Emerald Insight

Journal of Documentation

Applying the theory of information worlds within a health care practise in Finland
Helena Känsäkoski Maija-Leena Huotari

Article information:

To cite this document:
Helena Känsäkoski Maija-Leena Huotari , (2016),"Applying the theory of information worlds within a health care practise in Finland", Journal of Documentation, Vol. 72 Iss 2 pp. 321 - 341
Permanent link to this document:
http://dx.doi.org/10.1108/JD-05-2015-0065

Downloaded on: 09 November 2016, At: 21:00 (PT)
References: this document contains references to 79 other documents.
To copy this document: permissions@emeraldinsight.com
The fulltext of this document has been downloaded 178 times since 2016*

Users who downloaded this article also downloaded:

(2016),"Patterns of perceived public library outcomes in five countries", Journal of Documentation, Vol. 72 Iss 2 pp. 342-361 http://dx.doi.org/10.1108/JD-08-2015-0103

(2016),"How are the new documents of social networks shaping our cultural memory", Journal of Documentation, Vol. 72 Iss 2 pp. 277-298 http://dx.doi.org/10.1108/JD-06-2015-0069

Access to this document was granted through an Emerald subscription provided by emerald-srm:563821 []

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 21:00 09 November 2016 (PT)

Applying the theory of information worlds within a health care practise in Finland

Helena Känsäkoski and Maija-Leena Huotari
University of Oulu, Oulu, Finland

Received 17 May 2015
Revised 4 October 2015
Accepted 5 October 2015

Abstract

Purpose – The purpose of this paper is to increase understanding about value creation to families in childhood obesity care in multiprofessional collaboration in an integrated care pathway (ICP).

Design/methodology/approach – The qualitative case study involves the ICPs of two Finnish University Hospital districts. The empirical data, collected between 2009 and 2012, consists of semi-structured interviews of 30 health professionals in primary and special health care, of three children and their mothers, a family questionnaire ($n = 13$) complemented with care path instructions and memos of an ICP work group.

Findings – The findings indicate that organisational culture confirms boundaries which hinder transfer of information and sharing of knowledge between organisations and professional groups. The concepts of Chatman's theory of everyday life information seeking complemented with the concepts of Burnett's and Jaeger's theory of information worlds are applicable to describe aspects of organisational culture on patient value creation in the ICP for obese children.

Research limitations/implications – The data of the patients and families were limited. Interviews were completed with a questionnaire which has its limitations in qualitative research. In future studies, e.g., families' focus-group interviews could bring new insights.

Practical implications – The practise of information transfer between Finnish primary and special health care need changes. Modern information technology, e.g., videoconference could be used to increase family involvement in the value creation and the environment should be more supportive for healthy lifestyle.

Originality/value – The study is one of the first which empirically applies Chatman's and Burnett's and Jaeger's theories in a work-related setting.

Keywords Health care, Value creation, Organizational culture, Childhood obesity, Information sharing, Integrated care pathway

Paper type Research paper

1. Introduction

In OECD countries 23 per cent of boys and 21 per cent of girls are overweight or obese and these rates are even higher in Finland (OECD, 2013). The treatment is lifestyle counselling targeted at the whole family. It is based on multiprofessional collaboration and Evidence-Based Medicine (EBM) and aims at a change in health behaviour – a decrease in energy intake and increase in expenditure (Han *et al.*, 2010; Obesity (chidren) Current Care guideline, 2012). The treatment should bring value for the children and adolescents and their families.

This paper elaborates further the idea of value creation in work settings that was suggested by Huotari and Chatman (2001). The idea was applied by Känsäkoski (2014, p. 112) as a part of a theoretical model (Figure 1) and empirically tested in an integrated care pathway (ICP) for treatment of obese children. The study was conducted in Finland, where public authorities should guarantee adequate social, health, and medical services for every inhabitant (Ministry of Justice, 1999), and municipalities should be responsible for primary and secondary health care and for health promotion (Ministry of Social Affairs and Health (MSAH), 2010, 2012). Primary health care services include

Journal of Documentation
Vol. 72 No. 2, 2016
pp. 321-341

0022-0418
DOI 10.1108/JD-05-2015-0065

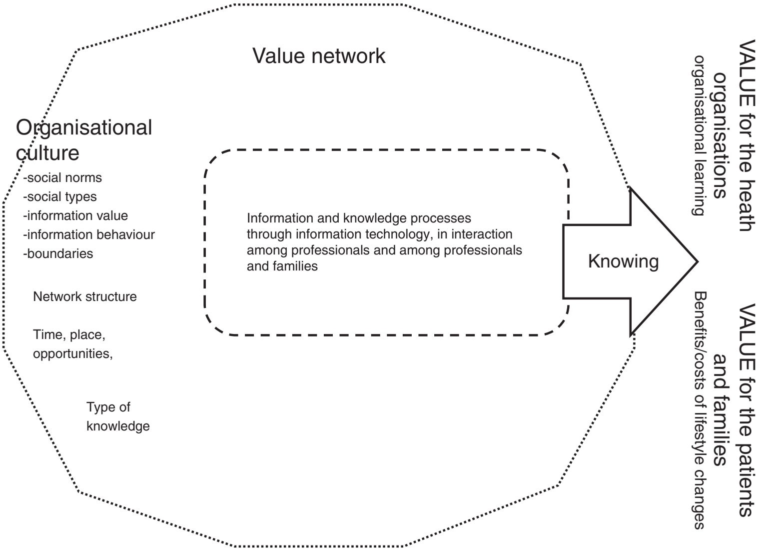


Figure 1.
The theoretical model of the study as a whole

Source: Känsäkoski (2014, p. 112, modified)

child as well as school health care, which municipalities can provide by themselves, in mutual collaboration, or purchase them from other public or private organisations (MSAH, 1972, 2012). Prevention, early diagnosis and treatment are primary health care's tasks, but severely obese children are referred to special health care.

