

# Psychological Health and Life Satisfaction of Portuguese Teachers

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**Abstract:** Background: In Portugal, teachers have constantly sought better working conditions in order to improve their mental health, which can result in demotivation and personal and professional exhaustion. Methods: A total of 1454 national public school teachers participated in this study, 17.4% (n = 253) male, aged between 22 and 66 years old (M = 51.4, SD = 7.5). The instrument used included questions concerning sociodemographic data (gender, years of teaching experience, age, length of service), a life satisfaction scale, WHO-5/quality of life perception, the physical and psychological symptoms scale-HBSC, depression, stress, and the anxiety scale-DASS-21. It also included questions about the school environment: relationship with the principal, and school atmosphere. Results: Four groups of teachers were created for the statistical analyses: No Life Satisfied/No Symptoms; Life Satisfied/No Symptoms; No Life Satisfied/With Symptoms; and Life Satisfied/With Symptoms. The results revealed that male teachers showed higher percentages for the following groups: No Life Satisfied/No Symptoms ( $\chi^2 = 17.223(3)$ ,  $p \leq 0.001$ , 20.2%), Life Satisfied/No Symptoms ( $\chi^2 = 17.223(3)$ ,  $p \leq 0.001$ , 43.3%) and No Life Satisfied/With Symptoms ( $\chi^2 = 17.223(3)$ ,  $p \leq 0.001$ , 23.9%). Conclusions: The results made it possible to identify a profile of teachers who are more likely to develop mental health problems and psychological distress: those who have lower perceived life satisfaction and more psychological symptoms, which are associated with a low perception of quality of life, a worse relationship with principals and a worse perception of the quality of the school environment; this situation seems to be even worse among female teachers.



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## 1. Introduction

Being a teacher is considered a physically, socially, and emotionally challenging profession. Furthermore, these intrinsic challenges are often increased by external factors, such as politically driven structural changes and pressures. Stress and mental disorders connected to work are also a serious problem, for themselves and for schools and the wider economy [1].

A number of potential stressors have been identified in empirical studies including troublesome students or discipline problems, time pressure and workload, poor student motivation, large student diversity, conflicts with colleagues, lack of administrative support, and value conflict [2]. Regarding the well-being and mental health of teachers, in the report published by Office for Standards in Education (2019), the authors found that the teachers' self-reported well-being at work is usually low or moderate. Aspects such as school culture and relationships with colleagues positively influence teachers' well-being. However, they are counterbalanced by negative factors, such as high workload, lack of work–life balance, a perceived lack of resources and a perceived lack of support from leaders, especially for managing students' behaviour [3].

Kidger et al. (2016) found that well-being is low and depressive symptoms are high amongst teachers. The main causes of poor mental health in the workplace are identified as cultural and relational factors, as well as contractual factors relating to working conditions. The authors mention that the way teachers feel about their working conditions, that is how stressed or dissatisfied they are, may be linked to poor mental health [4].

One of the questions investigated in several studies is if there are differences between the teachers' gender and age in terms of their psychological health. For gender, the results have been mixed, with some showing non-significant associations and others showing that female teachers are more at risk of mental health and well-being problems [5]. Shaheen and Mahmood (2016) found mixed results in their study, the authors observed that female teachers had a higher risk of developing burnout, while male teachers felt less fulfilled [6]. Regarding age, studies are also inconsistent, while some attribute a higher risk of mental health and well-being problems to older and more experienced people, others attribute the same risk to younger and less experienced people [5].

So, there are several variables that can influence teachers' mental health and well-being. Luque-Reca and collaborators (2022), believe that the perception of life satisfaction in teachers can be an important factor in their mental health. According to the authors, the level of life satisfaction experienced by an individual will depend on the result obtained when comparing life conditions (i.e., achievements) with values established by the individual to define a good life (i.e., expectations). Thus, a teacher with high life satisfaction judges the conditions in which their life develops positively [7]. Considering research findings that life satisfaction is lower in teachers compared to the general population [3] it would be interesting to see the relationship between teachers' psychological health and their perception of life satisfaction.

