

Satisfaction Of Spanish Primary School Teachers Regarding Anti-Covid Protocols

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Abstract

After the closure of the Spanish Primary Education Centres in March 2020, academic and educational institutions began the 2020-2021 academic year with the obligation to abide by the anti-Coronavirus protocols. Consequently, students of all academic levels, and especially school-age children, have experienced, to a greater or lesser degree, a learning crisis. For this reason, this research was carried out with the objective of analysing the perception of Spanish Primary Education teachers. Cross-sectional descriptive study in a representative sample of Spanish Primary Education teachers (n = 263). The research instrument consisted of a closed questionnaire designed ad hoc with a total of ten questions related to the object of study and other questions related to sociodemographic variables. Cohen's t-test and d statistic were used to determine differences between sexes and the ANOVA test, and all statistical analyses were performed with Stata version 12 (StataCorp., United States) with a p value < .05. 76.4% of those surveyed did not identify the protocols established by the state administration as sufficient and correct, and 84% did not consider the resources provided by the administration of their region sufficient. Spanish teachers are not satisfied or in agreement with the protocols implemented by the governments of each Spanish region.

Keywords Work environment; Educational policy; Primary school teacher; Job satisfaction; Teacher employment conditions.

Introduction

The Type 2 Coronavirus Pandemic that causes severe acute respiratory syndrome (COVID-19, its acronym in English Coronavirus Disease-19) caused the start of

the 2020-2021 school year to be conditioned by health safety regulations (Sánchez et al., 2021). Children appear to be at relatively low risk of developing moderate inflammatory syndrome, less likely to

become infected with COVID-19, and more likely to be asymptomatic (compared to adults) (Gilliam et al., 2021; Wu & McGoogan, 2020). At the same time, because viral loads can be similar in symptomatic and asymptomatic carriers, it has been interpreted that children may act as transmitters that are difficult to identify, especially in settings that serve large numbers of children, such as day care centres and schools (Gilliam et al., 2021; Zou et al., 2020).

This situation, unprecedented in Spain, caused the closure of educational centres in March 2020 as a key intervention strategy to stop the spread of the virus. Consequently, students of all academic levels and, especially school-age children, have experienced, to a greater or lesser degree, a learning crisis (UNICEF, 2020). Consequently, each country has been given the responsibility of devising safe reopening and return-to-school strategies. Given these circumstances, the work of the teacher began to be carried out through distance learning, interfering in the life habits of these professionals, occupying more free time of these individuals to carry out work tasks (de Alencar et al., 2022).

The institutions took as their starting point the "Checklist of support for the reopening of classrooms" of the World Health Organization (2020), which defines the following as fundamental protection measures: (a) hand hygiene; (b) the use of a mask; (c) maintenance of physical distancing; (d) cleaning of materials; (e) environmental ventilation; and (f) immediate isolation of any individual with symptoms. Based on these guidelines, each Autonomous Community (AC) designed its own protocols to provide the necessary education services while avoiding a resurgence of the rate of infection.

The measures implemented in Spain should not only be evaluated in terms of health

efficacy, but also their effect in relation to teacher job satisfaction and well-being should be considered as a secondary measure of their validity. For this reason, this research was carried out with the aim of analysing the perception of Spanish Primary Education teachers on the anti-COVID protocols implemented in each AC. Previously, it was defined as a hypothesis that the perception had been heterogeneous in the different Autonomous Communities.

Methodology

Experimental design and sample

A cross-sectional descriptive study was carried out in a representative sample of Spanish Primary Education teachers. The National Institute of Statistics (2020) census the population of Primary Education teachers in Spain at 47675 people. According to these data, considering a sample heterogeneity of 50%, a margin of error of 5% and a confidence level of 85%, it would be necessary to reach a sample size of 207 individuals.

An email with the protocol and instructions was sent to all practicing Primary Education teachers in Spain through a database of emails from public, subsidized and private educational centres in Spain. From this shipment, the sample of 263 teachers who expressed their desire to participate in the study, voluntarily, was obtained. This sample size implies a response rate of 76% of the total invitations to participate that were made.

