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Adolescents' Beliefs about Preferred Resources for Help Vary Depending on the Health Issue

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Abstract

Background—Adolescents' health care use is less than ideal, especially for more sensitive services. We know little about adolescents' preferred resources for help for health-related issues, and whether these resources vary by problem type. This study examined whether adolescents' preferred resources for help differed depending on the health issue studied.

Methods—Two hundred ten high school students (54% females; 76.6% participation rate) completed a self-administered survey of four separate age- and gender-specific health case scenarios: an adolescent who has symptoms of pneumonia; smokes five cigarettes daily; plans to initiate sex; and has symptoms of depression. For each health scenario, participants rated the importance of getting help in general, how important it was to get help from specific resources (friends/siblings; significant adults; health care professionals; and mental health professionals), and highest rankings of specific resources.

Results—Most adolescents believed it somewhat or very important to get help in general for all scenarios (94% pneumonia; 81% cigarette; 88% depression) except the sex scenario (27%). Repeated measures analysis of variance revealed significant differences in participants' beliefs in the importance of getting help from each specific resource across the four scenarios (all p < .001). Participants' top ranked resources included a doctor (55%) and parents (40%) for the pneumonia scenario; a friend (31%), parents (20%), and doctor (20%) for the cigarette scenario; a partner (38%) and friend (35%) for the sex scenario; and a partner (33%), psychologist (23%), and friend (20%) for the depression scenario. Beliefs in the importance of getting help from specific resources also varied by age, gender, and beliefs in importance of getting help in general.

Conclusions—Adolescents' preferred resources for help differ depending on the health issue in question, with adolescents preferring informal resources (friends and partners) and significant adults (parents) to go to for help for nonphysical health-related issues and physicians for physical health-related issues. Future preventive service efforts and research should also consider the importance of age and gender when examining adolescents' preferred resources for help.

Keywords

Adolescents; Adolescent Health Services; Access to Health Care

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The causes of adolescents' morbidity and mortality are mainly preventable. For this reason, organizations such as the American Medical Association, the American Academy of Pediatrics, and the Maternal and Child Health Bureau promote the delivery of adolescent clinical preventive services [1,2]. Despite establishment of these guidelines and provider efforts to adhere to them, adolescents' routine use of health care is less than ideal, especially for sensitive services or potentially health-compromising behavior such as tobacco use [3]. Adolescents do not go to the doctor even when care is needed [4], but little is known about adolescents' health care resources.

Previous studies provide us a basic understanding about adolescents' general health care resources [5-7]. One study that examined a nationally representative household sample found that adolescents cite mothers and health professionals as top health care resources, particularly younger teens and females [5]. Another study of middle and high school students found that adolescents cited school health classes as the most frequent source of knowledge about health care in general, followed by media, parents, and friends [6]. Younger adolescents were more likely to cite health classes, parents, and media, whereas older adolescents were more likely to cite media and friends [6]. Previous research about access to confidential services suggests adolescents' health care resources may vary depending on the type of health issue examined [8]. This may be particularly true given that many adolescents report having concerns they wish to keep confidential and choose not to seek help because of a fear that confidentiality would be breached [8,9]. Marcell and Halpern-Felsher showed that adolescents perceive health problems differently and that their intentions to seek medical care were dependent on their perceptions that the doctor was effective for that problem [10]. However, we know little about from which other resources adolescents might seek health advice or care and whether this varies by type of health problem.

The main goal of this paper is to examine adolescents' beliefs about preferred resources for help for different types of health issues. We use a scenario-based approach to explore beliefs about preferences for help from friends/siblings, significant adults, and health and mental health professionals for different types of health issues, including help for a severe respiratory complaint, cigarette use, sexual behavior, and symptoms of depression. For each health issue, this paper specifically examines 1) the extent to which adolescents believe it is important to get help in general and from specific resources, 2) adolescents' top rank of preferred resources for help, and 3) whether beliefs and rankings about preferred resources for help vary by age, gender, and beliefs in the importance of getting help in general. We hypothesize that adolescents' beliefs about preferred resources for help will vary depending on the health problem studied.