In the study by Matos et al. (2023), the authors used the dual models of Greenspoon, 2001; Keyes, 2002; and Westerhof, 2010 [8–10], to analyse the psychological health of children and adolescents. The four-scenario perspective revealed a view of the worsening of adolescents' psychological health after the pandemic, emphasising gender differences and more specifically highlighting differences in gender and level of education. The dual model [8–10] was designated by Matos et al. (2023) as a four-part model and was adapted for use in population studies and for understanding the psychological health of children and adolescents, understanding its dynamics and the associations that are more or less beneficial or harmful to the lives and well-being of children and adolescents [11]. The model used by Matos et al. (2023) was replicated in this study for teachers.

The aim of this study was to analyse the relationship between teachers' perceived satisfaction with life and psychological symptoms. As in the study by Matos (2023) [11], in this study we will retain the analogy from the tripartite model that life satisfaction and psychological symptoms are not opposed on a continuum. These two dimensions are associated, respectively, with psychological health (also known as subjective well-being) and psychological disturbance (also known as psychological well-being), amounting to the four following psychological states between them: complete psychological health (reduced psychological symptoms and high satisfaction with life), incomplete psychological health (reduced psychological symptoms and low satisfaction with life), incomplete psychological disturbance (marked psychological symptoms and high satisfaction with life) and complete psychological disturbance (marked psychological symptoms and low satisfaction with life). Complete psychological health thus implies both conditions: high satisfaction with life and reduced psychological symptoms of malaise, as suggested in the dual model [8–10].

## 2. Materials and Methods

### 2.1. Participants

This study included 1454 national public school teachers, 17.4% ( $n = 253$ ) male, aged between 22 and 66 ( $M = 51.4$ ,  $SD = 7.5$ ) [12]. Table 1 indicates that some participants did not provide responses to the gender and age questions, resulting in a variance between the total sample size and the total number of responses for each question. (see Table 1).

**Table 1.** Demographic characteristics of the participants.

	N	%
<b>Sample</b>		
<b>Gender</b>		
Male	253	17.5
Female	1189	82.5
Total for this Study	1442	100
<b>Age</b>		
22–47	456	31.4
48–54	441	30.4
55–66	556	38.3
Total for this Study	1453	100
<b>Work Years</b>		
0–22	461	32
23–30	495	34.4
31–47	485	33.4
Total for this Study	1441	100

2.2. Variables and Measures

This study is included in the “Psychological Health and Well-Being Observatory: Monitoring and Action” study [12]. The study was launched in school clusters randomly selected by NUTS III, including students of all educational levels and their respective teachers, through a questionnaire designed and validated by the working group based on instruments already tested in Portugal. Classes were drawn for all levels of education from 27 school clusters. The study included four questionnaires addressed to pre-school and 1st cycle students (answered by teachers); 2nd cycle students; 3rd cycle and secondary level students; and teachers [11,12].

This study used the instrument directed to teachers, which included questions relating to sociodemographic data (gender, school cycle and teaching years, age, time worked), a life satisfaction scale [13], WHO-5/perceived quality of life [14], the physical and psychological symptoms scale–HBSC [15,16], depression, the stress and anxiety scale–DASS-21 [17], questions about the school environment, like relationship with the principal, and the school environment (see Table 2) [18].

**Table 2.** Variables used in the study.

Variables	Answer Options	Answer Option Used	Min.–Max. (for Item)
<b>Gender with which you identify</b>	1-Male; 2-Female; 3-Other; 4-I prefer not to respond;	1-Male; 2-Female;	1–2
<b>Age</b>	Open question	1-22–47 years old; 2-48–54 years old; 3-55–66 years old	1–3
<b>Work Years</b>	Open question	1-0–22 years; 2-23–30 years; 3-31–47 years;	1–3
<b>Life Satisfaction</b>	The following figure represents a ladder. The top of the ladder is “10” and represents the best possible life for you, the bottom of the ladder is “0” and represents the worst possible life for you. Right now, where do you think you are on the ladder?		
	0-Worst possible life. . .10-Best possible life;		0–10

Table 2. Cont.

