This article is part of the publications from the I International Congress Quality of Life, Citizenship and Mental Health organized by the Polytechnic Institute of Viseu, Higher School of Health, carried out in Viseu, Portugal (article written in Portuguese language of Portugal).

Original Article

Risk factors for mental health in children and young people: knowledge of education agents

Fatores de risco para a saúde mental infanto-juvenil: conhecimentos dos agentes educativos

Factores de riesgo para la salud mental infanto-juvenil: conocimientos de los agentes educativos

Carlos Albuquerque[1] https://orcid.org/0000-0002-2297-0636
Madalena Cunha[1] https://orcid.org/0000-0003-0710-9220
Carolina Matos[1] https://orcid.org/0000-0001-9857-7809
Carolina Capela[1] https://orcid.org/0000-0002-4657-593X
Mafalda Mendes[1] https://orcid.org/0000-0002-2921-8623
Maria Gomes[1] https://orcid.org/0000-0003-2613-3963
Rúben Dias[1] https://orcid.org/0000-0002-0939-9551
Vânia Monteiro[1] https://orcid.org/0000-0002-2614-3849

How to cite:
Albuquerque C, Cunha M, Matos C, Capela C, Mendes M, Gomes M, et al. Risk factors for mental health in children and young people: knowledge of education agents. Acta Paul Enferm. 2020; eAPE20190256.

DOI
http://dx.doi.org/10.37689/acta-ape/2020AO0256

Descritores
Conhecimentos; Saúde mental; Fatores de risco; Crianças; Adolescente

Keywords
Knowledge; Mental health; Risk factors; Child; Adolescent

Descriptores
Conocimiento; Salud mental; Fatores de riesgo; Niño; Adolescente

Submitted
September 3, 2019

Accepted
October 21, 2019

Corresponding author
Carlos Albuquerque
E-mail: cmalbuquerque@gmail.com

Abstract

Objective: To assess the level of knowledge of education agents about risk factors for mental health in children and adolescents, and to analyze these factors connection with sociodemographic variables.

Methods: This was a quantitative study that used non-probabilistic sample of 136 education agents (62.5% professors, 32.4% nurses and 5.1% police officers). Most of participants were women (70.6%) with mean age of 48.34 years old. Data collection was performed through a self-completion questionnaire during 2018 academic year in four schools of the municipality of Viseu, Central Portugal. Statistical tests used were chi-square and multiple regression analysis.

Results: In general, education agents showed to have knowledge about risk factors for mental health, highlighting that 39.71% of them had excellent knowledge. In comparative terms, nurses showed better level of knowledge ($\bar{x}$=15.546), followed by professors ($\bar{x}$=13.318) and, police officers ($\bar{x}$=8.571). Differences between participants were significant (x^2=14.725; p= 0.004). The multivariate study demonstrated that gender was the only variable to prove to be a predictor of the level of knowledge, explaining the 11.5% of variability (p=0.002), and showing that women had a greater level of knowledge. The predictive effect of the variable *professional category* (p=0.051) and years of professional experience (p=0.0179) was not significant.

Conclusion: The fact that gender was the only variable that proved to be predictive of the level of knowledge led us consider the need of adopting differentiated strategies for training programs, in which the characteristics and vulnerability of both sexes should be protected.

Resumo

Objetivo: Avaliar o nível de conhecimentos dos agentes educativos sobre os fatores de risco para a saúde mental de crianças e adolescentes e analisar a sua associação com variáveis sociodemográficas.

Métodos: Estudo quantitativo, com recurso a uma amostra não probabilística de 136 agentes educativos (62,5% professores, 32,4% enfermeiros e 5,1% polícias), na sua maioria mulheres (70,6%) e média de idades de 48,34 anos. A colheita de dados, com recurso a um questionário de auto-preenchimento, realizou-se no ano lectivo de 2018 em quatro escolas do concelho de Viseu - Região centro de Portugal. Testes estatísticos utilizados: Qui-Quadrado e Análise de Regressão Múltipla.

Resultados: Na generalidade os agentes educativos revelaram possuir conhecimentos sobre os fatores de risco para a saúde mental, destacando-se 39,71% que chegam mesmo a evidenciar excelentes conhecimentos. Em termos comparativos, os enfermeiros são os que evidenciam melhores níveis de conhecimentos ($\bar{x}$=15,546), seguindo-se os professores ($\bar{x}$=13,318) e, por fim, os polícias ($\bar{x}$=8,571), diferenças estas significativas (x^2=14,725; p= 0,004). O estudo multivariado inferiu ser o género a única variável a se revelar preditora do

[1]Escola Superior de Saúde, Instituto Politécnico de Viseu, Viseu, Portugal.
Conflicts of interest: nothing to declare.

nível de conhecimentos, explicando 11,5% da sua variabilidade (p=0,002), evidenciando as mulheres maior nível de conhecimentos. Já o efeito preditivo da variável categoria profissional (p=0,051) e tempo de experiência profissional (p=0,0179) não se revelou significativo.

