A peer-led asthma education program in adolescents was more effective than no program for improving quality of life

Shah S, Peat JK, Mazurski EJ, et al. **Effect of peer led programme for asthma education in adolescents: cluster randomised controlled trial.** BMJ. 2001 Mar 10;322:583-5.

QUESTION

In adolescents with asthma, is a peer-led asthma education program more effective than no program for improving quality of life (QoL)?

DESIGN

Randomized (allocation concealed*), blinded {data analyst}†,* controlled trial with 3-month follow-up.

SETTING

6 high schools in Tamworth, New South Wales, Australia.

PATIENTS

272 adolescents who were in grades 7 and 10, were present on the test day, and reported recent wheeze were included in the study. 251 adolescents (92%; mean age 14 y, 55% girls) completed follow-up.

INTERVENTION

3 schools (124 students) were cluster randomized to implement the adolescent peer-led asthma education (Triple A) program. The Triple A program involved a 3-step approach to peer-led education: In step 1, student volunteers in grade 11 were trained as leaders during a 6-hour workshop to educate their peers on asthma and its management; in step 2, teams of 3 to 4 of these leaders taught three 45-minute health lessons to grade 10 classes in their schools on how to critically analyze the barriers to asthma management by using games, videos, worksheets, and discussion; and in step 3, the grade 10 students developed short acts, dramas, and songs to present the key messages to grade 7 students. 3 schools (148 students) were cluster randomized to receive no program.

MAIN OUTCOME MEASURES

Main outcomes included asthma QoL (overall, activities, symptoms, and emotions) and lung function. QoL was assessed using a self-administered questionnaire. Improvement in QoL was considered clinically important with a change in score of > 0.5 units.

MAIN RESULTS

Overall QoL and activities were higher for students in the Triple A program than for those who were not (Table). Grade 10 students in the Triple A program reported an increase in QoL (P = 0.01) (Table), and grade 7 students did not (P = 0.08). Grade 7 students in the Triple A program reported an increase in activities (P = 0.005) (Table), and grade 10 students did not (P = 0.53). Groups did not differ for emotions (P = 0.14) or symptoms (P = 0.15). Groups did not differ for improved lung function.

CONCLUSION

In adolescents with asthma, a peer-led asthma education program was more effective than no program for improving overall quality of life and activities.

Source of funding: Commonwealth Department of Health and Aged Care and Asthma NSW.

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*See Glossary.

†Information provided by author.

Adolescent peer-led asthma education program (Triple A) vs no program for overall quality of life (QoL) and QoL activities domain‡

Outcomes at 3 mo	Triple A	No program	RBI (95% CI)	NNT (CI)
Overall QoL	25%	12%	101% (17 to 247)	8 (5 to 36)
Grade 10 QoL	18%	4.5%	306% (31 to 1200)	8§ (5 to 32)
Overall activities	41%	28%	48% (4.3 to 110)	8 (5 to 72)
Grade 7 activities	55%	30%	87% (21 to 192)	4 (3 to 13)

‡Abbreviations defined in Glossary; RBI, NNT, and CI calculated from data in article.

§NNT rounded to the next highest integer.

COMMENTARY

Current asthma consensus guidelines consider asthma education to be one of the most important components of asthma management, but unfortunately, this aspect of care is often neglected. Furthermore, we need to determine what types of educational interventions are most useful in the various subgroups of asthmatic patients, such as adolescents. The study by Shah and colleagues reports a new and promising approach to providing asthma education to adolescents through a peer-led program. It suggests that adolescents can learn from their peers and probably do so more often than from adult educators. Lung function improved in both groups. Because the intervention was done at the same time as the control group, the magnitude of the effect may have been underestimated as a result of contamination of the control group through awareness of the study in the community.

The level of asthma-related morbidity in these adolescents seemed low; if a high-morbidity subgroup had been chosen, the results might have been more striking (1). It would be worth repeating the study among adolescents who have recently visited an emergency room for acute asthma, as we recently did for adults (2). Furthermore, high-morbidity groups are often nonattenders of educational programs, and new initiatives, such as the one described by Shah and colleagues, could be useful in motivating these patients to improved self-management.

This study is important because it suggests the peer-teaching approach that has been successful in drug-use prevention among adolescents (3) may be transferable to asthma education.

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