Methods

Participants

A school-based survey of 210 ninth and 12th graders was conducted in Northern California in 2000. Questionnaire development, survey procedures, and participant demographics have been described in a previous report [10]. In brief, participants were 75% white, 2.5% black, 3.5% Hispanic/Latino, 6% Asian, and 13% other/mixed race. Ages ranged from 13 to 19 years (mean age 15.4 years, SD = 1.8), with 54% being female. Ninth and 12th graders did not differ on any of the demographic and main study variables, except that ninth graders were more likely to have had a recent routine physical examination than 12th graders ($\chi^2 = 12.3$, df = 3, p = . 007).

Procedures

Ninth grade participants were recruited from all eight mandatory "Social Issues" classes and 12th grade participants from three "Social Studies" classes from one Northern California suburban high school. Parent consent and adolescent assent procedures were approved by the University of California, San Francisco's Institutional Review Board. A total of 221 students and their parents consented to participate, representing 80.7% of students recruited (151 of 173 ninth graders and 70 of 101 12th graders). Due to 5% absent rate on the day of survey administration (eight ninth and three 12th graders), the final participation rate was 76.6% (n = 210; 143 ninth and 67 12th graders). Participants were asked to complete a confidential, self-administered written survey during a regularly scheduled 50-minute class.

Measures

Demographics—Sociodemographic information assessed included participants' age, gender, race/ethnicity, and self-report of parental education.

Case scenarios—Case scenarios were used to examine beliefs about preferred resources for help for health issues in three separate areas: (1) physical health (a scenario of an adolescent with symptoms of pneumonia); (2) risk behaviors (two scenarios: an adolescent who smokes five cigarettes daily and an adolescent who is planning to initiate sex); and (3) mental health (a scenario of an adolescent who has symptoms of depression). These scenarios were chosen to represent common health issues faced by adolescents. Participants were given surveys depicting scenarios that matched their age and gender. For example, a ninth grade male was given a survey that included the following four health scenarios:

Pneumonia scenario: Paul is a 14-year-old teenager who has had a bad cough for 3 days now. Since his cough began he's had a high fever of 103° Fahrenheit. During the past 24 hours he's been having a harder time breathing and is having some chest pain. He's been real tired during this illness and hasn't been able to go to school at all.

<u>**Cigarette scenario:**</u> Clint is a 14-year-old teenager who has been smoking about five cigarettes a day for the past 2 years. Most of his friends are real heavy smokers. His parents don't know he smokes.

Sex scenario: Steve is a 14-year-old teenager who just started dating. He's been out with the same person three times now. They've kissed and hugged, and started some touching and fondling (feeling up). Steve is planning to have sex soon.

Depression scenario: David is a 14-year-old teenager who's been feeling sad recently. He's been having problems sleeping, and eating. His schoolwork is suffering because he can't concentrate well in class and in doing his homework. He would rather be alone most of the time. His friends have a hard time cheering him up.

Analyses in this article focused only on participants' beliefs and rankings about preferred resources for help. As described next, after reading each scenario, participants were queried about the extent to which they believed it was important to get help in general for the problem; it was important to get help from specific resources for the problem, including friends and siblings, significant adults, health professionals, and mental health professionals; and their ranking of who they would specifically go to for help.

<u>Beliefs in the importance of getting help in general:</u> Beliefs in the importance of getting help in general were assessed using age- and gender-matched questions. After each health scenario, participants were asked to respond to the question: "How important is it for Paul to

get help from someone for this problem?" responded to on a one-to-five scale, one = not at all important; five = very important.

Beliefs in the importance of getting help from specific resources: Beliefs in the importance of getting help from specific resources were assessed using age- and gender-matched questions. Participants were asked to respond to the question: "How important is it for Paul to get help from each of the following people?" for each specific health problem. Specific resources fell into one of four categories: (1) Friends and Siblings (brother/sister [sibling], friend [not boyfriend or girlfriend], boyfriend or girlfriend [partner]); (2) Significant Adults (parent, other relative, teacher, phone line [teen help line], religious leader [priest, minister, rabbi]); (3) Health Professionals (school nurse or school doctor, doctor [other than from school]); and (4) Mental Health Professionals (school counselor; psychologist, psychiatrist, or social worker). Responses ranged from one = not at all important to five = very important. A sum composite score was developed to represent the mean number of specific resources within each health scenario participants' responses for each specific resource as somewhat or very important to get help. vs. a little, not very, or not at all important and then summing across all specific resources within each health scenario.

