Skills for Interviewing Adolescent Patients: Sustainability of Structured Feedback in Undergraduate Education on Performance in Residency

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ABSTRACT

Background Effective adolescent (10 to 19 years) interviewing by physicians is an essential skill that many trainees can find challenging.

Objective We assessed whether structured adolescent interviewing using standardized patients (SPs) and feedback in undergraduate medical education (UME) has a sustained effect on residents' skills.

Methods Postgraduate year (PGY) 1 residents conducted interviews with a SP adolescent–mother pair. The SPs independently scored each PGY-1 interview using the structured communication adolescent guide (SCAG). Unpaired *t* tests were conducted comparing "Total-Item" and "Global" scores of PGY-1s who received structured SP adolescent interviewing with feedback in UME ("structured training" group) to those who had not ("no structured training" group).

Results PGY-1s in the structured training group (n = 23) received significantly higher mean Total-Item scores from both the SP adolescent (40.78 ± 7.04 and 32.41 ± 10.12, respectively; $P = .001$) and the SP mother (40.48 ± 7.90 and 33.34 ± 10.90, respectively; $P = .01$) than those without structured training (n = 29). Statistically significant results favoring PGY-1s with prior training were also seen with the SP adolescent and mother total Global SCAG scores.

Conclusions Structured training in adolescent interviewing with SPs and feedback in UME appears to have a sustained effect on residents' adolescent interviewing skills. PGY-1s will interview adolescents and may benefit from structured adolescent SP interviewing with feedback, especially individuals who did not have this experience during their medical school training.

Introduction

Successful communication strategies have been shown to enhance patients' satisfaction with their care[1,2] and compliance with treatment programs.[3–5] However, studies have shown that postgraduate year (PGY) 1 residents in multiple disciplines are not skilled in many aspects of adolescent communication.[6–9] Health care professions trainees also feel that their adolescents' communication training needs are not addressed in medical education, expressing interest in more training throughout the medical curriculum.[10]

Communication training using adolescent standardized patients (SPs) has been shown to be effective at the undergraduate level,[11,12] yet little is known about the sustained impact effectiveness of this type of training into residency. There is some evidence supporting the sustained effect of adult communication skills training from undergraduate medical education (UME) into graduate medical education.[13] Our study aimed to determine whether structured SP adolescent interviewing with feedback in UME has a sustained effect on PGY-1 residents' adolescent interview performance.

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Editor's Note: The online version of this article contains a table of residents' scoring in both "structured training" and "no structured training" groups.

Methods

We conducted a 2-group comparison study. PGY-1s entering Dalhousie University in Halifax, Canada, were invited to participate and were recruited from all specialties at orientation sessions prior to the start of their residency. Five female adolescent and mother pairs were trained using scripts containing sensitive adolescent topics and were encouraged to give feedback. SP pairs were randomized to each individual PGY-1 who participated. SP adolescents portrayed a 14-year-old girl.

Outcome Measures

Demographic information collected included age, sex, institution of UME training, and previous adolescent interview teaching. Participants with "structured

TABLE 1
Demographic Information for PGY-1s With No Previous Structured Training in Undergraduate Medical Education Versus PGY-1s With Structured Training[a]

	Male, No. (%)	Female, No. (%)	Age Range, y	Average Age, y
No structured training	9 (31)	20 (69)	24–46	29.17
Structured training	9 (39)	14 (61)	20–30	27.13
P	.55	.55		.08

Abbreviation: PGY, postgraduate year.

[a] No statistically significant difference was found between the "no structured training" group and the "structured training" group when comparing the percentage of men and women in each group or the mean age of participants. No statistically significant difference was found between the average age of the no structured training group versus the structured training group.

training" indicated that they had received training in UME with at least 1 adolescent SP and were given feedback. A lecture and/or tutorial on adolescent interviewing was classified as "no structured training."

The structured communication adolescent guide (SCAG) was used to evaluate resident performance. Prior research has shown the SCAG to be a reliable instrument with some validity evidence when used by SPs[14] and non-SP adolescents.[15] The SCAG consists of 4 sections: Getting Started, Gathering Information, Teen Alone, and Wrap Up. The sum of all checklist item scores within each section yields a "Total-Item" score (maximum of 58). The sum of the "Global" scores for each section (n = 4) yields a total Global score (maximum of 40). The 5-point Likert scale used in earlier SCAG iterations was expanded to a 10-point scale to allow for more variability in scoring. The Teen Alone section highlights 14 sensitive topics relevant to adolescents and is based on the HEADDSS mnemonic.[16,17]

Procedure

Interviews were conducted at the Dalhousie University Learning Resource Centre. Each resident provided informed consent, completed a demographic questionnaire, and conducted an interview with an SP adolescent–mother pair. Using the SCAG, SPs individually scored PGY-1s immediately following each interview. The SPs recorded scores of 2 of 2 (fulfilled the criteria of the question well), 1 of 2 (fulfilled the criteria), or 0 of 2 (did not fulfill the criteria) for each item. The PGY-1s also received a Global score on each of the 4 sections of the SCAG. Standardized patients were asked to write comments regarding PGY-1s' performance, which shaped the verbal feedback PGY-1s would receive.