Variables	Answer Options	Answer Option Used	Min.–Max. (for Item)
<b>Psychological symptoms</b> In the last 6 months, how often have you felt the following...? Sadness	0-Rarely or never; 1-Almost every month; 2-Almost every week; 3-More than once a week; 4-Almost every day;		0–4
Irritation/bad mood			
Nervousness			
<b>WHO-5/perceived quality of life</b> Please indicate for each of the five statements the one that comes closest to how you have been feeling over the last two weeks. <b>5 items</b>	0-Never; 1-Sometimes; 2-Less than half the time; 3-More than half the time; 4-Most of the time; 5-All the time;		0–5
<b>DASS-21</b> For each of the sentences that you will read next, select the option that best indicates the extent to which each of the sentences applies to you DURING THE LAST WEEK. There are no right or wrong answers, respond according to the following scale. <b>Depression</b> <b>Anxiety</b> <b>Stress</b> <b>21 items</b>	0 = Nothing applied to me- 3 = Mostly applied to me of time (ranges: Depression 0 to 21; Anxiety 0 to 21; Stress 0 to 21; Total 0 to 63)		0–3
<b>School board relationship</b> <b>8 items</b>	0 = Completely disagree- 4 = Completely agree (range 0 to 32)		0–4
<b>School environment</b> <b>10 items</b>	0 = Completely disagree- 4 = Completely agree (range 0 to 40)		

2.3. Procedure

This study was carried out as part of the “Psychological Health and Well-Being Observatory: Monitoring and Action” study. Its goal was to assess and monitor the general psychological health and well-being of school-aged children and adolescents (5/6 years to 12th grade) and their educators/teachers as a general indicator of the well-being of the school ecosystem. In addition, the purpose was to develop action and intervention recommendations to promote better psychological health and well-being in educational settings [12]. The was a collaborative effort between the Directorate-General for Education and Science Statistics, the Directorate-General for Education, the National Programme for Promoting School Success, the Social Adventure Team/ISAMB, the University of Lisbon (scientific coordination), the Order of Portuguese Psychologists, and the Calouste Gulbenkian Foundation. This study was carried out at the request of and with the support of the Ministry of Education.

The study started in December 2021 with the design and development of the data collection instruments. After a stratified and random selection of public school groups in continental Portugal by NUTS III (Nomenclature of Territorial Units for Statistics), the school groups were contacted via email in January 2022, and in the event of refusal, replaced in a new draw based on the respective NUTS.

The application protocol took an average of between 20 and 30 min. The teachers’ participation was voluntary. Data confidentiality was ensured, and all ethical, deontological, and scientific requirements were rigorously adhered to, following the Helsinki guidelines

and complying with data protection regulations outlined in the European Union’s General Data Protection Regulation.

The study design and the instrument used received approval from the advisory board of the Social Adventure group at the Institute of Environmental Health (ISAMB), the Directorate-General for Education and Science Statistics (DGEEC), the Directorate-General for Education (DGE), the National Plan for Promoting School Success (PNPSE), the Portuguese Psychologists’ Order (OPP), and the Calouste Gulbenkian Foundation (FCG).

2.4. Data Analysis

The data were analysed using the Statistical Package for Social Sciences (SPSS) version 24 for Windows. Descriptive correlational and comparative analyses were performed (ANOVAS and chi-square) and finally, four logistic regression models were employed.

3. Results

Four groups of teachers were created for the statistical analyses. The groups relating to life satisfaction were created by dividing the variable by the median, creating the group with life satisfaction and the group without life satisfaction. The groups for having or not having psychological symptoms were created by joining three psychological symptoms (sadness, irritation/bad mood, and nervousness) and then cutting the variable by the median, creating the group with symptoms and the group without symptoms. The groups were then combined to create the four groups used in this study: No Life Satisfied/No Symptoms; Life Satisfied/No Symptoms; No Life Satisfied/With Symptoms and Life Satisfied/With Symptoms.

The differences between the four groups and gender, age and work time were analysed using chi-square test (see Table 3).

Table 3. Gender, age and work time differences for life satisfaction/psychological symptoms groups.