<u>Order of importance of getting help from specific resources:</u> Participants were asked to rank up to five resources for help as follows: "Using above choices, rank (put in order of importance) who Paul should go to to get help for the problem."

Data analysis

To examine whether adolescents' beliefs in the importance of getting help in general and from specific references varied across the type of health problem, we performed repeated measures analysis of variance (ANOVA) using health scenario (four levels) to determine the main effects of the scenario. Paired two-tailed *t*-tests were employed as follow-up to significant main effects. To minimize Type 1 error for these analyses, comparisons with associated probabilities \leq .001 were considered statistically significant. Two-tailed *t*-tests were employed to explore whether the composite sum score for specific references varied by gender and age. Linear regression analyses were performed to examine the relationship between gender-, age-, and scenario-specific beliefs in the importance of getting help in general and importance of getting help from specific resources, controlling for mother's education and personal experiences with scenario-specific issues (e.g., ever had pneumonia, ever tried cigarettes, ever had sex, ever was depressed).

Results

Beliefs in the importance of getting help in general

The majority of participants believed it somewhat or very important to get help for the pneumonia, cigarette, and depression scenarios (93.8%, 81.0%, and 88.3%, respectively; Table 1). There was little consensus among participants' beliefs in the importance of getting help for the sex scenario. Repeated measures ANOVA revealed significant within-individual differences among participants' beliefs in the importance of getting help in general across the four scenarios (F = 5076.3, p < .001; Table 1). Follow-up paired two-tailed *t*-tests of the significant main effects showed the pneumonia scenario was rated significantly higher in importance than the cigarette scenario (paired t = 2.96, p = .003); and the pneumonia, depression, and cigarette scenarios were rated significantly higher in importance than the sex scenario (paired ts = 21.35, 17.59, and 19.67, respectively, all p < .001). No differences were found between the pneumonia and depression scenarios.

Beliefs in the importance of getting help from specific resources

The mean number of specific resources who participants identified as somewhat or very important to get help from for each health scenario is reported in Table 2; and participants' beliefs in the importance of getting help from specific resources for each health scenario (means and standard deviations) are reported in Table 3. On average, participants identified 3.6, 5.6, 3.1, and 6.4 resources as somewhat or very important to get help from for the pneumonia, cigarette, sex, and depression scenarios, respectively. Females were more likely to report more specific resources for the sex and depression scenarios than were males (3.8 vs. 2.3, t = 4.38, p < .001; and 6.8 vs. 5.9, t = 2.27, p = .024, respectively; Table 2). No differences by age were noted. Preferred resources for help for the pneumonia scenario included doctor, parent, and school nurse/doctor; for the cigarette scenario included partner, friend, doctor, parent, sibling, school counselor, school nurse/doctor, and phone line; for the sex scenario included partner and friend; and for the depression scenario included friend, parent, psychologist, partner, school counselor, phone line, sibling, and doctor (Table 3).

Beliefs in the importance of getting help from specific resources across scenarios

For each specific resource, we performed repeated measures ANOVA to examine withinindividual differences in beliefs in the importance of getting help across scenarios, and followup paired two-tailed *t*-tests of any significant main effects. Overall, repeated measures ANOVA revealed significant differences in participants' beliefs in the importance of getting help from each of the specific resources across the four scenarios (Table 3). Beliefs in the importance of getting help from resources were significantly different depending on the resource studied except for the importance of getting help from a phone line and a school counselor.

Friends and siblings—Participants believed it was important to get help from a friend and partner for the depression and cigarette scenarios and from a partner for the sex scenario. Participants believed it was less important to get help from a sibling for the cigarette and depression scenarios.

Significant adults—Participants believed it was most important to get help from a parent for the pneumonia scenario, followed by the depression and cigarette, and lastly the sex scenario. Participants did not believe it was important to get help for any scenario from other relatives, teachers, and religious leaders.

