



Impact of Online Support for Youth With Asthma and Allergies: Pilot Study

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Youth with asthma and allergies often feel isolated and different from their peers. The objective of this study was to test the impact of online social support for these youth. Three months of support was provided using weekly synchronous chat sessions. Online sessions were facilitated by trained peer mentors (older youth with asthma and/or allergies) and health professionals. Youth could also e-mail one another between chat sessions and post messages on an electronic community bulletin board. Twenty-eight adolescents across Canada participated. Social isolation and loneliness were significantly reduced. Youth reported gaining confidence and a sense of normality.

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YOUTH TRANSITION FROM early to older childhood by increasing independence from parents and expanding their relationships with peers (Furman & Buhrmester, 1992). As they mature, youth with chronic conditions such as asthma and/or allergies prefer to be increasingly responsible for their health (Divertie, 2002; Horner, 1999; Slack & Brooks, 1995), yet they are at risk for reduced dietary and environmental vigilance due to insufficient knowledge (Lyons & Forde, 2004), denial of the severity of their condition (Laudebauche, 1997; Rydstrom, Hartman, & Segesten, 2005), and desire for social conformity (Bock,

Munoz-Furlong, & Sampson, 2001; Buston & Wood, 2000; Penza-Clyve, Mansell, & McQuaid, 2004; Rich, Lamola, Gordon, & Chalfen, 2000; Sicherer, Noone, & Munoz-Furlong, 2001; Velsor-Friedrich, Vlasses, Morberley, & Coover, 2004). Youth with asthma and/or allergies often feel isolated, different, and excluded from their peers due to their inability to participate in social and recreational activities (Kyngas, 1999; La Greca et al., 1995; Rich et al., 2000; Rydstrom, Englund, & Sandman, 1999), teasing by schoolmates (Sicherer et al., 2001), and embarrassment regarding their conditions (Buston & Wood, 2000; Penza-Clyve et al., 2004). Moreover, they experience peer pressure that results in nonadherence to health regimens and other risky behaviors (Horner, 1999; Kyngas, 2004; Sampson, Munoz-Furlong, & Sicherer, 2006; Schlundt et al., 1994; Thomas, Peterson, &

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Goldstein, 1997) with potentially life-threatening consequences (Bjorksten, 2000; Bock et al., 2001).

Approximately 80% of youth with asthma also have allergies, and allergen sensitization can be a risk factor for severe asthma (Boulet, Becker, Berube, Beveridge, & Ernst, 1999). The unique support needs of youth with asthma and allergies have been neglected (Bjorksten, 2000; Prince, 1996; Spargo & Couriel, 1997; Velsor-Friedrich & Srof, 2000). Youths worry about the effects of asthma on activities and peers' perceptions. They can be frightened by their disease and want care that is individualized in response to their needs (Couriel, 2003). These adolescents want to be normal, yet believe that asthma exacerbations are unpredictable and disruptive and perceive there is tension between their own symptom management and others' expectations (e.g., parents). Medication adherence has been negatively associated with age; adolescents are less adherent than children (McQuaid, Kopel, Klein, & Fritz, 2003). Intervening in adolescence has the potential to instill positive asthma management behaviors (Maggs, Schulenberg, & Hurrelmann, 1997; van Es, Nagelkerke, Colland, Scholten, & Bouter, 2001). Pilot testing of online support interventions for youth affected by asthma and allergies is timely. Accordingly, the objective of this study is to test the impact of online support for youth with asthma and allergies.

