Online Discourses about Pregnancy: Privacy as a 'Price' for Supportive Communication?

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Abstract

Pregnancy is accompanied by considerable physical, psychological, and role changes. While the development of the unborn child is perceived intensely, many events during the course of pregnancy stay out of control and produce feelings of uncertainty. These uncertainties are likely to evoke the need for supportive communication and initiate behaviors such as turning to online support groups. This study focuses on different types of supportive communication in online discourses among pregnant women, the thematic contexts and the role of disclosing private details with regard to social support. A content analysis of 1,032 posts from 620 different members of an online community was conducted. Compared to empathetic support, informational support clearly dominated the discourse. Overall, users were rather cautious in providing private details. Higher levels of self-disclosure were only observed regarding informational support. Hence, we assume that self-disclosure might be useful for issue-related advice, but is not generally necessary for empathetic support. Implications for further research and practice are discussed.

Key Words: Uncertainty management, supportive communication, online social support, pregnancy, privacy, self-disclosure, online communities

Introduction

Pregnancy and the wish for a child are periods of life characterized by considerable physical, psychological, and role changes, leading to substantial transitions of lifestyles and perspectives of life. These transitions are perceived intensely and make expectant women highly involved in any issue related to pregnancy (Song, West, Lundy, & Smith Dahmen, 2012), especially in health-related topics (Aaronson, Mural, & Pfoutz, 1988; Dervin, Harping, & Foreman-Wernet, 1999). Feelings of uncertainty during these periods of transition are not only negatively experienced (e.g., fears) but also associated to positive aspects (e.g., pleasant anticipations), both being bound to several important, life-changing decisions (Carrigan & Szmigin, 2004). Consequently, pregnant women have higher needs for supportive communication and social support including informational, emotional, and self-esteem support as well as support by social networking. Online communities are capable to fulfil these supportive functions and play an important role in these women's life as 'community of women in similar situations' (Song et al., 2012). But supportive communication is likely to require the disclosure of private information in the online community. Against this background, we focus on two aspects: First, we examine the role of different types of supportive communication and associated pregnancy-related issues in an online community for pregnant women. Second, we investigate how disclosure of private information in the online discourse is associated to supportive communication.

Theoretical Background

Uncertainty management and information seeking in pregnancy

Even if women engage in self-monitoring and caring both for themselves and their unborn child, many

factors of pregnancy experience will stay out of control and produce feelings of uncertainty (Brashers, 2001). These often provoke risk perceptions and the need for risk reduction (Clarke & Gross, 2004) and lead to communication and information seeking behaviors in order to gain reassurance, support or encouragement (Aaronson et al., 1988; Dervin et al., 1999). While most women are generally interested in information about child-development, the course of pregnancy, and birth (Godolphin & Towle, 2005; Larsson, 2009), there are also specific supportive needs resulting from pregnancy-related issues expectant mothers face in specific situations. It can be expected that different supportive needs lead to different supportive communication processes in the pregnancy-related online discourse. However, it is worth mentioning that sometimes it may also be useful to actively avoid information which might cause more uncertainty or even fears (Brashers, 2001; Lindley, 2006).

Support in online communities

Expectant women can use diverse information sources and communication strategies to satisfy their needs for social support. They can turn to health professionals or use direct and indirect forms of peer-to-peer communication. Focusing on peer-to-peer communication, online communities as a special type of an online support group (Ginossar, 2008; Tanis, 2007), addressing a broad public sharing interests and experiences play a particularly important role in pregnancy (Arnold, 2003; Bradley & Poppen, 2003). This network of weak ties lowers the barriers to communicate (Boyd & Ellison, 2008; Ellison, Steinfield, & Lampe, 2007; Hardey, 2001; Wright, Rains, & Banas, 2010) and facilitates supportive communication online, sometimes complementing face-to-face conversations and improving coping and empowerment (Arnold, 2003; Knapp & Vangelisti, 2009).