The ICP is set up to improve multiprofessional collaboration and communication (see Yamazaki and Umemoto, 2010). It is a practise between primary and special health care and based on structured forms of activities with routines (Giddens, 1984; Schatzki, 2000; see also Cox, 2012). Studies on ICPs indicate that their goal is to ensure care by optimising the use of resources. The purpose is a multidisciplinary care practise which is based on guidelines and evidence for a specific patient group. Atwall and Caldwell (2002) claim that the goals should be shared and the attitudes positive for knowledge sharing. Moreover, all the actors should have access to the patient records. However, Pinder *et al.* (2005) argue that care pathways may reproduce professional boundaries and tensions related to patient-centredness vs efficiency and effectiveness. It has also been indicated that managed care, lack of time, separation, multitasking, and new technologies do not encourage sharing knowledge and mutual learning (White *et al.*, 2000). Moreover, implementation (Kinsman, 2004; Kinsman *et al.*, 2004), reduction of costs (Loeb *et al.*, 2006; Rotter *et al.*, 2010), patient outcomes and satisfaction on the quality of care (Gardetto *et al.*, 2008; Rotter *et al.*, 2010) have been investigated.

In Finland studies have also indicated deficiencies of information flows between primary and special health care (Saaren-Seppälä, 2004; Ensio and Ryynänen, 2007; Mertala, 2011). Practises of professional autonomy have ruptured communication, and physicians' habits of working and carrying responsibility alone have hindered multiprofessional negotiations for outlining care agreements (Engeström *et al.*, 1999). Electronic patient record (EPR) systems are common in Finland, but direct information transfer between primary and special health care and different municipalities is impossible. The EPR systems are separate and legislation rules that medical practioners need an informed consent in order to transfer the patient records to another health care organisation (MSAH, 1992).

2. Aims of the study and theoretical background

Besides information studies this study involves public health care, nursing science, and business and marketing studies. The aim of this paper is to increase understanding about value creation for patients and their families by answering the following research questions:

RQ1. Which concepts of the theory by Burnett and Jaeger can be identified as elements of the organisational culture that enhance or inhibit the value creation of the ICP?

RQ2. How are the patients and their families involved in the value creation in the ICP?

RQ3. How do patients and their families perceive value?

Value in health care is financial (Teperi *et al.*, 2009; Porter, 2010), but also aesthetic, moral, social, and psychological (Normann and Ramirez, 1994). In this study, value was defined as patients' and their families' better health and well-being as an outcome of health care processes (Känsäkoski, 2014, p. 100), which were examined from the perspective of value creation in networks (Normann and Ramirez, 1994; Wikström *et al.*, 1994). This paper focuses on identifying the elements of organisational culture related to value creation in these processes. The elements were approached with Jaeger and Burnett's (2010) theory of information worlds, which integrates the micro-level concepts of Chatman's (1991, 1992, 1996, 1999) small world theory with the macro-level concepts of Habermas's (1989) theory of public sphere, both related to social environments. The concepts of Chatman's theory, namely, social norms, social types, and information behaviour are augmented with the concepts of boundaries, and of information value as a substitute for worldview of Chatman's concepts and is defined as "a world's shared sense of a scale of the importance of information" (Jaeger and Burnett, 2010, p. 6) (see Figure 1).

Being intrinsic to specific worlds information value does not transfer easily across their boundaries. It interrelates the aspects of information perception, control, economics, and content. The perception of the intrinsic aboutness of information defines information value. At boundaries different information worlds contact each other. As information flows through boundaries it is re-evaluated according to the norms of that world, in other words, information has different value within each group (Jaeger and Burnett, 2010). The norms filter the information from the public sphere, and small worlds can try to protect their own views from outsiders (Burnett and Jaeger, 2008).

Individual actors can belong to several worlds or networks, the lifeworld influences the small worlds and vice versa, and intermediate (meso) levels can interact with both. In society small worlds form a network of relationships (Jaeger and Burnett, 2010), which resembles the idea of value creation based on social networks (Huotari and Chatman, 2001; Wikström *et al.*, 1994; Normann and Ramirez, 1994). Organisational factors of time and place, opportunities to transfer, share and create information, and type of knowledge and knowing were also examined (see Figure 1).

Lifestyle counselling was seen as a means for the family to achieve the goals of health and welfare. Value for the patients was a balance of the benefits of counselling and the costs which the change of lifestyle required in practise (see Figure 2).

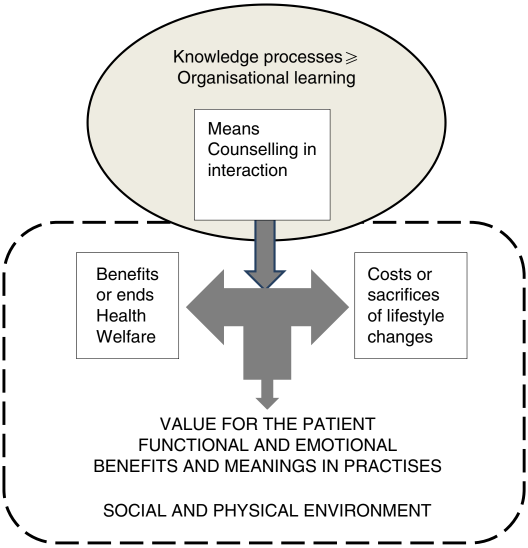


Figure 2.
The elements of value for the patient

Source: Känsäkoski (2014, p. 54)

Beyond the scope of this paper is the examination of the value created in the information and knowledge processes of networks set up by health care professionals and patients and their families and partly enabled by the inter- and intra-organisational electronic network, including the EPRs. Also aspects of organisational learning along with the families' larger social networks are excluded in this paper.