Health professionals—Participants believed it was most important to get help from a doctor for the pneumonia and cigarette, followed by the depression, and lastly the sex scenario. Participants believed it was most important to get help from the school nurse for the pneumonia, followed by the cigarette and depression, and lastly the sex scenario.

Mental health professionals—Participants believed it was most important to get help from a psychologist for the depression scenario only. Participants believed it was important to get help from a school counselor for the cigarette but more important for the depression scenario. Participants believed it was important to get help from a phone line for the depression and cigarette scenarios.

Order of importance of getting help

Participants' ranking of specific resources from which to get help differed for each health scenario (Table 4). For the pneumonia scenario, participants' first rank included doctor (55.5%) and parent (40.2%); and second rank included parent (42.8%), doctor (35.6%), and school nurse (15.9%). Additional resources ranked included siblings, friends, and other relatives, ranked third, fourth, and fifth, respectively.

For the cigarette scenario, participants' first rank included friend (31.3%), parent (19.5%), and doctor (19.5%); and second rank included partner (23.7%), friend (13.9%), doctor (11.9%), and sibling (10.3%). Neither health nor mental health professionals were highly ranked.

For the sex scenario, participants' first rank included partner (38.3%) and friend (35.2%); and second rank included friend (29.7%), partner (25.0%), and sibling (13.5%). Neither health nor mental health professionals were highly ranked.

For the depression scenario, participants' first rank included partner (32.8%), psychologist (23.1%), and friend (19.5%); and second rank included friend (17.5%), parent (16.5%), psychologist (13.9%), partner (12.4%), and sibling (10.8%). Health professionals were not highly ranked.

Teachers and religious leaders (both significant adults) were never ranked as resources for any health scenario.

Relationship between gender, age, and beliefs in importance of getting help in general and beliefs in importance of getting help from specific resources

To examine whether gender, age, and beliefs in importance of getting help in general are related to beliefs in importance of getting help from specific resources, we performed linear regression analyses for each scenario and specific resources, controlling for mother's education and personal experiences with scenario-specific issues (e.g., ever had pneumonia, tried cigarettes, had sex, was depressed).

Age was significantly related to adolescents' beliefs in the importance of getting help from a number of the specific references for the cigarette, sex, and depression scenarios. For the cigarette scenario, younger age was significantly related to greater belief in the importance of getting help from a phone line and school counselor (betas ranged from .16 to .21, all p < .05), whereas older age was related to greater belief in the importance of getting help from a sibling (beta = .17, p = .041). For the sex scenario, older age was significantly related to greater belief in the importance of getting help from a teacher and school nurse (betas ranged from .24 to . 25, all p = .002). For the depression scenario, older age was significantly related to greater belief in the importance of getting help from a psychologist (beta = .19, p = .011).

Gender was also significantly related to adolescents' belief in the importance of getting help from a number of the specific references for the cigarette, sex, and depression scenarios. For the cigarette scenario, female gender was related to greater belief in the importance of getting help from a school nurse (beta = .16, p = .042). For the sex scenario, female gender was significantly related to greater belief in the importance of getting help from a friend, parent, and doctor (betas ranged from .15 to .23, all p < .04). For the depression scenario, female gender was related to greater belief in the importance of getting help from a school counselor and psychologist (betas ranged from .17 to .18, all p < .05).

We found that adolescents' beliefs in the importance of getting help in general for the health issue was significantly related to beliefs about getting help for many of the specific references for the cigarette, sex, and depression scenarios, including getting help for the cigarette scenario from a sibling, parent, teacher, phone line, school counselor, psychologist, and doctor (betas ranged from .18 to .40, all p < .05); getting help for the sex scenario from a friend, sibling, parent, teacher, phone line, religious leader, school counselor, psychologist, school nurse, and doctor (betas ranged from .21 to .46, all p < .05); and getting help for the depression scenario from a friend, sibling, partner, parent, phoneline, school counselor, psychologist, school nurse, and doctor (betas ranged from .19 to .35, all p < .05). For the pneumonia scenario, beliefs in

the importance of getting help in general was related to greater belief in the importance of getting help from a doctor only (beta = .36, p < .001; F(5,155) = 5.55, Adj R² = .125, p < .001).

