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Improving the attitudes of primary care practitioners toward adolescent care: a pre-post intervention pilot study

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Abstract:

Background: Investing in adolescent health is among the most cost-effective health measures. Primary care practitioners are ideally positioned to deliver such interventions. However, several barriers hinder them from engaging with adolescents.

Objective: To pilot test the impact of a 1-day training session on adolescent health on the attitudes of primary care practitioners toward adolescent care.

Subjects: Participants were family physicians and nurses enrolled in a 1-day training session on adolescent health.

Methods: A non-randomized, pre-post intervention study with no control group. Data on barriers for providing care to adolescents, preferred pediatric age group and attitudes toward adolescent care were collected immediately prior. Participants' attitudes were measured again immediately after training.

Results: Most participants reported they preferred to attend pediatric groups other than adolescents. The most frequently reported barriers were: excessive amount of time needed and lack of training. Participants reported positive pre-training attitudes, with mean scores above the midpoint of the scale in all dimensions. Significant positive improvements were observed after training in Adequacy, Self-esteem and Satisfaction. Subgroup analysis showed that at baseline, professionals who preferred to work with adolescents had significantly more positive attitudes in Adequacy, Self-esteem and Satisfaction. After training there was a general improvement in attitudes in both groups, with attenuation of the differences between them.

Conclusion: Participation in a 1-day tailored educational intervention on adolescent health had a positive impact on the attitudes of primary care practitioners, regardless of their preferred age group. This improvement may lead to more active engagement with adolescents and substantial health gains.

Keywords: adolescent health, attitudes, continuing medical education, primary health care

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Introduction

Adolescence encompasses great physical, cognitive, emotional and social changes that are the foundation for later life health and wellbeing [1], [2], [3]. Unprecedented global forces are shaping the health of the largest generation of 10–24 year olds in human history [3]. Despite making up around a third of the population in many countries, adolescents and young adults are generally overlooked in health and social policies [3], [4]. Investments in adolescent health and wellbeing bring a triple dividend of benefits now, into future adult life and for the next generation of children [3], [5], [6], [7], [8].

About two-thirds of adolescents' contacts with health services occur in Primary Health Care settings [9]. Primary health care professionals have a longstanding relationship with the family, and an understanding of the context of the family's issues. Families highly value the input of these practitioners and welcome their involvement [10]. However, evidence suggests that only 39% of adolescents visiting primary care receive preventive counseling [11].

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One of the main barriers to good practices in adolescent health care is the lack of specific training [1], [10], [12], [13], [14], [15], [16], [17]. Inconsistent and inadequate training results in discomfort in addressing important aspects of adolescent health and unfortunately leads to missed opportunities for reducing morbidity and mortality in this population [9].

A recent report of the Lancet Global Commission on adolescent health and wellbeing outlines where investments in adolescent health should be placed up to 2030 [3]. This Commission clearly states that healthcare providers must have the knowledge, skills, and attitudes to engage with adolescents while maintaining a level of engagement with families, and that training is of essential importance [3].

Several studies have examined pediatric residents' factors affecting their regard toward adolescents. Clinical skills and knowledge in adolescent care [2], attitudes after Adolescent Medicine rotations [18], personal backgrounds, values and their own adolescent experiences [10], [19] have all been associated with pediatric residents' attitudes toward adolescents and their approach to adolescent health care. However, no study to date evaluated whether specific training improves primary care practitioners attitudes toward adolescents.

This study sought to bridge this gap in the evidence. Our aim was to pilot test the impact of a training session on adolescent health in the attitudes of Primary Care Physicians and Nurses toward adolescent care. We hypothesize that training improves the attitudes of these professionals.

Materials and methods

Context

In Portugal, the policies issued by the Ministry of Health are coordinated and delivered by five Health Administrations, distributed by geographic region. Each Health Administration comprises several health Center groupings, consisting of several functional units – the Health Centers – whose mission is to ensure the provision of primary health care to the population.

This study was led in the Centre Region of Portugal. The Centre Regional Health Administration conducted six training sessions on adolescent health (one for each regional health center grouping), between September and October 2014. The sessions were addressed to primary health care professionals – family physician specialists, family medicine residents and family nurses.

