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Teacher satisfaction with school and psychological well-being affects their readiness to help children with mental health problems

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Abstract

Objective: In support of a whole-school approach to mental health promotion, this study was conducted to find out whether and how significantly teachers' satisfaction with school and their subjective psychological well-being are related to the belief that they can help pupils with mental health problems.

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Design: Cross-sectional data were collected as a part of the European Union's, Seventh Framework Programme for Research (FP7) Saving and Empowering Young Lives in Europe (SEYLE) study. One of the elements of the SEYLE study was to evaluate teachers' attitudes and knowledge related to pupils' mental health issues and their own psychological well-being, as well as their satisfaction with the school environment.
Setting: The sample of schools from the SEYLE study sites representing 11 European countries was randomly chosen according to prior defined inclusion and exclusion criteria. The final cross-sectional database used for analysis in the current study comprised 2485 teachers from 158 randomly selected schools.
Method: Respondents' belief that teachers can help pupils with mental health problems served as the outcome variable in our predictions with probability of the positive answer being modelled in the logistic regression analysis. Teachers' subjective psychological well-being and school satisfaction were included as independent variables in the logistic regression model and several other relevant variables were added to statistically control for them. Multiple models were tested in order to obtain the final model.
Results: Logistic regression models showed that better satisfaction with general school climate, higher psychological well-being, and the ability to understand pupils' mental health problems increased the odds of teachers' readiness to help pupils with mental health problems.
Conclusion: By providing a good school environment, by valuing the subjective psychological well-being of the teachers, and by providing adequate training to fulfil their 'gatekeeper' role, the preconditions to improve the mental health of the pupils they teach will be achieved. These suggestions are in line with a whole-school approach to mental health promotion.

Introduction

Childhood and adolescence are critical times for developing good mental health. Lifetime psychiatric disorders usually have their first onset at a young age – half of them by 14 years and three-quarters by 24 years.[1, 2] Evidence suggests that at least one in every four to five young people in the general population suffer from at least one psychiatric disorder in any given year.[3] A review of epidemiological studies indicated that the prevalence estimates of childhood psychopathology ranged from approximately 1% to nearly 51% (mean = 15.8%),[4] and there is evidence that psychiatric disorders among young people are increasing internationally.[5, 6] Hence it is essential to deal with the problems concerning mental health at an early stage of onset and to consider young people as an important target group for prevention and early treatment of mental health disorders. Although the family environment is important for children and adolescents, an appropriate setting for different interventions is the school, where children spend a large proportion of their time.

According to Kessler et al.,[1] about half of the population may experience at least one lifetime diagnosable psychiatric disorder, which makes it highly probable that every person has a close contact with somebody who is suffering from a milder or more severe form of mental health problem. This is especially true for various non-medical professionals as well, including teachers at schools, who may be considered as community facilitators or 'gatekeepers' to mental health services. As professionals who as part of their job have regular and frequent interactions with a wide range of young people, teachers may be in a unique position to recognize the first signs of mental health problems as well as to provide first line support and referral to mental health specialists.[7–10]

Pupils' mental health problems add to teachers' classroom burden and due to a lack of time and many students per teacher there is a danger that they will be addressed only when seen as a direct barrier to effective teaching.[8, 9] However, a comprehensive, multi-layered and whole-school approach is valuable in helping young people with emotional and behavioural problems, including partnerships with outside agencies and the neighbourhood environment. Whole-school approaches shift the focus from the treatment of ill-health and the promotion of mental health to the establishment of a school climate conducive to the positive development of all people studying and working there, and to joint responsibility for everyone's well-being.[8, 11–16]

One of the key elements of whole-school approaches to mental health promotion is the early detection of pupils at risk, a task in which teachers can play an important role.[7, 17–19] Professionals with non-medical backgrounds such as teachers can learn to recognize mental health problems and manage such cases using relevant knowledge, attitudes and skills.[7–9,15, 20–26] Research has shown that teachers acknowledge their role as potential helpers, but they lack confidence and would like to know more about pupils' mental health.[9]

Teachers' psychological well-being and satisfaction with their daily working environment are associated with their actual behaviour. It has been found that a poor psychosocial climate in a classroom and the misconduct of pupils can have negative effects both on teachers' and pupils' general well-being and mental health status as well as on work-related or academic achievement.[9, 27–31] Kidger et al.[8] have expressed concern that if teachers' own mental health needs are neglected, they may be unable or unwilling to consider mental health problems of the young people they teach: 'When teachers' emotional health is in jeopardy, it reduces their ability to support and respond to pupils appropriately, which creates further difficulties within the classroom and more emotional distress for pupils and teachers alike'.[8, p. 929]

The Saving and Empowering Young Lives in Europe (SEYLE) project has been conducted with the purpose of drawing attention to developing mental health problems among youth and was designed to evaluate a variety of school-based interventions.[32] One of the elements of the project was to evaluate teachers' attitudes and knowledge related to pupils' mental health issues and their own psychological well-being as well as their satisfaction with the school environment. The aim of the current study was to find out whether and how significantly teachers' school satisfaction and their subjective psychological well-being are related to their belief that they can help pupils with mental health problems.