Health-related online communities are predestinated for different types of social support (Coulson, 2005; Eysenbach, Powell, Englesakis, Rizo, & Stern, 2004; Ginossar, 2008). The community spirit facilitates *emotional support, support for the feeling of self-esteem* and *support by social networking* (Cope, 1995). These three types of supportive communication refer to interpersonal relationships; they help to cope with emotional stress, uncertainty or other challenges during pregnancy (Lee & Hawkins, 2010) and are capable to promote empowerment, to extend options of self-determined action and to foster a sense of control (Oh & Lee, 2011). Additionally to these types of support we will classify as 'empathetic support', *informational support* constitutes the factual level of online discourse. Referring to trustworthy personal experiences of other women in a comparable situation (Prior, 2003), informational support is based on a specific notion of knowledge among the community members. Acting as peers, they provide information, orientation, and practical advice in certain situations (Arnold, 2003), help to understand complex situations and can act as translators and caregivers (Stehr & Grundmann, 2010).

Overall, it is plausible to assume that the different types of social support are related to different types of pregnancy-related issues. Recent research has shown inconsistencies referring to the extent, prevalence and importance of different types of supportive communication. Some studies reported that emotional support was the most frequent type or more prevalent than informational support (Love et al., 2012; Malik & Coulson, 2011), whereas other studies revealed the opposite (Coursaris & Liu, 2009; Gray, 2013; Keating, 2013) or empathized the importance of self-esteem support and social networking (Loane & D'Alessandro, 2013).

Hence, online communities might serve as a complementary information source serving a wide range of supportive communication and allow uncertainty management (Brashers, Goldsmith, & Hsieh, 2002; Owen et al., 2010), but they also might bear specific risks and benefits for its users.

The challenge of handling online privacy

One main challenge for members of the online community who want to share social support is handling privacy. Privacy is a basic human need, rooting in a sense of shame and the need for personal space and intimacy in interpersonal relationships (Altman, 1975; Debatin, 2011; Westin, 1967). According to Margulis (1977), the protection of privacy represents control over transactions between persons with the aim to enhance autonomy and to minimize vulnerability. The openness and anonymity of online communities change conditions for the individuals' ability to protect their privacy and challenge the handling of online privacy.

Considering the specific characteristics of online communities, privacy is often referred to a privacy dilemma or paradox: Online communities are an ideal forum for "[...] communicating uninterrupted messages that might be perceived as threatening or difficult in face-to-face interaction" (Knapp & Vangelisti, 2009, pp. 108-109). Due to personal disclosure, users risk breaches of their privacy (Walther, 2011). But in many cases, giving private information seems to be necessary to reap the benefits like social support from the community (Ellison, Vitak, Steinfeld, Gray, & Lampe, 2011); some authors even argue that negotiating private information serves managing social relationships (Child & Petronio, 2011). Nevertheless, the motivation to get social support can

collide with the motive to maintain online privacy (Kraemer & Haferkamp, 2011; Walther, 2011). Thus, individuals have to balance pros and cons of keeping control of personal information on the one hand, and receiving support and engaging in supportive communication, on the other.

In online communities, different levels of privacy and access to private information need to be distinguished (Burgoon, 1982; Kraemer & Haferkamp, 2011; Parrot, Burgoon, Burgoon, & LePoire, 1989). On a general level, community members provide information and factual data about themselves in their users' profiles (person-bound level). On a situational level, i.e., during the communication process, information about emotional states, thoughts, and preferences are disclosed towards the community members.

Research Questions

Based on our theoretical background, we aim to analyze how pregnant women use online communities for supportive communication and to investigate how self-disclosure in a pregnancy-related online community is associated to different types of social support. For this purpose, we derived five research questions.

The first questions concern the nature and pregnancy-related thematic contexts of supportive communication that users seek for or provide to others. In the second step, we analyze the thematic contexts of privacy issues and self-disclosure in supportive online discourses among expectant women.

It can be assumed that online communities are predestinated for different types of social support, because they offer the opportunity to share experiences and emotions with other pregnant women. Due to the mixed findings on the prevalence of different types of supportive communication, the first research question asks for the importance of different types of support for pregnant women in an online community.