Social Support for Youth With Asthma and Allergies

Social support plays a key role in improving outcomes for children with chronic health conditions (Barlow & Ellard, 2004; Bruzzese et al., 2004; Guevara, Wolf, Grum, & Clark, 2003; Kintner, 2004; Knight, 2005; Kyngas & Rissanen, 2001). It is a key determinant of health (Stewart, Reid, & Mangham, 1997) and health behavior (Stewart, 2000), a crucial factor in fostering resilience (Stewart et al., 1997), and a resource for coping, self-efficacy, and self-management of the stresses of chronic conditions (Stewart, 2000; Thoits, 1995). Adolescent youth place high value on the support of peers who share chronic conditions (Bryant, 1996; Kyngas, 2004; Velsor-Friedrich et al., 2004). Indeed, peer support has been associated with decreased loneliness, shame, and

perceived difference, as well as enhanced social competence, health behaviors, social acceptance of chronic conditions, and coping with asthma and allergies (Knight, 2005; Kyngas, Kroll, & Duffy, 2000; La Greca et al., 1995; Noll, Bukowski, Rogosch, LeRoy, & Kulkarni, 1990). Support interventions that address the needs of youths with asthma and allergies have the potential to facilitate a smoother transition to young adulthood via the sharing of informational (e.g., advice), affirmational (e.g., reassurance of worth), and emotional (e.g., shared understanding) support (Stewart, 2000). Support from peers (i.e., other youth with asthma and allergies) may supplement the social networks of youth with asthma and allergies. Three mediating processes operate during support intervention: social comparison (comparison of stresses, coping strategies, support resources), social exchange (reciprocity or give and take of support), and social learning (role modeling, exchange of experiential knowledge; Gottlieb, 2000). Drawing upon Stewart's theoretical work in social support (Stewart, 2000), Figure 1 depicts these relationships.

Technology-Enabled Support Interventions

Although interventions for youth with asthma and allergies exist (Hampel, Rudolph, Stachow, & Petermann, 2003; Hazzard, Celano, Collins, & Markov, 2002; Shah et al., 2001), they typically focus on disease and symptom management education rather than meeting their support needs (Gibson, Shah, & Mamoon, 1998; Shah et al., 2001). Because youth with asthma and allergies often experience social and geographic isolation, Internet technology can provide a useful vehicle to enhance access to support. Youth regularly communicate with friends and receive support through e-mail and/or instant messaging (Lenhart, Madden, & Hitlin, 2005). Youths with chronic conditions, including asthma, noted that technology, including the Internet and chat rooms, allowed them to communicate anonymously and share emotions and information (Kyngas, 2004). However, reviews of randomized controlled trials of computer-based interactive health communication programs for people with chronic conditions revealed that all programs focused on adult populations and none were

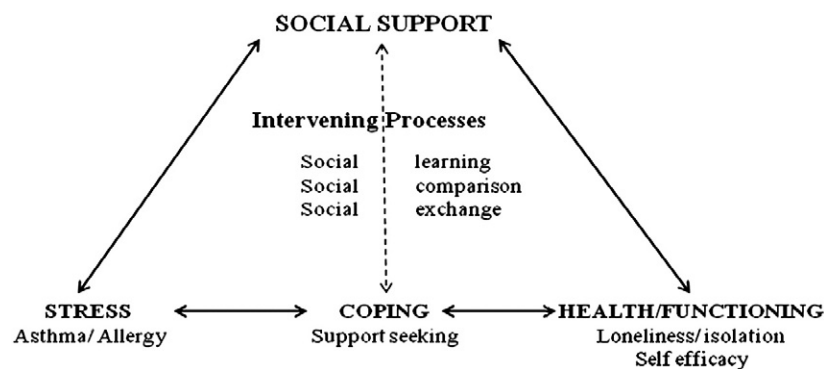


Figure 1 Relationship of social support to stress, coping, and health.

targeted to youth with severe asthma and/or allergies (Barlow, Wright, Sheasby, Turner, & Hainsworth, 2002; Eysenbach, Powell, Englesakis, Rizo, & Stern, 2004; Murray, Burns, See, & Lai, 2007). Interactive multimedia computer games that provided information about decision making and behavior change for children (7 to 17 years) with asthma have been associated with improved self-efficacy (Bartholomew et al., 2000; Homer et al., 2000; Shegog et al., 2001). An educational computer network for hospitalized children (8 to 18 years) with asthma or sickle cell disease revealed increased knowledge and perceived support (Hazzard et al., 2002). Internet-based education and management Web sites for 6- to 17-year-olds (Chan et al., 2007) and 15- to 19-year-olds (Joseph et al., 2007) with asthma were linked to improved inhaler technique, asthma knowledge, and quality of life and to fewer symptoms, school days missed, restricted activity days, and hospitalizations. A computer-based educational program for children and youth with asthma and their caregivers was linked to improved knowledge of asthma and decreased use of emergency health services (Krishna et al., 2003). Although the effects of these educational and disease management Internet programs are promising, Internet programs that have an additional emphasis on providing social support to youth with asthma and allergies have not been well studied.

