. It was related to spend more time, work, and creativity. When schools in Poland were closed (11/03/2020) and teaching throughout the country was carried out remotely, many teachers needed technical support, especially

Comment [DIM11]: Instead of writing too much on teachers role, focus on your argument. Establish the knowledge gaps, justify the need of this study.

teachers with longer work experience. (Tomczyk & Walker, 2021). It was a completely new, global change in the way of teaching, which had never taken place in Polish education before. Therefore, it is not surprising that many schools lacked adequate equipment and guidelines regarding the rules of distance learning (Morgan, 2020; Romaniuk, Łukasiewicz-Wieleba & Kohut, 2020; Madalińska-Michalak, 2020; Rotas & Cahapay, 2020). A broader view of the functioning of teachers at that time presented Supreme Audit Office (SAO) report. A questionnaire survey conducted by the SAO in over five thousand educational institutions showed that that in the initial period of distance learning, teachers prepared for new conditions on their own, using the help of their younger colleagues, in March 2020 the number of teachers who completed various forms of education related to distance learning was 47%, and six months later it reached 81%. Most of the teachers working remotely used their own electronic equipment and the Internet, and only 7% of them used school resources. Nearly 70% of the teachers who participated in the SAO questionnaire conducted remote classes from home, and only 28% of them had access to a well-equipped classroom. (Supreme Audit Office Report, 2021).

Comment [DIM12]: Older generation

The specificity of the teacher's work and extraordinary circumstances resulting from the pandemic were the basis for undertaking research on the key factors determining the appropriate health condition of this professional group and the level of education of children and adolescents closely related to it. The aim of the study was to assess the level of occupational burnout, the sense of job satisfaction and the self-effectiveness of Polish teachers working during the COVID-19 pandemic.

Comment [DIM13]: Did not you assessed self-efficacy?

Comment [DIM14]: Specify level of the teachers. University? Primary schools?

Materials & Methods

Participants

The study was conducted from May 25 to June 24, 2021. 456 teachers from randomly selected schools in the Podkarpacie region in Poland participated in the study. The method used was a diagnostic survey conducted by means of a questionnaire survey. Inclusion criteria: professionally active primary and secondary school teachers, minimum 2-year work experience, consent to participate in the study. The questionnaire contained socio-demographic data of the respondents and three standardized scales: The Satisfaction with Job Scale (SSP), GSES and AVEM. The participants were asked to complete the questionnaires described below on their own. The survey was anonymous. All participants were personally informed about the conditions and procedure of the study. At the same time, they gave their informed consent to participate in the study. We received written informed consent from participants of the study.

Comment [DIM15]: How did you select them from the 'randomly' selected schools? Conveniently? If randomly, specify the method

Comment [DIM16]: How?

Comment [DIM17]: Provide reference for each of these scale

Tools

Comment [DIM18]: Appropriately cite each of the scale you used.

Self-efficacy was measured with the GSES scale (General Self-Efficacy Scale; Schwarzer, Jerusalem, in Polish adaptation of Juczyński. The scale consists of 10 items and is designed to measure the general belief of an individual as to the feeling of effectiveness in specific situations,

Comment [DIM19]: Efficacy or effectiveness? On what? Specify.