RQ1: Which types of supportive communication are how prevalent in online discourses among pregnant women?

The second research question aims at describing the content-related contexts of these types of supportive communication in order to develop a closer understanding of why and when different types of social support are needed. We were interested in dominant pregnancy-related issues of online discourses among expectant women and looked at the relationship between specific issues on the one hand and social support on the other hand.

RQ2: Are different specific pregnancy-related issues associated to different types of supportive communication?

The next question links both main targets of our study and asks for the relationship between supportive communication and situation-bound self-disclosure of private information in the discourse. Due to the fact that pregnancy and the wish for a child are very private issues, it seems to be nearly inevitable to receive and to share information, feelings or thoughts without disclosing private information at all. However, there is a need of handling online privacy carefully, because the community is still a group of strangers. Therefore, the third question asks for the relationship between supportive communication and self-disclosure.

RQ3: Are different types of supportive communication associated differently to the disclosure of private information in the online discourse?

The last two research questions focus on self-disclosure. Research question four aims at describing pregnancy-related thematic and situational contexts of self-disclosure and asks if revelation of private information in the online discourse is issue-specific or not.

RQ4: Are specific pregnancy-related issues associated differently to the disclosure of private information in the online discourse?

For the last question we distinguish between self-disclosure in the online discourse (on a situation-bound level) and disclosing general information about the own person (person-bound level). While situation-bound disclosure refers to private information in posts, the person-bound level refers to information regarding the person, which can be found in the user's profile. We are interested if these two levels of self-disclosure are connected to each other.

RQ5: Is disclosure of private information in online discourses (situation-bound level) associated to the general disclosure as a community member (person-bound level)?

Method

In order to answer our research questions, we conducted a standardized content analysis of posts and user profiles of the online community www.urbia.de. *urbia* is the largest German family online community offering different services, news and bulletin boards in the fields of pregnancy, wish for children, babies and family life. Especially women use this platform to seek information, to share experiences and to post requests or provide help. We used a two-step sampling strategy: First, one week (November 14-20, 2011) was chosen randomly. Second, we used a systematic sampling strategy to define a constructed week by choosing the first thread each hour during this week. For our sample we selected only the first post and the first five direct answers to the starting post. Additionally, the analysis

included the individual user profiles of the corresponding participants in the selected section of each thread. The sampling strategy resulted in 274 threads with 1,032 posts from 620 different users. The study involved two levels of analysis: the individuals' user profiles and the posts.

Measures

To measure the type *of supportive communication,* we differentiated four types of social support (Cutrona & Suhr, 1992): informational and emotional support, support for the feeling of self-worth or self-esteem and support by the social network. For every type we captured if the user demanded or provided support or if support was both demanded and provided. For further procedures we used dichotomous variables for the demand and provision of each type of support. Based on the theoretical considerations and due to the infrequent occurrence of self-esteem and social networking support, we merged emotional support, support for the feeling of self-esteem and support by social network to one type of support *(empathetic support)*.

The *thematic contexts* of communication captured relevant issues like wish for a child, pregnancy, childbirth, handling and nurture of the baby, friends and family, leisure time as well as finance and career. For every post, one relevant issue was assigned.

The variable *privacy of the statement* was dichotomously coded and measured the disclosure of information about the private self in posts (situation-bound level). Generally, this included all topics associated with shame, triggered emotions or intimacy, interpersonal relationships, sexuality or the own body.

Privacy concerning the user's person in general was measured by a *self-disclosure index* on the user's profile level of analysis (person-bound level). Based on the dichotomous variables regarding the release of a picture of the user, a personalized nickname, a motto and other optional information about the person, we determined the degree of self-disclosure by a frequency index. The index ranks from 0 'non-disclosing' to 4 'highly self-disclosing' (M = 2.48; SD = 1.17).

For a comparison between the self-disclosure on the person-bound and situation-bound level, the variable measuring self-disclosure on the post-level was aggregated (percentage of posts with private information per user) (M = 0.47; SD = 0.46).

