

Design, Evaluation, and Feasibility of a Pediatric Mentoring Program

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Abstract

Chronic illness can have a significant impact on a child's psychological and social well-being. Although children and their families seem to adapt to chronic health conditions, epidemiologic studies suggest these same children display twice the prevalence of psychological symptoms when compared to children without a chronic condition. One intervention that may improve a child's psychosocial well-being is a "buddy program" involving one-on-one mentorships between medical students and children diagnosed with a chronic illness. Studies suggest that one-on-one mentoring promotes better social, academic, and behavioral outcomes, and some follow-up studies suggest these benefits extend a year or more beyond the end of a youth's participation in a mentoring program. The purpose of this study is to design and evaluate the feasibility of a mentoring program between pediatric chronically ill patients and medical students at the University of Arizona College of Medicine - Phoenix Campus.

Mentoring Program Design

Objectives:

The objectives of the mentoring program are to:

1. Provide the pediatric patients with:
 - A friend who provides moral, social, and emotional support and companionship between medical visits
 - A friend who visits and accompanies them during medical visits at the hospital / clinic, provides social support and encouragement during their medical visit, but does not participate directly in their medical care.
2. Provide the medical students with:
 - An opportunity to gain insight on the personal and family impact of a chronic illness by focusing on their friendship with a patient, rather than his/her disease process.
 - An opportunity to gain exposure to pediatric patients' experiences in the hospital / clinic and to develop empathy and understanding from these experiences

Method:

I used PUBMED and the general search terms "mentoring," "buddy," "students," and "healthcare workers" to search literature regarding mentoring programs between healthcare workers or students. I designed a tentative program design based on a previous literature review of research regarding design of effective mentoring programs for children.

Potential Participants:

1. Male or Female patients of Phoenix Children's Hospital aged 8-17 and diagnosed with a chronic condition. For the purposes of this program, a pediatric chronic condition is defined as a condition that lasts greater than 3 months and affects daily functioning.
2. Parents/guardians of children with a chronic condition
3. Medical students enrolled at the University of Arizona College of Medicine - Phoenix Campus.

Time Commitment:

Students and children in the mentoring program will participate in an initial training session: after training they will meet once a month and contact each other once a week via phone, email, or mail. The estimated time commitment for this program is 4 hours of initial training, 4 hours/month for face-to-face meeting(s), and 15-30 min/week for communication between pediatric patient/student pairs via phone, email, or mail. I will pair students and patients for one year.

Mentoring Program Design

Student/Patient Pairing:

Shared interests and characteristics are reliable predictors of a strong mentor-youth relationship. Additionally, while shared interests help in the formation of a new relationship, demographic similarity (same race, gender) in mentor-youth pairs is not necessary. There is no evidence the same gender mentor-youth pairs form stronger relationships than heterosexual mentor-youth pairs. Consequently, medical students and pediatric patients will be matched by their interests and living proximity, but will not be matched by gender or race.

Prior to beginning the program, students and patients will fill out a survey regarding their interests. Patients will be matched with students who share the same "top 3" interests. If a patient does not share at 3 interests with any student, she will be matched with a student with 2 of the same interests, and so on. If a patient shares the same degree of interests with more than one student, the student who lives closer to the patient will be matched with the patient.

Activities:

Different patients will have different activity and functional levels, so the medical students will have to discuss meeting locations and activities with their buddies' parents. They may choose to meet at Phoenix Children's Hospital when the child has an appointment procedure, or hospitalization. They may choose to meet at the family's home, or at a designated community meeting place. Potential meeting locations and activities include the Phoenix Zoo, Heard Museum, Diamondback games, parks, arcades, board games, cooking/baking, etc.

Feasibility of Mentoring Program

Objectives

The objectives of the medical student survey are to:

1. Determine current/anticipated medical student involvement in extracurricular activities
2. Determine previous experience with chronic illness and pediatric chronic illness
3. Determine interest in participating in a pediatric mentoring program

Research Method

74 medical students at the University of Arizona - Phoenix participated in this study. Participants were recruited via an email sent through the class listservs. Participation was voluntary and no incentives were offered for participation. Participants included 18 first-year students (24.3% of participants), 22 second-year students (29.7%), 15 third-year students (20.3%), and 19 fourth-year students (25.7%). There were 35 (48.6%) male participants and 37 (51.4%) female participants.

An Extracurricular Activities Survey assessed the current extracurricular commitments of medical students and their interest in joining the mentoring program. The survey included a short description of the mentoring program and estimated time requirements, and collected data regarding demographics (year in school, gender, career choice), current extracurricular activities, interest in the mentoring program. It also solicited comments on previous experience with chronic illness, pediatric chronic illness, and interest in the mentoring program.

