
Article:
Fredriksen, E.H. orcid.org/0000-0001-5609-8308, Moland, K.M. orcid.org/0000-0003-1491-8595 and Harris, J. orcid.org/0000-0002-0754-7223 (2018) How do health professionals acknowledge Web-based knowledge in pregnancy consultations? Health Care for Women International , 39 (9). pp. 955-967. ISSN 0739-9332

https://doi.org/10.1080/07399332.2017.1423314

Title:

How do Health Professionals acknowledge Web-based knowledge in pregnancy consultations?

Author names

Eva Haukeland Fredriksen (1)

Karen Marie Moland (2,3).

Janet Harris (4).

Author affiliations

1. Department of Occupational Therapy, Physiotherapy and Radiography, Faculty of Health and Social Sciences, Western Norway University of Applied Sciences, Norway.

2. Centre for International Health, Faculty of Medicine and Dentistry, University of Bergen, Norway

3. Department of Nursing, Faculty of Health and Social Sciences, Western Norway University of Applied Sciences, Norway.

4. School of Health and Related Research, University of Sheffield, United Kingdom.

Corresponding author

Eva Haukeland Fredriksen, Department of Occupational Therapy, Physiotherapy and Radiography. Faculty of Health and Social Sciences, Western Norway University of Applied Sciences, Norway.

PO Box 7030, 5020 Bergen, Norway. Email: eva.haukeland.fredriksen@hvl.no.

Phone +4755585607/+4748285171.

KEYWORDS: e-Health Literacy; health professionals; pelvic girdle pain (PGP); pregnancy consultations; Web-based health information

RUNNING HEAD:
Web-based knowledge in pregnancy consultations

Acknowledgements

We thank the interviewees for their positive contributions to our study. We also thank Bergen University College for funding the study.

Declarations of conflicting interests

The authors declared no conflicts of interest with respect to the authorship and/or publication of this article

Funding

Bergen University College, Bergen, Norway

ABSTRACT

Web-sites for pregnancy health are an important source of information for pregnant women, but how different cadres of health professionals value and utilize pregnant women`s e-health literacy and Web-based knowledge in pregnancy consultations is not well understood. Using a qualitative research design and pelvic girdle pain as a tracer condition, we explored how Norwegian doctors, midwives and physiotherapists manage women`s e-health literacy and Web-based knowledge in pregnancy consultations. The recognition of pregnant women's eHealth literacy and Web- based knowledge differed across professional groups and produced dismissive, reactive and proactive attitudes depending on time pressure, professional identity and internet experience.

MAIN TEXT

Increasing numbers of pregnant women turn to the Internet to obtain health information (Larsson, 2009; Ling-ling, Larsson & Shu-yan, 2013) and to gain more control over decisions affecting pregnancy (Lagan, Sinclair & Kernohan, 2010). The use of Web-based health information within the health care encounter has been termed the e-patient revolution (Wald, Dube & Anthony, 2007), which has a significant impact on the interaction between patients and the health professionals (Hardey, 2001; Broom, 2005; Sommerhalder, Abraham, Zufferey, Barth & Abel, 2009). In this qualitative study we explored how 13 Norwegian doctors, midwives and physiotherapists managed pregnant women`s e-health literacy (e-HL) and Web-based knowledge; i.e. how their skills and knowledge were identified during the consultations, and to what extent it was acknowledged and utilized as a resource. The article is part of a larger qualitative study that explores e-HL and Web-based knowlegde in health in pregnancy from different prespectives. We believe that this issue needs attention from health professionals and the research community not only in Norway, but also internationally, because the e-patient revolution is a global phenomenon affecting clinical encounters and pregnant womens`s decision making in health.

