

IMPACT EVALUATION OF LITERACY ON HEALTH IN SCHOOL FROM THE THIRD CYCLE OF BASIC EDUCATION: A SCOPING REVIEW

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ABSTRACT

The scientific evidence shows the importance of promoting health for eating, sexuality, tobacco and alcohol use among teenagers. There is no evidence to assess its impact. Aim: identify instruments to measure the impact of interventions to promote healthy diet, sexuality, tobacco and alcohol use among teenagers. Method: Scoping review based on Participants, Concept, Context, from Joanna Briggs Institute method. Results: The studies were selected following the PRISMA, and the data was extracted. Six primary studies were included; five were quantitative in design; the other was of mixed design. Instruments were identified that would make it partially possible to assess the impact of interventions of healthy eating and tobacco and alcohol use. The topic of sexuality did not arise. Conclusion: Some variables emerged from the instruments identified, that were relevant in building an instrument to assess the impact of interventions to promote healthy diet, sexuality, tobacco and alcohol use among teenagers.

Keywords: Healthy lifestyle, Health literacy, Health promotion, Weight and measures

1 INTRODUCTION

According to scientific evidence, the school environment is the preferred space for health promotion (HP), and national health policies for health and education are vital in this field (Dresler-Hawke & Whitehead, 2009). To this end, education and health organizations have worked in partnership to empower young people to adopt healthy lifestyles and promote health literacy (Direção Geral de Educação, 2014; Direção Geral da Saúde, 2015)

There is evidence that shows the importance of promoting health for eating, sexuality, tobacco and alcohol use among young people (Direção Geral da Saúde, 2015a). In the report in the study “Health Behavior in School-Aged Children” (Matos, Simões, Camacho & Reis, 2014), which discussed the health of Portuguese adolescents in times of recession, a third of the young people, who had already begun sexual activity without using condoms, stated that they had not thought about it as the reason for doing so. The average age for trying tobacco and alcohol was 13, and 38% said they ate fast food because it is cheaper, quicker and tastier.

In a psychometric validation study on attitudes and beliefs to do with sexuality and sex education, adolescents’ attitudes and beliefs are connected to their knowledge about sexuality, and they are limited with regard to gender and contraception, violence in relationships, gender and sexual behaviour (Carvalho, Pinheiro, Gouveia & Duarte, 2016).

The Organisation for Economic Co-operation and Development (OECD) report (2015) gives average obesity rates of 24% for boys and 22% for girls, and in Portugal these percentages are 25% for boys and around 30% for girls. The report “Portugal – Alimentação Saudável em Números” (Direção Geral da Saúde, 2015b), discusses the stabilization in the rise in obesity and increase in body weight, measured using the Body Mass Index, over the last four years.

On tobacco and alcohol use, the study ESPAD_Portugal/2015 shows that for the 13-18 age group, 71% of young people have tried alcohol and 40% have tried tobacco (Feijão, 2015).

These are areas in which there have been requests by the surrounding regional community to survey and then intervene Amendoeira et al, 2014; Pereira et al, 2014). In the monitoring process for the intervention in the project Crescer com peso e medida, 80.9% of the children (n=110) demonstrated knowledge about what makes a healthy breakfast and 74.3% (n=101) identified the components of a healthy snack (Amendoeira et al, 2018). For sexuality, a systematic literature review (SLR) about education programs at schools shows strategic lines of intervention for young people, parents and teachers and an assessment of the impact of changes to young people’s sexual behaviour. Another SLR on prevention of tobacco use among children and young people, furthered the need for intervention programs, evidence of which demonstrates their effectiveness (André & Amendoeira, 2013). In an epidemiological study aiming to characterize the smoking habits of students in the 3rd

cycle of basic education, comprising the 13-15 age group, the results showed that 20% of young people had already tried smoking, 96% believed that smoking is harmful to health and 45.4% said that they had spoken about the dangers of smoking at school. Nonetheless, partner organizations have identified a gap: a lack of assessment of the impact of HP interventions in these areas (André et al, 2016).

Impact is defined as the immediate effect that HP programs have on people, partners and settings to influence key health factors. The program's impacts should be accompanied by information gathering on the development process, i.e., an assessment of the process. This is important in that assessing the process measures the activities and quality of the program and the people at whom it is directed. Health impact assessments (HIA) have been recommended as a tool to estimate how programs and projects may have an impact on health and inequalities in health, using quantitative, qualitative and participatory techniques (Australian Institute of Primary Care, 2003). HIAs help decision-makers make choices about alternatives to actively promote health and prevent illnesses. The World Health Organization supports tools and initiatives in the field of HIA to improve health and well-being in all sectors (Peters et al, 2015).