Feasibility of Mentoring Program

Survey administration was via Survey MonkeyTM, an online survey website familiar to the students. Participants were recruited via email sent to class listservs. There was a response rate of 44.3% across classes. The fourth year students had the highest response rate at 79.2%, followed by second-year students (45.8%), first-year students (37.5%), and third-year students (31.3%).

Results

Figure 1 - Time spent on extracurricular activities per week by UA-COM-Phoenix students.

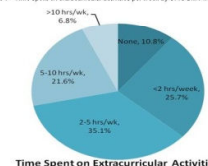


Figure 2 - Frequency of participation in extracurricular activities per week by UA-COM-Phoenix students.



Figure 3 - Interest in and reasonability of time commitment of buddy program according to UA-COM-Phoenix students, separated by year in medical school. Highlighted boxes show answers of highest prevalence for each class. MS = medical student.

Answer Options	Year in Medical School				Total
	MSI	MSII	MSIII	MSIV	
Phase 1: Will you have enough time to agree or disagree with each of the following statements by choosing the most accurate answer.					
I am interested in participating in a buddy program with a pediatric patient.					
Strongly Agree	22.3% (4)	22.7% (3)	31.1% (4)	31.1% (4)	28.0% (15)
Agree	22.4% (4)	27.3% (3)	32.8% (4)	32.8% (4)	32.2% (15)
Neutral	38.9% (7)	12.4% (2)	13.3% (2)	10.0% (2)	18.0% (14)
Disagree	11.1% (2)	38.9% (5)	20.0% (3)	20.0% (3)	24.9% (13)
Strongly Disagree	5.6% (1)	4.4% (1)	0.0% (0)	0.0% (0)	2.7% (2)
I feel that the time commitment for this program is reasonable.					
Strongly Agree	27.8% (5)	9.1% (1)	48.7% (7)	42.1% (6)	29.7% (23)
Agree	61.1% (11)	68.2% (9)	46.7% (7)	40.3% (6)	55.4% (43)
Neutral	11.1% (2)	13.6% (2)	6.7% (1)	13.4% (2)	12.2% (9)
Disagree	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	2.7% (2)
Strongly Disagree	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)

Experiences with Chronic Illness and Pediatric Chronic Illness: Thirty-two students answered the following question: "Please describe any previous experience with chronic illness, including experiences with personal illness, illness in the family, previous volunteer and clinical experiences, LCE, etc." There were a wide range of responses, including personal and familial malignancies, volunteer work abroad, and patients encountered during clinical rotations. Only two participants replied that they had no experience with chronic illness.

Results

Students answered the following question: "Have you had any previous experience with pediatric chronic illness? If yes, please describe briefly." There were a wide range of responses, including AIDS work in Africa, raising children or siblings with chronic illnesses, patients seen on clinical rotations, and personal childhood illnesses. 39 (52.7%) students had no previous experience with pediatric chronic illness.

Discussion:

The aim of this survey was to assess the feasibility of the mentoring program by (1) determining if there was medical student interest in implementing the mentoring program, and (2) determining whether the time commitment for the mentoring program was reasonable for medical students.

Fifty-four percent of the survey participants were interested in the mentoring program. The seventeen students in the "strongly agree" category were well-dispersed among classes, suggesting that the program would be sustainable if implemented.

The proposed mentoring program would require about 6 hours a month, averaging to 1.5 hours a week. According to our survey, 64 (86.5%) participants felt that this time commitment was reasonable. In fact, 47 (63.5%) students were already participating in extracurricular activities for more than 2 hours a week. In addition, 41 (55.4%) students were participating in extracurricular activities once a week or more.

Not surprisingly, it would be difficult for students in their third year to participate in this program. Twenty-six percent of third-year students reported no participation in extracurricular activities, and sixty percent reported either no participation or less than 2 hours of participation a week. While the mentoring program will have to compete with other extracurricular activities for student time, this survey shows that students during their basic science and fourth years do have enough time for extracurricular activities to participate in this program.

Conclusion:

The results of the survey are encouraging for the feasibility of implementing the mentoring program. The survey suggests that there is enough student interest to start a pilot program with a group of 10 or less students. Ideal participants would be students in their first or second years of medical school, as they have less experience with chronic illness (thus, more to learn) and more time for extracurricular activities during this stage of their training. This program could potentially fill a training gap for medical students in the area of pediatric chronic illness, while providing pediatric patients with a unique source of friendship and support.

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