BACKGROUND

The struggle over the patient`s role in medical decision making is often characterised as a conflict between the values of the patient and the values of the doctor. In seeking to reduce the doctors' dominance, many have advocated for greater patient control, where doctors are encouraged to enable patients to make informed decisions for themselves rather than making the decisions for them (Emanuel & Emanuel, 1992; Hardey, 1999; Song, West, Lundy & Dahmen, 2012). Medical sociologists have noted that the phenomenon of the patient as a critical consumer of health has triggered a process of de-professionalization, which has

diminished doctors` authority (Song, West, Lundy & Dahmen, 2012). The de-professionalization process changes the power relationship between patient and doctors. The e-patient revolution, which is described as a triangulation of patient-Web-physician (Wald, Dube & Anthony, 2007), has fuelled this process of de-professionalization. The concept of "net-friendly" clinician has been launched to address medical consultations in the new digitalized context. This term refers to a clinician who helps patients to navigate through the wealth of health care information by providing an "internet prescription" for recommended Websites. It has been argued that integration of patients` use of the Web within a medical practice could increase the quality of health care (Wald, Dube & Anthony, 2007), and it has also been reported that provider-patient talk about Web-based health information is associated with higher patient satisfaction (Bylund, Gueguen, Sabee, Imes, Li & Sanford, 2007). But according to a survey from 2010, almost 50% of pregnant women reported a lack of opportunity and time to ask questions during pregnancy consultations (Lagan, Sinclair & Kernohan, 2010). Thus, many are not likely to receive information that they both need and want (Bessett, 2010). A survey of midwives from 2011 reported that two-thirds believed that the Internet provides women with information that they otherwise would not receive, and as much as 73% agreed that the Internet improved women`s understanding of conditions associated with pregnancy. However, the midwives also expressed serious concerns about the accuracy of the information that women were retrieving, and valued this situation as a challenge (Lagan, Sinclair & Kernohan, 2011).

The ability of individuals to access relevant information from electronic sources and being able to make sense of it has been termed e-health literacy (e-HL). Drawing on Nutbeam`s model on health literacy (Nutbeam, 2008), Norman and Skinner define e-HL as the ability to seek, find, understand and appraise health information from electronic sources and apply the knowledge gained to address or solve a health problem (Norman &Skinner, 2006). In the

present study, we used Norman and Skinner`s definition of e-HL in the exploration of how doctors, midwives and physiotherapists managed pregnant women` e-HL and Web-based knowledge; how their skills and knowledge were identified during the consultations, and to what extent it was acknowledged and utilized as a resource. Although there are studies describing doctors` experiences with the e-health revolution (Hardey, 1999 and 2001; Broom, 2005; Bylund, Gueguen, Sabee, Imes, Li & Sanford, 2007), and midwives' experiences with e-literate pregnant women (Lagan, Sinclair & Kernohan, 2011) we have not identified any studies describing the experiences of physiotherapists. We have not found any studies who describe how different cadres of health professions within the same context experience and manage the e-health revolution in pregnancy consultations.

In Norway, 96% of the population in the 16-79 year age group were Internet users in 2015, and 90% of the women in the 25-34 year age group used the Internet to seek for health-related information (Statistics Norway, 2015). Hence, we assume that most pregnant women in Norway consult the Web for health information in addition to consultations with the health professionals. During pregnancy, women are eligible to regular consultations with a GP or a midwife, which is free of charge. Most pregnant women consult their GP early in pregnancy for medical tests. This first medical consultation is normally 20 minutes, whereas the follow-up consultations throughout the remaining pregnancy are usually 10-15 minutes. In addition, many consult a midwife from mid-pregnancy and until term. The first pregnancy consultation is one hour, whereas the next consultations are normally limited to 30 minutes. Women who experience pregnancy-related health problems may also be eligible for physiotherapy, usually limited to 30 minutes per consultation.

Doctors (GPs), midwives and physiotherapists have different roles and responsibilities in the encounter with pregnant women. As experts in general medicine and gatekeepers to social

benefits the GPs are responsible for medical examinations and technicalities, and for giving information about risk prevention and individual pregnancy rights. The midwives, who are trained in comprehensive pregnancy and birth care, prepare women for birth and motherhood and provide information, assistance and support throughout pregnancy, delivery and the postpartum period. Physiotherapists are experts in examination, treatment and prevention of musculoskeletal disorders, and are responsible for giving their pregnant patients tailored information and treatment. Hence, the GP, the midwife and the physiotherapist have complementary roles and responsibilities vis a vis the pregnant woman, but do not necessarily work in interdisciplinary teams.

During pregnancy, Norwegian women interact with their GP, and commonly also with midwives and with physiotherapists, but how these different cadres of health professionals experience and manage the e-health revolution within the Norwegian health care context is not known. We therefore explored different health professions` acknowledgement of pregnant women`s e-HL and Web-based knowledge within this national context, bearing in mind that the e-patient revolution is a global phenomenon, affecting pregnancy consultations globally.