Conclusão: O facto do género ter sido a única variável que se revelou preditiva do nível de conhecimentos, faz-nos ponderar da necessidade de se adoptarem estratégias diferenciadas em programas de formação, onde as características e vulnerabilidade dos dois sexos sejam salvaguardadas.

Resumen

Objetivo: Evaluar el nivel de conocimiento de los agentes educativos sobre los factores de riesgo para la salud mental de niños y adolescentes y analizar su relación con variables sociodemográficas.

Métodos: Estudio cuantitativo, con un muestreo no probabilístico de 136 agentes educativos (62,5% profesores, 32,4% enfermeros y 5,1% policías), en su mayoría mujeres (70,6%) y con un promedio de edad de 48,34 años. La recolección de datos se realizó mediante un cuestionario autocompletado, en el año lectivo 2018, en cuatro escuelas del concejo de Viseu, en la región centro de Portugal. Las pruebas estadísticas utilizadas fueron: prueba χ^2 de Pearson y Análisis de Regresión Múltiple.

Resultados: En general, los agentes educativos revelaron tener conocimientos sobre los factores de riesgo para la salud mental, con un 39,71% que logró demostrar excelentes conocimientos. En términos comparativos, los enfermeros son los que demuestran mejores niveles de conocimiento ($\bar{x}$=15,546), seguidos de los profesores ($\bar{x}$=13,318) y por último los policías ($\bar{x}$=8,571), diferencias estas significativas (x^2=14,725; p= 0,004). Con el estudio multivariado se reveló que el género es la única variable que se mostró predictiva del nivel de conocimiento, que explica el 11,5% de su variabilidad (p=0,002) y demuestra mayor nivel de conocimiento en mujeres. Por otro lado, el efecto predictivo de la variable categoría profesional (p=0,051) y tiempo de experiencia profesional (p=0,0179) no demostró ser significativo.

Conclusión: El hecho de que el género haya sido la única variable que demostró ser predictiva del nivel de conocimiento nos hace considerar la necesidad de adoptar estrategias diferenciadas en programas de capacitación, en los que las características y vulnerabilidad de los dos sexos sean resguardadas.

Introduction

Health and illness are intrinsic realities of the human life cycle, and the way they have been conceptualized has changed with human's own evolution, and by reflecting the historical, cultural and social context and the scientific evolution.[1] Health is defined as a dynamic process of adapting and coping with the environment, meeting needs and reaching the maximum potential of physical, mental, spiritual and social well-being, not merely absence of illness or disease.[2]

The World Health Organization (WHO) defines mental health as a state of well-being in which every individual realizes his or her own potential to cope with the normal stresses of life, to work productively and fruitfully, and the ability to make a contribution to her or his community.[3] From this point of view, mental health is also understood as a state characterized by being good about yourself and others, accepting the demands of life and knowing how to deal with positive and negative emotions (namely happiness/sadness, courage/fear, love/hate, serenity/anger, guilt and frustrations), recognizing your own limitations and searching for help, if necessary.[4] In this context, mental health is an integral and indivisible part of health as a whole, perceived as an "*essential asset for well-being and the development of human potential*".[1] For this reason, it is a basic right of all citizens, assumption that is expressed in the WHO 2015 Report *The European Health Report*, as this is stated that "we cannot talk about health without talking about mental health".[5]

Taking this assumption to the context of children and youth, we noticed that risk factors and its connection with mental health problems in adolescents are well identified in different publications involving the most diverse fields of knowledge.[6] Furthermore, we found that mental health problems and problems related to behavioral development in children and adolescents significantly increased over the last years, and the most recent WHO study – focused on health behavior in school-age children, revealed that half of mental health problems in adulthood started during or before adolescence. For instance: (i) depression and anxiety disorders are among the five main causes of illness in general, and (ii) suicide, in low and middle income countries, is the main cause of death among adolescents aged between 10 and 19 years old, and the second cause of death in high income countries in Europe.[7] Taking this reality to the Portuguese setting, what stands out is that mental health problems – connected to a complex interaction between the child or adolescent, the family and the sociocultural environment where they belong, have led to a general increase in the demand of mental health services specialized in

children and adolescents, both outpatient consultations and emergency services, as well as an increase in the severity of patients' clinical pictures.[8,9]