After intensive training and coding tasks ten graduate students performed the coding of data. During the training, discrepancies and problems were discussed and the codebook was improved. The data from a random sample of 36 posts and 20 user profiles were deployed to establish reliability for this study. Holsti was used to determine the intercoder reliability and was found to be acceptable at .94 across all variables. Results showed that for all units the combined coefficients across all variables had high intercoder agreement: post-level (formal categories .99; content categories .94; total .94) and user-profile level (formal categories .99; content categories .90; total .96).

Results

The first question asked for the prevalence of different types of support that *urbia* users demanded or provided in the online discourse. Because online support groups particularly offer the opportunity to share both empathetic support and factual information with others having a similar issue involvement and because existing findings regarding the importance of different supportive communication are inconsistent, we were interested in the amount of the different types of support in the pregnancy-related online discourse. In total, we coded the demand respectively the provision of informational, emotional as well as self-esteem support and support provided by the social network in 1,032 posts. Overall, 890 of all posts (86%) revealed references to supportive purposes. 780 posts (76%) contained informational support whereas only 298 posts (29%) contained emotional support (see Table 1).

Demand or provision for self-esteem support and social networking accounted for less than 5 percent. Cumulating emotional, self-esteem support and social networking activities, 31 percent of the posts referred to empathetic support. Thus, we found twice as many references to informational than to empathetic support.

To focus on the demand or provision for support, the results showed that the proportions of the different types of support were equivalent to supportive online communication activities overall (see Table 1). Thus, we can assume that the empirical relevance of different types of supportive communication is independent from the question if support is demanded or provided. An in-depth analysis of informational support as the dominant purpose showed that expectant women mainly seek for practical advice and operational information (76.4% of the posts demanding for informational support), whereas only 25.8 percent of the posts demanding for informational support focused on surveillance.

Table 1 *Types of social support demanded or provided in posts*

	Support demanded	Support provided	Support overall (demanded or provided)
	N (%)	N (%)	N (%)
Informational support	229 (78.2%)	564 (86.5%)	780 (75.6%)
Emotional support	83 (28.3%)	218 (33.4%)	298 (28.9%)
Self-esteem support	10 (3.4%)	27 (4.1%)	37 (3.6%)
Social networking	10 (3.4%)	2 (0.003%)	12 (1.2%)
Total	293 (100%)	652 (100%)	1032 (100%)

Note. One post could contain different and more than one type of support.
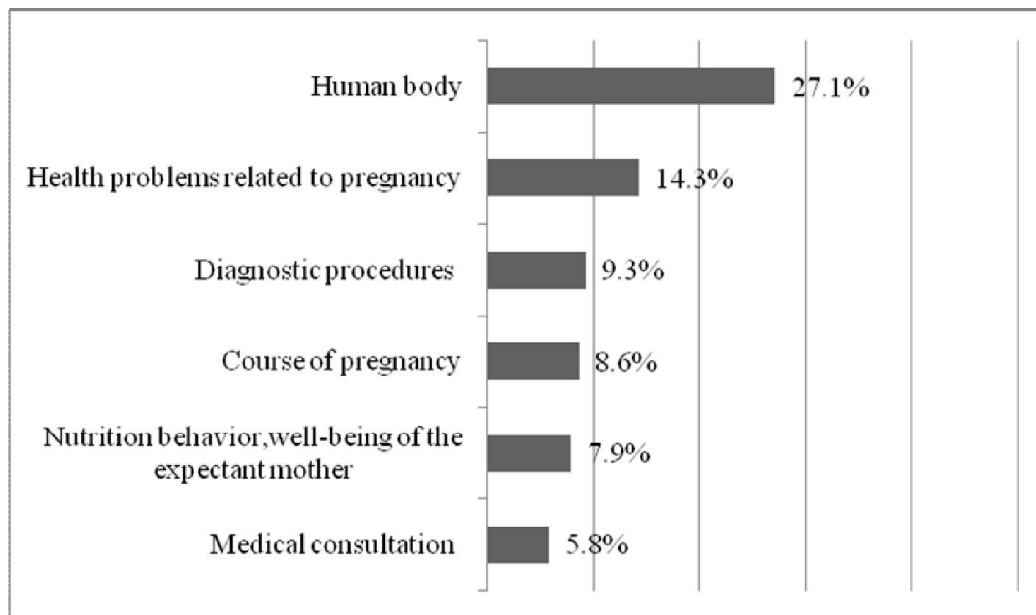
N = 1,032 posts/N = 293 posts demanded support/N = 652 posts provided support