Discussion

This study suggests that adolescents' beliefs about preferred resources from whom to get help differ depending on the health issue in question. As opposed to a physical health issue (e.g., symptoms of pneumonia) where adolescents' beliefs about preferred resources for help include mainly health care professionals and parents, beliefs about preferred resources for help for risk behavior (e.g., tobacco use, sex behaviors) and mental health (e.g., depression) issues are disparate and rarely involve health care or mental health professionals even when the issue is more severe. Furthermore, although consensus is reached about whom to go to for certain issues (e.g., partners and friends as preferred resources for help for sex), there was less consensus reached for the cigarette and depression scenarios. Although beliefs in the importance of getting help in general was significantly related to resource preferences, it was not as discriminating in preferred resources for help as was adolescents' age and gender.

Our findings highlight the importance of adolescents' social support, including friends, siblings, and significant adults (particularly parents) as their preferred resources for nonphysical-related health issues. These findings are consistent with a previous study by Raviv et al [8] that found that adolescents' willingness to seek help for mental health concerns varied as a function of social support, with adolescents being more willing to seek help from informal (friends) vs. formal (parents) resources. When it comes to help-seeking, the number of resources one has, who one goes to for support, the attitudes and beliefs about health and careseeking held by these resources, and knowledge about the availability of adolescent services, when appropriate, can influence an adolescent's connection to care [11]. Our findings are consistent with models of help-seeking that describe that help-seeking occurs in stages [12, 13], in that help is first explored among informal resources (Stage 1) who then may serve to interpret or reinterpret symptoms or pressure an individual to get help (Stage 2). Interactions with informal resources may then lead to referral to the lay system (Stage 3), which in turn may lead to referral to the medical system (Stage 4). The sole reliance by adolescents on informal resources (e.g., peers) as compared with formal resources (e.g., parents and teachers) may also be seen as less threatening to them [7]. Yet, this reliance, in part, may contribute to adolescents' lack of connection to the health care system when needed because their most preferred resources may not be familiar with adolescents' health issues or the availability of confidential adolescent health services.

Previous studies report that male adolescents use health services less than females [14,15]. Our study's findings show that females have a greater network of both formal and informal resources than do males and thus, as a result, may be more likely to be referred to health care services than males. Males were also neither more nor less likely than females to prefer any of the specific resources for any scenario. The way in which men and women are socialized in the United States (e.g., men are taught to be tough, competitive, and inexpressive, whereas women are taught to be sensitive, expressive, and emotional) may contribute to our findings about gender. In fact, Marcell et al found that male adolescents who hold more traditional beliefs are less likely to have a physical examination compared to males who hold more neutral beliefs [16]. Together these findings support the need to identify methods to increase males' resource networks and acceptance of help-seeking.

Our study finds that age discriminated between adolescents' preferred resources for help with older youth seeking more formal resources for the sex scenario and younger youth seeking more informal and confidential sources for the cigarette scenario. These findings demonstrate developmentally appropriate decision-making [17,18] that also supports the importance of

access to and promotion of confidential resources. Our findings related to age may also represent in part adolescents' comfort with or past history of getting help from specific resources.

Strategies to increase awareness about health resources and confidential services include the use of social health marketing campaigns [19] that include messages that make help-seeking for nonphysical health-related issues (e.g., depression, drug use, sex) more socially acceptable. Another strategy is for health care providers to promote their role and ability to address the broad range of adolescents' health care needs. This includes raising awareness about confidential services during initial encounters with adolescent patients, bringing these topics up with children and their parents as child patients transition into adolescence, and using reminders with established adolescent patients. Assurances by providers about confidentiality has been shown to increase the number of adolescents willing to disclose sensitive information about sexuality, substance use, and mental health as well as the number who seek future health services [20]. Whether establishing better connections between adolescents and their preferred resources to get help is able to subsequently improve adolescent health is an important area of future research.