Based on these facts, we could easily observe that mental health problems in children and adolescents may appear to be a major public health challenge, which demands the implementation of preventive measures to support the development and progression of risk factors they may face. Thereby, there is a need of and early intervention, not only within the family, but also in the school context, where education agents will certainly have a decisive role.[10] Children and adolescents spend a large part of their time at school and, as such, this institution has the challenge of truly becoming a promoter of health and preventive actions for mental health.[11] Schools must be used as an environment for intervention and implementation of programs with the support of health professionals in partnership with the family and the community, thus allowing children and adolescents to increase their literacy on mental health and, if needed, to search for help early. The National School Health Program in force in Portugal, as it intervenes in Kindergarten, Elementary and High School, assumes an active role in the management of health determinants of the educational community, establishing school health teams (formed by nurses, doctors, social services technicians, psychologists, nutritionists and police officers) as an interface with the educational system for its implementation. The technicians that comprise the school health teams are professionals trained to support the development of the process of health promotion in the school environment, who know how to share their knowledge and how to find common grounds in the challenge of positive health for everyone, thus strengthening the management of health determinants in the educational community, namely the early identification of risk factors, and contributing to obtain health gains, in the medium and long term. In addition, the school has to provide students ways to understand how to express and communicate their emotional bonds with people and with the environment, and how to participate and be reponsible.[12] Furthermore, the promotion of mental health in schools involves networking, in which the school system joins community mental health centers, medical centers, hospitals and universities to extend the promotion and offering interventions, since the success of the programs increases with the cooperation of schools, teachers, local leaders and other partners.[13]

Team working, training oriented to the needs and the creation of debate and tolerance spaces, connected to a holistic approach of health, increase well-being and reduce the risk of illness in children and adolescents. However, this process demands that education agents hold the knowledge to identify risk factors that may interfere with children and adolescents mental health.[10,11]

The main objective of this study is to assess the level of knowledge of educational agents about risk factors for mental health in children and adolescents, and to analyze these factors connection with sociodemographic variables.

Methods

This was a quantitative, cross-sectional, descriptive, survey type study, carried out in four schools of the municipality of Viseu, Central Portugal, that used non-probabilistic sample including 136 education agents (62.5% professors, 32.4% nurses and 5.1% police officers) with mean age of 48.34 years (± 7.49 years old) and age gap oscillating between 31 and 62 years of age. The majority of the participants were women (70.6%), graduated (68.4%), urban residents (72.8%) and were married or in a civil union marriage (70.6%). The mean years of service of participants was 24.33 years (SD=7.19 years), whereas 78.7% had a binding employment contract and 21.3% had a non-binding employment contract. The level of knowledge of education agents was measured through the application of the *Risk Factors for Children and Adolescents Mental Health Scale*[14] made up of 18 items with true/false answers, in which the global score oscillates between 0 and 18 (where false answers scored 0 and true answers scored 1, the higher

the total score of the scale, the better the level of knowledge). The stratification of the three levels of knowledge (insufficient, reasonable and excellent) was done based on percentage calculations, where the intervals varied from 0 to 10, 11 to 16, and 17 to 18 points, respectively. Besides the variable *level of knowledge*, other three variables were considered: gender, professional category and years of service, assessed through a sociodemographic form. Data collection was performed through a self-completion questionnaire during 2018 academic year, the research project was approved by the Ethics Commission of Higher School of Health of the Polytechnic Institute of Viseu, Portugal, and the participants signed the informed consent form. After data collection, the results were given to the institution's pedagogical councils.The *Statistical Package for the Social Science* (SPSS), version 25.0 was used to process and analyze data. A level of significance of 95% (α=0.05) was adopted for chi-square test and multiple regression analysis.

Results

The study showed that the level of knowledge of education agents about risk factors for children and adolescents mental health was expressed by the following percentages: 39.7% of agents with excellent knowledge, 33.10% reasonable knowledge, and 27.20% insufficient knowledge. According to the results in Table 1, we verified that nursing professionals evidenced better level of knowledge ($\bar{x}$=15.546), followed by professors ($\bar{x}$=13.318) and, finally, police officers ($\bar{x}$=8.571). Concerning gender, women showed, on average, better knowledge ($\bar{x}$=14.698), compared with men ($\bar{x}$=11.625) (Table 1).