3. Empirical study design

The study involved the ICPs for obese children of two Finnish University Hospital Districts (UHDs). At the time of the study Finland was divided into 20 districts each providing specialised care for its population. Every municipality belonged to a particular hospital district. For this study, the division to primary and special health care was sufficient. Special health care "means health care services in specialized fields of medicine and dentistry, including the prevention, examination and treatment of diseases, medical emergency services and medical rehabilitation" (MSAH, 1989). Furthermore, research, development, and training should be provided in the hospital district's area.

Overweight and obese children are treated in health centres or child health clinics until the age of seven when they start primary school, and school clinics. Patients need a referral to special health care except in the case of an emergency. Referrals are given on the basis of health centres' own criteria, guidelines, and recommendations for diagnosing associated diseases.

3.1 Methodology

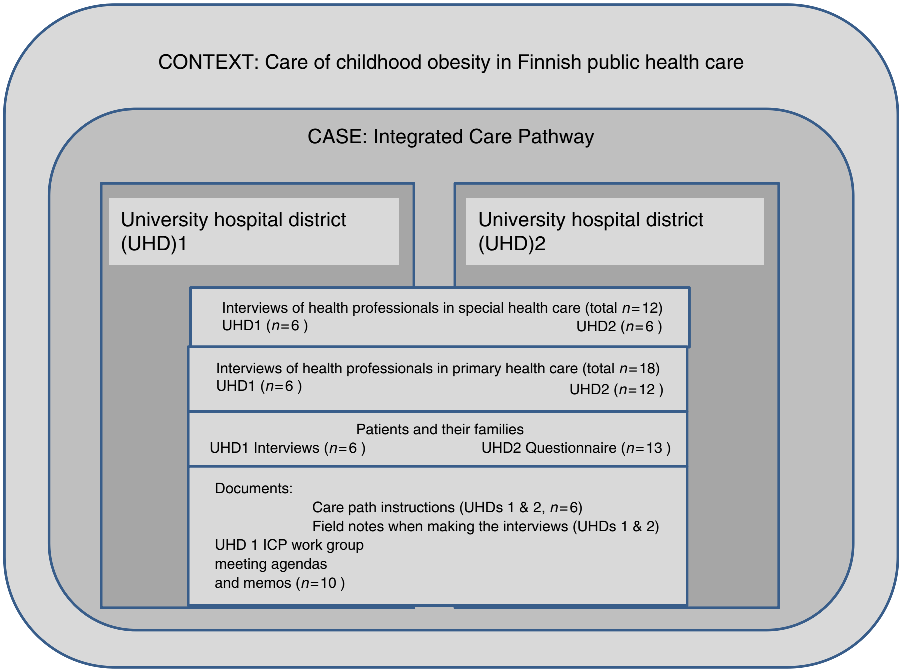
Metatheoretically the study was closest to social constructivism or collectivism. Information behaviour relies on construction of knowledge. According to social constructivism knowledge formation of an individual derives from social interactions and cultural meanings. Talja *et al.* (2005, p. 92) state that "collectivism takes professions and knowledge domains as its research object and sees the information and communication practices and terminologies of professions as the primary context for information behaviour and knowledge organization". Health care organisations and professional groups were seen as knowledge domains whose behaviour as actors in value creation was scrutinised (see Talja *et al.*, 2005; Hjorland and Albrechtsen, 1995).

The study applied a qualitative single embedded case study design (Yin, 2009). The two UHDs represent one case, an ICP for obese children in Finnish public health care, as well as two embedded units of analyses (UAs) selected on the basis of purposeful sampling (Patton, 2002). Triangulation were used as follows: first, interviews of health care professionals in both UAs and interviews of patients and their families in the UA1; second, field diaries in both UAs; third, a questionnaire for families in the UA2; fourth, documents of care path instructions in both UAs; and finally, notes of the meetings of the work group in the UA1 (see Figure 3).

3.2 Data of the UAs

The practises of division of treatment in primary and special health care in both UAs were based on national childhood obesity Current Care Guidelines (Obesity (chidren) Current Care guideline, 2012).

UA1 belonged to the UHD which covered 35 municipalities and over 740,000 inhabitants in 2009. The specialised treatment was located at the Paediatric Outpatient Clinic for children under the age of 16 years, but chronically ills could be treated until the age of 18. The referrals (from 40 to 50 annually) were addressed to the clinic and the paediatricians handled them alone or within a team of other doctors. In total 12 professionals, six in special and six in primary health care, were interviewed from May



Source: Känsäkoski (2014, p. 126)

Figure 3.
The research design and data of the study

until December, 2009. The themes, which were the same for primary and special care, focused on the interviewee's expertise, guidance of patients and their families, transfer of patient information and medical knowledge in and between health care organisations and within the ICP, sharing of knowledge and information in one's own professional group and multiprofessional collaboration. The ICP's work group meetings were attended seven times, from February 2009 to May 2012, and one regional training session. The interviewees in special health care were two paediatricians, one nurse, one clinical nutritionist, and two physiotherapists (see Figure 3). In primary care the interviews formed a convenience sample as the data were collected in one municipality with over 100,000 inhabitants. Four interviewees were public health nurses working in child welfare clinics and schools, a clinical nutritionist, and a paediatrician. The interviews, conducted at work, were recorded and transcribed verbatim by the first author. The average length was 35 minutes (from 20 to 60 minutes, approximately seven hours of audio data, 90 transcribed pages in total). The notes were written in the field diary immediately after the interview (Känsäkoski, 2014, p. 133).