Hypotheses

We predicted that youth participants involved in a 12-session online peer support intervention would report the following: (a) increased support-seeking coping; (b) increased support satisfaction and reduced support needs; (c) increased social network size; (d) decreased loneliness and social isolation; and (e) increased self-efficacy.

Methods

A one group pre/posttest design was used in this study. The online support intervention was implemented during 2008 and 2009 after all appropriate ethics approvals were obtained. A combination of quantitative and qualitative data were collected to evaluate outcomes and perceived impacts of the intervention.

Sample and Recruitment

Participants were invited to participate in the online intervention via flyers at pediatric asthma and allergy clinics, pharmacies, an asthma and allergy camp, and online announcements on lung health or anaphylaxis-related Web sites. To be considered for study inclusion, youth were between 11 and 16 years of age and had physician-diagnosed asthma and/or allergies. The youth and their parents were provided information on the study by letter, telephone, and

e-mail. An invitation letter, combined assent/consent form, and demographic information form were mailed to potential participants. Potential participants ($n = 31$) were informed that computer and Internet access would be provided if they did not have this technology at home. Twenty-eight participants (16 boys, 12 girls) from across Canada returned the signed consent/assent forms and demographic information. All families had Internet access and a suitable computer. The average age of participants was 13 years (range = 11–16 years). Three participants (all boys) were diagnosed with asthma, 6 participants (all girls) were diagnosed with severe allergies/anaphylaxis, and the remaining 19 participants (13 boys, 6 girls) were diagnosed with asthma and allergies.

Intervention Design

Based on the results of an initial survey and interviews with youth and their parents, the research team developed an online peer mentor training program, program content, and technology interfaces for a peer-support intervention for youth. The intervention was hosted on an existing secure online peer networking Web site designed for children with disabilities called Ability Online. The communication environment used varied Internet technologies, including electronic mail, message boards, and chat rooms integrated under the Ability Online interface. Ability Online is a free Internet community, available 24 hours a day, and monitored by volunteers. Three months of support was provided with weekly synchronous chat sessions about topics identified as priority issues in previous research. Sessions were moderated by trained peer mentors (older youth/young adults with asthma and/or allergies) and health professionals. Peer mentors participated in an 8-hour online training session, complete with discussion boards and learning modules on: (a) peer mentoring; (b) social support; (c) asthma; (d) allergies; and (e) Ability Online interface. Health professionals provided support to peer mentors and were available as consultants as needed. Youth participating in the online support could also e-mail one another in between chat sessions and post messages on an electronic community bulletin board. Three types of support were provided, including informational (sharing of educational content on asthma and allergies), affirmational (sharing of personal stories of successes and challenges), and emotional (sharing of positive and negative feelings associated with the experience of asthma and allergies) support.

Participation and Intervention Dose

Participant use of online options was tracked via the number of logons, e-mails, and chat minutes. Over the 3 months and 12 synchronous chat sessions, 21 of the 28 participants logged onto the Web site four or more times (range = 5–50 times; $n = 21$); 7 participants logged in three or fewer times; and, 3 youth did not participate. The 7 youth

who logged in three or fewer times provided inadequate data for analysis and thus were considered nonparticipants.