METHOD

We invited Norwegian midwives, physiotherapists and doctors (GPs) who had clinical experience with pregnant women who suffered from the common pregnancy complaint pelvic girdle pain (PGP) to participate in a qualitative interview study. We used PGP as a tracer condition, because doctors, midwives and physiotherapists are often confronted with this health problem in their clinical encounters with pregnant women. PGP is a medically unexplained condition that is characterised by pain in the lumbar and pelvic region, and which commonly decreases women`s endurance capacity for everyday life activities such as walking, standing and bending (Vleeming, Albert, Østgaard, Stuge & Sturesson,2004;

Bastiaanssen,De Bie, Bastiaenen, Essed & Van den Brandt, 2005). Our previous research in this field revealed that Norwegian women who suffer from this condition often turn to the Internet for health information and support, aiming to make good health descisions for themselves (references will be added here after peer review).

The sampling process was more challenging than expected, and it took us nearly one year to recruit a sufficient number of participants. Initially, the first author (who is a physiotherapist) contacted midwives, GPs and physiotherapists via her professional networks. She recruited 4 midwives and 4 physiotherapists, and carried out 8 individual semi-structured interviews from April to September 2015. It was more challenging to recruit doctors. She sent several invitations to potential participants via a number of professional networks and via advertising on different information forums for doctors, without any response. She then used snowball sampling, sending emails to a number of other GPs to ask if they could name potentially interested people. After 6 months, 5 informants were recruited, and she carried out the interviews of the GPs from December 2015 to March 2016. All the 13 participants were female, aging from 30-59 years, and they were all experienced in providing health care for pregnant women.

We developed a thematic semi-structured interview guide to explore three topic areas : (1) identification of pregnant women`s previous knowledge and information sources; (2) health professionals' response to women`s knowledge and health decisions, and (3) contribution of health information to increase women`s ability to make good health decisions for themselves.

Each interview took 30-40 minutes, and was carried out in Norwegian by the first author. Twelve interviews were face-to-face interviews, and took place in workplaces, or in other arenas that the participants preferred. One interview was performed via telephone due to long distance. All interviews were tape-recorded, and transcribed to text-files. The quotes

were translated to English by the first author.

Analysis

The analysis and the sampling were parallel processes. All interviews were summarized in a short text immediately after the interview situation, and this first analysis was used to add emerging issues to the interview guide. The first author read all interview documents in full text before performing the initial coding of the data, using Nvivo11. Thereafter the Norwegian authors worked together to complete the thematic analysis.

Research Ethics

Before the onset of the study, the project was approved by the Regional Committee for Research Ethics (Reference number 2012/2225/REK Vest). All participants received written and oral information about the project, and signed a written consent form before the onset of the interviews. The data are stored on a research server, inaccessible to persons other than the research team.

FINDINGS

All of the participating health professionals had experienced that Web-based knowledge popped up directly or indirectly during the consultations whether they asked about it or not. They told that the e-health revolution had influenced their clinical practice, and they expressed a varying degree of ambivalence to pregnant women's e-HL and how they should relate to it. Approval and utilization of women`s e-HL as a resource that could be used in pregnancy consultations differed, both within and between the professional groups.

The Visibility of e-HL and Web-based knowledge in Consultations

Many participants did not ask their pregnant patients about their previous knowledge or where it originated from: "We have no idea about the patients` prior knowledge about health issues. But perhaps we should be better in asking them what they already know" (midwife C). Whether asked for or not, Web-based knowledge popped up directly or indirectly during many consultations. A doctor who did not ask about women`s knowledge or its sources, said that her patients never spontaneously disclosed that their knowledge originated from the Internet "But I think this is obvious, because they google all the time, and ask a lot of odd questions*" (*doctor I). One of the physiotherapists (H) said that many women were worried and told horror stories, but she did not know where these stories originated from: *"I do not* know. I do not ask them." Doctor M found that many women had already diagnosed themselves before the consultation, but she did not ask them why they believed that they had PGP, or where their knowledge originated from. Physiotherapist D commented with laughter that she did not know what her patients already knew about PGP, or where the knowledge originated from: *"*I start wondering whether I have listened to them – or whether I do all the *talking myself".*

Some of the midwives routinely asked what women knew about pregnancy and pregnancy-related health problems, and where it originated from: "I always ask what she knows about this*."* Do you know what this is? Have you read about it? *"* (midwife A). Some also asked for details about information sources to check the quality of the information sources: "Some have read on the Internet, and then I ask them where they found the information: Which Web-*site did you use?"* (midwife B).