Limitations

This study has several limitations. First, this study is cross-sectional in design and is thus not predictive in nature. Next, although the use of case scenarios in this article builds upon previous work using such methodology to elicit adolescent beliefs about health behaviors [21,22], it is possible that responses to case scenarios may differ from actual behaviors once participants are placed in real life situations. However, adolescents are responsive to hypothetical scenario-driven survey methodology as found in these previous studies. Finally, the generalizability of study findings may be limited due to the limited diversity of the sample. Future studies may need to validate study findings using more diverse sample populations.

Summary

Adolescents' preferred resources to get help depend on the health issue. Adolescents prefer informal resources (friends and partners) and significant adults (parents) to go to for help for risk behavior-type and mental health concerns, whereas physicians are preferred to go to for help for physical health-related issues. Future preventive service efforts and research should also consider the importance of age and gender when examining adolescents' preferred resources for help.

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References

- Elster, A.; Kuzsets, N. Guidelines for Adolescent Preventive Services (GAPS). Baltimore, MD: Williams & Wilkins; 1993.
- Green, M.; Palfrey, JS., editors. Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents. 2. Arlingtion, VA: National Center for Education in Maternal and Child Health; 2002. Revised
- U.S. Congress Office of Technological Assessment. Adolescent Health—VI: Summary and Policy Options. Washington, DC: U.S. Government Printing Office; 1991.

- Ford CA, Bearman PS, Moody J. Foregone health care among adolescents. JAMA 1999;282:2227– 34. [PubMed: 10605974]
- Ackard DM, Neumark-Sztainer D. Health care information sources for adolescents: age and gender differences on use, concerns, and needs. J Adolesc Health 2001;29:170–6. [PubMed: 11524215]
- Aten M, Siegel D, Roghmann K. Use of health services by urban youth: a school-based survey to assess differences by grade level, gender, and risk behavior. J Adolesc Health 1996;19:258–66. [PubMed: 8897103]
- 7. Dubow EF, Lovko KRJ, Kausch DF. Demographic differences in adolescents' health concerns and perceptions of helping agents. J Clin Child Psychol 1990;19:44–54.
- Raviv A, Sills R, Wilansky P. Adolescents' help-seeking behaviour: the difference between self- and other-referral. J Adolesc 2000;23:721–40. [PubMed: 11161335]
- Cheng TL, Savageau JA, Sattler AL, DeWitt TG. Confidentiality in health care. A survey of knowledge, perceptions, and attitudes among high school students. JAMA 1993;269:1404–7. [PubMed: 8441216]
- Marcell AV, Halpern-Felsher BL. Adolescents' health beliefs are critical in their intentions to seek physician care. Prev Med 2005;41:118–25. [PubMed: 15917002]
- Pescosolido BA, Gardner CB, Lubell KM. How people get into mental health services: stories of choice, coercion and "muddling through" from "first-timers.". Soc Sci Med 1998;46:275–86. [PubMed: 9447648]
- Moller-Leimkuhler AM. Barriers to help-seeking by men: a review of sociocultural and clinical literature with particular reference to depression. J Affect Disord 2002;71:1–9. [PubMed: 12167495]
- 13. Siegrist, J. Medizinische Soziologie. Munchen-Wien-Baltimore: Urban and Schwarzenberg; 1995.
- Ziv A, Boulet JR, Slap GB. Utilization of physician offices by adolescents in the United States. Pediatrics 1999;104:35–42. [PubMed: 10390257]
- Marcell AV, Klein JD, Fischer I, et al. Male adolescent use of health care services: where are the boys? J Adolesc Health 2002;30:35–43. [PubMed: 11755799]
- Marcell AV, Ford CA, Pleck JH, Sonenstein F. Masculine beliefs, parental communication, and adolescent males' health care use. Pediatrics 2007;119(4):e965–74.
- Lewis C. How do adolescents approach decisions: changes over grades seven to twelve and policy implications. Child Dev 1981;52:538–44.
- Cauffman E, Steinberg L. (Im)maturity of judgment in adolesence: why adolescents may be less culpable than adults. Behav Sci Law 2000;18:741–60. [PubMed: 11180420]
- Grossman, JB.; Walker, KE.; Kotloff, LJ.; Pepper, S. Adult Communication and Teen Sex: Changing a Community. Philadelphia, PA: Public/Private Ventures; 2001.
- Ford CA, Millstein SG, Halpern-Felsher BL, Irwin CE Jr. Influence of physician confidentiality assurances on adolescents' willingness to disclose information and seek future health care. A randomized controlled trial. JAMA 1997;278:1029–34. [PubMed: 9307357]
- Halpern-Felsher BL, Millstein SG, Ellen J, et al. The role of behavioral experience in judging risks. Health Psychol 2001;20:120–6. [PubMed: 11315729]
- Halpern-Felsher BL, Biehl M, Kropp RY, Rubinstein ML. Perceived risks and benefits of smoking: differences among adolescents with different smoking experiences and intentions. Prev Med 2004;39:559–67. [PubMed: 15313096]