It was explained to all the participants that the study respected the principles of the International Code of Ethics in Humanities and Social Sciences of the Centre for Research Ethics and Bioethics and the Data Protection Law 15/1999. In addition, all of them had to sign the informed consent to participate in this research. The research

protocol was approved by the EDUCA Ethics Committee (Code: 62020).

Research instrument and variables analysed

The instrument used was a questionnaire designed ad hoc to collect information on the teachers' perception of the anti-COVID-19 protocols designed by the central government and the Autonomous Communities, for the return to classrooms in Spain. The questionnaire was developed taking into account other works on the subject (Chang & Yano 2020, Feito 2020; Fernández-Bermejo, 2020) and was validated through expert judgment (Lynn, 1986). To do this, we requested the help of four women and three men, specialists in education and health. In this way, we designed a first draft of the questionnaire and sent it to the aforementioned group, sending us their comments and suggestions. With this information we reworked and modified the questionnaire that was sent again, so that they could assess the suitability of the questions of the corrected instrument. Finally, these experts issued their assessment, showing an agreement level of 85%, so we consider that the questionnaire was valid to be applied to the 263 participants, according to the criteria of Polit, Beck and Owen (2007). Reliability was determined by standardizing the survey administration protocol for all participants. The questionnaires were completed online during the month of October 2020.

The questionnaire included nine questions with three response options (yes, no and don't know/no answer):

•Q1: Do you think that when going back to the classroom the recommendations indicated by Health and Education from the central government can be met?

•Q2: Do you have doubts about the protocols marked by Education in your Autonomous Community or region?

•Q3: Do the protocols established by the state administration seem sufficient and accurate to you?

•Q4: Have you had enough information from the regional and/or state administration about the protocols to follow when going back to the classroom?

•Q5: In your opinion and based on the current situation in the country, should we return to face-to-face classes in September?

•Q6: Do you consider it incorrect and hasty to start the course in the month of September?

•Q7: Would you delay the start of the course until the health situation improved?

•Q8: Do you think that the state administration has planned this return to the classroom in advance?

•Q9: Has the administration of your region provided sufficient resources to teachers?

An item was also included that stated "Rate your degree of understanding of the COVID-19 safety protocols for the return to classrooms" whose response options were those included on a continuous scale from 1 to 10.

Finally, the following sociodemographic variables were included: sex; age; years of dedication to teaching and ownership of the workplace (public, concerted or private) and the AC where he develops his professional activity.

Statistic analysis

For the analysis of the results, the sample was divided into four age groups: under 30 years (n = 43), participants between 31 and 40 years (n = 75), participants between 41

and 50 years ($n = 80$) and participants older than 51 years ($n = 65$). In the same way, the sample was divided into four groups according to their experience as a teacher: participants with less than 10 years of teaching work ($n = 95$), between 11 and 20 years ($n = 96$), between 21 and 30 years ($n = 41$) and with more than 31 years of professional experience ($n = 31$).

To characterize the sample, descriptive measures were used (frequencies, percentages, mean and standard deviation). The chi-square test of proportion and Cramer's V statistic were used to verify the equality of proportions of the groups in a large database according to the different groups of age, teaching experience and ownership of the centre.

The t tests and Cohen's d statistic were used to determine the differences between sexes and the ANOVA test and the eta square statistic to analyse the question of the

questionnaire with a continuous response option (from 1 to 10), according to the sample groups defined by group of age, years of teaching experience, ownership of the centre and AC in which they work.

All statistical analyses were performed with Stata version 12 (StataCorp., United States) and statistical significance was always established at a p value $< .05$.

Results

Descriptive and bivariate analysis

The analysed sample consisted of 73.8% women and 26.2% men (Table 1). There were no significant differences between them in their age or in the years of experience as a teacher ($p > .05$). The differentiated analysis of the sample according to sex obtained significant differences in the ownership of the centre where they taught ($X^2 = 14.754$; $p = .001$; $V = .24$).

