

# Self-care for minor illness

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**Aim:** To describe experiences with and knowledge of minor illness, self-care interventions used in minor illness and channels of information used when providing self-care for minor illness. **Background:** Although minor illness is self-limiting, symptoms can be substantial and have a great impact on the affected person's wellbeing. Possibilities to seek and find information about health and self-care have significantly increased through internet-based communities, forums, and websites. Still, a considerable number of consultations with general practitioners are for conditions that are potentially self-treatable. Seeking advanced care for minor illnesses is costly for society and can create discomfort for patients as they are down-prioritized at emergency departments. **Methods:** Study participants were recruited randomly from the Swedish Adress Register. A questionnaire was sent out, and the final sample included 317 randomly selected persons aged 18–80 and living in Sweden. **Findings:** Having experienced a specific illness correlated with self-reported knowledge. Preferred self-care interventions differed between different conditions, but resting and self-medicating were commonly used, along with consulting health care facilities. Compliance to advice was the highest for official information channels, and family members were a popular source of advice.

**Key words:** health information; minor illness; self-care; self-efficacy; self-management

Received 8 October 2012; revised 28 July 2013; accepted 24 November 2013;  
first published online 22 January 2014

## Introduction

Being affected by minor illness is a rather common occurrence and the high prevalence suggests that there is a significant potential in empowering patients to rely on self-care (Welle-Nilsen *et al.*, 2011). Although minor illness is self-limiting, symptoms can be substantial and have a great impact on the affected person's well-being. A considerable number of consultations with general practitioners are for conditions that are potentially self-treatable (Morris *et al.*, 2001). Older studies have concluded that ~85–96% of acute minor illnesses are treated at

home (Elliott-Binns, 1973; 1986; Green, 1990), thus the majority of care is self-provided.

Minor illness includes in this present study infectious conditions such as common colds, sore throat, discomforting symptoms from sinuses, otitis media, conjunctivitis, gastroenteritis, and urinary tract infections (UTI). Adequate actions in this context can be self-care through interventions such as resting, self-medicating with over-the-counter (OTC) drugs, using home remedies, herbal treatments, and/or consulting health care facilities. Important focuses in the research of minor illness are on understanding people's behavior in order to promote self-efficacy in self-care.

## Background

Possibilities to seek and find information about health care, disease, and self-care have increased

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through internet-based communities, forums, and websites like Google, YouTube, homepages, blogs, and public sites (Vance *et al.*, 2009; Sethuram and Weerakkody, 2010). In this information overload, there is a risk that the disorganization of information, lack of user friendliness, and constant changeability can be confusing and challenging to persons lacking medical education or experience in using the internet (Jadad and Gagliardi, 1998; Cline and Haynes, 2001). One way to handle this risk is the introduction of public websites where professionals provide correct medical information. An example in the Swedish context is a public health information website ([www.1177.se](http://www.1177.se)), which has been launched as an extension to the national telephone help advisory center in order to provide reliable and evidence-based information on medical conditions and possible self-care interventions for symptom relief.

Since minor illness by its definition is minor and not life-threatening, it would be a waste of resources to allow minor illnesses to compete with severe illnesses for advanced specialist care when they are self-limiting and potentially self-treatable. Consultations at advanced levels of the health care system for conditions that are self-treatable are costly for society (Marklund *et al.*, 2007). Seeking advanced care for minor illnesses can also create discomfort for patients as they are down-prioritized at emergency departments. Being triaged as a nonurgent patient can imply long waiting hours and risk of feeling neglected by staff that tends to gravitate toward patients with urgent medical needs (Nyström *et al.*, 2003). Furthermore, overcrowded emergency departments might constitute a threat to patient security and influence the quality of care given, as overcrowding is associated with longer waiting hours, increased mortality rates, and impacts on patient experience (Morris *et al.*, 2012).

