

Online support communities for older people: Investigating network patterns and characteristics of social support

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Abstract

My PhD research aims to identify the components of social support in online support communities for older people. Findings will show how older people support each other in these online communities and how they form a social network based on their communication activities. In addition, my PhD research will reveal how different characteristics of social support evolve and change over time. I will investigate how relationships between older people form, dissolve, and are reconstructed within online support communities, and how individual members are integrated and take on certain roles and responsibilities within the community. Based on the findings, a descriptive model that conceptualises the exchange of social support in online support communities for older people will be developed.

Introduction

Social interactions and collaborations on the internet have become ever more popular in recent years. The rise of social networking sites (e.g. MySpace, Facebook, LinkedIn) and virtual worlds (e.g. SecondLife, ActiveWorlds) illuminates the trend to use the internet to interact with others online. At the same time, traditional ways of online communication (e.g. chats and discussion boards) are becoming more popular as well. A few years ago, people used the internet mainly to retrieve information. Nowadays, typical online activities include communicating with each other in virtual settings in order to socialise [11] and/or to collaborate. Horrigan et al. [3] found in a survey that 84% of internet users participate in online communities. People use online communities to meet other people, develop friendships, play, and exchange experiences and support [11].

In general, researchers describe online communities as settings, where people can meet and communicate with each other online [14]. Preece and Maloney-Krichmar [13] state that online communities are made up from "people who come together for a particular purpose, and who are guided by policies [...], and supported by software." In particular, online support communities consist of people who share similar life experiences and build a place of support, compassion and trust [12, 11]. Online support communities do often work as self support groups and display a high level of understanding and emotional support.

Motivation

The degree of internet usage by people aged 65+ has increased by 47% between 2000 and 2004. In Britain, 28% of the older population go online [7]. In the USA the situation is similar, as 22% of older people use the internet and an increase of this percentage is expected [2]. For most of the older people who go online, email is the predominant method of online communication [3], but online communities are also used increasingly by this target group.

Much work has been done by scholars and practitioners to make the internet more accessible. Guidelines that assert accessibility standards have been developed and

evaluated (e.g. [5]). This work has primarily focused on the accessibility of information on the internet. However, considering the increasing amount of social activities on the internet, it becomes clear that only ensuring access to information on the internet is no longer sufficient. The new challenges lie in considering the social aspects of activities on the internet. These include taking into account how older people communicate with each other, how they exchange information and support, and how they form relationships and groups in online settings. Thus, it is necessary to study how older people socialise and interact with each other in online communities. In my research, I focus on the exchange of social support in online support communities for older people.

The content that older people share with each other in online support communities has been the subject of several studies [1, 4, 16, 18, 19]. Also, query-based techniques have been applied to investigate how older people perceive social interactions in online settings [6, 17, 18]. However, these studies have been partial in their approach, as only few of these studies investigated social support specifically, and few used multiple methods to conduct their research. An integrated investigation is needed to fully understand how older people exchange social support in online support communities. My PhD research aims to provide a holistic description of the exchange of social support in online support communities for older people.

Research Questions

As elaborated above, the key Research Question of my PhD research is:

“How is social support exchanged in online support communities for older people?”

This can be broken down into the following Sub-Questions:

- I. What are the appropriate methods for studying online support communities for older people?
- II. What are the characteristics of social support in online support communities for older people?
- III. What are the network properties and patterns of online support communities for older people?
- IV. What are older people's needs concerning online support communities? How do they experience support in offline settings and how does this influence their participation (and non-participation) in online support communities?
- V. How does the content and the network patterns of online support communities for older people develop over time? (e.g. How does the network pattern change over time? Does the relation between content and network pattern change over time?)
- VI. How does the behaviour and network position of individual members change over time? (e.g. How do people gain and lose power and influence in the online community? What roles do they take on over a period of time?)

Completed work

Content analysis of an online support community for older people

In order to study the components of social support in online communities for older people, I did a content analysis of a subset of the messages of the discussion board about 'depression' within SeniorNet [15]. I collected and analysed the conversation on the board for a period of 1.5 years between 2000 and 2001. Four hundred (400) messages were exchanged in this time

and qualitative content analysis was used to determine how social support is expressed and facilitated in online communication. The findings identified different components of social support, and elicited the different roles that people take on in the online support community. A detailed description of the study can be found in [8].