Table 1. Sample statistics related to knowledge according to professional category and gender (n=136)

Professional category	n	Min.	Max.	$\bar{x}$	SD	Sk/error	K/error
Professors	85	2.00	18.00	13.318	4.640	-2.000	-1.760
Nurses	44	1.00	18.00	15.546	4.234	-5.982	5.464
Police Officers	7	4.00	14.00	8.571	3.780	0.554	-0.725
Gender	**n**	**Min.**	**Max.**	$\bar{x}$	**SD**	**Sk/error**	**K/error**
Male	40	2.00	18.00	11.625	4.823	-0.003	-1.492
Female	96	1.00	18.00	14.698	4.396	-5.183	1.324

Univariate Study: Effect of the Variable Professional Category

Based on the results in Table 2, we can observe that there were statistically significant differences of the level of knowledge according to the professional category (p=0.004). Nurses had the best knowledge (Adj R=2.7) and police officers show lowest knowledge (Adj R=2.1). Focusing on the analysis concerning percentage saturation of correct answers related to each of the 18 risk factors measured by the *Risk Factors for Children and Adolescents Mental Health Scale*, we confirmed that there was a significant connection between the professional category and 12 out of 18 risk factors: negative life events (p=0.016), childhood abuse/negligence (p=0.009), weak self-concept (p=0.003), death of close relatives (p=0.011), death of friends (p=0.005), irregular sleep pattern (p=0.037), intellectual stimulation deficit (p=0.000), dating violence (p=0.025), insecure attachment patterns (p=0.000), problem-solving difficulties (p=0.000), school failure (p=0.000), and social interaction difficulties (p=0.003). We also observed that all nurses showed maximum saturation of correct answers concerning the risk factor "childhood abuse/negligence", and police officers about "dysfunctional family environment" and "school violence/bullying". Professors evidenced a higher percentage of correct answers (95.3%), proving to have a greater knowledge about risk factors connected to "addictive behavior (alcohol, tobacco and other drugs)".

Univariate Study: Effect of the Variable Gender

The study showed that there were statistically significant differences in the level of knowledge of education agents about risk factors for children and adolescents mental health concerning gender (p=0.002), as the female gender revealed better level of knowledge, expressed by a percentage of 45.8% of women with excellent knowledge (Table 3). In addition, we observed that most women (97.9%) had correct answers concerning the risk factor "childhood abuse/negligence", thus revealing a better expression of knowledge; most men's correct answers were about the risk factor "dysfunctional family environment". Besides this observation, we

Table 2. Knowledge about risk factors for children and adolescents mental health according to professional category (n=136)

Professional category Level of knowledge	Professors n(%)	Nurses n(%)	Police Officers n(%)	Total n(%)	*p-value* (Chi-Square)
Insufficient knowledge	27(31.8)	5(11.4)	5(71.4)	37(27.2)	0.004
Reasonable knowledge	27(31.8)	16(36.4)	2(28.6)	45(33.1)	
Excellent knowledge	31(36.5)	23(52.3)	0(0.0)	54(39.7)	
Risk factors	**Professors n(%)**	**Nurses n(%)**	**Police Officers n(%)**	**Total n(%)**	***p-value* (Chi-Square)**
1 - Biological/hereditary factors	74(87.1)	36(81.8)	6(85.7)	116(85.3)	0.779
2 - Negative life events	64(75.3)	42(95.5)	5(71.4)	111(81.6)	0.016
3 - Childhood abuse/negligence	80(94.1)	44(100.0)	5(71.4)	129(94.9)	0.009
4 - Dysfunctional family environment	80(94.1)	43(97.7)	7(100.0)	130(95.6)	0.587
5 - Low self-esteem	68(80.0)	40(90.6)	4(57.1)	112(82.4)	0.058
6 - Weak self-concept	63(74.1)	38(86.4)	2(28.6)	103(75.7)	0.003
7 - Death of close relatives	60(70.6)	36(81.8)	2(28.6)	98(72.1)	0.011
8 - Death of friends	55(64.7)	37(84.1)	2(28.6)	94(69.1)	0.005
9 - Insecure attachment patterns	46(54.1)	37(84.1)	0(0.00)	83(61.0)	0.000
10 - Problem-solving difficulties	41(48.2)	35(78.5)	0(0.00)	76(55.9)	0.000
11 - Irregular sleep pattern (insomnia, parasomnia, etc.)	58(68.2)	39(88.6)	5(71.4)	102(75.0)	0.037
12 - Intellectual stimulation deficit	51(60.0)	33(75.0)	0(0.00)	84(61.8)	0.000
13 - School violence/bullying	75(82.2)	40(90.9)	7(100.0)	122(89.7)	0.596
14 - Dating violence	70(82.4)	38(86.4)	3(42.9)	111(81.6)	0.025
15 - School failure	48(56.5)	33(75.0)	0(0.00)	81(59.6)	0.000
16 - Social isolation/few friends	61(71.8)	38(86.4)	5(71.4)	104(76.5)	0.167
17 - Social interaction difficulties	58(68.2)	35(79.5)	1(14.3)	94(69.1)	0.003
18 - Addictive behavior (alcohol, tobacco and other drugs)	81(95.3)	40(90.9)	6(85.7)	126(92.6)	0.615