Health care personnel can influence a person's sense of efficacy in performing a certain task either positively or negatively, depending on the way they care for their clients (Bandura, 1992). Self-efficacy is according to Bandura (1997) the belief in one's capabilities to organize and execute the courses of actions required to produce given attainments. High levels of self-efficacy can mediate determination, which in the context of self-care for minor illness means that high levels of self-efficacy may lead to increased perseverance in

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symptom control and a readiness to act independently in health matters (Bandura, 1997). When health care costs for minor illness are reduced through the practice of self-care, this can potentially benefit people with chronic and severe medical conditions through liberation and redistribution of resources. Thus there is an incentive to treat illnesses at the correct level of medical specialization in regard to patient security, quality of care, and health care economy. It is therefore necessary to obtain a clearer view on how persons act in order to gain knowledge and manage symptoms when afflicted by minor illness. The aim of this paper was to describe peoples' experiences with and knowledge of minor illness, self-care interventions used in minor illness and channels of information used when providing self-care for minor illness.

## **Methodology**

### **Study design**

Minor illness is defined as a medical condition that requires little or no medical intervention (The Royal Pharmaceutical Society of Great Britain, 2003), and this paper is the first of two publications based on data from the questionnaire described here. A cross-sectional study design was used. Study participants were aged 18–80 and recruited randomly from the Swedish Address Register. All eligible participants initially received an information letter and a printed questionnaire by post, and the participants were also offered the opportunity to answer the questionnaire electronically. Two subsequent reminders were sent out containing links to the electronic version of the questionnaire.

### **Questionnaire**

The first part of the questionnaire contained a series of questions about demographics like age, sex, education, income, and perceived health and social support. The second part consisted of self-rated knowledge about minor illnesses (common cold, sore throat, discomforting symptoms from sinuses, otitis media, conjunctivitis, gastroenteritis, and UTI). Questions were presented by a four-grade ordinal scale ranging from 1 (having no knowledge about the illness) to 4 (knowing a great deal about the illness). The third part contained questions about which interventions were used for

each illness in order to relieve symptoms; the same options were given for each condition. The interventions were identified from previous literature and pilot work. Then came the fourth part with questions regarding information sources used in order to retrieve information about self-care in minor illness, preferred information sources in the future, compliance to self-care advices in relation to source of advice, and when health care facilities were consulted. The fifth part concerned questions about needs and preferences in order to feel confident in the performance of self-care. The Self-efficacy scale in self-care (SESSC) was used in order to measure self-efficacy in self-care. This scale contains six questions about self-rated certainty in symptom-management. Scores of the SESSC are summed within the range of 6–24, where a higher score indicates higher self-efficacy in self-care for minor illness. The SESSC has shown good validity and reliability (Gustafsson *et al.*, 2012). All items in the questionnaire were validated by a panel of senior lecturers and professors in health care sciences that were asked to complete the questionnaire while thinking aloud and leaving feedback. A semantic revision was made by an expert in the Swedish language, and finally a pilot study was conducted, giving the respondents ( $n=114$ ) the opportunity of commenting on the questionnaire. Amendments were made accordingly before dispatch of the questionnaire.

### Data analysis

Included in the analysis of this study was part one to four of the questionnaire along with the SESSC. In the analysis, various sum scores were calculated, such as total number of self-care interventions used in all seven minor illnesses, sum score of self-rated knowledge of all minor illnesses, and sum score of the SESSC. All sum scores were analyzed using both parametric and nonparametric methods with no differences in analysis result. Analyses were performed using the IBM Statistical Program for Social Sciences, version 19.0. In order to describe experience with and knowledge of minor illness and the use of self-care interventions and information channels, descriptive analyses were performed using numbers and percentages. In order to identify differences in results in relation to demographic data, data was analyzed using *t*-tests, Mann–Whitney, Pearson's and

Spearman's correlations, and  $\chi^2$  tests. *P*-values  $<0.05$  was used to denote statistical significance, and correlation coefficients  $<0.3$  were excluded from the result because of weakness of correlation.

### Results

Questionnaires ( $n=1000$ ) were sent out in November of 2010. Ten questionnaires were returned unopened because of address change. A total of 317 persons answered the questionnaire, giving a response rate of 32%. Characteristics of the study sample with the general population are presented in Table 1, and show that women, persons above the age of 65, and persons with higher education were somewhat overrepresented in the study sample.