120 also related to the performed work. The answers are given on a 4-point scale (from 1 - no /
 121 untrue, to 4 - yes / completely true). The Polish version of the scale is characterized by good
 122 psychometric properties. The reliability of the scale is $\alpha = 0.88$. The sum of all points gives the
 123 overall index self-esteem effectiveness, which can be between 10 and 40 points. The higher the
 124 score, the greater the sense of self-efficacy.
 125 The results within 1-4 sten were considered low, and 7-10 as high, which corresponds to an area
 126 of about 33%, the lowest results and the same number of the highest scores in the scale. Results
 127 between 5 and 6 are considered average (Juczyński, 2001).
 128
 129 The Satisfaction with Job Scale allows to measure the cognitive aspect of overall job satisfaction.
 130 The scale includes five items rated on a seven-point scale:
 131 - In many respects my work is close to the ideal;
 132 - I have great working conditions;
 133 - I am satisfied with the work;
 134 - So far, I was able to achieve what I wanted, at work;
 135 - If I had to decide again, I would choose the same job.
 136 Possible answers: from 1- I strongly disagree to 7- I strongly agree.
 137 The obtained results are summed up, and the overall score indicates the degree of satisfaction
 138 from work. The range of results is between 5 and 35 points.
 139 The higher the score, the greater the sense of job satisfaction. The internal reliability of the scale
 140 is high, Cronbach's alpha is 0.864. The reliability of the scale is $\alpha = 0.814$. The Job Satisfaction
 141 Scale has been adapted to Polish conditions (Zalewska, 2003).
 142
 143 The AVEM questionnaire (Prof. Uwe Scharschmidt, Dr. Andreas W. Fischer, Polish adaptation
 144 by Prof. Tatiana Rongińska, Prof. Dr. Werner Gaida), defines individual resources of an
 145 individual in the context of coping with the demands of professional situations. Importance is
 146 attached to explaining the ways of behavior and subjective assessment of interpersonal relations
 147 in the work environment. In practical terms, the use of the tool allows for the determination of
 148 behavioral patterns that are conducive to the mental health of an individual and a positive
 149 attitude to work. AVEM makes it possible to identify patterns of behavior and experiences that
 150 pose a threat to the health of an individual. They are considered depending on the relationship in
 151 the work environment and the immediate environment of the individual. The practical
 152 application of the method consists of developing pro-health preventive actions. The
 153 questionnaire consists of 66 items. The examined person assesses the accuracy of each of the
 154 statements in relation to their own feelings, experiences, and experiences on a five-point scale.
 155 The area of behavior and experiences in task situations is described by 11 scales of the
 156 questionnaire (each of the scales corresponds to 6 tasks-statements). Reliability tested by
 157 Cronbach's alpha method for individual scales ranges between 0.78 and 0.87. Determining the
 158 reliability with the split half method (according to Spearman-Brown) gave a result between 0.76
 159 and 0.90. The stability coefficients obtained so far (over a period of 3 months) for the German

Comment [DIM20]: Cite appropriately

version are between 0.69 and 0.82. The examination takes approximately 10 minutes. A computer program is used for the test, which ensures the completeness of the answer. The analysis of individual results is based on comparing the values of the raw scales calculated according to the key attached to the test with the norms of the selected sample, plotting the profile and comparing it with four reference profiles corresponding to a specific type of behavior and experience. The AVEM evaluation program automatically calculates the values of all the scales provided for in the test and compares them to the norms of the sample selected by the user. It generates a table with results and plots the profile of a given person together with reference profiles and the probability of belonging to a specific pattern-type of behavior and experiences.

There are 4 fixed types of work-related behavior and experiences:

Type G - healthy type

Committed, distancing, balanced, prone to offensive problem-solving strategies, he is an example of a positive attitude to work reinforced by the mobilizing influence of emotions.

Type S – savings type

About average professional ambitions, a reduced level of motivation, a clear tendency to distance from work-related problems, satisfied with the results of his work, with a positive attitude to life. He is characterized by a low subjective meaning of work, low professional ambitions, and a lack of perfectionism.

Type A – overburdened risk type

Ascribing to work a very high subjective importance, with low mental resistance and high intensity of negative emotions at the same time

Type B – burnout type

It is characterized by a very low subjective meaning of work, reduced resistance to stress with a simultaneous limited ability to distance oneself, a tendency to quit in difficult situations and extremely low internal balance values (Rongińska & Werner, 2012).

Statistical Analysis

The estimation method and the following statistical methods were used: in order to present the data, the method of descriptive statistics was used—arithmetic mean (M), the value of which determines the average level of a given variable, and standard deviation (SD), a statistical measure of scattering the results around the expected value.

The UPSAmi software, license agreement number: UR / 20150706 / EDU / 2, was used to calculate the AVEM questionnaire and identify the types of work-related behavior.

Additionally, the Shapiro–Wilk test to verify data distribution was used. Continuous variables, mostly non-normally distributed, were reported as a median with interquartile range or as a mean with standard deviation, as appropriate. They were compared by the Mann–Whitney U-test or unpaired t-test, ANOVA or Kruskal–Wallis test, respectively. Categorical variables were given as percentages and compared by χ^2 test. To evaluate the relationship between continuous variables, a Spearman rank correlation test (BMI, age, work experience). A cluster analysis was performed using the k-means clustering method. We obtained three different clusters of satisfactions. Three remaining clusters were compared by the covariance analysis (ANOVA),

Comment [DIM21]: You do not need to define mean and SD

202 Kruskal-Wallis test or χ^2 test, as appropriate. We calculate for binary variable the odds ratio
203 (OR) with 95% confidence interval (CI). To create a model describing effectiveness, we used the
204 discriminant tree method. Results that presented a p-value less than 0.05 were considered
205 statistically significant unless otherwise stated in the text.
206 Statistical significance was set at $p < 0.05$.
207 Statistical analysis was performed with Statistica TIBCO 13.3 and R (version 3.6.1) software.