Table 3. Knowledge about risk factors for children and adolescents mental health according to gender (n=136)

Gender Level of knowledge	Male n(%)	Female n(%)	Total n(%)	p-value (Chi-Square)
Insufficient knowledge	19 (47.5)	18 (18.8)	37 (27.2)	0.002
Reasonable knowledge	11 (27.5)	34 (35.4)	45 (33.1)	
Excellent knowledge	10 (25.0)	44 (45.8)	54 (39.7)	
Risk factors	**Género Male n(%)**	**Female n(%)**	**Total n(%)**	**p-value (Chi-Square)**
1 - Biological/hereditary factors	31(77.5)	85(88.5)	116(85.3)	0.088
2 - Negative life events	29(72.5)	82(85.4)	111(81.6)	0.091
3 - Childhood abuse/negligence	35(87.5)	94(97.9)	129(94.9)	0.013
4 - Dysfunctional family environment	38(95.0)	92(95.8)	130(95.6)	0.829
5 - Low self-esteem	29(72.5)	83(86.5)	112(82.4)	0.082
6 - Weak self-concept	23(57.5)	80(83.8)	103(75.7)	0.002
7 - Death of close relatives	22(55.0)	76(79.2)	98(72.1)	0.006
8 - Death of friends	19(47.5)	75(78.1)	94(69.1)	0.001
9 - Insecure attachment patterns	16(40.0)	67(69.8)	83(61.0)	0.002
10 - Problem-solving difficulties	14(35.0)	62(64.6)	76(55.9)	0.002
11 - Irregular sleep pattern (insomnia. parasomnia. etc.)	25(62.5)	77(80.2)	102(75.0)	0.049
12 - Intellectual stimulation deficit	19(47.5)	65(67.7)	84(61.8)	0.034
13 - School violence/bullying	34(35.0)	88(91.7)	122(89.7)	0.244
14 - Dating violence	28(70.0)	83(86.5)	111(81.6)	0.036
15 - School failure	17(42.5)	64(66.7)	81(59.6)	0.012
16 - Social isolation/few friends	29(72.5)	75(78.1)	104(76.4)	0.510
17 - Social interaction difficulties	21(52.5)	73(76.0)	94(69.1)	0.009
18 - Addictive behavior (alcohol. tobacco and other drugs)	36(90.0)	90(93.8)	126(92.6)	0.445

verified that there was a significant connection between gender and 11 out of 18 risk factors, specifically the following factors: childhood abuse/negligence (p=0.013), weak self-concept (p=0.002), death of close relatives (p=0.006), death of friends (p=0.001), insecure attachment patterns (p=0.002),

Table 4. Multiple regression analysis: the socioprofessional variables (gender, professional category and years of service) in the prediction of the level of knowledge about risk factors for children and adolescents mental health

Dependent variable: Level of knowledge about risk factors for children and adolescents mental health
R=0.339
R^2=0.115
Adjusted R^2 =0.094
Standard error of estimation=4.527
F=5.341
p=0.002

Regression weight				
Independent variables	**Coefficient B**	**Coefficient Beta**	**t**	***p-value***
Constant	11.904			
Gender	-3.276	-0.314	-3.653	0.000
Professional category	0.154	0.248	1.071	0.051
Years of professional experience	-0.197	-1.311	-1.351	0.179

Variance analysis					
	Effect	**Sum of squares**	**Mean of squares**	**F**	***p-value***
Regression	328.387	3	109.462	5.341	0.002
Residual	2520.952	123	20.496		
Total	2849.339	126			

problem-solving difficulties (p=0.002), irregular sleep pattern (p=0.049), intellectual stimulation deficit (p=0.034), dating violence (p=0.036), school failure (p=0.012), and social interaction difficulties (p=0.009).