		Gender		Male		Female		Total	$\chi^2$	df.		
		N	%	N	%	N	%					
Groups *	No Life Satisfied/No Symptoms	50	20.2	156	13.5	206	17.223 ***	3				
	Life Satisfied/No Symptoms	107	43.3	421	36.3	528						
	No Life Satisfied/with Symptoms	59	23.9	371	32.0	430						
	Life Satisfied/with Symptoms	31	12.6	211	18.2	242						
		Age		22–47		48–54		55–66		Total	$\chi^2$	df.
		N	%	N	%	N	%					
Groups	No Life Satisfied/No Symptoms	66	14.8	67	15.7	74	13.7	207	19.962 **	6		
	Life Satisfied/No Symptoms	175	39.1	151	35.3	207	38.3	533				
	No Life Satisfied/with Symptoms	112	25.1	156	36.4	166	30.7	434				
	Life Satisfied/with Symptoms	94	21.0	54	12.6	94	17.4	242				
		Work Years		0–22		23–30		31–47		Total	$\chi^2$	df.
		N	%	N	%	N	%					
Groups	No Life Satisfied/No Symptoms	68	14.9	78	16.3	61	12.9	207	20.232 **	6		
	Life Satisfied/No Symptoms	178	39.1	183	38.2	167	35.4	528				
	No Life Satisfied/with Symptoms	115	25.3	160	33.4	158	33.5	433				
	Life Satisfied/with Symptoms	94	20.7	58	12.1	86	18.2	238				

\* Groups relating to teacher’s life satisfaction; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .

For the differences between gender and life satisfaction/psychological symptoms groups it was observed that male teachers showed higher percentages for the following

groups: No Life Satisfied/No Symptoms ( $\chi^2 = 17.223(3), p \leq 0.001, 20.2\%$ ), Life Satisfied/No Symptoms ( $\chi^2 = 17.223(3), p \leq 0.001, 43.3\%$ ) and No Life Satisfied/With Symptoms ( $\chi^2 = 17.223(3), p \leq 0.001, 23.9\%$ ), when compared to female teachers. On the other hand, female teachers have a higher percentage in the Life Satisfied/With Symptoms ( $\chi^2 = 17.223(3), p \leq 0.001, 12.6\%$ ). In terms of age differences, it was found that teachers in the 48–54 age group have a higher percentage of No Life Satisfied/With Symptoms ( $\chi^2 = 19.962(6), p \leq 0.01, 36.4\%$ ) while teachers in the 22–47 age group have a higher percentage of Life Satisfied/With Symptoms ( $\chi^2 = 19.962(6), p \leq 0.01, 21.0\%$ ). The differences between age and the other groups were not statistically significant. Finally, the differences between the groups and work time revealed that teachers with working years between 0 and 22 have a higher percentage of Life Satisfied/With Symptoms ( $\chi^2 = 20.232(6), p \leq 0.01, 20.7\%$ ). The differences between work years and the other groups were not statistically significant.

Table 4 shows the differences between the life satisfaction/psychological groups and the following variables: WHO-5; DASS-21/Stress; DASS-21/Depression; DASS-21/Anxiety; School board relationship and School environment. The results indicated that the Life Satisfied/No Symptoms group has a higher average of WHO-5, indicator of higher perceived quality of life, ( $M = 15.9, SD = 3.9$ ),  $F(3, 1412) = 304.798, p < 0.001$ ; School board relationship, indicator of a better relationship with the school principal, ( $M = 24, SD = 6$ ),  $F(3, 1406) = 47.436, p < 0.001$ ; and School environment, indicator of a better school environment, ( $M = 28.9, SD = 7.1$ ),  $F(3, 1406) = 60.145, p < 0.001$ . On the other hand, the No Life Satisfied/With Symptoms group has a higher average of DASS-21/Stress, indicator of more stress symptoms, ( $M = 8.5, SD = 3.9$ ),  $F(3, 1413) = 233.156, p < 0.001$ ; DASS-21/Depression, indicator of more depression symptoms, ( $M = 6.3, SD = 4.1$ ),  $F(3, 1413) = 240.929, p < 0.001$ ; and DASS-21/Anxiety, indicator of more anxiety symptoms, ( $M = 5.3, SD = 4.1$ ),  $F(3, 1412) = 155.684, p < 0.001$ .