	Table 1
Beliefs in the importance of	getting help in general for each health scenario

Scenario	Pneumonia symptoms (P)	Cigarette use (C)	Sex Initiation (S)	Depression symptoms (D)
Beliefs in importance of getting help in general	%	%	%	%
Not at all important	0	.5	25.5	.5
Not very important	.5	2.4	28.4	1.5
A little important	5.7	16.1	19.7	9.8
Somewhat important	35.7	28.8	18.8	35.1
Very important	58.1	52.2	7.7	53.2
Mean (SD), *ab	4.51 (.62)	4.30 (.86)	2.55 (1.27)	4.39 (.76)

* Repeated measures ANOVA (F) = 5076.3, p < .001.

^{*a*}Responses ranged from 1 to 5; 5 = highest.

^{*b*} Paired *t*-test follow-ups: P = D; P > C; P, D, C > S, $p \le .001$.

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Mean number of specific resources participants' believed to be somewhat or very important to get help from for each health scenario^a Table 2

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Variables	Pneumonia symptoms (P) Mean (SD)	Cigarette use (C) Mean (SD)	Sex initiation (S) Mean (SD)	Depression symptoms (D) Mean (SD)
All	3.6 (1.9)	5.6 (3.1)	3.1 (2.5)	6.4 (2.8)
Gende Female Male	3.9 (2.1) 3.4 (1.6)	5.9 (3.0) 5.1 (3.3)	3.8 (2.5) 2.3 (2.3) **	6.8 (2.8) 5.9 (2.6)*
Age 9th graders 12th graders	3.5 (1.9) 4.0 (1.9)	5.8 (3.3) 5.2 (2.8)	3.0 (2.5) 3.4 (2.4)	6.3 (2.8) 6.7 (2.6)
Betters in importance of getting help in general Not important Important	3.0 (1.8) 3.7 (1.9)	3.4 (2.4) 6.1 (3.1)**	$2.4\ (2.2)\ 5.0\ (2.4)\ **$	4.1 (2.1) 6.7 (2.7) **
aMaximum number of specific resources = 12.				
* <i>p</i> < .05;				
** <i>p</i> < .001.				

 Table 3

 Beliefs in the importance of getting help from specific resources for each health scenario