Study design

This study was a non-randomized, pre-post intervention study with no control group. Primary data was collected using questionnaires immediately prior and after the intervention.

Participants

Family physician specialists, family medicine residents and family nurses working in the Center Region of Portugal were eligible to participate. To ensure that professionals from all units were represented, the Centre Regional Health Administration sent a letter to the coordinator of each health center ($n = 84$) with a summary of the training session, inviting them to select two health professionals from each health center, preferably a physician and a nurse. One hundred and thirty-two participants attended the training session and 90 agreed to participate in the study. There were no exclusion criteria.

Training program (intervention)

The training sessions were designed according to the principles of adult education, with the selection of the most appropriated andragogic techniques and diverse didactic resources. They were delivered by a group of eight accredited trainers and adolescent health experts, mainly from the National Society of Adolescent Medicine.

During each session, the presentation was stopped upon request to allow for discussion. Participants were encouraged to verbalize their points of view, personal experiences and to critique their colleagues in a constructive manner. They were particularly encouraged to consider which emotions they were feeling along the session.

Outcome measures and data collection instrument

Immediately prior to the training session, participants were asked to provide information on demographic data, barriers for providing care to adolescents, preferred age group to work with (new born/infant, child or adolescent), and attitudes regarding care for the adolescent. The data collection instrument was constructed based on a literature review [12], [20], [19], [21], [22], rather than an existing instrument, because a validated questionnaire encompassing all these dimensions was not available.

Attitudes of health professionals were assessed with a 10-item questionnaire (Table 1) adapted from a validated instrument – the Short Alcohol and Alcohol Problems Perception Questionnaire (SAAPPQ) [22]. Notwithstanding the obvious differences between these two populations, this approach was chosen because the literature shows a remarkable overlap between adolescents and patients with alcohol-related problems regarding barriers, enablers and attitudes from health professionals. Both groups typically have occult psychosocial problems. Primary care practitioners usually report similar barriers for engaging with these populations: lack of training, lack of time, difficulties in establishing rapport, difficulties in counseling and negative attitudes [10], [23], [24].

Table 1: Attitudes appraisal.

Domain	Item
Adequacy: The extent to which health professionals believe they have sufficient knowledge and skills to manage adolescents	I feel I know enough about adolescence to carry out my role when working with adolescents
Legitimacy: The extent to which health professionals consider some aspects of their job as being their responsibility	I feel I can appropriately advise adolescents
	I feel I have the right to ask adolescents questions about their problems when necessary
Motivation: The extent to which health professionals want to work with adolescents	I feel that my adolescent patients believe I have the right to ask them questions about their problems when necessary
	I want to work with adolescents
Self-esteem: The extent to which health professionals perceive their self-worth when dealing with adolescents	Pessimism is the most realistic attitude to take toward adolescents
	I feel I do not have much to be proud of when working with adolescents
Satisfaction: The extent to which health professionals feel rewarded when working with adolescents	All in all, I am inclined to feel I am a failure with adolescents
	In general, it is rewarding to work with adolescents
	In general, I like adolescents

Each questionnaire item invites the participant to express agreement on a seven-point Likert scale (from “strongly disagree” to “strongly agree”) with 10 statements regarding the provision of health care to the adolescent. Each pair of items measures a different dimension: Adequacy (items 1 and 2), Self-esteem (items 3 and 4), Satisfaction (items 5 and 6), Motivation (items 7 and 8) and Legitimacy (items 9 and 10). Each dimension is measured by the sum of each pair of items. The two items in the Self-esteem dimension and the second item in the Motivation dimension are reversed scored as they are negatively phrased.

After the training session participants were asked to answer only the ten items concerning their attitudes towards adolescent care.

Ethical considerations

The first page of the questionnaire contained a brief explanation of the study and its objectives. Participants were guaranteed data confidentiality and asked to provide informed consent. The study protocol was approved by the Ethics Committee of the Centre Regional Health Administration (Ref. 46/2014).