In the UA2 of the UHD, which covered 21 municipalities and about 250,000 inhabitants in 2011, the treatment in special health care was arranged in a "weight clinic". The team consisted of a paediatrician, who was in charge with no clinical tasks, a doctor in training (the training period ranges from three to six months), a nurse, two clinical nutritionists and a physiotherapist. The paediatrician looked at the referrals with the doctor in training. The team had its own guideline called "weight path". The treatment plan was outlined for one year with at least five visits to the clinic. The data of special health care were collected in June and in primary care in September 2011. In total, 18 professionals were interviewed, six in special and 12 in primary health care (see Figure 3). The interviewees of special health care were a paediatrician, a doctor in training, one nurse, two clinical nutritionists, and one physiotherapist. The team consisted of a paediatrician responsible for the medical care and functioning of the weight clinic, a nurse co-ordinating its activities, two clinical nutritionists (one working half-time), a physiotherapist and a specialising doctor. Thus all the main actors of the weight clinic were interviewed. The interviews in primary care were conducted in three municipalities. Ten public health nurses working in child welfare clinics and schools, and two doctors were interviewed. The average length was 39 minutes (from 22 to 51 minutes), the interviews were recorded and transcribed by the first author (11 hours six minutes audio data and 153 transcribed pages in total). A field diary was used similarly to UA1 (Känsäkoski, 2014, p. 136).

3.3 Data of patients and families

In UA1 three patients, from nine- to 16-year olds, and their mothers were interviewed in spring 2010, first the mother and then the child via telephone with the average length of 21 minutes (from 18 to 25 minutes). The interviews were recorded and transcribed by the first author. To overcome the challenges of interview recruitment a questionnaire directed to the families was used in UA2 on the basis of the pre-analysis of UA1's interviews. In total, 20 multiple choice questions (Likert scale) and one open-ended question were included. The survey's response rate was 32.5 per cent, the total number of questionnaires distributed was 40, and 13 of them were returned, which represents about one-third of the "weight path" families during one year. (Känsäkoski, 2014, pp. 134-138).

3.4 The document material

Both UHDs and all municipalities' health care centres had their own instructions (as text documents or flow charts or tables) about the care path for obese children with a detailed prescription of the indications to send the child to special health care. The ICP of UA1 was established in 2006. A work group was set up to compile the practises and instructions and to inform about them for all the health centres in the region. The first author attended seven out of ten of the ICP's work group meetings and one regional training session and received all agendas and memos of these meetings in 2009-2012 which along with the field notes were included in the data (Känsäkoski, 2014, App. 13).

3.5 Data analysis

The theory driven, inductive qualitative content analysis was applied. In open coding (Strauss and Corbin, 1990) the UA were clauses and sentences, and their parts. Similar and consistent utterances were divided into subcategories and combined into main categories (axial coding), matching the research problems. The interview quotations were translated from Finnish by the first author. The codes referring to special health care were (UA1Sp/UA2Sp), to primary health care (UA1Pr/UA2Pr), and to patients (UA1Ch and their mothers or families UA1M/UA2F). The analysis of the embedded units was performed separately at first and then combined.

The content of the care path instructions was categorised as follows: general criteria for overweight/obesity, main principles of care, description of measurements and required examinations, setting the goals, means for achieving them, follow-up recommendations, other general instructions. The main categories were: division of tasks between primary and special health care (6/6), recommended medical examinations and mapping the family's lifestyle (5/6), counselling and motivating the patients and the families (5/6), motivation for health professionals (4/6), and evaluation of the results (3/6).

The themes of the memos and agendas of the work group meetings of UA1 were: development of the ICP, current problems with ICP practises, presentations of research concerning the ICP, planning of regional updating training, updating the ICP protocol, and reporting recent activities. The patient survey data were analysed quantitatively through standard deviations due to its size ($n = 13$) and the open-ended questions through content analysis.

3.6 Ethical concerns

The Finnish law and decree of medical research (MSAH, 1999a, b, and the World Medical Association (2009) Declaration of Helsinki were obeyed. The permissions for collecting patient data were granted by the ethical committee of the first UHD. The medical director of the Department of Paediatrics and Adolescence in UA1 and the personnel director of the hospital in UA2 gave the permissions for the personnel interviews. In primary care (UA1, UA2) it was given by the municipalities' health care authorities. The interviewees were contacted and informed about the study via e-mail prior the study. In UA1 the mothers and children were asked for a written informed consent too. In UA2 the families received an information sheet attached to the questionnaire. The informants' anonymity was ensured. Consent forms of the UA1 children and parents were stored separate from the transcribed interviews in a safe place. The digitally recorded interview data were stored on one computer and protected with passwords.

4. Findings

4.1 Organisational culture in the ICP of childhood obesity

There were several small worlds in the ICP. First, a clear boundary between primary and special health care was identified. It was confirmed by the norms and practises

"There is a clear gap here that you do not necessarily know – or maybe you know – who the public health nurse is […]" (UA1Sp1). The boundary was highlighted by the use of the words we, our, or us meaning special health care as a separation from primary health care ("Usually the school doctor or other doctor in the health care centre writes the referral and it arrives to us and our specialised doctor reads and approves it and the patient gets an appointment to us" (UA2Sp1)).

From the primary health care's point of view, special health care was an unknown entity with unfamiliar practises and actions: "We have made a referral to special health care very seldom, but when we have done so I have a feeling that we do not get any feedback. Somehow it is a bit ambiguous, the patients disappear somewhere […]" (UA1Pr3). In general, the actors and practises of other organisations were unfamiliar "I always think what the content of those appointments is. Is it so that the child goes there for weighing or are some public health nurses able to take the parents? I don't know" (UA2Sp1).