Comment [DIM22]: How did you calculate OR?

Comment [DIM23]: You also used other software. Specify the analyses you performed with each of the software used

209 Ethics

210 This research project was carried out in accordance with the Helsinki Declaration. The study was
211 approved by the institutional Bioethics Committee at the University of Rzeszów (Resolution No.
212 13/05/2021) and all appropriate administrative bodies.

213 Results

214 Characteristics of the study group

215 A total of 412 teachers participated in the study. The table below presents results for the
216 descriptive statistics for individuals for the selected variables ~~(Table 1)~~.

Comment [DIM24]: Do not present analyses methods in result section. Methods should be written in methods section.

Comment [DIM25]: Table 1

217 Job satisfaction scale

218 The analysis took into account teachers' answers to individual questions contained in the job
219 satisfaction scale (detailed description in the methodology section). Using the clustering analysis
220 (k-means method), three groups of teachers characterized by similar satisfaction were created.
221 The third group consists of teachers with the highest level of job satisfaction in all areas of the
222 scale (for all 5 questions), obtaining statistically significantly higher points than teachers in
223 group 2 and group 1. For all comparisons of group 3 with groups 1 and 2 $p < 0.0001$. Group 2 is
224 the group with average satisfaction for questions 1,3,4,5 statistically significantly higher values
225 (for all $p < 0.0001$) for question 2, there are no significant differences between groups 2 and 1 (p
226 $= 0.08$). Multiple comparison tests with appropriate corrections (Bonferroni correction) were
227 used to compare the groups. Additionally, analyzing which questions statistically significantly
228 influencing the establishment of satisfaction clusters using the analysis of variance, it was
229 obtained that the answers to all of the five questions mentioned had a statistically significant
230 influence on the division ($p < 0.0001$ in each case).

Comment [DIM26]: Here you mostly presented your analyses methods/technique. These should be presented in methods section. Please only write your results in this section.

232 Self-assessment of effectiveness

233 When analyzing the evaluation of teachers' effectiveness, the division of effectiveness into two
234 groups was used (because of only 3 percent of people with efficiency measured in sten < 5),
235 resulting in a binary variable (low sten efficacy < 7 , high sten efficacy ≥ 7).

237 Job satisfaction and self-efficacy assessment

241 Considering the results concerning job satisfaction and self-efficacy assessment of the surveyed
242 teachers, it was shown that job satisfaction had a statistically significant impact on the
243 assessment of self-effectiveness of the surveyed teachers (p-value for χ^2 test <0.0001). In the
244 group of teachers with a high level of job satisfaction, a high self-efficacy assessment is 2.5
245 times more frequent and statistically significant than a low self-effectiveness assessment. In the
246 first and second groups, i.e., among teachers with medium and low job satisfaction, this ratio is
247 also statistically significant, but lower than 1 (i.e., statistically significant, low effectiveness
248 prevails over high. The ratio of high self-efficacy to low ones was obtained by performing the
249 analysis the odds ratio from the Ratio (**Table 2**).

250
251 The types of work-related behavior have a statistically significant impact on the assessment of
252 the teachers' own effectiveness. Carrying out the analysis for the selected types of work-related
253 behavior (p-value for χ^2 test <0.0001), it was shown that in the group of teachers presenting
254 the G behavior type, high self-efficacy scores are 3,272 times more frequent than low self-
255 efficacy scores. In the group of teachers presenting the behavior type B and S, low self-efficacy
256 assessment is more frequent, while in the group of teachers presenting the behavior type A, the
257 odds ratio **Od Ratio** was not statistically significant (**Table 3**).

Comment [DIM27]: Please check interpretation of OR and provide OR with 95% CI in brackets.

Comment [DIM28]: ?