**Table 4.** Differences between life satisfaction/psychological symptoms groups.

Groups	No Life Satisfied/No Symptoms			Life Satisfied/No Symptoms			No Life Satisfied/with Symptoms			Life Satisfied/with Symptoms			F	p
	N	M	SD	N	M	SD	N	M	SD	N	M	SD		
WHO-5	207	12.0	4.4	534	15.9	3.9	434	8.2	3.7	241	12.5	4.0	304.798	0.000
DASS-21/Stress	207	4.6	3.4	534	3.0	2.6	434	8.5	3.9	242	6.6	3.4	233.156	0.000
DASS-21/Depression	207	2.9	3.2	534	1.1	1.6	434	6.3	4.1	242	3.4	3.0	240.929	0.000
DASS-21/Anxiety	207	2.4	2.8	534	1.1	1.6	433	5.3	4.1	242	3.6	3.2	155.684	0.000
School board relationship	204	21.4	5.7	533	24	6.0	432	19.3	6.5	241	22.2	6.1	47.436	0.000
School environment	205	25.7	6.5	531	28.9	7.1	433	22.8	7.7	241	27.4	6.9	60.145	0.000

In order to understand which variables were most associated with the life satisfaction/psychological groups, four logistic regression models were carried out, one for each of the groups. Variables that were statistically significant at a bivariate level (chi-square and ANOVA) were included in the models.

For the No Life Satisfied/No Symptoms group, a poorly adjusted model was obtained (Hosmer and Lemeshow  $\chi^2 = 19.296(8), p = 0.013$ ) and the regression equation explained 6% of the variance (Nagelkerke  $R^2 = 0.06$ ). In this model the explanation of the No Life Satisfied/No Symptoms group was made by the following variables: gender (male) ( $\beta = -0.454, p = 0.017$ ), work years (less years) ( $\beta = -0.038, p = 0.016$ ), WHO-5 (less perceived quality of life) ( $\beta = -0.090, p = 0.000$ ), and DASS-21/Stress (less symptoms) ( $\beta = -0.132, p = 0.000$ ) (see Table 5).

**Table 5.** Logistic regression predictor—No Life Satisfied/No Symptoms.

	$\beta$	E.P	Sig	OR	95% IC than	95% IC to
Gender	−0.454	0.190	<b>0.017</b>	0.635	0.438	0.922
Age	0.033	0.020	0.109	1.033	0.993	1.075
<b>Work Years</b>	−0.038	0.016	<b>0.016</b>	0.962	0.933	0.993
<b>WHO-5</b>	−0.090	0.020	<b>0.000</b>	0.914	0.879	0.951
<b>DASS-21/Stress</b>	−0.132	0.036	<b>0.000</b>	0.876	0.816	0.941
DASS-21/Depression	−0.010	0.039	0.802	0.990	0.918	1.068
DASS-21/Anxiety	−0.018	0.041	0.655	0.982	0.907	1.063
School board relationship	−0.005	0.023	0.830	0.995	0.952	1.040
School environment	−0.017	0.019	0.383	0.983	0.947	1.021
<b>Constant</b>	0.301	0.887	0.734	1.351		

$R^2_N = 0.067$   
 $\chi^2_{HL} p = 19.296$

For the Life Satisfied/No Symptoms, an adjusted model was obtained (Hosmer and Lemeshow  $\chi^2 = 6.934(8)$ ,  $p = 0.544$ ) and the regression equation explained 51% of the variance (Nagelkerke  $R^2 = 0.509$ ). In this model the explanation of the Life Satisfied/No Symptoms group was made by the following variables: WHO-5 (higher perceived quality of life) ( $\beta = 0.174$ ,  $p = 0.000$ ), DASS-21/Stress (less symptoms) ( $\beta = -0.097$ ,  $p = 0.004$ ), DASS-21/Depression (less symptoms) ( $\beta = -0.245$ ,  $p = 0.000$ ) and DASS-21/Anxiety (less symptoms) ( $\beta = -0.124$ ,  $p = 0.005$ ) (see Table 6).