Univariate Study: Effect of the Variable Years of Professional Experience

Regarding the effect of the variable *years of professional experience*, it was not connected to the level of knowledge about risk factors for children and adolescents mental health revealed by surveyed education agents (p=0.214).

Multivariate Study between Level of Knowledge and Socioprofessional Variables

Table 4 refers to the model of multiple regressions implemented, in which the global score of the *Risk Factors for Children and Adolescents Mental Health Scale* was used as dependent variable and the three socioprofessional variables (gender, professional category and years of professional experience) were considered as independent variables. The results of the regression reveal that gender was the only variable that proved to be predictive of the level of knowledge about risk factors for children and adolescents mental health (t=-3.653; p=0.000), explaining 11.5% of variation, being 9.4% the variance explained adjusted. These results evidence a well-accepted model of regression (F=5.341; p=0.002), although the explanatory value is relatively small. This fact allows us to conclude that the level of knowledge about risk factors for children and adolescents mental health is significantly higher among the female gender. The predictive effect of the variable *professional category* (p=0.051) and *years of professional experience* (p=0.179) was not found significant.

Discussion

We consider the non-probabilistic sample method as a methodological limitation of this study. We also consider that the reduced sample of the three profiles of participants – as education agents integrated into school health teams, makes an unrepresentative sample of the population where they belong and requires to be cautious when "generalizing" the results in the population from which the sample was selected, since it only allowed knowledge of a specific context.

Concerning the discussion of the results obtained, the fact that there is a very low number of studies that connect the level of knowledge of education agents about risk factors for children and adolescents mental health with variables of socioprofessional context was a serious obstacle to compare results of this research with other studies conducted previously.

Despite this difficulty, by comparing the results of our study with the results obtained by Cais *et*

al.[15] and Botega *et al.*,[16] in which health professionals were surveyed about their knowledge and attitudes towards suicidal behavior, identified as an intrinsic risk factor for mental health, they also concluded that nurses are the ones who show better knowledge and greater professional competence.

Another analysis implemented in our research was centered in the multivariate study of sociodemographic variables (gender, professional category and years of professional experience), concluding that only the variable gender proved to be a predictor of the level of knowledge of education agents. This result, although somewhat difficult to fully explain, also finds support in the literature: Berlim *et al.* study[17] confirms that health professionals, regardless of their clinical background and work experience, show similar values in terms of their attitudes and beliefs regarding the suicidal phenomena.

We understand that formal training should be available for all education agents involved in the promotion of mental health in the school context. The programs that promote mental health by the promotion of protective factors, as well as the promotion of family and functional social networks (where education agents of this study fit) and the implementation of programs to increase the literacy, promoting greater knowledge and promptness in the search for help, could also prevent the attitudes that predispose children and adolescents towards mental illness. This is because mental health is translated into a satisfactory relationship with ourselves, with others and with everyday environments.[18] If during this phase, children and adolescents encounter demands for which they are not yet able to respond, and if the environment does not offer them the necessary support to do so, this represents a risk factor for the manifestation of a mental health problem.[19] Therefore, it is important to understand the real impact of mental health problems in the students' everyday activities, learning process and relationship with others, to better support them.[19]

Despite some studies about this issue already exist, there are still many dilemmas that limit the elaboration of reliable statistics in many countries, being a more serious problem in less developed countries, where its cause is attributed to the following factors: lack of human resources specialized in this area, low priority given to mental health issues considering physical diseases and weaknesses of the mental health services network.[20]

In view of these limitations, the scarcity of information about mental health problems often results in the difficulty of understanding them and foreseeing the suffering and impact they cause. If a problem is not properly understood, the solutions implemented will probably be inadequate, inefficient or even harmful for children and adolescents, depriving them of the necessary assistance and support.[19] Furthermore, it is necessary that other fields of work, such as social assistance, justice and education, work together with the mental health sector. Thereby, intersectoral work has a key role to move towards the formation of a care and protection network, preserve the role of each actor and of the family, in particular.[20] This study shows that education agents hold, on the whole, good knowledge about risk factors for children and adolescents mental health, as mentioned by the authors. However, given the high prevalence of wrong answers in items 9 "insecure attachment patterns", 10 "problem-solving difficulties", and 15 "school failures", there is suggestion to invest in the training of professionals that will work with children and adolescents, with an emphasis on these fields and by providing clinical, therapeutic and social tools.[8]