To determine whether a HP program had the desired effect, information on relevant changes among young people need to be collected so as to show that such changes can be attributed to the program. The assessment process deals with planning and implementation. Impact assessment derives from this and deals with health literacy. Effective HP programs help improve health results, such as a healthier lifestyle, healthier settings, increased life expectancy and better quality of life. Outcomes from the impact assessment include: quality of life and equity. These are influenced by a range of factors, including the physical, social and environmental surroundings of a certain group. Only a small percentage of factors may be directly influenced by an HP program. Furthermore, the changes in results will likely occur over a period of time. For these reasons, when assessing the effects of HP programs, only more immediate changes are taken into consideration. These changes are known as impacts and reflect the achievement of the program objectives (The Joanna Briggs Institute, 2015).

2 METHODS

This scoping review aims to answer the following question: What are the instruments for measuring the impact of health promotion interventions in schools on healthy diet, sexuality and tobacco and alcohol use?

Using the PCC method (Participants, Concept and Context), the following inclusion criteria were set in Table 1.

Table 1

Inclusion criteria related to review question dimensions

Question Dimensions	Inclusion Criteria
Participants	Young people of both male and female genders between the ages of 11 and 18 years
Concept	Healthy Lifestyle, Sexuality, Alcohol and Tobacco Use
Context	Secondary schools
Types of studies	All types of studies are considered: quantitative, qualitative and mixed

2.1 Search strategy

The search was carried out using MeSH descriptors interconnected with boolean AND and OR operators, leading to the following search expression: Healthy Lifestyle OR Alcohol Use AND

Tobacco Use AND Sexuality OR Sex Education AND Healthy Diet OR Obesity AND Weight and Measures. It was carried out on 18/01/18 on published databases – PubMed and the EBSCO platform (CINAHL Complete; MEDLINE Complete; Nursing & Allied Health Collection: Comprehensive; Cochrane Central Register of Controlled Trials; Cochrane Database of Systematic Reviews; Cochrane Methodology Register; MedicLatina) and on unpublished databases – ProQuest, RCAAP and Wiley.

Limiters used: Full text, published 01/01/2013 to 31/01/2018, humans and adolescent (13-18 years). Studies written in English, Spanish, French and Portuguese were considered for inclusion in this scoping review.

The relevance of studies for the scoping review was analyzed by independent reviewers based on the title and abstract. The full texts were accessed for all the studies that met the scoping review inclusion criteria. Reviewers independently analyzed the full texts of the articles to confirm whether or not they met the inclusion criteria.

2.2 Selection of relevant publications

The articles were selected using the PRISMA Flow Chart. As shown in Figure 1, the search identified 1466 studies. Of these, 125 were excluded for being duplicates; of the remaining 1341 relevant studies, 1305 were excluded after an assessment of their titles and abstracts, leaving 36 to be read in full text. 30 were excluded because they did not meet the inclusion criteria. So, six primary studies were included in this scoping review, of which five were quantitative in design and the other was of mixed design but was predominantly qualitative. Divergences among the reviewers were resolved by reaching consensus among them.

Four of the studies were done in Europe (three in Portugal and one in Spain), one in Malaysia (Asia) and the other in Brazil (South America), all in school settings.