Methodology and methods

Data

The data used in the current study were collected as a part of the SEYLE project, which was funded by the European Commission under the Seventh Framework Programme. The project aimed to test the effectiveness of school-based interventions in reducing suicidal and risk behaviours and promoting healthier ones, as well as in improving mental health in European adolescents. The detailed protocol for the SEYLE (registered in the United States [US] National Institute of Health [NIH] clinical trial registry [NCT00906620], and in the German Clinical Trials Register [DRKS00000214]) has been published elsewhere.[32] Ethics approval was obtained from the local ethical committees in each participating country.

The sample of schools from study sites representing 11 countries (Austria, Estonia, France, Germany, Hungary, Ireland, Israel, Italy, Romania, Slovenia, Spain, and with the National Centre for Suicide Research and Prevention of Mental Ill-Health [NASP] in Sweden as the coordinating

site) was randomly selected according to prior defined inclusion and exclusion criteria.[32] To evaluate the representativeness of study sites, key parameters such as mean age, number of immigrants, population density, net income and gender proportion for each site were compared to the corresponding national data. Data at national and local levels were extracted from Eurostat (http://epp.eurostat.ec.europa.eu). According to previous published results the SEYLE study sites are representative of their respective country.[33]

The total study sample consisted of 2537 teachers from 159 randomly selected schools who answered the baseline questionnaire. The questionnaires were administered in the official language(s) of the specific country and the full questionnaire took approximately 15–30 minutes to complete. The questionnaire administering procedures varied by countries and schools depending on the local agreements reached with school administrations. The questionnaires were anonymous and confidentiality was assured for all respondents.

With the variables considered in the later statistical analysis, almost 23% of observations had some missing values. Hot Deck imputation was applied to the variables included in the analysis to avoid losing valuable data and statistical power.[34] After imputation, the percentage of missing data was brought down to 2%. Country, school of the teacher and age groups (grouped by 10-year intervals with teachers aged <30 grouped together) were used to form decks. If a deck containing the missing value had no other observations in that deck (or all others had missing values) the values were not imputed.

After discarding the observations that still had missing data, the final cross-sectional database used for analysis consisted of 2485 individuals (30% men and 70% women; mean age 43.7±10.6) from 158 schools.

Measures

Psychological well-being was assessed using the World Health Organization (WHO) Well-being Scale (WHO-5), which has been routinely used as a measure of subjective psychological well-being.[35, 36] Respondents were given five statements and were asked to indicate how they had been feeling over the past two weeks using a six-point Likert scale (from 0 'At no time' to 5 'All of the time'). These five statements are: 'I have felt cheerful and in good spirits', 'I have felt calm and relaxed', 'I have felt active and vigorous', 'I woke up feeling fresh and rested' and 'My daily life has been filled with things that interest me'. Responses were summed, so that the final total score ranged from 0 ('the worst thinkable well-being') to 25 ('the best thinkable well-being'). The internal reliability was high (Cronbach's alpha = 0.84). The high internal and external validity of the WHO-5 scale has been confirmed in several papers.[37–39]

Assessment of school satisfaction was based on various subjective evaluations of teachers' working environment characteristics. The questions used for assessing overall satisfaction with school climate are presented in Table 1. The school satisfaction questions were answered on six-point Likert scales (from 1 'Not at all' to 6 'Very much'). For the purposes of analysis the values were re-coded from 0 to 5 respectively. Fourteen variables were summed to form a school satisfaction index ranging from 0 ('the lowest thinkable satisfaction') to 70 ('the highest thinkable satisfaction'). The internal reliability was high (Cronbach's alpha = 0.89).

Respondents' belief that teachers can help pupils with mental health problems was assessed with the question 'Do you think that teachers can help children who have problems with their feelings and behaviour?'. Possible answers were: 1 = 'Yes', 2 = 'No' and 3 = 'Don't know/No opinion'. A binary variable was computed with 'No' and 'No opinion/Don't know' opposing the positive answer. This new variable served as the outcome for our predictions (dependent

Table 1. Questions used to assess teachers' overall satisfaction with school climate.