Second, each municipal health care centre of a regional ICP formed its own small world. The practises and actions even of the neighbourhood municipality were unfamiliar: "In [name of the municipality] they have their own system but I do not know how well it works" (UA2Pr2). Furthermore, the EPRs of neighbourhood municipalities' health care centres did not communicate with each other, which prevented collaboration. For example, one health centre in UA2 had become part of a larger community which provided social and health services for four municipalities' inhabitants and technological problems caused difficulties in collaboration: "[…] we are in the same organization [organization's name] it just came up in a meeting that [municipality's name] and [municipality's name] do not have access to the intranet where we have information for every employee and forms and everything else that we need in our work" (UA2Pr5).

The patient documents had to be requested from the other organisation with the permission of the patient. The boundary between health centres was thus structural due to different EPRs. Furthermore, the practise of transferring patient documents was defined by the law (MSAH, 1994): "We get the papers of the child welfare clinic quite well, but we do not get any other papers. We also do not have permission to send the epicrises of the [name of the hospital] forward"(UA1Pr2).

Third, each professional group formed a small world within an organisation in which sharing of information and knowledge between insiders was easy: "And your own colleagues help and support, you can always ask what they would do […]" (UA1Pr2). Sharing of knowledge and information was easier within one's own professional groups even across organisational boundaries, which were crossed and professional group identity strengthened. "[…] in paediatrician updating training we regularly discuss this problem of overweight and its treatment. About what somebody has discovered and tried" (UA1Sp); "The clinical nutritionists […] of Finland meet a couple of times a year and then we have these meetings for children's clinical nutritionists […] so we have a lot of them" (UA1Sp). The expertise of the medical doctors as the decision-makers both in primary and in special health care was also evident ("[…] we always ask a lot from the doctors" (UA1Sp)) and they managed the main tie between primary and special health care through the referral-epicrisis system ("[…] the paediatrician sends it to the doctor in special health care and the return happens so that these doctors communicate with each other" (UA1Sp1)).

Fourth, a common work place with professionals of many disciplines constituted a small world. The coherence varied depending on the individuals and on general work conditions. For example, the structure of the social network was related to opportunities to meet co-workers. Collaboration and sharing of knowing could function well: "I have this colleague near and good collaboration with the doctor […] we have a clinical nutritionist and a physiotherapist and we work tightly together" (UA2Pr12). In some cases there were clear boundaries even in the same health centre: "[…] the child health clinic functions as the child health clinic and the doctors work as doctors and the nurses work as nurses. We have only two floors here in between us but sometimes I have a feeling that information transfer does not function well" (UA2Pr6).

However, there was an exception, as the multiprofessional team UA2 broke professional boundaries and enabled true collaboration and sharing of knowing: "We have a doctor, a nurse, a clinical nutritionist and a physiotherapist and sometimes when the patient has met the psychologist she can be there […] nowadays we talk only about the problematic cases, because we have only an hour […]" (UA2Sp). The core team formed a small world with its insiders, but the doctors in training remained as outsiders. ("And the specialising doctor is always the weakest link, because he/she is new and this work differs from other medical work" (UA2Sp2)). This was partly due to the practises in university hospitals where doctors in training change after their fairly short (from three to six months) training period and they do not have time to internalise the practises and norms of the small world.

Long work relationships established collaboration and trust and the network ties became stronger. Colleagues and co-workers were perceived as insiders: "[…] We know each other and it is easy to call a colleague and to talk about work issues" (UA2Pr9). Trust in these relationships was based both on affective and cognitive aspects. For example, the public health nurses who had been working with the same doctor in the child welfare clinic or at a school form an "insider" dyad: "In this other school we have had the same doctor for years and with him collaboration goes well since we have known each other for a long time" (UA1Pr4). Cognitive trust in these dyads was based on the health care norm to respect co-workers' competencies and also on the dominance of medical knowledge and on the knowing of doctors. Collaboration and communication with a familiar co-worker was easy and built up affective trust. "[…] We have a long-term doctor who is devoted to treating small children and school children. We have thus an outstanding situation […] it is easy to collaborate with her" (UA2Pr12).

However, constantly changing work partners hindered true collaboration and trust. Time was short to build up trust and to learn to collaborate. This seemed to be a problem especially in primary health care because understaffing had led to changing substitute personnel. "Formerly when we had a regular doctor at the secondary school, it felt that it was so much easier to work with a person you were used to working with and whom you were able to trust. But now, we have these visitors […] I worked at the other secondary school there were at least ten different doctors" (UA1Pr3); "If there is always a new doctor the school nurse is a bit alone and the doctors are not so devoted to the work" (UA2Pr4).

Almost all (27/30) interviewed health professionals in both UAs had a work experience for over ten years. The average work experience of the interviewees in both UAs was over 20 years (from four to 31 years) and in their current position or a similar task on average 12 years (from two months to 30 years). Attitudes towards newcomers and their knowing came up in the interviews of more experienced health professionals:

> "[…] the doctors could better internalise this weight path. Often when they come here they can say that they have never heard of it. Still it should be familiar to them even if they work in health centres and not at schools"(UA2Pr2); "[…] someone has been let's say six months working here and then suddenly realises that we have these weight path instructions" (UA2Pr4).

Especially in special health care the dominance and authority of doctors as information providers and their knowing about medical issues over other professional groups prevailed. A nurse noted, "[…] we always ask a lot from the doctors" (UA1Sp), and a medical doctor stated, "I think that it is the doctor's responsibility to find out about the health condition. We take a look at the laboratory results, check that the sugar levels are ok, see how the blood fats are, blood pressure, waist circumference and weight percent" (UA2Sp).