258
259 The level of job satisfaction among the surveyed teachers, measured by the number of points,
260 also statistically significantly differentiates the group of teachers with low self-efficacy scores
261 from teachers with high self-efficacy scores; p for U Mann-Whitney test <0.0001 as a higher
262 efficacy stimulant. By analyzing (χ^2 test) and dividing the level of job satisfaction into 3
263 groups (clusters), other factors influencing the level of job satisfaction among teachers were
264 revealed: age by groups (p <0.0001), seniority work broken down into groups (p = 0.0003),
265 workplace (p = 0.008), position (p = 0.0001) and type of behavior (p <0.0001).
266 Moreover, using the Kruskal-Wallis test, a statistically significant influence of the age of the
267 surveyed teachers (p = 0.01) and seniority in years (0.004) is visible. Analyzes of multiple
268 comparisons with appropriate corrections show that in cluster 2 there are statistically
269 significantly older teachers than in cluster 3 (p = 0.0122), and in cluster 2 there are people with
270 longer work experience than in cluster 3 (p = 0.0049) (**Table 4**).

271 The analysis of the results showed that the type of work-related behavior among the surveyed
272 teachers depends on age by group (p = 0.016), seniority by group (p = 0.016), and position (p
273 <0.0001) (**Table 5**).

274
275 The discriminant tree analysis showed that, considering factors such as sex, age, job satisfaction,
276 types of work-related behavior and work experience, it is possible to assess the teacher's self-
277 efficacy assessment. The tree shows, step by step, how to determine whether a given teacher will
278 achieve low-medium effectiveness - group "a" or high effectiveness - group "b". The long
279 branches of the tree describe which of the effectiveness groups a given teacher belongs to, while

280 the lower leaves contain the effectiveness group, the chance of belonging to a given group and
281 the percentage of people from all those in the given tree branch (**Fig. 1**).

282

283 Fig. 1. Discriminant tree analysis

284

285 Using the Boosting method, the total estimation error = 0.12 was obtained. The importance of
286 factors influencing self-effectiveness is presented in the table below. The higher the value, the
287 more the given factor determining job satisfaction (**Table 6**).

288

289 The mutual dependencies between the satisfaction with teachers' work and the assessment of
290 their own effectiveness and the type of work-related behavior are illustrated by the "heat map".
291 The darker the color of the field, the stronger the impact and the connecting lines show clusters
292 of close answers in one question (**Fig. 2**).

293

294 Fig. 2. Heat map: Interrelationships between teachers' job satisfaction and the assessment of self-
295 efficacy and the type of work-related behavior

296

297 Discussion

298 The aim of the study was to assess the level of occupational burnout, the level of job
299 satisfaction and the self-effectiveness of Polish teachers working during the COVID-19
300 pandemic. The issue of teacher satisfaction with professional work takes a special place both in
301 the field of pedagogical research and in the social dimension. Positive results of the teacher's
302 work and his commitment are related to the feeling of professional satisfaction. In the social
303 dimension, the feelings associated with the work of teachers are of greater importance than in the
304 case of people working in other professions (Buchcic, 2014). Our results showed that the
305 satisfaction with the work of the surveyed teachers was average. Satisfaction with work, also
306 known as job satisfaction, is a subjective state, but there is a common belief that the teacher's
307 work is hard, and stress and fatigue are a common phenomenon, leading to burnout. Although
308 job satisfaction may be a subjective state, but there is a common belief that the teacher's work is
309 hard, and stress and fatigue are a common phenomenon, leading to burnout (Scheuch, Haufe,
310 Seibt, 2015; Mukundan, Ahour, 2011, Yu et al, 2015).

311 Even before the COVID-19 pandemic, teachers' job satisfaction differed from country to
312 country. Zegier et al. conducted a large-scale study using TALIS (Teaching and Learning
313 International Survey) data (The OECD Teaching and Learning International Survey Results,
314 2013). The researchers found that secondary school teachers in England had lower job
315 satisfaction as a teacher compared to the other 17 other countries, including Poland (Zieger L,
316 Sims S, Jerrim J, 2019). On the other hand, the study conducted by Zakarija et al. on teacher' job
317 satisfaction from 38 countries showed that Austria, Chile, Spain, Canada, and Argentina are the
318 countries where teachers have the highest levels of job satisfaction, while the least satisfied with
319 their jobs were teachers in Bulgaria, England, Portugal, Saudi Arabia and Malta. (Zakariya YF,