1.	Do you enjoy your school?
2.	Are conflicts between staff members well managed in your school?
3.	Are conflicts between pupils well managed in your school?
4.	Do you feel your work is meaningful?
5.	Do you feel you can take part in the school's development?
6.	Can you influence your work situation in any way?
7.	Are you happy with the school's ambitions with regard to pupils' mental health?
8.	Do you use resources in your work?
9.	Do you get support in your work from other teachers?
10.	Do you get support in your work from leaders?
11.	Do you feel important as a person at the school?
12.	Is the co-operation between teachers and pupil health personnel effective?
13.	Is the co-operation with pupils effective?
14.	Is the co-operation with parents effective?

variable), with probability of the positive answer being modelled in the later logistic regression analysis.

When the effects of country, gender, and work experience were held constant, we added the following control variables assessing teachers' ability to understand pupils' mental health problems:

A. 'Do you think teachers usually know when their pupils are feeling very sad, or worrying a lot, or having trouble getting along with other children?' (1 = 'Yes', 2 = 'No', 3 = 'Don't know/No opinion');

B. 'Do you think you know enough about "child mental health"?' (1 = 'Yes', 2 = 'No', 3 = 'Don't know/No opinion');

C. 'Do you want to know more about "child mental health"?' (1 = 'Yes', 2 = 'No', 3 = 'Don't know/No opinion');

D. 'Do you currently have any pupils with a "mental health problem"?' (1 = 'Yes', 2 = 'No', 3 = 'Don't know/No opinion').

All the questions enumerated above were taken as categorical variables with 'Yes' set as a base level in the later logistic regression analysis.

Statistical analysis

Descriptive statistics (means, standard deviations, frequencies) for the variables included in later logistic regression analysis were calculated for our sample. Respondents' belief that teachers can help pupils with mental health problems served as the outcome of our model (dependent variable). Since the variable under study was binary, logistic regression was used to estimate the influence of psychological well-being and school satisfaction, while controlling statistically for other possible factors that might influence teachers' belief that they can help children with mental health problems.

Multiple models were tested in order to obtain the final model and comparisons were made between them. Model's likelihood function value (−2 Log likelihood) was used for model comparison where lower values indicate a better model. Each model's fit was assessed by the Hosmer-Lemeshow test; since this is a lack-of-fit test, low Chi-square statistic values and *p*-values higher

Table 2. Descriptive statistics of variables included in the logistic regression models: outcome (dependent) variable expressing the belief that teachers can help pupils with mental health problems and control variables that might influence this belief (*n* = 2485).

	Yes	No	Don't know/no opinion
Outcome (dependent) variable			
Teachers can help children who have problems with their feelings and behaviour	67%	22%	11%
Control variables			
Teachers usually know when children have emotional problems (A)	46%	47%	7%
Know enough about children's mental health (B)	11%	82%	7%
Want to know more about children's mental health (C)	86%	7%	7%
Currently have some pupils with a mental health problem (D)	52%	21%	27%
Gender			
Male	30%		
Female	70%		

	Mean	SD	Range
Work experience in years	17.9	10.7	0–54
Psychological well-being (WHO-5)	16.8	4.1	0–25
School satisfaction index	46.5	10.3	7–70

than 0.05 are desired. Model descriptives such as the correctly classified observations rate (a.k.a. concordance index – c) were calculated and in addition binned plots of residuals were assessed, but are not presented in the current paper.

Statistics software Statistical Package for the Social Sciences (SPSS) version 19 was mainly used for the analysis and R 2.9.2 (package: arm) was used to obtain the binned plots of residuals from the regression analysis.

Results

The results are presented in two parts. First, we present descriptive statistics of the variables included in later logistic regression analysis: teachers' belief that they can help children with mental health problems, teachers' school satisfaction, psychological well-being, work experience and other control variables (Table 2). Second, we report on regression analysis of the teachers' school satisfaction, well-being and their ability to understand pupils' mental health problems using their belief that teachers can help children with mental health problems as the dependent variable (Tables 3 and 4).

Descriptive statistics

Across the participating European countries, respondents thought that teachers can help children who have problems with their feelings and behaviour in 67% of the cases, while the remaining 33%

disagreed or were uncertain about such an intervention. Descriptive statistics for control variables indicating teachers' ability to understand pupils' mental health problems showed that almost half of the teachers thought that teachers usually know when children have emotional problems (46%) and claimed that they currently have some pupils with a mental health problem (52%). Teachers do not feel confident on mental health issues: only 11% of teachers thought they have enough knowledge about children's mental health and 86% wanted to know more (Table 2).