In conclusion, we believe that the results of this study may have objective implications. To promote a healthy general development of children and adolescents during this period of their lives, and to achieve the full development of their potential, there is need to ensure mechanisms for education, social protection, inclusion, promotion and guarantee of the rights of children and adolescents. There is need to recognize that children and adolescents experience psychic pain live in a subjective context. As such, the proposals for intervention will not have the required scope to meet the needs if there is no effective coordination between the various education agents, incorporated in the school and involving the family and community.[21] Interventions to promote the mental health of so-called "healthy" children and adolescents, conducted in organizations where they

spend much of their daily routine, such as educational institutions, are not new.[22] However, the nature and magnitude of the changes that occur during that period of life alert to the hidden curriculum that accompanies the school path alongside the manifest curriculum. For this reason, it is unquestionable that the "mental health" of children and adolescents does not arise disconnected from a cultural universe and family that favors it, where all education agents – properly trained and informed, must be alert.[20,21]

Conclusion

Considering the objective of this research, the results obtained evidence that, among the three categories of education agents being studied, nurses are the ones that showed a greater level of knowledge and police officers the lowest level of knowledge about risk factors for children and adolescents mental health. Considering this scenario, the identification of police officers as a group that needs training about mental health strengthens the implementation of specific training programs adjusted to this group in safe school program teams, which are a reality in Portugal. In addition, the fact that gender was the only variable that proved to be predictive of the level of knowledge of education agents made us consider the need of adopting differentiated strategies for training programs and, consequently, implementing strategies for mental health promotion and education in schools, where the characteristics and vulnerability of both sexes should be protected. Furthermore, we consider the need of conducting further studies in Portugal to broaden the knowledge about the impact of risk factors for children and adolescents mental health, connected to the relevance and consequences of early intervention and prevention among this age group. As a general guideline, the results obtained suggest undertaking future research with the use of longitudinal profile methodology, implementing a training plan, designed according to previous assessment of the real needs of education agents, and the consequent monitoring of training benefits and a follow-up process after training sessions. A study with this objective may provide more detailed information and allow to detect the variation of results after the trainings, attributed to the nature and specificity of the training interventions, besides representing an important contribution to monitor the education agents, obtaining benefits for children and youth mental health.

Acknowledgments

We thank the European Social Fund, the Operational Program "CENTRO 2020" and the Foundation for Science and Technology of the Portuguese Government for funding the Research Program MAISaúde Mental (More Mental Health) "Monitoring and assessing mental health indicators of children and adolescents: from research to practice" (identification number: CENTRO-01-0145-FEDER-023293) in which this study is included.

Collaborations

Albuquerque C, Cunha M, Matos C, Capela C, Mendes M, Gomes M, Dias R and Monteiro V contributed to the design of the study, analysis and interpretation of data, drafting the paper, critical review of the content and approval of the final version to be published.

References

1. Nogueira MJ. Saúde mental em estudantes do ensino superior: Fatores protetores e fatores de vulnerabilidade [dissertação]. Lisboa: Escola Superior de Enfermagem de Lisboa; 2017.
2. Conselho Internacional de Enfermeiros. Classificação internacional para a prática de enfermagem CIPE/ICNP: Versão 2015 [internet]. Lisboa: Ordem dos Enfermeiros; 2016 [citado 2018 Out 22]. Disponível em: https://futurosenf.files.wordpress.com/2017/04/cipe_2015.pdfWorld Health Organization.
3. The European Health Report 2015: Targets and beyond: reaching new frontiers in evidence [internet]. Copenhagen: WHO; 2015 [cited 2018 Oct 22]. Available from: http://www.euro.who.int/__data/assets/pdf_file/0006/288645/European-health-report-2015-full-book-en.pdf?ua=1
4. Braga AL, Oliveira AG, Ribas BF, Cortez EA, Mattos MM, Marinho TG, Cavalcanti TV, Dutra VF. Promoção à saúde mental dos estudantes universitários. Rev Pró-UniverSUS. 2017;8(1):48-54.
5. World Health Organization (WHO). Mental health: a state of well-being [internet]. Geneva: WHO; 2014 [cited 2018 Oct 22]. Available from: http://www.who.int/features/factfiles/mental_health/en/

6. Portugal. Ministério da Saúde. Rede de Referenciação Hospitalar Psiquiatria da Infância e da Adolescência [Internet]. 2018 Maio [citado 2019 Abril 2]. Disponível em: https://www.sns.gov.pt/wp-content/uploads/2018/06/RRH-Psiquiatria-da-Inf%C3%A2ncia-e-da-Adolesc%C3%AAncia-Para-CP.pdf

7. Word Health Organization (WHO). Prevention of mental disorders: effective interventions and policy options [internet]. Geneva: WHO; 2004 [cited 2018 Oct 22]. Available from: http://www.who.int/mental_health/evidence/en/prevention_of_mental_disorders_sr.pd

8. Santos DC, Jorge MS, Freita CH, Queiroz MV. Adolescentes em sofrimento psíquico e a política de saúde mental infanto-juvenil. Acta Paul Enferm. 2011;24(6):845-50.