Variables ⁴	Pneumonia symptoms (P) Mean (SD)	Cigarette use (C) Mean (SD)	Sex initiation (S) Mean (SD)	Depression symptoms (D) Mean (SD)	Repeated measures ANOVA (F)	Paired <i>t</i> -test Follow-Ups ^b	
Friends and siblings					*		
Brother/sister (sibling)	2.60 (1.08)	3.30 (1.31)	2.61 (1.37)	3.40 (1.22)	588.3	C = U > P = S	
Friend (not boyfriend/girlfriend)	2.68 (1.05)	3.95 (1.25)	3.75 (1.30)	4.29 (.97)	1443.9	D > C = S > P	
Boyfriend or girlfriend (partner)	2.77 (1.13)	3.96 (1.12)	3.96 (1.38)	4.11 (1.04)	1217.2*	C = S = D > P	
Significant adults							
Parent	4.57 (.66)	3.53(1.29)	2.26 (1.26)	4.14(1.02)	2696.4^{*}	P > D > C > S	
Other relative	2.31 (1.08)	2.72 (1.30)	1.69 (.97)	2.79 (1.25)	410.5^{*}	C = D > P > S	
Teacher	2.06 (1.01)	2.47 (1.37)	1.49 (.87)	2.94 (1.28)	408.6^{*}	D > C > P > S	
Religious leader (priest, minister, rabbi)	1.58(.90)	1.93 (1.21)	1.50 (.98)	2.22 (1.34)	244.2^{*}	D > C > P = S	
Mental health professional							
Phone line (teen help line)	1.50(.85)	3.11 (1.45)	2.52 (1.47)	3.45 (1.36)	483.9	D > C > S > P	
School counselor	1.67 (.93)	3.34 (1.36)	2.09 (1.32)	3.72 (1.22)	679.0*	D > C > S > P	
Psychologist, psychiatrist, social worker	1.77 (1.05)	2.93 (1.44)	2.00 (1.21)	4.14(1.21)	720.6*	D > C > P = S	
Health professional					÷		
School nurse or school doctor	3.29 (1.22)	3.14(1.38)	2.01 (1.25)	2.52 (1.31)	511.4	P = C > D > S	
Doctor (other than from school)	4.81 (.48)	3.87 (1.25)	2.44 (1.44)	3.11 (1.45)	5266.3^{*}	P > C > D > S	

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^aResponses ranged from 1 to 5; 5 = highest.

b All paired *t*-tests significant at *p*-value \leq .001.

 $^{*}_{p < .001.}$

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 Table 4

 Ranking of specific resources who participants would go to for help for each health scenario

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Rank	Pneumonia symp Response	toms (P), %		Cigarette use (C), %]	Response		Sex initiation (S), % I	Response		Depression symptom	ıs (D), % Re	sponse
#1	Doctor	55.5	НР	Friend	31.3	FS	Partner	38.3	FS	Parent	32.8	SA
	Parent	40.2	\mathbf{SA}	Parent	19.5	SA	Friend	35.2	FS	Psychologist	23.1	MHP
	I			Doctor	19.5	НP				Friend	19.5	FS
#2	Parent	42.8	SA	Partner	23.7	FS	Friend	29.7	FS	Friend	17.5	FS
	Doctor	35.6	ЧP	Friend	13.9	FS	Partner	25.0	FS	Parent	16.5	SA
	School nurse/ doctor	15.9	ΗР	Doctor	11.9	ЧЬ	Sibling	13.5	FS	Psychologist	13.9	MHP
	I									Partner	12.4	FS
	I	I	I			I			I	Sibling	10.8	FS
#3	School nurse/	34.7	НР	Friend	13.7	FS	Sibling	18.1	FS	Friend	17.5	FS
	Sibling	14.4	FS	Doctor	13.7	ЧР	Friend	13.2	FS	School counselor	14.4	MHP
	Parent	14.4	SA	Sibling	13.2	FS	Partner	12.6	FS	Partner	13.3	\mathbf{FS}
	Friend	12.4	FS	Partner	12.6	FS	Doctor	12.6	ΗP	Psychologist	11.3	MHP
	Ι		I	School counselor	10.5	MHP					I	
#4	Sibling	23.2	FS	School counselor	14.4	MHP	Phone line	16.3	SA	Partner	18.2	FS
	Friend	22.2	FS	Parent	11.2	\mathbf{SA}	Sibling	12.8	FS	Friend	15.5	FS
	Other relative	13.9	SA	Partner	10.6	FS	Parent	12.2	SA	Psychologist	12.3	MHP
	Partner	13.4	FS				Doctor	12.2	HP	Parent	11.8	SA
	I						Psychologist	11.6	MHP			
#5	Friend	26.5	FS	Parent	13.1	\mathbf{SA}	Phone line	17.7	SA	School counselor	16.2	MHP
	Partner	16.9	FS	Phone line	10.9	SA	Sibling	12.2	FS	Friend	13.5	FS
	Other relative	15.3	SA				Parent	11.0	SA	Partner	11.9	FS
	I	I	Ι	I	I	Ι	School counselor	11.0	MHP	I	I	I

HP = health professional; MHP = mental health professional; SA = significant adult; FS = friend and sibling.