Table 1 Descriptive statistics of the sample

	Total (n=263)	Women (n=194)	Men (n=69)
Age (mean \pm standard deviation)	42.4 \pm 1.2	42.2 \pm 0.7	42.4 \pm 1.2
Years of teaching dedication (mean \pm standard deviation)	15.8 \pm 1.3	16 \pm 0.8	15.1 \pm 1.3
Ownership of the centre [frequency (percentage)]*:			
Public	218 (82.9)	171 (88.1)	47 (68.1)
Concerted	40 (15.2)	21 (10.8)	19 (27.5)
Private	5 (1.9)	2 (1)	3 (4.4)
Results of the X^2 analysis between sexes: *p = .001.			

The results obtained in the questionnaire used are shown in Table 2. Significant differences were identified according to sex

in the questions: Q3 ($X^2 = 8.696$; $p = .02$; $V = 0.2$) and Q9 ($X^2 = 7.92$; $p = .01$; $V = .17$). The differentiated analysis according to age

groups identified significant differences in items Q4 ($X^2 = 16.273$; $p = .01$; $V = .18$) and Q6 ($X^2 = 16.962$; $p = .009$; $V = .18$). In item Q4, the affirmative responses decreased as the age of the respondents increased (from

39.2% of the youngest to 20% of the oldest group). On the contrary, in item Q6 the proportion of affirmative answers increased from 23 to 28.7%, between the two groups of youngest and oldest, respectively.

Table 2 Questionnaire results [data provided: frequency (percentage)]

	Total (n=263)	Women (n=194)	Men (n=69)
Q1: Do you think that when going back to the classroom the recommendations indicated by Health and Education from the central government can be met?			
No	170 (64.6)	128 (66)	42 (60.9)
Yes	73 (27.8)	50 (25.8)	23 (33.3)
Don't know/No answer	20 (7.6)	16 (8.2)	4 (5.8)
Q2: Do you have doubts about the protocols marked by Education in your Autonomous Community or region?			
No	55 (20.9)	36 (18.6)	19 (27.5)
Yes	200 (76)	151 (77.8)	49 (71)
Don't know/No answer	8 (3.1)	7 (3.6)	1 (1.4)
Q3: Do the protocols established by the state administration seem sufficient and accurate to you?*			
No	201 (76.4)	155 (79.9)	46 (66.7)
Yes	46 (17.5)	26 (13.4)	20 (29)
Don't know/No answer	16 (6.1)	13 (6.7)	3 (4.3)
Q4: Have you had enough information from the regional and/or state administration about the protocols to follow when going back to the classroom?			
No	161 (61.2)	120 (61.9)	41 (59.4)
Yes	87 (33.1)	61 (31.4)	26 (37.7)
Don't know/No answer	15 (5.7)	13 (6.7)	2 (2.9)
Q5: In your opinion and based on the current situation in the country, should we return to face-to-face classes in September?			
No	91 (34.6)	67 (34.5)	24 (34.8)

Yes	150 (57)	108 (55.7)	42 (60.9)
Don't know/No answer	22 (8.4)	19 (9.8)	3 (4.3)
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Q6: Do you consider it incorrect and hasty to start the course in the month of September?			
No	125 (47.5)	90 (46.4)	35 (50.7)
Yes	120 (45.7)	91 (46.9)	29 (42)
Don't know/No answer	18 (6.8)	13 (6.7)	5 (7.3)
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Q7: Would you delay the start of the course until the health situation improved?			
No	147 (55.9)	108 (55.7)	39 (56.5)
Yes	91 (34.6)	66 (34)	25 (36.2)
Don't know/No answer	25 (9.5)	20 (10.3)	5 (7.3)
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Q8: Do you think that the state administration has planned this return to the classroom in advance?			
No	239 (90.9)	178 (91.8)	61 (88.4)
Yes	17 (6.5)	11 (5.7)	6 (8.7)
Don't know/No answer	7 (2.6)	5 (2.5)	2 (2.9)
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Q9: Has the administration of your region provided sufficient resources to teachers?*			
No	221 (84)	170 (87.7)	51 (73.9)
Yes	30 (11.4)	16 (8.2)	14 (20.3)
Don't know/No answer	12 (4.6)	8 (4.1)	4 (5.8)

* Results of the X2 analysis between sexes: *p = .01.