**Table 6.** Logistic regression predictor—Life Satisfied/No Symptoms.

	$\beta$	E.P	Sig	OR	95% IC than	95% IC to
Gender	0.328	0.188	0.081	1.388	0.961	2.005
Age	−0.015	0.020	0.456	0.985	0.947	1.025
Work Years	0.027	0.016	0.088	1.028	0.996	1.060
<b>WHO-5</b>	0.174	0.020	<b>0.000</b>	1.190	1.143	1.238
<b>DASS-21/Stress</b>	−0.097	0.034	<b>0.004</b>	0.908	0.850	0.969
<b>DASS-21/Depression</b>	−0.245	0.048	<b>0.000</b>	0.783	0.712	0.860
<b>DASS-21/Anxiety</b>	−0.124	0.044	<b>0.005</b>	0.883	0.810	0.964
School board relationship	0.034	0.021	0.103	1.035	0.993	1.078
School environment	0.016	0.018	0.376	1.016	0.981	1.052
<b>Constant</b>	−2.913	0.877	0.011	0.054		

$R^2_N = 0.509$   
 $\chi^2_{HL} p = 6.934$

For the No Life Satisfied/With Symptoms, an adjusted model was obtained (Hosmer and Lemeshow  $\chi^2 = 11.280(8)$ ,  $p = 0.186$ ) and the regression equation explained 49% of the variance (Nagelkerke  $R^2 = 0.49$ ). In this model the explanation of the No Life Satisfied/With Symptoms group was made by the following variables: WHO-5 (less perceived quality of life) ( $\beta = -0.207$ ,  $p = 0.000$ ), DASS-21/Stress (higher symptoms) ( $\beta = 0.103$ ,  $p = 0.001$ ), DASS-21/Depression (higher symptoms) ( $\beta = 0.122$ ,  $p = 0.000$ ) and School environment (worst environment) ( $\beta = -0.061$ ,  $p = 0.002$ ) (see Table 7).

**Table 7.** Logistic regression predictor—No Life Satisfied/With Symptoms.

	$\beta$	E.P	Sig	OR	95% IC than	95% IC to
Gender	−0.084	0.217	0.701	0.920	0.601	1.408
Age	0.005	0.021	0.808	1.005	0.965	1.047
Work Years	−0.003	0.017	0.862	0.997	0.964	1.031
<b>WHO-5</b>	−0.207	0.021	<b>0.000</b>	0.813	0.780	0.847
<b>DASS-21/Stress</b>	0.103	0.032	<b>0.001</b>	1.108	1.041	1.180
<b>DASS-21/Depression</b>	0.122	0.034	<b>0.000</b>	1.129	1.057	1.207
DASS-21/ Anxiety	0.024	0.033	0.457	1.025	0.961	1.049
School board relationship	0.004	0.022	0.850	1.004	0.962	1.049
<b>School environment</b>	−0.061	0.019	<b>0.002</b>	0.941	0.906	0.977
<b>Constant</b>	1.671	0.891	0.061	5.315		

$R^2_N = 0.494$   
 $\chi^2_{HL} p = 11.280$

For the Life Satisfied/With Symptoms group, a poorly adjusted model was obtained (Hosmer and Lemeshow  $\chi^2 = 16.917(8)$ ,  $p = 0.031$ ) and the regression equation explained 6% of the variance (Nagelkerke  $R^2 = 0.06$ ). In this model the explanation of the Life Satisfied/With Symptoms group was made by the following variables: WHO-5 (higher perceived quality of life) ( $\beta = 0.046$ ,  $p = 0.023$ ), DASS-21/Stress (higher symptoms) ( $\beta = 0.169$ ,  $p = 0.000$ ), DASS-21/Depression (less symptoms) ( $\beta = -0.088$ ,  $p = 0.013$ ) and School environment (better environment) ( $\beta = 0.046$ ,  $p = 0.010$ ) (see Table 8).

**Table 8.** Logistic regression predictor—Life Satisfied/With Symptoms.

	$\beta$	E.P	Sig	OR	95% IC than	95% IC to
Gender	0.290	0.215	0.176	1.336	0.878	2.035
Age	−0.021	0.021	0.297	0.979	0.940	1.019
Work Years	0.012	0.017	0.458	1.013	0.980	1.046
<b>WHO-5</b>	0.046	0.020	<b>0.023</b>	1.047	1.006	1.089
<b>DASS-21/Stress</b>	0.169	0.032	<b>0.000</b>	1.184	1.112	1.260
<b>DASS-21/Depression</b>	−0.088	0.036	<b>0.013</b>	0.915	0.854	0.982
DASS-21/ Anxiety	0.008	0.034	0.801	1.008	0.944	1.077
School board relationship	−0.033	0.021	0.114	0.968	0.929	1.008
<b>School environment</b>	0.046	0.018	<b>0.010</b>	1.047	1.011	1.084
<b>Constant</b>	−2.859	0.885	0.001	0.057		