As a result of this study a code scheme that describes the different aspects of support in the investigated online community was developed. Table 1 lists the seven main categories of the code scheme with the short descriptions and examples based on the analysis of the messages. The categories describe the characteristics and components of social support as exchanged in online support communities for older people.

Table 1: Developed code scheme

Category	Description	Examples
Self-disclosure	Text units in which people post information about themselves. This can be done in different ways (e.g. emotional, narrative, medical)	"I yawn all the time. I want to go to bed. I know you're supposed to get out, but I don't have the energy to do that much."
Community building	The text unit includes people's opinion about the online community and meta-information about communication activities on the discussion board.	"Thank God for this board, as I can sit here and cry and rattle on--you are the only ones who understand."
Deep support	Supporting text units are often emotional and customised towards the unique situation of the target that the message is for.	"Words are so hard right now. So I place my hand gently over yours and let love and sweetness flow through to you."
Light support	The text unit is supportive and uplifting. It is written in a generic way, for another person or the whole community.	"Hang in there" , "I am thinking about you")
Medical facts	These text units include questions and answers about factual information within the topic (e.g. medication).	"So in "both cases" situational depression and bipolar depression they alter chemicals in the brain?"
Technical issues	The text units are concerned with technical problems or suggestions to solve them.	"Read in your browser screen and have Notepad or Wordpad minimised..."
Slightly off	Text units that are about others or about topics that strayed away from the theme of the discussion board.	"Sorry to hear Iowa's weather yesterday. Minnesota is much too cold and damp."

SNA of the communication patterns within the online support community

In order to study the communication patterns within an online support community for older people, I analysed the social network structure of the discussion board about 'depression' within SeniorNet. I applied social network analysis (SNA) to analyse the communication patterns and relationships between members of the discussion board. I investigated who was talking to whom in the online support community and constructed a social network based on the communication activities. In addition to looking at the structure of the exchanged messages within the discussion board as a whole, I also investigated the impact of the communication content on the social network patterns. In particular, I investigated whether conversations in each of the seven identified categories (see Table 1) have an impact on network characteristics (e.g. density of the network, building of cliques, and inclusiveness of the network). Figure 3 shows the sociogram of all investigated communication content of the

discussion board about depression within SeniorNet for the period of 1.5 years between August 2000 and February 2001. The red nodes represent the members of the online support community, and the black lines indicate the communication activities between them.

Findings show distinct differences between the social network patterns of empathic (related to support) and non-empathic (not related to support) communications. For example, members are more connected and closer to each other in the social networks that are related to support compared to communication that is not related to support. Also, the difference between seeking and giving support has an impact on the network structure, as messages that seek support are directed to the whole online support community and messages that give support are more commonly targeted to specific members. Additionally my results show that the type of support has an impact on the social network structure within the discussion board. Whereas 'Light support' is freely shared between all members of the online support group equally, 'Deep support' is often exchanged in small sub-groups within the online support community. For a full description of the study and findings, refer to [9].

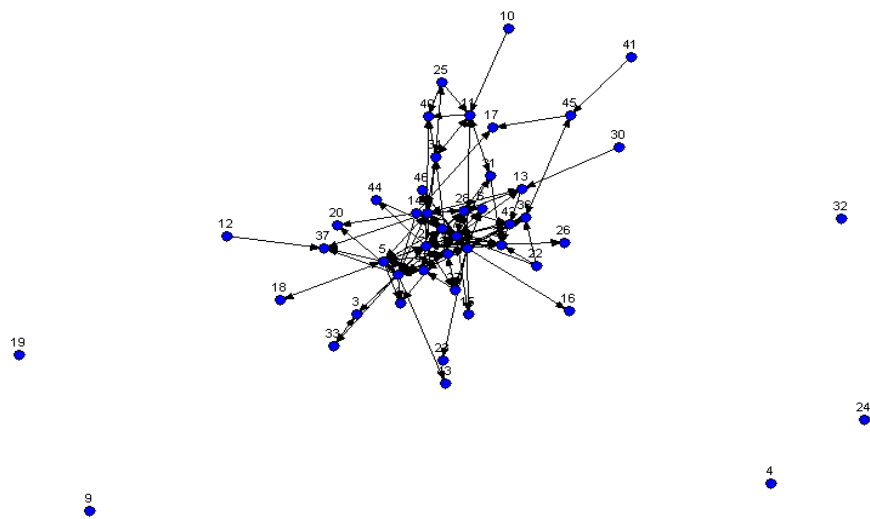


Figure 2: Sociogram of the investigated communication activities within the online support community