However, the differentiated analysis of the participants according to their experience as a teacher only identified significant differences in item Q6 ($X^2 = 14.215$; $p = .03$; $V = .16$). In this question, a significant increase in affirmative responses was observed as the teaching experience increased (and the consequent reduction of negative responses).

The contrast analysis between subgroups by ownership of the centre did not show statistically significant results in any item.

Analysis of the degree of understanding of the protocols

The degree of understanding of the applied protocols had an average score of $6.8 \pm .2$ for the total sample. In this variable, the differentiated analysis by sex, by age group, by years of teaching experience and by

ownership of the centre did not obtain statistically different results. Analysis by AC. identified that in Euskadi, Asturias and La Rioja the lowest levels of comprehension of the protocols were obtained (Figure 1). Conversely, the teachers from Murcia and Ceuta and Melilla were the ones who reported having better understood these protocols.



Figure 1. Degree of understanding of the protocols applied in each Autonomous Community (average result of a ten-point scale)

The analysis of item P9 according to the AC of the teachers' work showed that the two communities with the highest proportion of affirmative responses were Valencia and the Balearic Islands (Figure 2). On the contrary, the Autonomous Communities in which no teacher reported that the resources provided were sufficient were Andalusia, the Basque Country, Catalonia, Castilla y León, Asturias, Extremadura, La Rioja, Aragón, the Canary Islands, and Ceuta and Melilla.

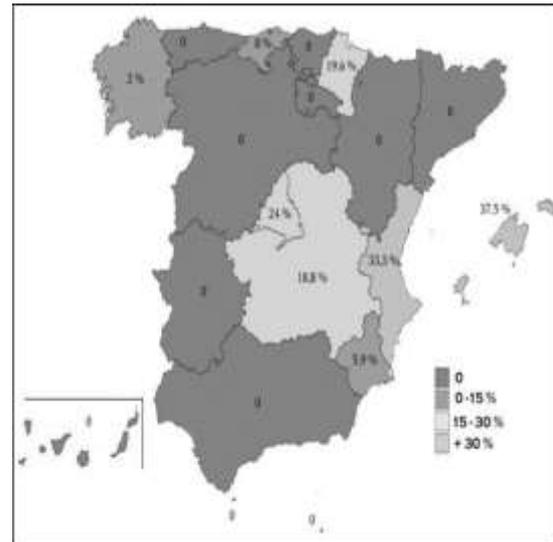


Figure 2. Percentage of teachers who perceived that the resources provided by their Autonomous Community were sufficient

Discussion

The objective of this study was to analyse the perception of Spanish Primary Education teachers regarding the anti-COVID protocols implemented in each AC. After carrying out it, it has been possible to identify that Spanish teachers are not satisfied or in agreement with the implemented protocols.

Teachers stated in 64.6% that they do not believe that the recommendations indicated by health and education from the central government can be met and, additionally, that the protocols are not even correct and sufficient in another 76.4%. That is to say, the teachers do not consider the defined norms applicable in the daily teaching reality. It is possible that the protocols have been defined prioritizing the protection of health but ignoring factors such as the inequality of resources between educational centres in different regions of the same AC (National Academies of Sciences, Engineering, and Medicine, 2020).

In fact, and possibly as a consequence of what was identified in the previous

questions, the teachers state that they have not received sufficient information about the action protocols in 61.2% of the cases and that they do not consider that the return to face-to-face teaching has been planned sufficiently in advance in 90.9%.

However, despite the negative data obtained, most of the participating teachers did believe that the course should start in September (57%) and that the start of the course should not be delayed (55.9%). These findings could be due to the fact that returning to the classroom subject to health protection protocols implies, among other things, following physical distancing (Viner et al., 2021). A measure that requires a high demand on the part of students and teachers for its correct compliance and control. In addition, even if it has been identified that the general perception of the teaching staff is negative, the group may not reject the start of the course due to social responsibility and with the community. In other words, reopening the Primary Education Centres not only facilitates the transmission of knowledge and socialization of children, but also recovers access to meal programs and some medical and social care services. Although childcare does not represent the primary function of Primary Education teachers, the situation experienced during the 2020 lockdown highlighted their role as providers of safe spaces for children while their tutors work (Dibner, Schweingruber & Christakis, 2020).