Of the 21 participants, each attended an average of three chat sessions (range = 1–9) and chatted for an average of 255 minutes (range = 68–1,201 minutes). There were significant differences in levels and types of participation. There was a core group of 5 high participators (attended chat five or more times), 8 moderate users (chatted three or four times), and 8 youth who participated rarely (attended chat one or two times). Some participants were lurkers who may not have actively engaged in the online support because they were too busy, their personal support needs were satisfied by reading the posts, or they were introverted or shy about public participation (Nonnecke & Preece, 2001). On average, girls ($n = 4.9$) attended fewer chat sessions than boys ($n = 6.6$). Because lurkers did not interact with other participants in the online sessions, the presence of lurkers likely did not affect findings.

Data Collection

Quantitative Data

Participants were asked to complete an electronic questionnaire composed of six standardized measures at preintervention and postintervention time points. Survey Monkey, a secure Web-based survey tool, was used for quantitative data collection. Psychometric characteristics of the standardized quantitative measures and relevant hypotheses are summarized in Table 1. For the postintervention time point (immediately following the last online support session), close-ended questions were added to the survey to assess satisfaction with informational, affirmational, and emotional support provided during the online intervention.

Qualitative Data Collection

Qualitative data relevant to influence of the intervention were collected from two sources. (a) Postintervention online data: Youth were asked 10 open-ended questions about what it was like to be part of the online support group, if and how participation affected their life, relationships with family and friends, or reduced isolation, and what changes they would recommend to the intervention. (b) Follow-up exit interviews: To help uncover possible reasons to explain the variation in participation and its impacts, youth were invited to participate in exit interviews based on their level of participation. Eight girls and six boys participated and ranged in age from 12 to 16 years of age. Four youth who did not participate in the online support group, four youth who attended two or fewer online sessions, five who participated three to five times, and two who attended seven or more times described their experience of being part of an online support group, how participation affected their life and relationships with others, and the extent to which the group may have increased or changed their self-management skills. Youth were specifically asked about the potential impact of

the intervention, including what they gained from the intervention, whether relationships with family and friends had changed, whether they were less lonely, or if they learned new ways of dealing with asthma and allergies. Interviews were conducted over the telephone. All the interviews were transcribed verbatim.

Data Analysis

Triangulation of methods (qualitative and quantitative) and data sources (standardized measures, close-ended questions and qualitative data from chat, online open-ended questions, and exit interviews) were used to maximize identification of trends in the pilot data. Qualitative data were analyzed using content analysis to determine themes and categories. Nonparametric statistics (Wilcoxon signed rank test) were used to identify pre- and posttest differences in the pilot data.

Results

A total of 28 participants completed the quantitative pretest measures. Of these, 10 participants completed the quantitative posttest measures and 20 completed the postintervention qualitative interviews. Results will be presented according to study hypothesis (1 to 5) focusing first on quantitative followed by qualitative findings. Overall, no significant differences in demographic characteristics or pretest scores were found between the group of participants who completed the quantitative outcome measures ($n = 10$) and the larger group ($n = 28$) who only completed the pretest measures.

Hypothesis 1: Increase Support-Seeking Coping

Nonparametric tests did not reveal statistically significant differences between pre- and postintervention scores on the Self-Report Coping Scale (SRCS) measure, although there was an encouraging trend in increased support-seeking coping. However, in the interviews, youth believed being aware that asthma and allergies are normal for many teenagers led to more support-seeking coping strategies characterized by assertive behavior with friends, teachers, and people in the community. For example,

I remember we did have a chat all about that I think it gave me some ideas, especially since at school, I'm a debater and to go to competitions you have to go out to different parts of the country...and, my teacher didn't really want me to go because I had allergies, even if I did win, so it kind of gave me ideas to, how to talk to him and how to like, tell him that I'm old enough to understand what my allergies are about and how to deal with them, so that kind of gave me an idea because other people had similar problems. So...how to approach him and how to tell him that everything's going to be fine as long as we're careful. (Participant 139)