Institutional Review Board approval was provided by the Research Ethics Board of Dalhousie University in Canada.

Data Analysis

Demographic information was analyzed using descriptive statistics. Unpaired *t* tests were utilized to compare the average Total-Item and Global (total) SCAG scores of the "no structured training" group with the "structured training" group. These *t* tests were conducted using the SP adolescents' and mothers' scores separately. Cohen's *d* analysis was conducted to determine effect size of these results. PGY-1 performance in the Teen Alone section of the SCAG was analyzed. An unpaired *t* test was conducted between the SP adolescent and SP mother scores to determine interrater reliability.

Results

A total of 52 PGY-1s participated (34 women) of a possible 108 (48% response rate); and 23 of these had received adolescent structured training during their UME, including 1 or more adolescent SP encounters with feedback (TABLE 1).

The structured training group demonstrated significantly greater Total-Item and Global SCAG scores (from both SP adolescents and mothers) than the No structured training group (TABLE 2). Cohen's *d* analysis demonstrated SP adolescent Total-Item and Global score effect sizes of 0.96 and 0.95, respectively. For the SP mothers, the Cohen's *d* effect size for the Total-Item and Global scores was 0.75 and 0.61, respectively.

The online supplemental material compares the percentage of PGY-1s who received a 2 of 2 ("did well") from adolescent SPs in all areas of interviewing between the structured training and no structured training groups.

Discussion

Our study aimed to determine whether structured adolescent training, consisting of interviews and structured feedback from an adolescent–mother SP pair in UME, had a sustained effect on PGY-1 adolescent interviewing performance.

PGY-1s who had received structured adolescent training in UME scored significantly higher on mean Total-Item and total Global SCAG scores than PGY-1s who had not. This lends support to our hypothesis

TABLE 2
Scores for PGY-1s With No Previous Structured Training in Undergraduate Medical Education Versus PGY-1s With Structured Training[a]

	SP Adolescent				SP Mother			
	Total-Item Score		Global Score		Total-Item Score		Global Score	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
No Structured Training	32.41	10.12	26.10	6.22	33.34	10.90	25.41	7.74
Structured Training	40.78	7.04	30.83	3.33	40.48	7.90	29.61	5.92
P	.001		.001		.010		.035	

Abbreviations: PGY, postgraduate year; SP, standardized patient.
[a] Structured training is interviewing 1 or 2 adolescent SPs with feedback. Total-Item score is the total sum of checklist item scores (maximum 58 points). Global score is total Global score (maximum 40 points).

that the skills acquired in interviewing an adolescent with SP feedback in UME were sustained into postgraduate training. Financial and time limitations are often cited as reasons for lack of adolescent training interventions.[17] This study showed that even with limited adolescent SP encounters with structured feedback, sustained improvement in adolescent interviewing performance appears possible.

The online supplemental material compares the percentage of PGY-1s in each group who scored 2 of 2 ("did well") from SP adolescents on each checklist item of the SCAG. There is room for improvement in many of the risk-taking areas, as well as in discussing confidentiality and separating the adolescent from the parent. This suggests the importance of training medical students, residents, and physicians in effectively facilitating good communication, separation from the adult, discussing confidentiality, and addressing risk-taking behaviors.

Limitations include a small sample size with respondents from a single institution. A second limitation is that the study utilized exclusively female SP adolescents and mothers to maintain consistency and reduce variability. A final limitation may be that our measures were based on just 1 adolescent interview for each participating resident. We believe that the SCAG's measure, which has shown both high reliability and evidence of validity in other studies,[14,15] provides an accurate assessment of PGY-1s' performance on this single occasion.

Conclusion

Structured adolescent training with feedback in adolescent interviewing could be beneficial in undergraduate medical curricula prior to learners approaching adolescents in residency training. The majority of PGY-1s will encounter adolescents and young adults, regardless of subspecialty. The importance of adolescent communication skills is not specific to pediatrics; therefore, we suggest that incorporation of these skills into postgraduate medical training would provide additional preparation for future adolescent clinical encounters.

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