In the differentiated analysis according to the sexes, in several items of the questionnaire it has been identified that men expressed more positive responses about the post-COVID-19 teaching scenario. Specifically, the imposed protocols seemed to be sufficient and adequate in 15.6% more men and the resources provided by the Autonomous Communities were perceived as sufficient in 12.1% more men than women. This is consistent with previous

findings on the greater perception of work pressure and inequality in the school environment by teachers and the differences in the mechanisms that teachers use to establish teacher-student relationships (Hajovsky, Mason & McCune, 2017; Huang & Fraser, 2009), aspects that are inevitably altered by the current situation.

The differences identified according to the age of the participants can be associated with the intrinsic differences in their teaching experience existing between them. But, the specific finding of differences based on this particular variable (which did not always coincide with the differences according to their teaching experience) may also be due to the differences in the academic training existing between them, given that university teaching and organization have changed profoundly in the last decades. In this way, beliefs and approaches to education can differ profoundly due to this phenomenon (Watson, 2006), so that there can be great differences in how they guide and understand the teaching profession from each other (González-Calvo & Fernández-Balboa, 2018). In another investigation (Sanz Remacha et al., 2022) that analysed the changes caused by COVID-19 in the teaching of Physical Education, the results showed that the teachers of this subject highlighted substantial changes in the programming or in the activities carried out, predominantly those related to the individual and self-constructed use of the material, with a safe distance, without physical contact and outdoors. Also, changes are observed in teaching styles, prioritizing those that are more reproductive or authoritarian.

On the other hand, the resources were not perceived as sufficient in more than half of the Autonomous Communities. It could be that factors such as maintaining social distance at certain times such as recess or the indication to favour environmental ventilation are not suitable or applicable in a

country like Spain. In fact, it has already been identified that most schools only have the manual opening of windows as the only ventilation system, a system that may be insufficient depending on the number of students and classroom size (Alonso, Llanos, Escandón & Sendra, 2021; de Gennaro et al., 2014). Although Spanish regulations have specified, for more than ten years, the need for ventilation to keep CO₂ levels below 500 ppm (compared to the concentration of outside air), which requires a ventilation flow of 0.0125 m³/s per occupant (RITE, 2007).

Taking into account that the threat of contagion from COVID-19 is likely to be present at the beginning of the 2021-2022 school year and that, if it is not, there will continue to be a continuous threat of new pandemics in the future with high morbidity rates (in terms of hospitalization rates) and mortality (in terms of lethality) (Taubenberger & Morens, 2006), health authorities and educational institutions should take into account the data presented here to improve and develop interventions and protocols that are safe as well as pragmatic and applicable to the daily reality of classrooms in Spain. In addition, as a suggestion for improvement, the necessary research should be encouraged to generate objective information that supports the formulation of policies and decision-making based on scientific evidence (Dibner et al., 2020; Walsh et al., 2021).

Conclusions and limitations of the study

In conclusion, the perception of Primary Education teachers about the anti-COVID-19 protocols implemented in Spain is, in general, negative. 64.6% of the participants do not believe that the recommendations indicated by Health and Education from the central government can be met. In addition, 76.4% did not consider the protocols correct or sufficient. These findings worsened the

differential analysis of women and younger age groups.

Consequently, it is necessary that the school health protocols for conducting face-to-face classes are carefully planned following national and international guidelines to guarantee that students are safe or at least mitigate the effects of COVID-19 and, all this, promoting the consensus between teachers, parents and health and educational institutions.

Likewise, this study presents methodological limitations that must be recognized: the collection of information through this questionnaire with closed and limited response options can bias the participants' appraisals. The impossibility of having other instruments, to be able to triangulate the results and thus verify the validity of the opinions expressed, through the different questions. However, this research has strengths such as the opportunity of the moment in which it was carried out, the representativeness of the sample size achieved and the differentiated analysis by AC.

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