To answer the second research question, we were interested in a description of different pregnancy-related issues associated to supportive communication. Therefore, we analyzed the relationship between the types of social support and specific pregnancy-related issues of the discourse. Overall, the pregnant women most frequently talked about the human body (24.1%), physical side effects of pregnancy or physical discomfort and health problems related to pregnancy (13.8%), the course of pregnancy (9.5%) as well as the diagnosis of pregnancy (8.4%).

To distinguish between informational and empathetic support, we could assert and identify specific patterns of dominant issues for the two types of support: Answering *RQ2*, we found a mediocre, but highly significant relationship (Cramer's-V = .363; p = .000) between the posts referring to informational or empathetic support and the topics of the discourse (see Figures 1 and 2). Pregnant women particularly shared informational support in those areas referring to practical physical issues and medical decisions of pregnancy. 27.1 percent of the posts with informational support dealt with the human body and 14.3 percent with health problems related to pregnancy (see Figure 1). Information from other expectant mothers seemed to provide practical advice in a similar situation. Even medical consultations (5.8%) were subject of the discourse.

Figure 1 *Most relevant issues related to informational support*
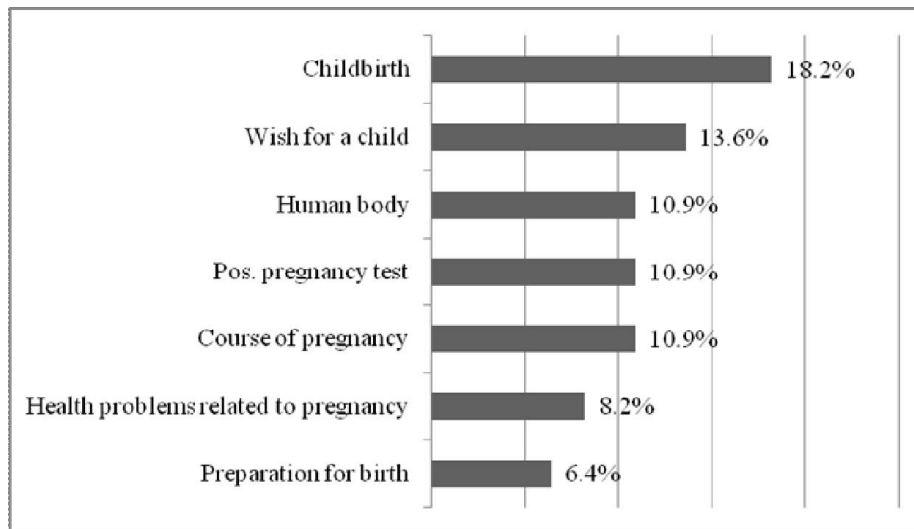
Note. n = 568 posts: $Chi^2 = .628$; p = .000; Cramer's-V = .363; p = .000
Cramer's-V = .363; p = .000

Empathetic support on the other hand was more closely linked to emotionally loaded issues and particularly to those aspects related to the child, while health-related topics were of less importance here (see Figure 2). Women seeking for empathetic support particularly broached the topics childbirth (18.2%), wish for a child (13.6%), questions referring to the human body (10.9%) and positive pregnancy tests (10.9%).

Figure 2 *Most relevant issues related to empathetic support*

Note. n = 110 posts; *Chi^2* = .628; *p* = .000; *Cramer's-V* = .363; *p* = .000

The connection between the types of supportive communication and the specific pregnancy-related issues raised the question if different discourses might be associated to self-disclosure in different ways. *RQ3* asked for the relationship between the different types of social support and the disclosure of private or intimate details in online discourses. The analysis of the association between self-disclosure and references to informational support should reveal if women share information regarding a sensible topic like pregnancy without disclosing private details or if disclosing private information is important in informational supportive communication.