The respondents were mostly female (70%) and their mean work experience in years as a teacher was 17.9±10.7. The mean subjective psychological well-being (WHO-5) score in the total sample was 16.8±4.1. On average, across participating European countries 13% of the respondents did not reach the critical value of 13 for the WHO-5 score (results not presented in the tables). The mean school satisfaction score in the total sample was 46.8±10.3 (Table 2).

Logistic regression analysis

Since multicollinearity among the predictors can lead to biased estimates and inflated standard errors (the Pearson correlation coefficient between well-being and school satisfaction scores was 0.41), it was not sensible to include well-being and school satisfaction in the same final model. Although there is always an option to construct two models instead of one, we found that final models are very similar whether they were modelled with the teachers' well-being scale or the school satisfaction index.

We decided to use the variable which had greater influence on the odds of teachers' belief that they can help pupils with mental health problems. Since those variables have different scales, we standardized them in a way that new means were 0 and standard deviations 1. Then each variable was regressed to the binary variable of interest. Those models showed that the standardized school satisfaction coefficient was $\beta = 0.411$ ($p < 0.001$) and teachers' well-being coefficient was $\beta = 0.244$ ($p < 0.001$; Table 3). This indicates that school satisfaction influence on odds is greater, which makes this model more attractive.

Table 3. Logistic regression models with standardized subjective psychological well-being scale (WHO-5) and standardized school satisfaction index.

Variable	Standardized WHO-5 score[a]			Standardized school satisfaction[a]		
	B	Exp(B)	p-value	B	Exp(B)	p-value
Constant	.735	2.086	.000	.751	2.118	.000
Standardized WHO-5 score	.244	1.276	.000			
Standardized school satisfaction				.411	1.508	.000

[a]Dependent variable is a binary variable - Teachers can help children with problems of feelings and behaviour ('Yes' = 1, 'No' & 'No opinion/Don't know' = 0), the probability of answering 'Yes' is modelled.

In further modelling we examined non-standardized variables. Variables were added in steps to the school satisfaction model in order to see changes in regression coefficients (Table 4, models 1–3). In order to obtain the final model (model 4), we removed statistically insignificant variables ($p > 0.05$) from model 3.

Table 4. Logistic regression models with school satisfaction index and independent variables, model fit statistics.

Variable	Level	Logistic model 1[a]			Logistic model 2[a]			Logistic model 3[a]			Logistic model 4[a]		
		B	Exp(B)	p-value	B	Exp(B)	p-value	B	Exp(B)	p-value	B	Exp(B)	p-value
Constant		−1.112	.329	.000	−1.035	.355	.000	.458	1.581	.134	.250	1.284	.362
School satisfaction		.040	1.041	.000	.040	1.041	.000	.032	1.032	.000	.032	1.033	0.000
Gender (Base = Male)					.061	1.063	0.522	−.056	0.946	0.575			
Worked as teacher, years					−0.006	0.994	0.159	−0.007	0.993	0.101			
A (Base = Yes)	No							−.395	.674	.000	−.389	.678	.000
	No opinion							−.676	.509	.000	−.664	.515	.000
B (Base = Yes)	No							−.629	.533	.000	−.624	.536	.000
	No opinion							−.780	.458	.001	−.765	.465	.001
C (Base = Yes)	No							−1.048	.351	.000	−1.054	.349	.000
	No opinion							−.990	.372	.000	−.991	.371	.000
D (Base = Yes)	No							.131	1.140	.278	.126	1.135	.295
	No opinion							−.242	.785	.022	−.232	.793	.027
Model comparison	−2 Log likelihood	3047.737			3045.288			2915.076			2918.025		
	Chi-square	88.134			90.582			220.794			217.845		
Test of model coefficients	df	1			3			11			9		
	p-value	.000			.000			.000			.000		
Association of predicted Probabilities and observed Responses	concordance index c	.616			.616			.674			.674		
Hosmer-Lemeshow lack-of-fit test	Chi-square	14.536			12.420			7.042			5.076		
	df	8			8			8			8		
	p-value	.069			.133			.532			.749		

[a]Dependent variable is a binary variable - Teachers can help children with problems of feelings and behaviour ('Yes' = 1, 'No' & 'No opinion/Don't know' = 0), the probability of answering 'Yes' is modelled.

All variables except gender and work experience as a teacher were statistically significant in the final model. The odds of a teacher believing that (s)he can help children with mental health problems rose by 1.033 times for every point on the school satisfaction index (assuming that all other indicators stay the same). For three variables (A–C) indicating teachers' ability to understand pupils' mental health problems, answering negatively ('No') or showing indifference ('Don't know/No opinion') reduced the odds that teachers believe in their ability to help children with mental health problems, compared to the ones who answered 'Yes' to these questions. The same almost applied to question D – answering negatively ('No') did not have a statistically significant effect on odds, but showing indifference ('Don't know/No opinion') reduced the odds.