Public health care as a whole can be perceived as an intermediate institution at the meso level. The ICP is at the same time a meso level construction, a social network, and a small world of its own in the public sphere. However, in UA1 only one of the six interviewed health professionals in special health care identified him/herself as an actor of the ICP:

> "I am actually not so aware of the issues of the ICP, I think that I do not actively work in the integrated care pathway; I just do my work here even if it is connected with the ICP" (UA1Sp4); "Well, I am not particularly – the requests come with other issues. I have not been a member of a team or anything like that" (UA2Sp5).

In UA1 primary health care only two of the four public health nurses had a vague idea of the ICP and perceived themselves as outsiders even though every health care professional is an actor of the network.

The nurses who were responsible for the functioning of the weight clinic in UA2 and for the endocrinological outpatient clinic in UA1 in both university hospitals were the boundary spanners between the small worlds of medical doctors and of the care staff. In primary health care the public health nurses worked independently but they collaborated with the doctors in child and in school clinics.

4.2 Social norms

The main value in health care was healing of diseases "First of all you have to find out why the child is obese, so that differential diagnosis works well so that we can identify those children who have a disease" (UA1Sp3) entailing the ethical principle of working for the benefit of the patients. The norm of "doing one's best" is related to this value and referred to a contradiction between the restricted resources including lack of time and the effort to help the patients as best one can: "This weight management is such an issue that I do not have enough time to do it […] I would like to do my work better than these resources allow me to do" (UA1Pr3). The other common norms were collegiality, independent work, and respect to other professionals' work and expertise. ("[…] a new clinical nutritionist […] told us about her work […] how to make a referral […] and how to collaborate with her […] one paediatrician made a small refresher course […] I think that we received some of the newest information there" (UA1Pr3)).

4.3 Information value

The content of information value in the health care professionals' interviews emphasised health as a value which was unchallenged as well as the dominance of biomedicine: "[…] I handle the referrals and I take a look at these patients. I think that the most important thing is to make differential diagnosis, to pick those patients who clearly have a disease and those who have risks for complications […]" (UA2Sp).

Furthermore, the professionals considered that health care and modern Western medicine with its evidence-based foundations are able to create better health. In other words, the control of health information was based on the "official" medical knowledge. The main value in health care was disease prevention and healing of diseases ("I think that it is the doctor's responsibility to find out about the health condition" (UA2Sp)).

Thus the information value of scientific EBM, measurements, and tests was indisputable. They determined the health status of the patient and were used to motivate the patient and the family: "[…] we try to find those who have a disease and those who clearly have risks for complications. They have disturbances in sugar or fat metabolism and problems with blood pressure or something like that […]. Then we always talk about these risk factors: what kinds of problems are expected if we cannot get a grip on obesity now" (UA1Sp3).

From the families' point of view, information value referred to their conceptions about the health risks of childhood obesity ("It is of course that you do not get any diseases at older age" (UA1M1)). This, in turn, was related with their motivation to change lifestyle towards healthier nutrition and to more active living habits. Motivation was related to the perceived value of counselling ("Most of all you think about health, both physical and mental health" (UA1M3)).

If the family did not recognise the child's obesity as a problem which had to be treated, they could find health information patronising and irritating: "Definitely I think that the child or adolescent is not worried if we say that when you are in your fifties you have arthritis or when you are forty you can get type 2 diabetes. It is unimportant for them when they are so young" (UA1Sp2).

4.4 *Value for the families*

For the families the main benefits of the weight management were health and welfare of the child in present and in future. Their costs and sacrifices were rather big and perceptions of the challenges differed.

In primary health care the counselling was perceived friendly by most families (in UA2 8/13) but not very supportive. Three families found it reproachful or making feel guilty and the application of the instructions in everyday life was not easy. Most of the families did not report of major lifestyle changes after the visits. Some changes (5/13 in total) had been made with the quality of nutrition and frequency of meals and slight changes (3-4/13) with portion size and exercise habits (4/13: a lot of changes 2, a fair number of changes 2, some changes 4 (see Känsäkoski, 2014, p. 216).

In special health care, in turn, families found the care as objective, friendly, practical, and supportive. They reported more often changes (12/13 in total) in their lifestyle, such as the quality of nutrition, the frequency of meals, portion sizes, and exercising habits. Some families' time was short to exercise or it was hard to find a fitting type of physical exercise for the child (see Känsäkoski, 2014, p. 217).

For the professionals families were essential partners in care. This parental involvement was necessary as it had become self-evident that the family's role and lifestyle influenced the child's weight. However, it was demanding to motivate them to lifestyle changes. All primary health nurses and doctors had encountered resistance and denial from parents when interfering with the child's overweight. Some families perceived lifestyle as a private issue and wanted to maintain their boundaries:

> […] the parent has called saying this letter has hurt him/her or that the letter stigmatises children even if that is not the purpose. I cannot know what kind of dynamics there are in the family and why it is like that. So parents do not understand why we interfere (UA2Pr2).

Parents' attitudes towards health professionals' interference were also neutral, and the easiest change was restricting eating sweets and other treats and drinking soft drinks:

> Most of the parents are willing to consider what issues they could change and somebody may have already noticed that the weight has increased and that they have already paid attention to these treat days at home (UA1Pr4).

5. Discussion

This paper aims at increasing understanding of value creation in multiprofessional collaboration within an ICP for obese children from the patients' viewpoint, namely, the children and their families. Value is created through intra and inter organisational information and knowledge processes which are related to various organisational features. These features include, for example, organisational culture (Currie and Suhomlinova, 2006), opportunities to share (Davenport and Hall, 2002; Sonnenwald, 2004; Riege, 2006), trust and motivation (Sonnenwald, 2004; Davenport and Hall, 2002), the type of knowledge (Ipe, 2003), and the structure of the social network (Wilson, 2010).