In general, e-HL and Web-based health information often seems to be "the elephant in the room"; present in the consultation room without being explicitly acknowledged. All the participants were aware of its existence, but many did not actively bring it into the conversation. Even so, it influenced the consultation, directly or indirectly.

The Challenge of incorporating e-Health Literacy into Consultations

In general, health professionals were ambivalent to women accessing the internet and to Web-based health information: *"If you* are looking for a special solution, you can find whatever you look for on the Internet "(doctor L). One of the oldest doctors commented that she did not distribute information about online health information because she had low digital competence, and because she feared that the patients might find incorrect health information on the Web. She preferred to give information herself: "I know that this is naïve, because they are on the Internet all the time anyway, and they find information whether I mention it or not. So I believe that I am stuck in old-*fashioned thinking"* (doctor J).

The participants were worried about negative consequences of using the Internet for health information: *"*It is a problem that some use it [too] much, instead of requesting help from the health professionals. Then *the health problem may worsen"* (physiotherapist H). They were especially skeptical about Web forums, which they saw as sites that contained misinformation, focusing on risks and crises, posted by persons with extreme experiences.

Some noted that pregnant women who had sought information on the internet decided what to do before the consultation:*"* They can be very offensive early in the consultation. They know, and they wish, and friends have told that PGP is dangerous, and that they need sick leave. *(...) If the woman has that attitude when she enters the* consultation room, sick-leave *will often be the outcome"* (doctor I). Giving advice to patients who had made up their minds before the consultation was challenging: "They do not come for a discussion. They come because they want sick leave. *(...) So I have* chosen a restrictive practice, discussing the need for sick leave" (doctor L). Others judged women`s knowledge as a positive resource: "They know their own body and how it reacts in a pregnancy. This bodily experience can result in better – and earlier – treatment in their *next pregnancies"* (doctor M).

Some doctors found that their patients wanted help to sort out the relevance and trustworthiness of Web-based health information. While encountering well-informed patients was viewed positively by some of the doctors, for others it had negative experiences: *"If they* are willing to listen to my opinion, it is ok. But if they come here and believe that they have *the blueprint, and I disagree, it can turn into a problem"* (doctor K). The doctors found the e-patient revolution challenging, but were uncertain about how to handle it:

> *"*We doctors want to find out what people are worried about. But simultaneously we are pressed for time, so it is scary to get too much information about people`s worries. For then your time-schedule is suddenly destroyed. So this is very – I think that most GPs are very ambivalent to this*"* (doctor J).

Some midwives also experienced the e-health revolution as challenging, not necessarily because it was time-consuming, but because it challenged their professional role:

> "They present results from studies that they have read, and then I must tell them that I haven`t read that study. I also tell them that one study is seldom enough to change clinical practice. They are often not used to reading research articles, and are unable to perform a critical appraisal. So I tell them this, while simultaneously taking a humble attitude to my ignorance related to the specific article that they refer *to"* (midwife B).

Others experienced women`s requests for discussion as a positive resource: *"Because* it means that she has enough confidence to discuss her disagreement *openly"* (midwife A). The encounters with well-informed pregnant women had changed the job significantly for many of the midwives. They found that it was time consuming to help pregnant women to discriminate between trustworthy and untrustworthy information on whether health problems were normal

or needed to be checked. They also reported about requests for extra consultations from worried women:

> *"*The women often realize that it was stupid to search the Internet for health information, and they are embarrassed for being worried – and yet they are worried, and need to sort out the information. (…) My secretary asks me to contact woman X and woman Y, who have checked the Internet for information on their health problems, and who have become worried about the situation. Then I need to phone *them, and to sort it out"* (midwife C).

All the participants were confronted with the e-HL revolution in their clinical practice, but seemingly, the midwives were most open to it.