PRISMA 2009 Flow Diagram

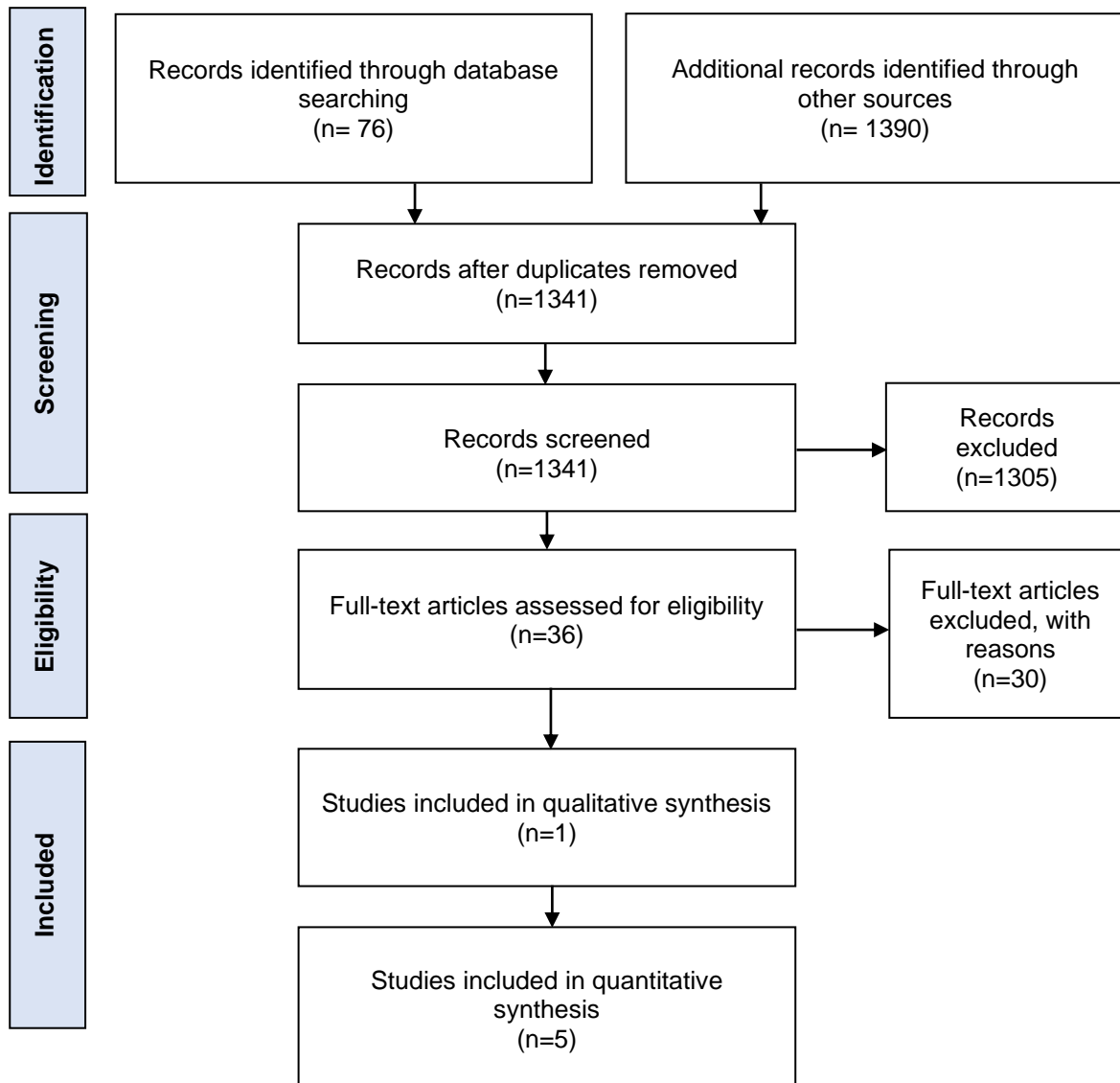


FIGURE 1: Flow diagram of studies identifying instruments to measure the impact of interventions to promote healthy diet, sexuality, tobacco and alcohol use among schoolchildren.

3 RESULTS

The data were collected using the extraction instrument, Appendix II, with source, author, reference and relevant results or discoveries for the review question that made it possible to identify the study in terms of title, authors, year of publication, country of origin and objectives and identify the methodologies and methods, research sources, population and sample and level of evidence. Finally, significant data (interpretation developed) were extracted for the starting question established for this scoping review.

The data were extracted by independent reviewers using an instrument (Table 2) developed by the researchers related the review objective and question. Table 2 presents a summary of the answers to the review question by study.

To meet the objective, six primary studies were included, of which five were quantitative in design: Roura et al (2017), Batista (2014), Mohammed & Che Jamaludin (2015), Maciel (2013), Sobral (2013) and the other was of mixed design but was predominantly qualitative: Cardoso (2017) Three of the studies are observational and cross-sectional: Roura et al (2017), Maciel (2013), Sobral (2013); one is correlational (Batista, 2014), and one is a cluster randomized controlled trial (Mohammed & Che Jamaludin, 2015). The mixed study is observational and cross-sectional for the quantitative part and uses grounded theory for the qualitative part.