Data collection and analysis

Data were introduced by the main investigator (M.I.S). Each participant was assigned a code only known to this researcher. Analysis was performed by a second research team (F.R.), blind to the identity of the participants. For statistical analysis, the following variables were transformed: the professional groups were dichotomized in physicians and nurses; the preference for age group was dichotomized in adolescents and others.

Results are presented as mean \pm standard deviation for continuous variables and frequency distribution for categorical variables. Student's t-test for paired samples was used to compare attitudes before and after training, attitudes before and after training between professional groups, and attitudes between groups that differed in age group preference. The chi-squared (χ^2) test was used to evaluate the association between the professional group and the age group preference.

Data were analyzed with IBM© SPSS© Statistics V22. Statistical significance was considered for a p-value < 0.05.

Results

Participants' characteristics

Of the 90 health professionals who participated in this study, 57 (63.3%) were nurses. Participants had a mean age of 42.3 ± 9.8 years, and 83 [92.2%] were female (Table 2).

Table 2: Participants' characteristics and preferred age group.

	Physicians (n = 33)	Nurses (n = 57)
Female, n (%)	27 (81.8)	56 (98.2)
Age, years	41.5 ± 12.6	42.8 ± 7.8
Preferred age group – adolescent, n (%)	13 (39.4)	17 (29.8)

Preferred age group

Most participants reported that they preferred to provide care for pediatric groups other than adolescents (Table 2). No association was found between professional groups and preference for an age group ($p = 0.35$).

Barriers

The most frequently reported barriers were the excessive amount of time needed for providing care to the adolescent and lack of training (Table 3). Other less frequently reported barriers included: difficulties in communication, lack of appropriate facilities and factors hindering the adolescents from seeking help, such as insufficient publicity, moderating fees and non-compatible schedules.

Table 3: Barriers to adolescent care.

Barrier	%
Excessive time needed	70
Lack of training	62.2
Unsatisfactory results	6.7
Lack of interest	1.1
Other	7.8
There are no barriers	8.9

Attitudes

Overall, participants reported positive pre-training attitudes, with mean scores above the midpoint of the scale in all dimensions assessed (Table 4). Significant positive improvements were observed in Adequacy, Self-esteem and Satisfaction, and a tendency towards significance in Motivation. There were no significant differences in attitudes between physicians and nurses, both before and after training.

Table 4: Pre and post training attitudes toward adolescent care.

	Pre training	Post training	p-Value
Adequacy	8.5 ± 1.9	9.8 ± 1.6	<0.001
Legitimacy	8.3 ± 2.3	8.4 ± 2.5	0.64
Motivation	11.6 ± 1.7	12.0 ± 1.5	0.06
Self esteem	9.7 ± 2.1	10.7 ± 2.0	<0.001
Satisfaction	10.8 ± 1.9	11.3 ± 1.6	0.003

Comparison of attitudes prior to training according to preference by age group showed that professionals who preferred to work with adolescents had significantly more positive attitudes in Adequacy, Self Esteem and Satisfaction, with a trend towards significance in the other two dimensions (Table 5).

Table 5: Pre and post training attitudes toward adolescent care by age-group preference.

	Pre training			Post training		
	Preferred group		p-Value	Preferred group		p-Value
	Adolescents	Others		Adolescents	Others	
Adequacy	9.1 ± 1.6	8.2 ± 2.0	0.04	10.1 ± 1.5	9.6 ± 1.5	0.11
Legitimacy	9.0 ± 2.3	8.0 ± 2.3	0.05	9.3 ± 1.8	8.0 ± 2.7	0.006
Motivation	12.1 ± 1.6	11.4 ± 1.8	0.06	12.1 ± 1.7	11.9 ± 1.4	0.56
Self esteem	10.5 ± 2.1	9.3 ± 1.9	0.01	11.0 ± 2.1	10.5 ± 2.0	0.33
Satisfaction	11.4 ± 1.6	10.4 ± 2.0	0.02	11.9 ± 1.3	11.0 ± 1.6	0.006

After training there was a general improvement in attitudes, with attenuation of the differences between professionals who selected different preferred age groups. The only significant post training differences between these groups were on Legitimacy and Satisfaction (Table 5).