Elicitation of user needs and preferences

In order to get a deeper understanding about the needs and preferences of older people regarding online support, I conducted interviews with 31 older people who had different levels of expertise in using the internet and online communication (non-internet users, users who use email, and users who use online support communities). I studied the perception and experiences of older people concerning support in their everyday offline life. In addition, I also investigated their usage of online communication (e.g. emails and online support communities) in order to exchange support. The aim of the interviews was to elicit older people's motivation to exchange support in online settings and the reasons for reluctance to do so. The developed categories (see Table 1) were used as a basis for the interviews and people were asked about their experience of online and offline support relating to these categories. By analyzing the perceptions and experiences of older people, I investigated how the different characteristics of online communication can facilitate or hamper the exchange of support for older people.

Findings show that online support communities for older people do indeed have the opportunity to enhance older people's lives, but they also indicate that in order to facilitate online support for older people, special care has to be taken about the needs and preferences of this target group. A complete description of the study and its findings can be found in [10].

Future work

The remaining work of this PhD includes a longitudinal study to investigate the dynamics and changes of message content and network structure in these communities over a longer period of time. The first step in the data collection phase will be to collect messages of an online support community for older people. The chosen online support community will have to have an archive with a sufficient amount of messages to do longitudinal analysis with.

There will be two approaches to the analysis of the collected data: Firstly, I will investigate the characteristics of the whole community over time. Linking both, the analysis of the content and the network structure over time, this study will give insight into the development of online support communities over time and further inform the phenomenon of social support in online support communities for older people.

Secondly, I will observe individual members of the online support community over time. Findings of this study will inform the exchange of social support in online support communities for older people from an individual perspective.

Based on the findings of this study and of the studies already completed, a model will be developed that shows how social support is exchanged in an online support community for older people. Additionally to the components of social support and network characteristics that emerge of supportive communication, roles and responsibilities of individuals in the process of exchanging social support will be incorporated. Also, dynamic changes of support and network patterns over time will be modelled to allow for a more flexible explanation of the phenomenon.

The developed model is proposed not only to explain the exchange of social support in online support communities for older people, but also as a tool to be used to study online support communities for older people. Thus, the model will be accompanied by methodological guidelines on how to apply it to study online support communities. For example, guidance will be provided on how to use the categories as a basis for content analysis.

Additionally, a variety of online support communities for older people will be consulted with the aim to validate the generalisability of the model. I will take parts of the model as a basis to reflect on its applicability to study online support communities for older people in general.

Anticipated contribution

The results of the studies will shed light on the patterns of social support exchanged among older people in online communities. I believe that the outcome of the PhD will be of use for both researchers and practitioners in the area of HCI/CMC as it investigates an area that is currently understudied.

The proposed model will go beyond existing research and provide a tool for analyzing the characteristics and network patterns of online support communities for older people. Scholars

will be able to use the model, both to explain social support in online support communities as well as to apply the model as a methodological tool in their own research activities.

Also, findings from the studies and the description of the model will help better understand how older users interact with each other in online support groups which will also benefit practitioners and designers of online support communities for older people. If we understand the aspects of online social support and how it is exchanged by older people in online communications, we can also find ways to nurture it and design online communities to better facilitate supportive communication.

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About the author



Ulrike Pfeil started her PhD work in October, 2006, funded by a three-year, full-time doctoral research studentship from City University London. She was awarded an MSc in HCI from the same university in 2006 and a BSc in Information Design from the "Hochschule der Medien", Stuttgart, Germany in 2005. Her research interests include Social Aspects of Computing, especially in Computer-Mediated Communication. She specifically investigates the phenomenon of social support among older people, especially how social support changes in online environments compared to offline ones. Within City University, she is working at the Centre for HCI Design. The research area of the Centre is particularly focused around Requirements Engineering, E-learning, Computer-Supported Collaborative Work, Inclusive Design and Social Aspects of Computing.