The final model had a good fit according to the Hosmer-Lemeshow lack-of-fit test with a significance level of 0.749 (Table 4). A scatter plot (not presented) of the binned residuals and expected values of the model showed an evenly scattered cloud, indicating that the model binned errors were normally distributed and the errors by themselves were independent. The concordance index (c) indicated that 67% of cases were placed in the right category by our final model.

Discussion

The current study endeavoured to explain which factors may be related to teachers' beliefs that they can help children who have mental health problems; that is, problems with their feelings and risky behaviour. We proposed that teachers' confidence for helping those children is related to their satisfaction with the overall school climate and their own subjective psychological well-being, as well as their ability to generally understand children's mental health problems.

There is strong support in the literature that improved well-being among teachers relates to enhanced academic achievement and reduces risk and problem behaviour in the young people they teach.[30, 31, 40] The novel contribution of this study was our ability to show that teachers' school satisfaction and psychological well-being increased the odds that they believe in their ability to help children and adolescents who have mental health problems. After controlling for gender and work experience, the logistic regression analysis confirmed that school satisfaction was a statistically significant predictor of a positive attitude towards helping behaviour (i.e. it increased for every point on the school satisfaction scale by 1.033 times).

Society needs teachers who are able and highly motivated to fulfil their duties and responsibilities. If a teacher feels good and is satisfied with the work environment at school, there is a better chance that (s)he can create an atmosphere that supports positive mental health and improves academic achievement. Schools need to improve teachers' school satisfaction and well-being when aiming to improve their helping behaviour attitude.

As the prevalence of psychiatric disorders is high,[1, 3, 4] there is a strong chance that during their career teachers will come across pupils with mental health problems. Within the SEYLE teachers' sample, on average half of the teachers stated that they currently have some pupils suffering from a mental health problem and almost the same proportion of teachers thought that they usually recognize children with mental health problems. Yet teachers evaluate their own knowledge about children's mental health as being low and a vast majority of them want to know more about the subject. All these variables were related to teachers' attitude to helping behaviour in the logistic regression models. Better mental health knowledge and the wish to be more educated, as well as more frequent real contact with mental health issues, predicted stronger belief that teachers can help.

Gender had no significant influence on belief about helping behaviour. Additionally, more experienced teachers were more likely to deny the possibility that teachers can help pupils with mental health problems. This could be interpreted as a sign of burnout or unwillingness to fulfil functions besides delivering the regular curriculum. This may also be because these teachers have previous experience with pupils who have had mental health problems and perhaps they felt overwhelmed and did not know how to help. Obviously, this subgroup of teachers needs special attention in terms of mental health promotion and education in order to better understand the reasons for their disbelief in helping pupils.

Taking into consideration our cross-sectional study design and findings from previous studies,[27] it must be noted that causality can go in both directions. As Rothi et al.[9] have stated: 'Pupils' mental health problems add to teachers' classroom and management burden, lower job satisfaction and more importantly affect their own psychological well-being'.[9, p. 1227] Thus adequate training enabling teachers to fulfil their gatekeeper role in early detection of mental health problems in the classroom improves the lives of both the young people and the teachers themselves.[8, 9, 22]

The study has some limitations. First, the results are based on surveyed self-reports, therefore it is impossible to say how teachers' attitudes relate to their actual helping behaviour. The second limitation of our study is the amount of missing data: 23% of observations had some missing values. The imputation strategy is justified because excluding cases due to missing values may produce biased results and Hot Deck imputation[34] reduced that bias, therefore the quality of our estimates improved. We also studied missing data to see if it had some kind of a structure, concluding that the data were missing at random and Hot Deck imputation was justified in that situation.

Conclusions

The current study showed that teachers' confidence in becoming involved in helping pupils with mental health problems is associated with better satisfaction with the general climate at school, higher subjective psychological well-being, and their ability to understand pupils' mental health problems. If these conditions are fulfilled, teachers have a better chance of thinking that they can help children with mental health problems, thereby indirectly increasing the quality of teaching. Additionally, based on our data, more experienced teachers need to focus especially on mental health promotion and education. A good school environment which values the subjective psychological well-being of the teachers, and the provision of adequate training to teachers to fulfil their gatekeeper role, act as preconditions to improve the mental health of the pupils taught. These suggestions are in line with a whole-school approach to mental health promotion.

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