Discussion

Physicians' awareness of their own feelings and responses toward their patients is known to impact the quality of the therapeutic relation [18]. A non-judgmental attitude is essential to engage with adolescents [3]. Health care providers must also have the knowledge and skills to address the complex health issues of adolescents. Hence, our study aimed to evaluate the impact of a 1-day training session on the attitudes of primary care physicians and nurses toward adolescent healthcare. Our results showed that these professionals presented, in general, positive attitudes at baseline, which were further improved after the training session.

The positive effect of training on improving knowledge, competence and clinical skills toward adolescent healthcare has been thoroughly documented [1], [2], [12], [20], [23]. Attitudinal shifts with training are not so well explored. A qualitative study using semi-structured interviews explored the impact of Adolescent Medicine rotations on the attitudes of pediatric residents [18]. The authors reported a positive change on residents' attitudes toward adolescent healthcare. In another qualitative study examining the impact of training on pediatric nurses' knowledge, attitudes and practice, the authors reported improvements on all these domains following a 3-week educational intervention [25]. To our knowledge, this pilot study is the first to report the effects of a training session on the attitudes of primary health care practitioners toward adolescent care.

Adolescents and young adults have the poorest level of universal health coverage of any age group [3]. It is often claimed that this is due to the fact that healthcare providers do not like to work with adolescents [21], [23]. Our results seem to be in line with this claim as most participants referred that adolescents were not their preferred age group. Interestingly, our findings also showed that family physicians and nurses had positive

attitudes toward working with adolescents. Prior to training, the majority felt motivated for, and satisfied when, working with adolescents. The majority also reported positive feelings when working with adolescents (task-specific self-esteem). This suggests that physicians and nurses in primary care practices are willing to engage with adolescents and take joy from it, notwithstanding the fact that the majority prefer other pediatric age groups. Another interesting finding was that primary care providers were divided about their belief in having adequate knowledge and skills (role adequacy) for providing care to the adolescent. Accordingly, more than 60% of the sample pointed to a lack of training as a barrier for providing this care. Participants also reported borderline positive views regarding their legitimacy for engaging with adolescents. This was particularly true for those who reported a preference for age groups other than the adolescents. At baseline, preference for adolescents seems to have worked as an enabler, as they reported higher levels of adequacy and legitimacy. Hence, our findings suggest that primary care practitioners' desire to work with adolescents does not constitute a major barrier. However, doubts about their professional role in, and feelings of unpreparedness for, engaging with adolescents may act as a barrier for providing care to the adolescent, particularly for those preferring to work with other age groups. This reinforces the need to properly train family physicians and nurses to engage with adolescents. It also suggests that training programs must include components to increase professionals' legitimacy in this specific area.

Overall, there was a positive shift in attitudes with training. As expected, professionals felt better equipped to work with adolescents (role adequacy) after being trained. They also reported significant higher levels of satisfaction and task-specific self-esteem, and a trend for being more motivated to work with adolescents. This effect could be observed independently of whether or not the adolescents were the preferred age group. Training also seems to have eliminated differences in adequacy, motivation and self-esteem that were observed between these groups at baseline. This suggests that the contents of the training program are appropriate for these three dimensions and tailored to the needs of both these groups. Although both groups improved their levels of satisfaction, significant differences were still present after training. One could think of adding more motivational contents to the training program. However, both groups reported high levels of motivation after being trained, which suggests that little is to be gained from investing in this area.

A notable exception for this overall improvement was participants' feelings of legitimacy. No significant differences could be found with training. When analyzing pre-training legitimacy, a trend toward feeling more legitimate to work with adolescents was seen among those who preferred to work with adolescents. Training was able to slightly increase the feeling of role legitimacy in this group, while the other remained unchanged. Training programs may need to be tailored if one wants to increase family physicians' and nurses' feelings of legitimacy, especially for those whom the preferred age group is not the adolescent.