Table 2 *Relationship between self-disclosure and informational support in posts*

Self-disclosure	Informational support		
	No	Yes	Total
	N (%)	N (%)	N (%)
No self-disclosure	159 (63%)	427 (55%)	586 (57%)
Self-disclosure	93 (37%)	353 (45%)	446 (43%)
Total	252 (100%)	780 (100%)	1,032 (100%)

Note. Chi^2 = 5,414; *p* = .02; *Cramer's-V* = .072; *p* = .02

In sum, less than half of all posts contained self-disclosing details (see Table 2). This result was observed for posts with informational support as well as for posts without informational support. Hence, users were preferably restrictive with detailed information. Still, the amount of self-disclosing posts among informational support posts (45%) was higher than the amount of self-disclosing posts among posts without informational support (37%) and we found a very weak, but significant relationship between the revelation of private details and informational support in posts (*Cramer's V* = .072; *p* = .02) indicating that to some extent self-disclosure might be needed in order to share informational support and necessary for the online discourse on specific topics in pregnancy.

Analogous to informational support, we focused on the empathetic dimension of supportive communication and analyzed the relationship between empathetic support and the disclosure of private

information in posts. The analysis referred to the question whether seeking and receiving empathetic support which particularly might require empathy and foster social proximity lowers the users' constraints to disclose themselves by sharing intimate and private

details with other members of the online community. For this purpose, we investigated the relationship between empathetic support and self-disclosure in the online discourse.

Table 3 *Relationship between self-disclosure and empathetic support in posts*

Self-disclosure	Empathetic support		
	No	Yes	Total
	N (%)	N (%)	N (%)
No self-disclosure	401 (56%)	185 (57%)	586 (57%)
Self-disclosure	309 (44%)	137 (43%)	446 (43%)
Total	710 (100%)	322 (100%)	1,032 (100%)
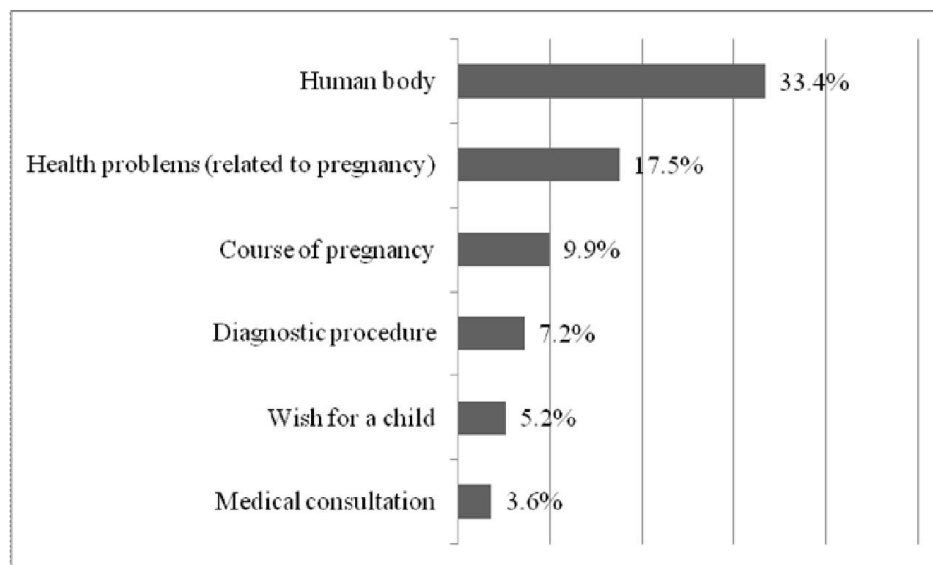
Note. Chi^2 = .009; n.s.; Cramer's-V = .009; n.s.