9. Portugal. Ministério da Saúde. Direção-Geral da Saúde. Relatório saúde infantil e juvenil- Portugal 2018 [Internet]. 2018 Dezembro [citado 2019 Abril 2]. Disponível em: http://www.aenfermagemeasleis.pt/2018/12/07/relatorio-saude-infantil-e-juvenil-portugal-2018-dgs/

10. Portugal. Ministério da Saúde. Direção-Geral da Saúde. Circular normativa nº 7/DSE: Programa nacional de saúde escolar [Internet]. 2006 Jun 29 [citado 2018 Nov 8]. Disponível em: https://www.dgs.pt/directrizes-da-dgs/normas-e-circulares-normativas.aspx?cachecontrol=1542037041348

11. Pinto AC, Luna IT, Silva AA, Pinheiro PN, Braga VA, Souza AM. Fatores de risco associados a problemas de saúde mental em adolescentes: revisão integrativa. Rev Esc Enferm USP. 2016;48(3):555-64.

12. Ascenço MG. Comportamentos, estereótipos, causas e conhecimento em saúde mental nos adolescentes [dissertação]. Coimbra: Instituto Politécnico de Coimbra; 2013.

13. Wasserma C, Hoven CW, Wasserman D, Carlim V, Sarchiapone M, Al-Halabí S, Postuvan V. Suicide preventiuon for youth – a mental health awareness program: Lessons learned from the Saving and Empowering Young Lives in Europe (SEYLE) intervention study. BMC Public Health. *2014;12*(776):1-11.

14. Madalena C, Albuquerque, J, Duarte, J. Escala Fatores de Risco para a Saúde Mental das Crianças e Adolescentes. In: M Cunha, editor. Escalas de Avaliação. Viseu: ESSV; 2016. p: 39-44.

15. Cais C, Silveira, IU, Stefanello S, Botega NJ. Suicide prevention training for professionals in the public health network in a large Brazilian city. Arch Suicide Res. 2011;15(4):384-9.

16. Botega NJ, Silva SV, Reginat DG, Rapel CB, Cais CF, Mauro ML, Cecconi JP. Maintained attitudinal changes in nursing personnel after a brief training on suicide prevention. Suicide Life Threat Behav. 2007;37(2):145-53.

17. Berlim M, Perizzolo J, Lejderman F, Fleck MP, Joiner TE. Does a brief training on suicide prevention among general hospital personnel impact their baseline attitudes towards suicidal behavior? Affect Disord. 2007;100(1-3):233-9.

18. Brás M, Santos J. Prevenção do suicídio em meio escolar. *In:* Saraiva C, Peixoto A, Sampaio D., *editores. Suicídio e comportamentos autolesivos. Lisboa: Lidel, Edições Técnicas. 2014, p: 485-92.*

19. Lima D, Simões I, Jorge MJ. Saúde mental de crianças e jovens a recuperação em contexto escolar [Internet]. Lisboa: ARIA - Associação de Reabilitação e Integração Ajuda; 2016. [citado 2018 Nov 10]. Disponível em: https://www.aria.com.pt/downloads/promovete_manual_escola.pdf

20. Assis SG, Avanci JQ, Pesce RP, Ximenes LF. Situação de crianças e adolescentes brasileiros em relação à saúde mental e à violência. Cien Saude Colet. 2009;14(2):349-61.

21. Membride H. Mental health: early intervention and prevention in children and young people. Br J Nurs. 2016;25(10):552-4, 556-7.

22. World Health Organization (WHO). Adolescent mental health in the European Region [Internet]. Copenhagen: WHO; 2018 [cited 2018 Oct 22]. Available from: http://www.euro.who.int/__data/assets/pdf_file/0005/383891/adolescent-mh-fs-eng.pdf?ua=1&fbclid=IwAR279LxYDftjXFV8meSL40rSvaC6kcWITW6NI7Bbwgvr4LrlNAyubWgMjgI