Different Logics in the Consultation Room

Although shared decision-making is seen as the ideal outcome of medical consultations, health professionals were ambivalent about using women's knowledge as a resource. They seemed to be more concerned about providing health information than finding out what the women already knew. Some of the doctors and all the midwives routinely distributed health information to their pregnant patients. They distributed links to reliable Websites, or health information they had printed out from the Internet themselves. However, they seldom followed up on the issue in the next consultation, so many did not know whether the women had read the information or not.

The doctors told that they were willing to consider solutions proposed by women, and that they wanted to judge the validity of their knowledge: *"I* am of course always willing to listen to them. If they come up with a specific solution I want to know where it comes from *and why they have chosen it"* (doctor L). Some also used time and efforts to tell their pregnant patients about the importance of critical thinking: *"*They need to understand the

difference between information from a chat- forum and a Web-page from the health authorities*"* (doctor L). The midwives, who were in a situation with better time resources per consultation, also used time and effort to discuss Web-based information: "We show them recommended Web-sites, and warn them against frivolous chat-sites and sites where advice is given by non-professionals. This information is given to all pregnant women*"* (midwife C). In general, the midwives proactively encouraged critical thinking: *"*I strongly advise women to be selective and critical towards the information they find online. If they are not – the information may be a hindrance *instead of a resource"* (midwife B).

Like the midwives, physiotherapists advised their patients to be critical of Web-based health information: "There are lot of stories and personal experiences on PGP, which may not *be relevant for your situation"* (physiotherapist G). But the physiotherapists did not use the Internet as a tool in their clinical practice:

> "I do not encourage them to go online. I believe that I can give them the information they need myself. I believe that this is my strength: via individual treatment I can give them exact information about their individual complaints and symptoms*"* (physiotherapist D).

The physiotherapists focused on learning via the body: *"*We work to improve bodily *awareness: "*How you rai*se, how you walk, how you stand."* And many women report that *such small corrections help"* (physiotherapist F). They viewed bodily experiences as essential for enabling their patients to make good health decisions: "This assures them that movement is not dangerous, and that they are able to do more than they thought beforehand (…). It ensures them that they can handle the problem" (physiotherapist G). Hence, the physiotherapists neglected Web-based health information as a tool in their clinical practice because they believed that women benefit more from individual tailored information and treatment than from generalized Web-based health information. Although the midwives had a

more proactive attitude to using the Internet as a tool in clinical consultations, they held similar views, underlining that their major role was to strengthen women's self-confidence as pregnant and birthing women: *"*No Internet information can do this. You need a verbal and an embodied dialogue to do this. You need to be sensitive to *their signals"* (midwife E).

DISCUSSION

In general, all participants focused on their role as health information providers. Only a few explored women`s previous health-related knowledge or sources of knowledge before they started giving advice. Many reported that pregnant women`s knowledge challenged their professional role and authority, affecting their relationships with pregnant patients. Experiences of how Web-based knowledge challenges professional roles have frequently been reported in the literature (Emanuel & Emanuel, 1992; Hardey, 1999; Hardey, 2001; Wald, Dube & Anthony, 2007; Lian, 2008; Song, West, Lundy & Dahmen, 2012).

The professionals in our study had a range of different attitudes to women's e-HL and the Web-based knowledge that they brought into the consultation room. Some had turned to a strategy of utilizing e-HL in pregnancy consultations, others seemed to resist and dismiss e-HL, while the rest seemed to adapt to the pressure in a rather reactive manner and accept e-HL as inevitable. The e-patient revolution had encouraged midwives and some doctors to implement a "net-friendly" clinical practice, but ability to include Web-based resources in consultations varied according to time allocated to each patient, professional roles and Internet experience. Generally, they reported that the e-health revolution had resulted in more demanding patients, which challenged their professional roles. For the GP`s this also challenged their role as gatekeepers, and many were ambivalent to women`s e-HL and Web-based knowledge in health. Most midwives had a proactive approach, and were eager to utilize and improve women`s e-HL. In contrast, the physiotherapists did not recognize

women`s e-HL and Web-based knowledge in health as important issues in the consultation room. They focused on giving women tools to manage their health problems by giving tailored health information and by improving individual women`s bodily awareness.