We found that the majority of posts referring to empathetic support did not contain self-disclosing details. However, the proportion of posts including self-disclosure did not differ between the two subgroups (43% vs. 44%; see Table 3). Thus, the revelation of private information in posts was not associated to

demanding or providing empathetic support (*Cramer's-V* = .009; n.s.).

The fourth research question transferred the purpose of *RQ2* to the case of self-disclosure and raised the question whether there is an issue-specific disclosure of private information.

Figure 3 *Most relevant issues related to the disclosure of private information*

Note. N = 446; Chi^2 = 124,004; p ≤ .000; Cramer's-V = .347; p ≤ .000

As shown in Figure 3, the disclosure of private information in posts was related to specific issues. We found a highly significant, mediocre relationship between self-disclosure and the topic of a post (*Cramers´s-V* = .347; *p* ≤ .000). Unfolding private information was most prevalent in discourses about the human body (33.4%)

and the experience of or sorrows about health problems (17.5%). Half of all posts including private details dealt with one of these two issues. Based on these findings we can assume that self-disclosure might be more relevant in the context of body and health-related questions and less for emotionally loaded topics or

issues which might evoke empathetic feeling with other pregnant women like for example the wish for a child. Thus, the analysis referring to *RQ4* showed that situation-bound self-disclosure (post-level) to some extent depends on the subject of discourse.

The last research question aimed to analyze the relationship between self-disclosure on the situation-bound level (posts) and the general (person-bound) level, i. e., disclosure of private details in the users' profiles. Thus, we investigated if users showed a general tendency in how they deal with privacy issues in the online discourse. The mean values of self-disclosure on a general person-bound level illustrated that all users provide at least some private information about themselves (M = 2.48; SD = 1.17). However, a correlation analysis showed a weak negative, but significant relationship between person-bound and situation-bound self-disclosure (Pearson's R = -.102; p = .011). Based on this result, we can assume that different factors motivate general and situational self-disclosure in the online community.

Discussion

The online discourse among people sharing the same level of issue involvement can particularly be beneficial for satisfying their needs regarding informational and empathetic support (Arnold, 2003; Eysenbach et al., 2004). Supportive communication is particularly relevant in transitional periods like pregnancy. Against the background of the major role the internet plays for health and pregnancy-related information seeking by now (Larsson, 2009; Lee & Hawkins, 2010) and taking into consideration the advantages emerging from online communities for women (Oh & Lee, 2011; Tanis, 2007), we focused on the pregnancy-related discourse among women in a specific online support group for expectant mothers. We aimed at examining how pregnant women use online communities for supportive communication in different thematic contexts of their pregnancy. The public revelation of private details in such a sensitive issue should be treated as a crucial point and thus should be a particular subject of research (Trepte & Reinecke, 2011). Therefore, we also focused on the disclosure of private information in the online discourse (on a situation-bound level) and connected this to different types of supportive communication, different subjects of discourse and to the extent of information disclosed on a general person-bound level.

Obviously, the online community was extensively used for supportive communication – 86 percent of all posts in the sample referred to informational or empathetic support. We found more posts containing informational support than posts referring to empathetic support. Thus, we could find support for the assumption that the online community did not mainly serve as a social network. Due to the fact that the exchange of informational support revealed as the dominant way of using the online community, expectant mothers might utilize online communication with others in similar situations complementary to health professionals' expertise. This might further indicate an unfulfilled need for health information and a lack of other resources complementing advice by health professionals (Lee & Hawkins, 2010). For pregnant women, informational support in the online community may thus serve needs complementary to patient-provider-interaction.

The second research question referred to issue-specific differences between informational and empathetic support and revealed highly plausible results indicating that different pregnancy-related issues require different types of social support: Searching for informational support was rather related to physical challenges and health problems during pregnancy as well as practical or factual advice, while empathetic support was more prevalent with regard to emotional coping or preparation of childbirth or to share the pleasure of a fulfilled or sorrows of an unfulfilled wish for a child.