$R^2_N = 0.063$   
 $\chi^2_{HL} p = 16.917$

#### 4. Discussion

Working as a teacher has been considered a profession at risk of various problems, especially those associated with mental health. In Portugal, teachers have constantly sought better working conditions in order to improve their mental health, which can result in demotivation and personal and professional exhaustion. Identifying a profile associated with risk and well-being could be a way of developing interventions in the school context to help them promote their mental health. The aim of this study was to analyse the impact of perceived life satisfaction and psychological symptoms on mental health indicators among teachers.

The results showed that female teachers are more often in the group considered to be at risk (No Life Satisfied/With Symptoms). In the same group are teachers aged between 48 and 54. In terms of age, it is not the teachers in the oldest group who are identified as being at risk, but those in the middle age group. This could mean that demotivation and exhaustion can arise when they are in the middle of their career. These results suggest that teachers may experience higher levels of motivation when they are

younger and just starting their careers, with this motivation gradually decreasing over the years. Demotivation appears to peak between the ages of 48 and 54. Perhaps approaching retirement age (between 55 and 66) will restore some motivation and well-being to teachers, who will again have a better perception of life satisfaction and fewer symptoms, but not enough to return to the level of younger teachers.

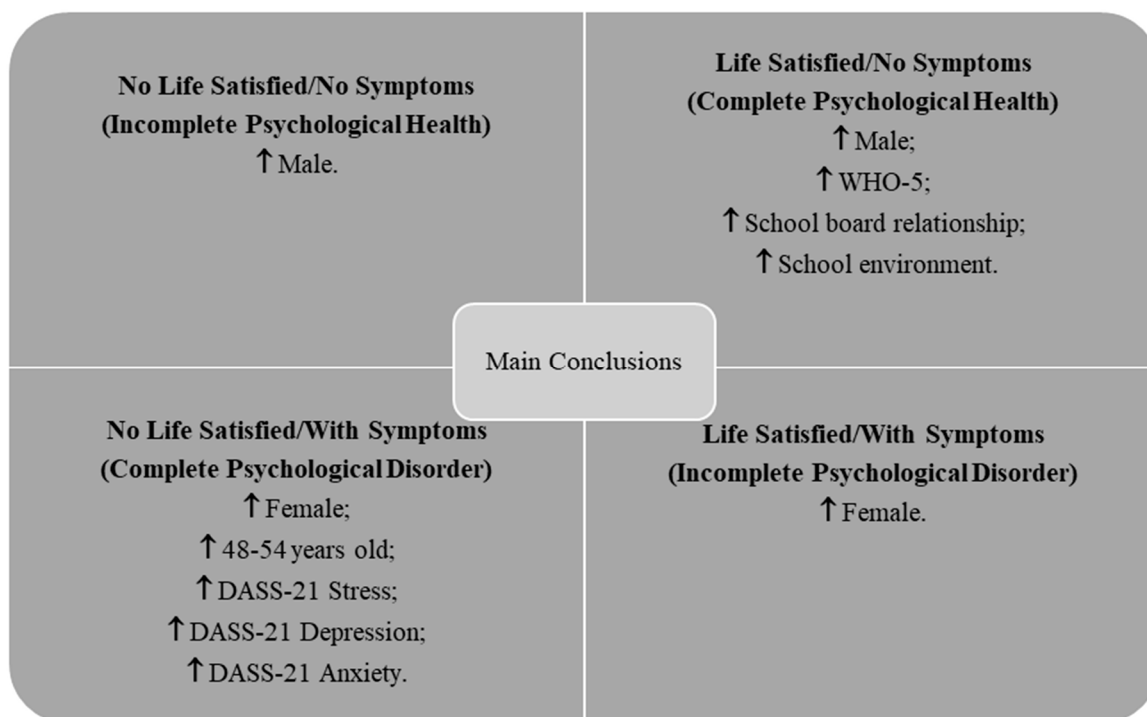
Studies carried out to analyse the differences between age and gender among teachers show mixed results, and are especially inconsistent for age [5], while for gender it is female teachers who are most often identified as being at greater risk of mental health problems [6], indicating the need for early intervention with programmes aimed at these teachers.