5.1 Contribution to theory

The findings reported here show that the concepts of Chatman's theory of everyday life information seeking complemented with the concepts of Burnett's and Jaeger's theory of information worlds are applicable to describe aspects of organisational culture on patient value creation in the ICP for obese children. The focus in this research was on the micro level, on the small worlds of health care organisations and the families and their mutual interaction. However, health care organisations can also be perceived as a meso level, an intermediating public sphere institution similar as schools, libraries, and media that ensure information flow through different small worlds.

5.2 Social types (insiders/outsiders)

Features of professional subcultures as small worlds in the ICP were identified. However, it was challenging to indicate whether their boundaries were based on cultural constructions or on organisational practises. Sharing of professional dilemmas was more common within one's own professional groups. For example, the public health nurses in primary health care frequently keep in touch with their colleagues. This is typical for organisational culture in Finnish health care where strong subcultures of professional groups, specialities, and units in primary and special health care are common (Wiili-Peltola, 2005; Eriksson-Piela, 2003; Lehtomäki, 2009).

The doctors discussed emerging medical problems and complicated patient cases together in doctor's meetings or informally in special health care. West *et al.* (1999) perceived that the doctors' dense professional social networks fortified their professional identity and thus also the boundaries between the professional small worlds. In UA2 the team meetings were for sharing multi-professionally experiences and feelings of challenging issues in counselling. Long work relationships affirmed cognitive and affective trust in insiders of the care team and enabled this kind of sharing. Collaboration is not possible without trust which is needed for sharing of information and knowledge (Huotari and Chatman, 2001; Davenport and Hall, 2002; Riege, 2006; McAllister, 1995; Sonnenwald, 2004; Holste and Fields, 2010).

5.3 Boundaries

The boundary identified between primary and special health care is deeply rooted in Finnish health care (Kerosuo, 2006; Saarivirta *et al.*, 2012). Special health care including university hospitals have the status of high competence, specialised physicians, and specialised care. This enables multidisciplinary medical research which cumulates professional knowing and knowledge (Saarivirta *et al.*, 2012) also for academic training. This may confirm the boundary between primary and special health care, which is further confirmed by the social norms. This cultural and structural boundary is sustained by organisational practises.

However, Yu (2012) suggests that the boundaries of an individual's information world are defined on the basis of his/her information practises rather than social norms. Wide interaction with the "outside" world produces also a rich information world (Yu, 2012; Bronstein, 2014; Sabelli, 2014). This notion deserves more attention in future studies.

5.4 Social norms

Preventing and healing of diseases was the main goal which entails the ethical principle of working for the best of the patients (Tagliaventi and Mattarelli, 2006). This established the norms of expertise, keeping up with latest scientific and technical development, and goal-orientation. The common norms of the ICP as a whole were expertise, collegiality and respect of other professionals, and division of work tasks which emphasises independent work. This finding is in accordance with a study of Finnish health centres (Lehtomäki, 2009), which indicated typicality of the independent working culture and individual decision making.

Keeping up with new knowledge was a norm for all the health professionals, and typical for medical doctors in particular (Lehtomäki, 2009). Motivation to share knowledge relates to the evaluation of its risks and benefits because knowledge enhances competitive advantage (Riege, 2006; Wilson, 2010). In some contexts valuable knowledge is connected with status, career prospects, and individual reputation so that the knower makes a decision what knowledge to share, when to share, and with whom to share it (Ipe, 2003). In this study no reasons were noted for not sharing knowledge and goals were common and clear for all professionals. These findings are in line with a study in oral health care (Kasila, 2007). The funding structure of health care organisations including outcomes that are not driven by profits or competition might explain the invisibility of the competitive aspect (Van Beveren, 2003). The public health nurses shared their knowledge and experiences with colleagues. The doctors, who were their closest co-workers, were more information sources than partners of knowledge sharing, as nurses consulted them in problematic situations only.

Factual knowledge as the foundation of medical care was evident. This supports the findings of studies showing the dominance of biomedical knowledge which fortifies the doctors' position in the hierarchy (Eriksson-Piela, 2003; Currie and Suhomlinova, 2006). Multiprofessional collaboration in health care has been a concern for years, but the professional boundaries, respect of another professional's knowledge and competence, and the tradition of working independently are such norms that indicate more linear division of work tasks.

5.5 Information value

Similarly to previous studies information value of scientific EBM including measurements and tests was appreciated in this study (Lehtomäki, 2009). Huotari and Chatman (2001) state that in small worlds the inside-generated information and knowledge is seen as more trustworthy than the information from outside. Similarly Yates-Mercer and Bawden (2002) note that the value of information depends on the context and on the information use by individuals (see also Riege, 2006). In this study the measurements determined the patient's health status and were used to motivate the patient and the family. The professionals' interference with the child's increasing weight is justified with risks of obesity in later life even if the family does not recognise it as a problem (Vuorela, 2011). Scott *et al.* (2004) claim that doctors "medicalise" weight loss counselling as a problem and as a risk for future health. National and regional guidelines support this aspect, but patients and their families' everyday life does not always get enough attention in the practice of health care. In this study it was challenging to indicate the information value from the families' viewpoint. The need for practical tips as information content emerged only once. More extensive qualitative data might have deeper insights of this aspect.

The counselling aimed at a healthy lifestyle for the families, whose main benefits were the child's or adolescent's health and well-being in present and in future. The families found counselling better at the special level of care, though, the application of the instructions in everyday life was a challenge. This finding is in accordance with Porter's (2010, Suppl. App.: 6) statement: "Though the service experience can be important to good outcomes, it is not itself a health outcome" (see also Teperi *et al.*, 2009).

The costs and sacrifices related to lifestyle changes were too big for acting according to the instructions. For the professionals the most important of these were taking responsibility for and control over the child's eating and exercising. They noted that the families' attitudes and lack of motivation were the challenges in counselling and assumed that these were the main reasons for problems with lifestyle changes (Gerards *et al.*, 2012; Isma *et al.*, 2012).