### Experience and knowledge

The most commonly experienced minor illness was the common cold (98.1%) and sore throat (94.6%), followed by gastroenteritis (89.2%). About half of the respondents had experience of UTI (52.1%), discomforting symptoms from

**Table 1** Characteristics of the study sample, compared with the general population

	Study sample [ $n=317$ (%)]	General population (%)
Gender (%)		
Male	124 (40.9)	50.2
Female	179 (59.1)	49.8
Age group (%)		
<26	27 (8.8)	14.5
26–35	32 (10.5)	16.5
36–45	41 (13.4)	18.1
46–55	61 (19.9)	17.2
56–65	61 (19.9)	16.6
>65	84 (27.5)	17.1
Annual income (%) <sup>a</sup>		
<192 000 SEK	120 (39.6)	40
192 000–396 000 SEK	142 (46.9)	50
>396 000 SEK	41 (13.5)	10
Education level (%)		
Compulsory school	72 (23.7)	22
Upper secondary school	71 (23.4)	43
University or college studies	161 (53.0)	33

<sup>a</sup> General population counted in quartiles.

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sinuses (49.5%), otitis media (45.7%), and conjunctivitis (44.1%). Having experienced a specific illness correlated with self-reported knowledge about that same illness ( $\rho$  0.333–0.485,  $P < 0.01$ ). Knowledge correlated positively with the SESSC score ( $\rho$  0.465,  $P < 0.01$ ).

### Self-care interventions

The most common self-care intervention for common colds was resting, followed by self-medication and waiting it out. Only 3.6% ( $n = 11$ ) stated that they contacted health care for common colds. For symptom relief of sore throat, the most common self-care interventions were self-medication, resting, or waiting it out. Also, using home remedies was rather common when suffering from a sore throat. When experiencing discomforting symptoms from sinuses, the most common self-care interventions were to contact health care facilities, self-medicate, and rest. The most common self-care interventions for otitis media were to contact health care facilities and to self-medicate, while only 5.1% tried herbal remedies for symptom relief. In cases of conjunctivitis, the most common self-care interventions were to contact health care facilities, to self-medicate, or to wait it out. When afflicted with gastroenteritis the most common self-care interventions were to rest, to wait it out, or to self-medicate. Home remedies were also used by some. The most common intervention for symptom relief in UTI was to contact health care facilities. Doing nothing was the least popular option when suffering from a UTI (Table 2).

### Information channels

The most common condition that generated consultations with health care facilities was UTI, followed by otitis media, conjunctivitis, and discomforting symptoms from sinuses. Least common was to contact health care facilities for a common cold. The most common facilities for receiving self-care advice are presented in Table 3. Health care centers and family members seem to be popular sources of self-care advice, while out-of-hours primary care and emergency departments appear to be the least used sources for self-care advice.

The facility that had the highest compliance to health advice given was the primary health care center, where 98.6% of respondents stated that they followed all or some advice given. In second place came the national telephone health advisory center (1177), where all or some of the advice given was followed by 96.5% of respondents, and

**Table 3** Common facilities for receiving self-care advice

Information channel	(%)
Health care center	37.8
Family member	36.2
Internet	32.7
Pharmacist	31.1
Friends or relatives	30.2
Telephone help advisory center	23.5
Books or magazines	18.7
Brochures	13.0
TV or radio	11.4
Herbal medicine information sources	5.7
Out-of-hours primary care	1.3
SOS alarm emergency call center 112	1.0

**Table 2** Self-care interventions for minor illnesses<sup>a,b</sup>

	Common colds (%)	Sore throat (%)	Symptoms from sinuses (%)	Otitis media (%)	Conjunctivitis (%)	Gastro-enteritis (%)	Urinary tract infection (%)
Waiting it out	30.8	25.4	13.4	11.8	16.8	44.5	7.1
Resting	51.3	40.9	29.5	20.6	7.6	51.5	7.7
Self-medicating	45.0	45.7	40.9	27.2	31.3	19.5	8.3
Home remedies	17.2	22.3	12.8	9.6	7.6	18.8	12.8
Herbal remedies	16.6	13.4	7.4	5.1	3.8	3.3	7.7
Contacting health services	3.6	8.9	43.0	66.2	49.6	5.9	80.1

<sup>a</sup> Multiple answering alternatives were given.

<sup>b</sup> Persons never having experienced discomfort from the condition were excluded from the analysis.