The Idea of the Net-friendly Clinician

When describing ideal professional behavior, both lay people and doctors commonly focus on the importance of good communication. This includes being good listeners with good judgement and updated knowledge, who follow up patients with interest in their concerns and welfare (Lupton,1997). The idea of the "net-friendly" clinician has been launched to increase the quality of health care by integrating patients` use of the Web within the consultation (Wald, Dube & Anthony, 2007). But few in our sample asked about pregnant women`s previous knowledge in health or where it originated from, preferring to teach them about health issues or to inform them about Web-based health information sources. Most took for granted that their own professional knowledge was superior to the knowledge that women might have beforehand. The patients were defined as clients or pupils who needed guidance and advice, and sometimes persuasions, to implement the recommended knowledge and health behavior. Based on our findings, we argue that being a "net-friendly" clinician does not necessarily align with the ideal descriptions of a good doctor as presented by Lupton (Lupton, 1997), or with other models of the ideal physician-patient relationship (Emanuel & Emanuel, 1992). Emanuel and Emanuel (1992) have launched an ideal model in which the doctor is described as a friend or a teacher and the patient as a pupil or a friend. According to this ideal model the health professional engages the patient in dialogue on what course of action is best, and indicates what the patient should do. They argue that this empowers the patients, by considering alternative health-related values through dialogue (Emanuel & Emanuel, 1992).

Giving patients opportunities to use and access Web-based information in consultations aligns with the promotion of shared decision-making in clinical consultations. This also aligns with Emanuel & Emanuel`s ideal models which implies that the professionals acknowledge the knowledge of the patient, and empower the patients via dialogue. This requires sufficient time resources. A "net-friendly clinician" with scarce time resources may minimize the time she spends on verbal dialogue by printing out health information from the Web, or by giving links to the Internet, without any discussion or dialogue related to the health information itself. If the professionals do not discuss this information with their pregnant patients, it simply reverts to information giving, which may result in alienated and disempowered women. With limited time and interpretive talents, the communication may occasionally lapse into paternalism (Emanuel & Emanuel, 1992). In contrast, a "net friendly clinician" with sufficient time resources, who listens to the women, who identifies their previous knowledge and its origin, and identifies their information needs and appraisal skills may empower their patients and enable them to make good health decisions. This was the case for many midwives and some of the doctors in our study, who aimed to contribute to increasing the patients` e-HL.

However, in encouraging patients to become "knowledgeable consumers in health," responsibility for taking medical decisions may be placed on the patients, while the professionals withdraw (Mol, 2008). This idea of the patient as a customer has been criticized for several reasons. It may have negative consequences for the patients, who may receive what they ask for but not what they need (Lian, 2008), and it lacks a caring approach that requires understanding of what the patient values (Emanuel& Emanuel, 1992). Such professional withdrawal can also become an outcome of a "net friendly" clinical practice in a context of scarce time resources and lacking communication. As stated by Emanuel and

Emanuel (1992), we must recognize that developing a good and empowering relationship with patients, requires a considerable amount of time.

METHODOLOGICAL CONSIDERATIONS

The study has several limitations. First, the sample from each profession is small, so we need to be careful about making generalizations. Second, all participants were female. Male doctors, midwives and physiotherapists may have different practices, experiences and perspectives than the female professionals that participated in this study. Third, the first author has a background as a physiotherapist within the field of women's` health, which may have influenced the research process. However, the team drew on clinical and theoretical knowledge from a wide range of health professions and social sciences, which we value as a strength.

Concluding Comments

This study adds knowledge about different practices within and across professions when it comes to identification, acknowledgement and utilization of pregnant women`s e-HL and Web-based knowledge in health. We argue that health professionals need to discuss how they handle e-literate pregnant patients and how they implement the idea of the "net-friendly clinician". We also believe that interdisciplinary collaboration in strengthening consultations in the context of increasing e-HL may increase women`s ability to take good and well-informed health decisions, based on Web-based health information and in dialogue with the professionals. This issue also needs attention from health professionals and the research community not only in Norway, but also internationally, because the e-patient revolution is a global phenomenon affecting clinical encounters and pregnant womens`s decision making in health.

REFERENCES

Bastiaanssen, J. M., De Bie, R, Bastiaenen, C.H, Essed, G.G. & Van den Brandt, P.A. (2005). A historical perspective in pregnancy-related low bach and/or pelvic girdle pain. European Journal of Obstetrics & Gynecology, 120, 3-14.

Bessett, D. (2010). Negotiating normalization: The perils of producing pregnancy symptoms in prenatal care. Social Science and Medicine 71(2), 370-377.