Notwithstanding their will to work with adolescents, the participants in this study identified several barriers to adolescent healthcare. Obstacles to adolescent care were common across all participants, irrespective of their preferred age group, a finding also reported in previous studies [21], [23]. The two most frequently reported barriers were the amount of time needed to manage adolescent problems and insufficient training. Over the last decades, these and other barriers have consistently been mentioned by healthcare professionals but little seems to have changed [10], [21], [23]. The consultation time in primary care is typically short. For instance, patients in the UK discuss their mental health problems with a primary care practitioner for an average of 9 min per consultation [10]. Adolescents are less experienced users of health care. Hence, more time seems to be required for professionals to engage with them, especially when it comes to sensitive issues like sexuality, psychosomatic complaints, emotional suffering, family dysfunction or alcohol and drug related problems [3], [23]. What is surprising is that one third of a family physician's time is spent dealing with these same issues in their adult patients [23]. This suggests that not only more time, but also more training, is needed for primary care professionals to systematically engage with adolescents. Another argument for this low engagement is that healthcare professionals have few opportunities to address the psychosocial problems of the adolescents because they limit their use of health care services to acute illness and trauma [3], [21]. One would assume that primary care practitioners would be more willing to counsel adolescents if more time was available, such as during routine visits. However, only 39% of adolescents seem to receive some type of preventive counseling during such visits [11]. Thus, lack of time seems to be a multidimensional barrier that should be addressed in more detail in future studies to outline its true impact.

Difficulties in communication, lack of appropriate facilities, and factors hindering the adolescents from seeking help, such as insufficient publicity in the media, moderating fees and non-compatible schedules were barriers less frequently reported in this study. Some of these are external to health services and include legal frameworks, governing health actions, and out-of-pocket costs. Although not unique to adolescents, they assume a greater magnitude in the young. Both legal and financial barriers to health service access are greater in adolescents than in other age groups [3].

Lack of training often results in discomfort in approaching important aspects of adolescent health, leading to the loss of opportunities for reducing morbidity and mortality in this population [10], [22]. Therefore, inter-

national societies [13], [15] and, more recently, the Lancet Commission on Adolescent Health and Wellbeing [3], have strongly recommended that healthcare providers should receive training to improve their knowledge, skills and attitudes so that they are able to deliver confidential, non-judgmental and respectful health care to adolescents. Although our training program was designed before the release of these recommendations, it thoroughly addresses these concerns. It was also as much as possible tailored to the needs of primary care practitioners. First, it is a 1-day training session, thus taking into account time constraints in clinical practice. Second, it approached both biological and psychosocial aspects of adolescent care. Third, it was not based solely on an exhaustive description of theoretical contents, but rather promoted the use of several active methodologies, encouraging personal engagement and sharing of experiences and values. Despite this, it was not our goal to ascertain which training strategies had the most impact. Future studies could address which contents are more related to attitudinal shifts, explore barriers and enablers and incorporate these findings in an improved training program. Another interesting line of research would be to validate the 10-item attitude questionnaire.

Our study has some limitations. First, participants were selected after being invited by their local coordinator. It is possible that those with more interest in adolescent care may have been overrepresented. Nevertheless, we sought to include participants from all Primary Care Units in our geographical region. More research is needed to examine the generalizability of this training program. Second, participants were part of a training session on adolescent care and some of the questions may have been answered in a socially desirable way. Hence, we cannot rule out a social desirability bias. However, a two thirds majority reported that adolescents were not their preferred group. This suggests that the respondents felt comfortable expressing their views. Finally, our results are based on the views of two distinct professional groups – physicians and nurses. They have distinct professional roles in providing care for the adolescent which may have introduced some heterogeneity. However, precisely because of this, we believe it makes sense to analyze the views of these two groups. Additionally, the groups were similar concerning their attitudes toward adolescents.

Conclusion

This study showed that participation in a 1-day training session on adolescent health has a positive impact on the attitudes of primary care practitioners, regardless of their preferred age group.

Our results may have important implications for clinical practice: the improvement on the attitudes of primary care practitioners with a tailored educational intervention may lead to a more active engagement with adolescents, resulting in substantial health gains. It also reflects the need for policy makers to recognize the importance of incorporating adolescent health training into primary care practice to deal with the increasing problems of the adolescents. We hope that this contributes to the ultimate goal of providing quality patient care and better patient outcomes.

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