Table 1 Hypotheses and Relevant Standardized Measures

Hypotheses	Measures	Content and Scoring	Psychometric Properties	Use
1. ↑ coping	SRCS (King, Schultz, Steel, Gilpin, & Cathers, 1993; Ellerton, Stewart, Ritchie, & Hirth, 1996; Klimes-Dougan & Bolger, 1998; Tremblay, Hebert, & Piche, 1999; Causey & Dubow, 1992)	Seeking social support subscale scores range from 8 to 40, with a higher score indicating greater use of support seeking as a coping strategy.	Internal consistencies and test–retest reliabilities: .60–.80; Cronbach’s alpha levels = .71–.76; Herbert, Parent, and Daignault (2007) report the internal reliability of this subscale to be .85.	Estimates the frequency of self-reported support seeking.
2. ↑ support satisfaction/ ↓ support needs	MSPSS (Zimet, Powell, Farley, Werkman, & Berkoff, 1990) PSS-Friends, PSS-Family (Prociano & Heller, 1983)	Total scores range from 7 to 84, with higher scores indicating greater perceived social support. These are 20-item scales scored with <i>yes</i> , <i>no</i> , and <i>I don't know</i> . Yes or no is given 1 point, depending on range of item, and I don’t know 0. Each scale has a range of 1 to 20, with 20 indicating <i>more support</i> .	The internal reliability of the total scale and two subscales, family and friends, are .88, .87, and .85, respectively (Zimet, Dahlem, Zimet, & Farley, 1988, p. 36). Internal consistency is .83 on the friends and .89 on the family scale.	Assesses youth perceptions of adequacy of social support provided by family and friends. Measures the extent to which need for information, support, and feedback are available from friends and family.
3. ↑ social network size	CISS (Wolchik, Teals, & Sandler, 1989; Ellerton et al., 1996)	Children listed all the people who provided support during the past couple of months. Measure of social support was calculated by summing the number of supporters.	Internal consistency reliabilities: .79–.90; test–retest reliabilities: .52–.85	Measures perception of source, amount, and type of social support and satisfaction with support.
4. ↓ loneliness/social isolation	LSDS (Rotenberg & Whitney, 1992; Cassidy & Asher, 1992)	Children respond to 24 questions, 16 that assess loneliness, the others are filler items on activities and hobbies on a 5-point Likert scale (<i>always true</i> , <i>true most of the time</i> , <i>sometimes true</i> , <i>hardly ever true</i> , and <i>not true at all</i>).	Item-to-item correlation: .50–.72; Cronbach’s alpha = .90; Spearman–Brown reliability split half = .83; Guttman split half reliability coefficient = .91; the authors report an internal reliability of .79.	Measures children’s self-reported feelings of loneliness and dissatisfaction with peer relationships.
5. ↑ self-efficacy	CASES (Bursch, Schwankonsky, Gilbert, & Zeiger, 1999; Bursch, Schwankonsky, Gilbert, & Zeiger, 2003; Velsor-Friedrich, Pigott, Srof, & Froman, 2004)	Measures children’s perceived effectiveness in managing exposure to asthma triggers, environment, and medication. Participants respond to 9 questions on a Likert scale that indicates how sure they are that the behavior can be enacted (1 = <i>not at all sure</i> , 2 = <i>a little bit sure</i> , 3 = <i>fairly sure</i> , 4 = <i>quite sure</i> , and 5 = <i>completely sure</i>).	Internal consistency reliability: Cronbach’s alpha = .87 (.75 in attack prevention, .82 in attack management).	Self-efficacy of asthma attack prevention and attack management.

Hypothesis 2: Increase Support Satisfaction and Reduce Support Needs

Nonparametric tests did not reveal statistically significant differences between pre- and postintervention scores on the Multidimensional Scale of Perceived Social Support (MSPSS), Perceived Social Support—Family (PSS-Family), or Perceived Social Support—Friends (PSS-Friends). Non-significant trends in both the PSS-Family and PSS-Friends scales suggested that perceived support may have increased had our sample size been large enough to increase power. Indeed, interviews with participants revealed that youth were more confident in their ability to make and socialize with friends. For example:

I think I'm a lot more open with it now, but there hasn't been a gigantic change. If I'm out with friends or something like that and they're ordering food or something like that, I don't feel weird to be like, 'Whoa, I've got allergies so be careful about this' or if I'm at their houses or something like that I just don't feel weird about it anymore. (Participant 106)

Other youth spoke about their improved ability following the intervention to talk with their family, particularly about bullying, as indicated:

My family is more understanding of certain things like kids making fun of my allergy and I have become closer to my parents. They taught me that allergies are a part of life and that I should be careful but live life normal for the most part. (Participant 156)

Hypothesis 3: Increase Support Network Size

Pretest, participants reported an average of 5.4 (range = 3–37) people in their network versus an average of 6.1 (range = 3–30) postintervention. A nonsignificant trend toward increasing identification of mothers, fathers, siblings, and friends as support network members was noted; however, pre- and posttest significant differences were not revealed on the Children's Inventory of Social Support (CISS) measure. The intervention did not seem to increase the number of online friendships with either peers or peer mentors, possibly a reflection of the short duration, which will be discussed more in-depth below.

Hypothesis 4: Decrease Loneliness and Social Isolation

On the Loneliness and Social Dissatisfaction Scale (LSDS), pre- and postintervention scores revealed a statistically significant difference ($p = .009$) between pretest score (35.7; $SD = 2$) and posttest score (26.5; $SD = 5.54$). Six youth reported that learning about how common their experiences with asthma and allergies were allowed them

to be more open about their condition and made them feel less isolated:

There were a lot of people on it, so it kind of helped me realize that I'm not, like, kind of by myself and I don't have to feel so left out really anymore. And I kind of know that it is kind of almost really common now. (Participant 106)

Most youth said they had supportive friends but indicated that they found it easier to talk about their condition online. As one youth said, "it was easier to talk about asthma and allergies than with regular teens. 'Cause usually you don't talk about asthma and allergies to other teens. it's just not a subject that comes up" (Participant 129). Other youth also reported that they were more positive, outgoing, and able to talk openly about asthma and allergies after the intervention, for example:

...like my allergies didn't really exclude me from any of those activities...with other teens but it certainly gave me more of wanting to go out there and doing different things too with them...have fun with your friends and kind of keep in mind about your allergies but put it aside and just put your fear aside and, play like you have no allergies...they kinda, helped me become more positive...and sort of gained relationships with them and, know that you're not the only one out there. (Participant 156)

Hypothesis 5: Increase Self-Efficacy

On the Child Asthma Self-Efficacy Scale (CASES), there were no significant differences between pre- and postintervention means. Prior to the intervention, participants' mean scores were relatively high, indicating most youth thought they could manage their condition well; preintervention, the range was 2.63 to 5, and postintervention, the range was 2.56 to 4.67. This reinforces the qualitative data, revealing that youth believed they were well educated about asthma and allergies.

Qualitative data showed that moral support from mentors and other youth made participants feel more confident in their decisions and more comfortable handling bullying and peer pressure. Youths who reported being bullied at school ($n = 5$) perceived that they benefited significantly from the support from peers and mentors, reporting that "one person always helped me out and told me not to let anyone make fun of me and vice versa" (Participant 131). Another added that the peer support "gave me some decent ways to make decisions about problems I'm having," "taught me to stay aware but still be adventurous and not let people tease me because I have allergies," and "people told me not to think about them and not let people bug you" (Participant 116). Others spoke specifically of being more confident, for example:

It gave me some confidence...I remember [mentor name] said that she's been to all different types of countries with different food labelling laws and that kind of like showed me that it is possible...I think the main thing was how to talk to people about them. That was really the big, the big thing. (Participant 139)

Most participants believed they could communicate more openly and enjoyed talking to other youth with asthma and allergies about problems they might have been embarrassed to discuss in a face-to-face situation. Most also gained confidence and generally felt more normal. For many youth, recognizing that asthma and allergies were quite common was particularly beneficial. As one youth said, "They helped me feel more confident that a lot of people as I saw have allergies and asthma so I'm like a regular kid" (Participant 106). Five youth specifically credited the practical and emotional support they received with their newfound ability to handle harassment and low self-esteem problems. "I was getting made fun of at school and they taught me how to deal with it properly" (Participant 156). Although unanticipated, youth who benefited most were those with higher needs. When triangulated, qualitative data suggesting that youth who were being bullied at school and suffered from low self-esteem and quantitative data on youth who scored lower on the CASES (indicative of more difficulty managing their condition) provided evidence that youths with higher needs in these categories gained most from the intervention.