Broom, A. (2005). Virtually he@lty: The impact of Internet Use on Disease Experience and the Doctor-Patient Relationship. Journal of Qualitative Health Research,15, 325-345.

Bylund, C. L., Gueguen, J.A., Sabee, C.M., Imes, R., Li, Y. & Sanford, A. (2007). Provider-patient dialogue about internet information: An exploration of strategies to improve the provider-patient relationship.Patient Education and Counseling, 66, 346-352.

Emanuel, E.J., & Emanuel, L.L (1992).Four models of the physician – patient relationship. Journal of the American Medical Association, 26(16), 2221-2226.

Fredriksen, E.H., Harris, J., Moland, K.M. (2016): Web-based discussion forums on pregnancy complaints and maternal health literacy in Norway: A qualitative study. Journal of Medical Internet Research 2016: Volum 18, e113.(5)

Fredriksen, E.H., Harris,J., Moland K.M. & Sundby, J. (2014). "They Ask Whether This Is Real or Fake": A Qualitative Norwegian Study of Pregnancy Complaints and Access to Social Benefits. Health Care for Women International,35:3, 266-284.

Fredriksen, E.H., Moland, K.M., Sundby, J. (2008). "Listen to your body". A qualitative text analysis of internet discussions related to pregnancy health and pelvic girdle pain in pregnancy. Patient Education and Counseling, 73, 298-304.

Hardey, M. (1999). Doctor in the house:the Internet as a source of lay health knowledge and

the challenge to expertise. Sociology of Health &Illness, 21, 20-835.

Hardey, M. (2001). "e-Health": The internet and the transformation of patients into consumers and producers of health knowledge. Information, Communication & Society 4(3), 388-405.

Lagan, B. M., Sinclear, M. & Kernohan, W.G (2011). A Web-based survey of midwives`perceptions of women using the Internet in pregnancy: a global phenomenom. Midvifery 27,272-281.

Lagan, B. M., Sinclear, M. &Kernohan, W.G. (2010). Internet use in pregnancy informs women`s decision making: A Web based survey. Birth, 37, 106-115.

Larsson, M. (2009). A descriptive study of the use of the Internet by women seeking pregnancy-related information. Midwifery, 25, 14-20.

Lian, O. (2008). Pasienten som kunde. [The patient as a customer]. In A. Tjora (ed.), Den moderne pasienten [The modern patient], (pp.34-56). Oslo, Norway, Gyldendal Norsk Forlag AS.

Ling-ling, G., Larsson, M. & Shu-yan, L.(2013). Internet use by Chinese women seeking pregnancy-related information. Midwifery, 29 (7), 730-735.

Lupton, D. (1997). Doctors on the medical profession. Sociology of Health & Illness, 19 (4), 480.497.

Mol, A. (2008). The Logic of care. Health and the problem of patient choice. London and New York: Routledge.

Norman, C. D. & Skinner, H.A.(2006). eHealth Literacy: Essential Skills for Consumer

Health in a Networked World. Medical Internet Research 8(2). e9.

Nutbeam, D. (2008). The evolving concept of health literacy. Social Science and Medicine, 67, 2072-2078.

Sommerhalder, K. Abraham, A., Zufferey, M.C., Barth, J., & Abel, T. (2009). Internet information and medical consultations: Experiences from patients`and physicians`perspectives. Patient Education and Counseling, 77, 266-271.

Song, F.W., West, J.E., Lundy, L. & Dahmen, N.S. (2012). Women, pregnancy, and health information online: The making of informed patients and ideal mothers. Gender & Society, 26, 773-798.

Statistics Norway, 2015. ICT usage in households 2015, 2nd quarter. http://www.ssb.no/teknologi-og-innovasjon/statistikker/ikthus (accessed 08.12.2015).

Vleeming, A., Albert, H.; Østgaard, H., Stuge,B., & Sturesson, B. (2004). European Guidelines on the diagnosis and treatment for pelvic girdle pain: European Commission, Research Directorate- General, Departement of Policy, Coordination and Strategy.

Wald, H. S., Dube, C.E, Anthony, D.C. (2007). Untangling the Web - The impact of Internet use on health care and the physical-patient relationship. Patient Education and Counseling. 68. 218-224.