In *RQ3*, we asked for the relationship between informational support as well as empathetic support and self-disclosure in the online discourse. Even though we found more posts with reference to informational support that were connected to self-disclosure, it became obvious that information orientation slightly raised the probability of revealing private details. Although users seemed to be rather cautious in providing private information in their posts overall, more disclosure might be necessary or at least useful in order to share pregnancy-related information successfully. For posts referring to empathetic support, this relationship was not evident. Thus, disclosing private information does not seem to be a prerequisite for the exchange of empathetic support in a pregnancy-related online community. Therefore, we can assume that self-disclosure is not a *necessary* condition for supportive communication in the online community per se and that users tend to distinguish the amount of self-disclosure depending on the purpose they deal with. Interestingly, regarding informational support, it might be particularly expedient to disclose some more private details, while empathetic support seems to get along without higher degrees of self-disclosure. Moreover, self-disclosure seems to be an issue-related and situation-bound phenomenon. Health and physical issues are closely linked to private information or more precisely: They

seem to be private or intimate by nature and therefore might require a minimum of disclosure.

Answering *RQ5*, we compared the different levels of self-disclosure in the online community. For the purpose of being a community member, the users accepted to reveal at least some personal information on their profile. This readiness to sign up and create a profile was only weakly, but negatively associated to the disclosure of private information in posts. Thus, the common agreement of sharing some private information about oneself is obvious, but this general self-disclosure on a person-bound level clearly turned out *not* to be a predictor for self-disclosure in single conversations. Or, vice versa: Unfolding private details in the discourse does *not* indicate a tendency to disclose oneself in general.

To put it into a nutshell: Other women in a similar situation which can be met in an online community play an important role for pregnant women and women who wish for a child, particularly regarding informational support. All users did provide some intimate details about themselves, but there is some evidence that supportive online discourses do not require more self-disclosure per se. We only found a closer relationship between informational support and situation-bound self-disclosure. Finally, users in fact seem to differentiate both between different subjects of discourse, different types of social support and different levels of self-disclosure which may provide some evidence for some degree of self-consciousness and media-literate internet use as well as a conscious decisions about the need of self-disclosure, which would indicate an adequate handling of the privacy paradox.

Limitations

Some limitations of the current study need to be considered. First of all, we only focused on the *online* discourse among pregnant women or women wishing for a child and therefore, we cannot provide any empirical evidence for the relationship between supportive communication in online and offline contexts. Additionally, we are not able to make a statement about the users' motivations of sharing social support in the online community and their reflections about online-privacy and self-disclosure. For these purposes, complementary survey data are needed. Nevertheless, using survey methods comprises different disadvantages compared to analyzing online discourses via content analysis: Even though a survey can provide information about the users' motives or intentions, it does not reveal information about the actual and empirically observable communication behavior. Therefore, we strongly suggest using both content analysis and survey methods in combination to gain a more detailed picture of uncertainty management and strategies of demanding and providing social support among pregnant women.

Implications for research and practice

These results have several implications for both future research efforts in this domain as well as for practitioners, such as health professionals, and the interaction in shared decision making. First of all, future research is needed in order to understand the importance of different types of social support with regard to different health-related issues in more detail. Multi-method designs should help to find out more about the motivational factors of supportive needs, self-disclosure and privacy protection in online communities. Besides, in order to delineate how online communities can provide social support in particular, supportive online communication should be compared to offline channels such as face-to-face communication with health professionals or peers.

Furthermore, we can derive some implications for health (communication) professionals: Obviously, pregnant women and women who wish for a child have strong informational needs beyond information they receive from health professionals. Lay health online communities seem to be perceived as suitable communication platforms where health and pregnancy-related know-how and experiences can be shared. In order to avoid the diffusion of potentially misleading, wrong or risky information, content-related quality management is inevitable for online communities. Moreover, it is important to improve health and online literacy of users. Health interventions should not only enhance knowledge, but also encourage restrictive dealing with private information, improve the users' ability to evaluate the quality of the information critically and strengthen a self-determined way of handling privacy concerns. Only under these preconditions, lay online communities can actually support patient empowerment.

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