Discussion

In spite of a small sample size of completed participants in this pilot study, mainly nonsignificant but consistently positive trends in the data suggest that there are likely benefits to providing support online. The sample size limited the study's power to detect statistical differences; however, the triangulation of methods helped address this limitation. In particular, social isolation and loneliness—two key barriers to the mental well-being of adolescents—were both significantly reduced. Perhaps more convincingly, qualitative findings confirm that participants perceived positive impacts of the intervention across all social support domains. Youth reported gaining confidence and a sense of normality from talking to other youth. Qualitative findings also revealed an unanticipated positive outcome for youth who experience higher needs associated with socially isolating situations such as bullying and with low self-esteem. Although recruitment efforts focused on youth with asthma and allergies, most of the online support discussions addressed allergies rather than asthma. This bias is reflected in the qualitative quotes that most often focus on allergies.

Evaluation of Internet interventions should seek to assess the potentially different effects, both benefits and disadvantages, of different types of support (e.g., telephone or

face-to-face) compared with Internet support (Griffith, Lindenmeyer, Powell, Lowe, & Thorogood, 2006). Although the anonymity of online support increases self-disclosure, information sharing, and emotional support (Salem, Bogar, & Reid, 1997), our relatively high rate of nonparticipants may be a reflection of shy youth being intimidated to log on to talk to a whole group of unknown individuals or even to take part in the data collection. In subsequent studies, it will be worthwhile to compare online support to a similar face-to-face or telephone support to determine distinctions in propensity to participate. In developing and delivering support programs for youth with asthma and allergies, pediatric nurses need to balance the increased geographic accessibility of support provided by online interventions with the possibility of more engaged participation in face-to-face or telephone interventions. It is likely that pediatric nurses need to be prepared to provide a variety of intervention options to maximize the likelihood of youth engagement in support programs for asthma and allergy management.

Although participation in the chat sessions was less frequent than anticipated, the rates are similar to other computer-mediated support interventions. For example, in an intervention to support single mothers ($n = 42$), Dunham, Hurshman, Litwin, and Gusella (1998) had a core group of 15 (35%) who incorporated online support into daily life, 8 (20%) who used it occasionally, and 19 (45%) who did not use it at all or used it only briefly then stopping. Recently, Gustafson's Comprehensive Health Education and Social Support (CHESS) intervention group (2008) compared computer-mediated support to regular Internet support. Slightly more than 70% of the CHESS participants and just under 60% of those given the Internet logged on the first week, but by 20 weeks, use was low, just 30% continued to use CHESS, and only 15% were using the Internet (Gustafson et al., 2008). The participation statistics were similar in this study, 46% of youth participated more frequently, 28% used it occasionally, and 25% stopped participating or did not use it at all or were lurkers. Wenger, McDermott, and Snyder (2002) indicated that lurkers perceive a sense of community despite not directly participating. For some, just knowing the support group is available if they need it may be helpful. People can get support vicariously by thinking of themselves as members and by identifying with the community (Nonnecke & Preece, 2001). It seems, based on our study and Internet interventions for other populations, that lurkers could make up at least half of online support groups.

In conclusion, the online support intervention was accessible, appropriate, and timely. Given the encouraging perceived impacts, this exploratory pilot study can inform a future randomized controlled trial with a larger sample and control group. Moreover, important insights concerning complex clinical questions about for whom the intervention useful, in what ways, and under what circumstances, could result from replication of this pilot intervention.

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