The results also show that the Life Satisfied/No Symptoms group appears to be the group with the lowest risk of developing mental health problems, with the best perception of quality of life (WHO-5), the best relationship with the principal and the best perception of the school environment, while the No Life Satisfied/With Symptoms group has the most symptoms of stress (DASS-21 Stress), depression (DASS-21 depression) and anxiety (DASS-21 anxiety). There are several studies that identify teachers as a population at risk of mental health problems, and the associated variables are also diverse, such as the school environment, relationships with colleagues and superiors, overwork or working conditions [1,3,4]. These results reinforce the idea that teachers have an increased risk of developing mental health problems, especially those who are dissatisfied with their lives, which is naturally reflected in their workplace and well-being [3,7]. There is also an important role for the positive school environment and the relationship with the principal in the perception of life satisfaction and the positive impact on psychological symptoms and mental health. However, the results regarding the relationship with the principal were not significant in this study's findings [7].

The logistic regression models carried out reinforced these data. In the two adjusted models, the group with no risk (Life Satisfied/No Symptoms) and the group with the highest risk for mental health problems (No Life Satisfied/With Symptoms) reflect an association with the variables that have the greatest impact on life satisfaction and psychological symptoms among teachers. Thus, for the group with greater life satisfaction and no psychological symptoms, the variables with the greatest impact are better perception of quality of life, fewer symptoms of stress, depression, and anxiety. For teachers in the risk group, with less life satisfaction and more psychological symptoms, there is a greater impact of more symptoms of stress and depression, lower perception of quality of life and lower perception of a positive school environment. The regression models once again reveal the profile of teachers who are more likely to develop mental health problems, those who have lower perceived life satisfaction and more psychological symptoms, with the perception of quality of life, the relationship they have with principals, the school environment and symptoms of psychological malaise contributing to this, which may be even worse in female teachers and teachers aged between 48 and 54.

By defining a risk profile of teachers who are more likely to develop mental health and psychological malaise, it is possible to develop and work on strategies to prevent demotivation and deterioration in their mental health and well-being. This study shows that these interventions need to take into account the promotion of positive interpersonal relationships in the workplace, self-care strategies, the prevention of overwork, and the creation of environments in schools where teachers can promote their mental health, resorting to professionals and adequate spaces to work on your well-being.

This four-part model allows us to look in more depth at the evolution of life satisfaction and the perception of psychological symptoms of malaise in teachers, allowing us to look at gender and age differences. This four-scenario perspective gives a relevant insight into the problem of teachers' psychological health and its relationship with variables such as the relationship with their work environment and working conditions and their psychological health (see Figure 1).



**Figure 1.** Main results of the four-part model adopted from the dual model [8–11]; (arrow indicates the highest values).

**5. Conclusions**

Teachers are often identified as a population at risk for psychological health problems, with female teachers being particularly susceptible to malaise symptoms. The work environment and interpersonal relationships within schools play a significant role in influencing teachers’ psychological well-being. Recognising this, there is a pressing need to prioritise the promotion of self-care strategies among teachers and within national school systems. By fostering a supportive environment and encouraging self-care practices, we can strive to enhance the overall psychological health and resilience of educators.

Identifying a risk profile makes it possible to develop strategies that meet teachers’ needs. It is necessary to promote strategies that enable teachers to deal with the various demands of the profession, promote self-care and well-being, as well as the well-being of the entire school community. This includes involving them in political and structural decisions at school, involving pupils and parents in these decisions, promoting training for teachers, parents, and non-teaching staff in the area of psychological health and well-being, and promoting initiatives that develop the socio-emotional competencies of the entire educational community. These actions are urgently needed if teachers are to develop effective strategies to deal with the demands and new challenges brought to the school and to promote their well-being.

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**Informed Consent Statement:** Previous authorization of the students' parents/caregivers, and the acceptance of the informed consent information included in the online data collection instruments was required. The study was approved by the Portuguese Ministry of Education and the above referred Ethics Committee and was performed in accordance with the ethical standards of the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

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