**Table 4** Compliance to advice received

Information channel	Followed all advice (%)	Followed some advice (%)	Did not follow any advice (%)
Health care center	52.2	46.4	1.4
Telephone help advisory center	45.9	50.6	3.5
Pharmacist	31.9	63.8	4.3
Family member	16.9	78.7	4.4
Herbal medicine information sources	11.9	66.7	21.4
TV or radio	6.1	71.2	22.7
Friends or relatives	5.2	86.2	8.6
Brochures	4.6	76.9	18.5
Books or magazines	2.4	73.2	24.4
Internet	1.8	86.6	11.6

in third place came the pharmacist, where 95.7% stated that they have followed all or some of the advice (Table 4). As for the internet, very few persons answered that they had followed all advice read on the internet, while 86.6% said they had followed some advice. Books, magazines, TV, radio, and herbal medicine information sources seemed to be the least trusted information channels, as more than 20% of participants rejected advice obtained through these sources.

The primary health care center was the source of information that most respondents stated that they would use during future consultations (62.2%), followed by the pharmacist (43.2%), the national telephone health advisory center (42.9%), and the internet (41.9). Most respondents wanted to contact their primary health care center by telephone (88.6%), drop-in (35.2%), or email (18.9%).

## Discussion

Findings show that the most commonly experienced minor illness was the common cold, and having experienced a specific illness correlated with self-reported knowledge about that illness. Preferred self-care interventions differed somewhat between different illnesses, but resting and self-medicating were commonly used, along with consulting health care facilities. Compliance to advice was highest for official information channels such as primary health care centers, the

national telephone help advisory center, and pharmacists, while family members were a popular source of advice, but their advice seemed to be shifted to a higher extent, as it was more common to follow some rather than all advice obtained through family members.

Interestingly, respondents seemed quite educated as to knowing when to contact health services, as only 3.6% stated that they would contact health care facilities for a common cold, whereas 80.1% would contact health care facilities for a UTI. This is in line with recommendations from the website of the national telephone help advisory center (André and Rodhe, 2011). The fact that the respondents seemed to know that a common cold is self-limiting and does not require medical attention while a UTI most often should be presented to the GP indicates that they are well-informed. As the results in this study show, experience (ie, having had a specific illness) correlated with self-reported knowledge and SESSC score, indicating that knowledge about common illness can be somewhat based on experiences of illness attained through life. This could mean that the person's own experiences from previous illness can form part of a person's knowledgebase and influence the way people act and react to future illness.

The results show that most people affected by minor illness will try several self-care interventions in order to relieve their symptoms. However, when they decide to contact health care services it might not be a specific medical treatment that the patients are looking for. A Norwegian study found that patients who have unsuccessfully tried to treat a minor illness feel worried about more serious conditions, and therefore want to rule out such options by seeing a doctor (Welle-Nilsen *et al.*, 2011). Another study of parents seeking immediate primary care for their children also had similar findings, where many parents consulted with the intention of preventing or ruling out serious disease rather than in response to presenting conditions (Hugenholtz *et al.*, 2009).

Despite its' popularity as a health information provider, compliance to advice read on the internet was low in the present study when participants were asked if they followed all advice read on the internet (1.8%), but relatively high when asked if they followed some advice read on the internet (86.6%). This could imply that the internet is seen as a somewhat unreliable source of information,

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thus requiring an active evaluation of web-site and information reliability before choosing to either follow or reject the advice. A previous study has shown that compliance to web-based medical advice is related to attitude toward the advice, and that attitude is primarily shaped by the perceived effectiveness of the delivered advice and the trust in the website (Nijland *et al.*, 2010). The internet may be an excellent source of information, while a real-time consultation with a health care professional can function as a validation of the information and a confirmation that the information retrieved is correct and practicable, and that the care-seeker has the capabilities needed in order to manage the situation.

