



ORIGINAL ARTICLE

Curricular intervention increases adolescents' knowledge about asthma: a randomized trial[☆]

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KEYWORDS

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Education;
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Abstract

Objectives: To evaluate the impact of a curricular intervention concerning the knowledge about asthma among adolescents from a public school.

Methods: This was a randomized, controlled trial study on a curricular intervention in asthma, carried out with asthmatic and non-asthmatic adolescents. The study participants were divided into a curricular intervention group for asthma (IG), and a control group with traditional curriculum (CG). Topics related to asthma were included in the curriculum, such as the disease concept, triggering factors, treatment, symptoms, action plan, and beliefs in popular myths about the disease. These topics were evaluated through a questionnaire with scores ranging from 0 to 20 points, expressed by the mean score. The acquisition of knowledge was evaluated 90 days and 540 days after the start of the intervention (baseline), by applying the mixed linear model for analysis of associations.

Results: 181 students participated in the study (IG=101 and CG=80). As shown by their scores before the intervention; the students were unaware about asthma (IG: $\bar{x} = 10.7 \pm 2.9$ vs. CG: $\bar{x} = 11.5 \pm 2.7$ points), its treatment (IG: $\bar{x} = 1.6 \pm 0.9$ vs. CG: $\bar{x} = 1.6 \pm 0.8$ points), and reported beliefs in popular myths about the disease (IG: $\bar{x} = 1.5 \pm 1.1$ vs. CG: $\bar{x} = 1.7 \pm 1.1$ points). After the intervention, the IG showed higher overall knowledge (GI: $\bar{x} = 15.5 \pm 3.1$ points), as well as knowledge about the treatment (GI: $\bar{x} = 2.5 \pm 1.0$ points).

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points), and two times more knowledge in the field “beliefs in popular myths about the disease” when compared to the CG. A greater probability of achieving satisfactory knowledge about asthma was noted in the IG (RR = 3.5), with NTT = 2.0.

Conclusion: The inclusion of the asthma topic in the curriculum improved knowledge about the disease in a subgroup of students.

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PALAVRAS-CHAVE

Asma;
Conhecimento;
Educação;
Saúde escolar;
Prevenção & controle

Intervenção curricular eleva o conhecimento dos adolescentes sobre a asma: um ensaio randomizado

Resumo

Objetivo: Avaliar o impacto de uma intervenção curricular sobre o conhecimento em asma dos adolescentes de um colégio público.

Métodos: Ensaio controlado e randomizado de uma intervenção curricular em asma, conduzido com adolescentes, asmáticos e não asmáticos, alocados em: grupo intervenção curricular em asma (GI) e grupo controle com currículo tradicional (GC). Foram inseridos no currículo tópicos relacionados à asma tais como o conceito, fatores desencadeantes, tratamento, sintomas, plano de ação e crenças em mitos populares sobre a doença, avaliados por meio de um questionário com escore de 0-20, expressos em média de acertos. Avaliou-se a apreensão do conhecimento 90 dias e 540 dias após o início da intervenção (baseline), aplicando-se o modelo linear misto para análise das associações.

Resultados: 181 estudantes participaram do estudo (GI = 101 e GC = 80). Os estudantes desconheciam a asma, como revelam os seus escores anteriores à intervenção (GI: $\bar{x} = 10,7 \pm 2,9$ vs. GC: $\bar{x} = 11,5 \pm 2,7$ acertos), seu tratamento (GI: $\bar{x} = 1,6 \pm 0,9$ vs. GC: $\bar{x} = 1,6 \pm 0,8$ acertos) e relataram crenças em mitos populares sobre a doença (GI: $\bar{x} = 1,5 \pm 1,1$ vs. GC: $\bar{x} = 1,7 \pm 1,1$ acertos). Após a intervenção, o GI apresentou maior conhecimento geral (GI: $\bar{x} = 15,5 \pm 3,1$ acertos); sobre o tratamento (GI: $\bar{x} = 2,5 \pm 1,0$ acertos) e 2 vezes mais conhecimento no domínio “crenças em mitos populares sobre a doença” comparado ao GC. Maior probabilidade de alcançar conhecimento satisfatório sobre a asma foi observado no GI (RR = 3,5), com NNT = 2,0.

Conclusão: A inserção do tema asma no currículo é capaz de elevar o conhecimento sobre a doença em um subgrupo de estudantes.

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Introduction

Asthma is the most common chronic disease among children and adolescents, with a worldwide prevalence of 14%.¹ In Brazil, it is estimated that 23.2% of adolescents have symptoms suggestive of the disease, one of the highest worldwide prevalence rates.² At this age range, asthma is the third cause of hospitalization and death among respiratory diseases³ in Brazil.

Education is one of the pillars for asthma management, and has been recommended by national and international guidelines.⁴ Despite these recommendations, patients and relatives of asthmatic individuals have a low level of knowledge about the disease, which contributes to under-treatment and lack of symptom control,⁵⁻⁷ high morbidity, social isolation, future working inability,⁷ and early death⁸ at school-age.⁹

The school environment is favorable to asthma guidelines, primarily for adolescents.¹⁰⁻¹⁶ School educational actions have been developed by health professionals and

have contributed to the reduction of underdiagnosis,¹¹ morbimortality, and the emotional burden caused by asthma in countries such as the USA and Australia.^{8,9} Despite the successful results in high-income countries, there are few initiatives in economically-disadvantaged countries.¹¹

In middle-income countries, such as Brazil, educational interventions on asthma carried out in schools can also be an effective strategy for health promotion, and for control of asthma and other chronic respiratory diseases. Despite this, there are no standardized actions in Brazil that include guidelines on asthma in schools' curricular activities. In the city of Salvador, state of Bahia, Brazil, despite the existence of a successful program for asthma control, in which health education is one of the pillars for the disease management,¹⁷ the authors did not identify educational actions aimed at adolescents in the school environment.

An alternative for the development of educational actions aimed at prevention and promotion of health in schools is the inclusion of health-related themes into the school curriculum.^{18,19} The inclusion of these themes into

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