Table 2

Data extraction - Answers to the review question, shown by study

Study No.	Authors	Year of Publication	Country of origin	Study design	Study population	Tools used	Key findings
1	Elena Roura, Raimon Milà-Villarroel, Sara Lucía Pareja, Alba Adot Caballero	2016	Canada	Random sample Cross-sectional study	2519 students aged 13–14 years	Scale of eating habits, test of attitudes towards eating, international physical activity questionnaire, scale of overall self-efficacy and individual, semi-structured interview.	20% of participants overweight or obese. A considerable proportion do not respect SENC recommendations. High consumption of meat, fried foods and commercial bakery products among the population in the study. Low consumption of fruit, vegetables and white fish.
2	Isabel Baptista	2014	Portugal	Quantitative, descriptive, correlational, analytic and cross-sectional study	971 students aged 14-21 years	Questionnaire on socio-demographic profile and lifestyles; Rosenberg self-esteem scale; clinical self-concept inventory; tobacco use scale	62% use or have used tobacco. The first cigarette was smoked at the age of 13.8 on average, with school being the main place where cigarettes were on offer. 74.3% give “wanting to know what it was like” as their main reason for smoking. The youngest have the most knowledge about tobacco use with regard to health, while the oldest demonstrate greater knowledge at socio-cultural level. Sample with good self-concept and self-esteem.
3	Azmawati Mohammed Nawi, Farrah Ilyani Che Jamaludin	2015	Malaysia	Randomized controlled trial	97 students aged 16 years	Eating Behavior Questionnaire	The obeseGO! program had a limited effect on reducing BMI, abdominal circumference and body fat. Effective in promoting a healthy diet. The interactive way of transmitting information on the website attracted adolescents' attention and encouraged them to follow a healthy lifestyle and lose weight. The program helped reduce obesity.
4	Francine Maciel	2013	Brazil	Cross-sectional, descriptive study	525 adolescents	Self-filled questionnaire Food consumption – over the last 24 hours, diet quality index, healthy eating index	Roughly 31% of the students were overweight or obese and a total of 73% mentioned that they performed physical activity. Roughly half watch TV for two hours or more per day, 36% play videogames for two hours or less per day and 41% spend four hours or more in front of the computer per day. More than 60% have already gone on a diet to

							gain or lose weight. Around 11% eat meals outside the home and 9% do not usually go to fast food restaurants or snack bars.
5	Susana Cardoso	2017	Portugal	Cross-sectional, mixed study – grounded theory	358 adolescents aged 14-18 years	Self-filled questionnaire, Eating Habits Scale (EHA)	Several factors that influence diet and physical exercise choices were identified, including biological, environmental, socio-cultural and psychological factors. Both eating habits and physical activity vary by sex. Boys and girls make different choices that justify interventions in the field of education for health.
6	Graça Sobral	2013	Portugal	Cross-sectional study	1125 adolescents aged 12-17 years	Body esteem scale, appearance schemas inventory, adolescent questionnaire version, QAF TEEN, IPAQ.	The factors that were shown to contribute to excess weight are related to cultural aspects such as the adolescents' nationalities and parents, a preference for eating meat and industrialized foods and, although without any significant differences found, time spent doing sedentary activities. Adolescents who are overweight show an understanding of that condition and believe their health to be bad or very bad, they turn to diets, reducing the amount of food consumed, and tend to relativize the importance of physical appearance.

4 DISCUSSION OF RESULTS

Due to the complexity/difficulty in assessing the impact of interventions and due to the nature of the social and political contexts where they take place, the decision not to identify instruments for assessing impact in this scoping review is justified (Sobral, 2013). Despite this, some of the instruments identified are important tools for listing variables to be included in future instruments.

This scoping review was unable to identify scales or other instruments for assessing the impact of interventions in the three areas; the studies included helped identify variables in only two fields food using the Eating Habits Scale – EHA (Cardoso, 2013), validated for Portugal Marques et al (2011). Behavioural variables are related to food consumption. In the field of toxic consumption – tobacco use applied the Tobacco Consumption Scale of Precioso (Batista, 2014), the contributions of which were important in identifying impact variables. Only one variable emerged related to the theme of “alcohol consumption not at meals”. Issues relating to this topic were drawn up based on the variables identified for tobacco use, since both are integrated into the field of harmful consumption. The results are presented as a draft in accordance with the research objective and question, relating to the distribution of studies by author, year of publication, country of origin, type of study, population and content of the interventions.

5 LIMITATIONS OF THIS SCOPING REVIEW

This scoping review included articles published in English and Portuguese. Studies in other languages may also have been important. None of the studies selected includes the field of sexuality.

6 CONCLUSIONS

The objective of this scoping review was to identify instruments to measure the impact of HP interventions related to food, sexuality, tobacco and alcohol among young people in a school environment. Some variables emerged from the instruments identified – essentially related to cognitive features and attitudes – that were relevant in building an instrument to assess the impact of interventions to promote healthy diet, sexuality, tobacco and alcohol use among teenagers.

7 IMPLICATIONS FOR RESEARCH

In the light of what has been described about the importance of instruments to assess the impact of HP interventions, studies need to be carried out that identify variables to assess the impact in health promotion intervention fields in school environments.

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