This study was conducted in a Swedish context, and during the last years several reforms have been introduced in the Swedish health care system that are aimed at improving accessibility to general practitioners and pharmacies. A national telephone help advisory center has been phased in with the purpose of giving correct and professional medical information and advice, while at the same time supporting self-care and guiding patients to the correct level of care. Deregulation of state-owned primary health care clinics has allowed private operators to enter the market with the aim of increasing accessibility to general practitioners. According to the annual report from the Swedish Pharmacy Association (2011), deregulation of state-owned pharmacies has led to improved availability of OTC drugs. This is because of a 34% increase in pharmacies and longer opening hours, thereby broadening the range of symptoms that are potentially self-treatable by self-medication. In the present study, only minor illness with an infectious genesis was included. This was because of the important incentive of decreasing the prescription and use of antibiotics for conditions that are potentially self-limiting because of the problem of antimicrobial resistance. The natural course of these conditions is often uncomplicated although symptoms can be trying during the time they last (Swedish Institute for Communicable Disease Control, 2011). Infectious conditions that could require medical care and possibly medication, such as UTI and otitis media, were included because knowing when to contact primary health care also can be seen as an action of self-care when other actions fail to suffice. With the ambition to increase self-care and reduce prescription and use

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of antibiotics, it is important to keep in mind that there must also be room for the health services to meet the needs of people with minor illness without placing the entire responsibility on the patient alone. If health professionals are able to pass on a view on minor illness as a sometimes inconvenient yet naturally occurring and often a self-limiting condition, this might influence care seekers and form a stable ground to stand on when the next episode of minor illness emerges.

## Limitations

The response rate was low (32%), but was similar to a comparable study recently carried out in the United Kingdom (Elliott *et al.*, 2011). This rate contributes to certain concerns regarding the external validity of the study results, as participation rates have traditionally been seen as indicators of survey quality, based on the fact that nonresponse error is partially a function of response rates (Curtin *et al.*, 2000; Galea and Tracy, 2007). However, although nonparticipation bias is a concern, studies have found little evidence for substantial bias as a result of nonparticipation (Page, 1991; Shahar *et al.*, 1996; Kreiger and Nishri, 1997). One possible explanation for the low response rate could be the fact that the printed version of the questionnaire was dispatched only once, because of financial limitations. According to Galea and Tracy (2007), providing the option to complete surveys via the internet, along with another survey mode option, is a possibility for increasing study participation. This mode was attempted in the present study, however only 11.7% ( $n=37$ ) completed the survey electronically.

Apart from the distributional limitations of the study, the questionnaire was a general health questionnaire not aimed directly for people with a specific condition, thus interest in the study matter may have influenced response rates. The questionnaire was relatively long and required some time and effort to answer. Despite the low response rate, the sample size was relatively large and participants from various demographic and socio-economic groups were well-represented for in the study sample.

The results from this study showed that women, persons above the age of 65, and persons with a university degree were somewhat overrepresented.

There is clear evidence that some groups are more likely to participate in studies, these being women and older persons, persons with higher socioeconomic status, and persons of higher education (Burg *et al.*, 1997).

An estimation of power resulted in a minimum of 63 persons needed in each group for a power of 80%. In this study, there were 124 men and 179 women participating, thus well above the minimum number of respondents required for sufficient statistical power. Also, a Manova analysis was performed on various items from the questionnaire in order to detect differences between early and late responders. Significant differences between early and late responders could imply that nonresponders had more divergent opinions and answers, and therefore would have had a great effect on the final results. The Manova did not detect significant differences between early and late responders.

## Implications

Health care personnel can be a valuable support in confirming persons' assessment of their symptoms and have the possibility of guiding care-seekers in their choice of interventions. As the variety of ways to consult the health care services increases, policy makers should invest in research on how to create trustful relationships with care-seekers over the internet in order to optimize the practice of evidence-based self-care interventions. Personal encounters are hard to replace with technology. As internet and web-applications grow as providers of health information and self-care advice, further research is needed in order to ascertain the sources that are most efficient in regards to enhancing self-care behavior. Accessible and reliable self-care advice might contribute to a reduction of care burden in out-of-hours primary care and emergency departments, hence health care organization should strive to optimize the working situation of telenurses, giving them time to build trusting relations with care seekers.

## Acknowledgments

This study is part of a research project on minor illness that was supported by the Department of

Health Sciences, Luleå University of Technology. The authors also would like to thank all participants of the study for contributing their valuable knowledge, and the foundation of Olle Engkvist Byggmästare for the financial support provided.

## Ethical standards

All participants received information about the study's aims and procedures; they were informed that participation was voluntary and that submitting the questionnaire would be considered a written consent to participate in the study. This study was reviewed and approved by the regional ethical board of Umeå (nr 1610-10).

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