Comment [DIM29]: ? ditto

320 Bjørkestøl K, Nilsen HK, 2020). The time of the COVID-19 pandemic was a great challenge for
321 many teachers and significantly reduced their job satisfaction (Muhammad et al., 2021; Dicke et
322 al., 2020). The results of our study show how difficult the pandemic was for many teachers. The
323 vast majority of the surveyed teachers (200 people) presented type B of work-related behavior,
324 i.e., burnout, and 133 people presented type A, i.e., the type of personality in which the
325 probability of burnout is very high. Thus, 333 teachers out of 410 participating in the survey did
326 not cope with a difficult situation related to their work. Similar results presented Karbanowicz, in
327 her study, 90% teachers also presented type B, i.e., burnout (Karabanowicz, 2014). Increasing
328 demands and the necessity to cross conventional teaching methods during the national lockdown
329 mean that more and more teachers show symptoms of increasing fatigue due to unfavorable
330 working conditions. This is, of course, an individual situation and depends on the intensity of
331 stressors as well as the subjective sensitivity and mental resilience of a given person, but it shows
332 that many teachers have a problem with coping with the difficulties they experience in their daily
333 work. (Buchner, Majchrzak, Wierzbicka, 2020; Muhammad et al., 2021, Dicke et al., 2020).
334 When analyzing the evaluation of teachers' effectiveness, the division of effectiveness into two
335 groups was used (because of only 3 percent of people with efficiency measured in sten <5),
336 resulting in a binary variable (low sten efficacy <7, high sten efficacy >= 7). In our study, the
337 vast majority (N = 306) showed a high level of self-efficacy, which proves that the surveyed
338 teachers are convinced that their own ability to plan, organize and conduct the teaching process
339 in an effective manner, conducive to achieving the assumed educational goals. The issue of self-
340 efficacy among teachers is the subject of many studies (Skaalvik, Skaalvik, 2007; Tschannen-
341 Moran, Woolfolk, 2001). It has been noticed that teachers with a high sense of self-efficacy
342 introduce modern teaching methods more often than teachers with a low sense of self-efficacy,
343 which significantly improves not only the effectiveness of teaching, but also increases the level
344 of job satisfaction (Dilekli, Tezci, 2016; Barouch, Adesope, Schroeder, 2014).
345 Considering the results concerning job satisfaction and self-efficacy assessment of the surveyed
346 teachers, it was shown that job satisfaction had a statistically significant impact on the
347 assessment of self-effectiveness of the surveyed teachers. Raily et al. points to similar
348 dependencies, that high self-efficacy is an important determinant of job satisfaction among Irish
349 teachers (Reilly, Dhingra, Boduszek, 2014). Considering the COVID-19 pandemic and the new
350 challenges for teachers related to it, their sense of self-efficacy is an important factor determining
351 the entire area of the teacher's work, taking into account the sense of job satisfaction and the risk
352 of developing professional burnout (Pressley, 2021; Hoang et al. 2020; Pressley, 2021). The
353 review of available publications shows that teachers during COVID-19 showed significantly
354 lower self-efficacy. This is confirmed by the results of the American study in this area. The
355 authors indicate that both virtual and hybrid teachers had a lower sense of self-efficacy compared
356 to teachers teaching in direct contact. In addition, researchers indicate that an important factor
357 influencing the sense of effectiveness is the level of qualifications (Pressley, Ha, 2021).
358 Own research showed that age and seniority were factors that significantly influenced the sense
359 of satisfaction with the work of the surveyed teachers. It is consisted with Lisowska study, that

Comment [DIM30]: Your methods can not conclude that low level of these indicators are due to the pandemic. Please be careful when you interpret your findings. You have used a cross-sectional methods. Please check the limitations of cross-sectional design and discuss your findings accordingly. This comments applies to the whole discussion.

Comment [DIM31]: Ditto. Please be consistent in using the terminology. Please check the differences between efficacy and effectiveness

younger teachers and teachers with work experience from 1 to 5 years show a higher level of job satisfaction compared to older people working from 6 to 20 years. (Lisowska, 2017). In turn, in Shrestha's study, teachers of older age groups expressed greater satisfaction with their work than their younger colleagues (Shrestha, 2019). According to Okapara et al, the respondents' gender is also a factor influencing the level of teachers' job satisfaction. Females presented a higher level of job satisfaction with compared to males (Okpara, Squillace, Erundu, 2005). The analysis of the results showed that the type of work-related behavior among the surveyed teachers depends on age, seniority and held position. It is in opposite to Karbanowicz study, where the seniority and held position did not determine the type of work-related behavior among the surveyed teachers (Karabanowicz, 2014). The results of Smetackova study conducted among 2,394 Czech teachers showed negative correlation between burnout and self-efficacy. Teachers who scored high in the self-efficacy reported low burnout symptoms, and vice versa, and as in our study, the risk of burnout was higher among older teachers and with 6 to 20 years of work experience (Smetackova, 2017), it is consist with Skaalvik study (Skaalvik, Skaalvik, 2007).

Limitations and future research

The conducted study highlights important relationships between the level of self-efficacy, coping with workload, professional burnout, and the job satisfaction among the surveyed teachers. Our study has some limitations that should be considered when analyzing the results. The time of the study is a very difficult period of teachers' functioning related to the pandemic and the results should be analyzed in this context. To reassess the level of job satisfaction, sense of effectiveness and burnout level of Polish teachers a repetition of the study after the pandemic period is being considered. The study was conducted in one of the regions of the country and should be repeated on a larger population among other parts of Poland. Being that the study is cross-sectional, the causality and temporality issues should not be considered.

Conclusions

The article is in line of other studies analyzing the functioning teachers during a COVID-19 pandemic. These circumstances influenced teachers' level of effectiveness, job satisfaction and predispose them to the occurrence of burnout syndrome. The obtained results show that there is a close relationship between indicated factors. In general, the specificity of a teacher's work, especially in the difficult period of a pandemic, makes people feel tired and suffer with all its consequences.

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Comment [DIM32]: Good point. You should remember this when you interpret your results in discussion and conclusion.

Comment [DIM33]: Please write your most important findings- level of self-efficacy, job satisfaction and burn out. Association between these variables.

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Table 1. Characteristics of the study group

Independent variables	Categories	N	%	Me (95%CI)	SD	Median (q1-q3)
Sex	Female	270	65.38			
	Male	142	34.38			
Age				41.7(40.89;42.51)	8.36	40(37;47)
Age group	up to 37 years	111	26.88			
	from 38-47 years old	200	48.43			
	over 48 years	102	24.70			
Place of work	Secondary school	298	72.15			
	Primary school	115	27.85			
Work experience				17.02(16.19;17.84)	8.57	17(12;23)
Work experience – age group	Up to 5 years	58	14.04			
	from 5-15 years	103	24.94			
	from 15-24 years	170	41.16			
	over 24 years	82	19.85			
Held position	certified teacher	314	76.03			
	contract teacher	40	9.69			
	trainee teacher	23	5.57			
	appointed teacher	35	8.47			
Class tutor	Yes	118	28.57			
	No	291	70.46			
Self-assessment of effectiveness	low-medium (sten<7)	107	25.91			
	high (sten>=7)	306	74.09			
	effectiveness sten			7.36(7.2;7.52)	1.63	7(6;8)
	effectiveness point			31.93(31.52;32.34)	4.26	31(29;35)
Type of AVEM	Type B	200	48.42615			
	Type G	48	11.62228			
	Type S	32	7.74818			
	Type A	133	32.2033			

Comment [DIM34]: ? write full

Comment [DIM35]: Of mean?

Comment [DIM36]: Why are you presenting SD without mean?

Comment [DIM37]: Why this median is different?

Comment [DIM38]: specify

Comment [DIM39]: specify

			9			
Scale of job satisfaction	satisfaction sum				21.92(21.37;22.46)	5.61
	satisfaction %				62.62(61.07;64.16)	16.02
	Satisfaction after clustering	Group 1	83	20.10		
		Group 2	141	34.14		
		Group 3	189	45.76		

Comment [DIM40]: specify, groups do not mean anything. Tables should be self-explanatory.

Me – median, SD – standard deviation.

Table 3. Type of work-related behavior and self-efficacy assessment.

Types of work-related behavior	<i>p</i>	Od Ratio	95%CI lower	95% CI upper
		High self-efficacy rating/ Low self-efficacy rating		
Type B	0.0128	0.604	0.406	0.898
Type G	0.0036	3.272	1.472	7.273
Type S	0.0003	0.337	0.186	0.612
Type A	0.0888	1.501	0.940	2.396

p - *p*-value, indicate significant values (*p* < 0.05).

Comment [DIM41]: Why these are in bold? These are not statistically significant!