The families wished for concrete instructions. They had the opinion of already knowing the basics of weight management and noted varied reasons for difficulties with making changes in everyday life. They needed instructions for preparing healthier meals and coping with challenging situations at home, for example, when the child wanted bigger portions. The environment did not support healthy behaviour. Demanding work life and parents' long working hours led to exhaustion, and preparing healthy meals and supporting and encouraging the child to exercise required resources. Families' need for support on weight control-related matters in their everyday life has been reported also in other studies (e.g. Virtanen, 2012).

The findings support the idea that the value of a service is socially constructed and created in use (Vargo and Lusch, 2008; Holttinen, 2010). Consumers seek functional and emotional benefits and meanings in their practises. In this study functional benefits relate to factual knowledge about the health risks of obesity. Emotional benefits are support and encouragement, and the professionals' ability to encounter the child's and the family's feelings in counselling. The child and the family should be able to construct meaning for the efforts of weight management. If they are able to do this, they are motivated to do lifestyle changes and to commit to these changes even if they require major new living habits and struggle. Although the families perceived as being involved in the care of their children or adolescents, the examination indicates that their role in the value creation of the ICP was fairly modest.

5.6 Implications for practise

This study indicated that information transfer between primary and special health care through the referral-epicrisis system was efficient, but not sufficient. Thus a change in the practises is needed. The main problem with the epicrises (care feedbacks) was that they did not reach all the professionals, especially the public health nurses. It was brought up that the personnel of special and primary health care and the family should have a meeting at the end of the treatment period in special health care. This would be an opportunity to increase value through patient involvement. Modern technology such as video conferencing can make this possible even to more remote places.

The study indicated that good quality health information is not enough to enhance families' lifestyle changes. Families need more support in their everyday life. The social institutions, such as schools, media, and leisure environment at the meso level, should promote healthy lifestyle. Public libraries' networks and their role as "a public sphere agency" (Jaeger and Burnett, 2010, p. 154) in health promotion could be significant. For children and adolescents also targeted web-based weight management services which provide provisional and contested knowing (Askola *et al.*, 2014) could support weight management.

In Finland, a wide social welfare and health care reform is in process. The new model aims at a seamless service of primary and special health care and more efficient administration of the services. Moreover, a national patient data repository (*Kanta-arkisto*) has been implemented recently. This common register entails in future all the patients' medical records for the health professionals within the health care district. Thus information access and information flow across individual small worlds and the meso level of health care organisations can be improved (Jaeger and Burnett, 2010). However, the patient must be informed about its use and they have the right to refuse consent to pass their information between the various register controllers in the common register.

5.7 Validity and reliability of the study

The quality of this study is discussed through the following four criteria (Miles and Huberman, 1994). Confirmability, which refers to the role of the researcher and objectivity of the research process. The research process and the findings were presented in detail. The first author's long work experience in Finnish public health care provided pre-understanding of municipal health centres as a work environment, of different professionals' roles, and of some common practises. However, this experience is from another field which provides neutrality. The data analysis was conducted twice, immediately after the health professionals' interviews, and after one year. Credibility (or internal validity by Yin, 2009), which relates to the authenticity of the data. Methodological triangulation confirms the findings. Interviewing was a relevant method in primary and special health care. The findings concerning the patients and their families were validated with a questionnaire. Document analysis confirmed the health professionals' descriptions of the practises in the ICP. Transferability (or external validity by Yin, 2009), which refers to generalisation. In case studies a contribution to theory is based on analytical and not statistical findings. Two embedded UA were used to increase the external validity. The theoretical framework was constructed on the basis of earlier research to establish transferability. Reliability or dependability, which can be ensured by using a careful study protocol with process documentation (Miles and Huberman, 1994) to enable repeating and verifying the findings (Yin, 2009). The data were described and the research process reported in detail. Multiple citations from the data were used to confirm the researcher's conclusions. The main categories and subcategories were mostly derived from earlier research.

5.8 Limitations of the study

The major limitations relate to the data of the patients and their families. Recruiting the patients to the interviews was challenging and thus made by proxy with the help of the nurses. Childhood obesity is a sensitive problem for the families which may have influenced their willingness to participate in the study. A questionnaire has its limitations in qualitative research. The concept of patient value was operationalised on the basis of the patients' and their mothers' interviews, which indicated that benefits, costs, and sacrifices were different in every family. Thus these findings were supported with earlier studies on customer value in business and marketing.

5.9 Ideas for future research

The role of the patients and their families as actors of the value network of health care is a novel approach which should be scrutinised more in future studies. The study's theoretical framework could be tested in ICPs of other diseases and in wider contexts of multiprofessional collaboration and in the contexts of societal issues also in such as economic crisis or emergency situations as suggested by Jaeger and Burnett (2010).

The data concerning the patients were collected from those families which had been referred to special health care. Value, however, was defined as health and well-being in the long term. Thus the patients' and their families' perceptions of their care should be studied also after their treatment in special health care. This would reveal whether the care path has been seamless to continue the care in primary health care as planned. For example, focus-group interviews would be relevant to provide new insights of couseling.

Implementing the care instructions into everyday life was challenging for the families. Managing or losing weight requires the families and the children making choices everyday, for instance regarding food. It would be interesting to screen the parents' and the children's everyday health information literacy related to their nutrition and exercise habits with the tool introduced recently (see, Niemelä *et al.*, 2012).

Furthermore, as the citizens of Finland will soon have access to their own health records on the internet, it would be interesting to examine whether this will change their health behaviour and if so, how the changes will be.

6. Conclusions

The findings reported here are based on one of the first empirical studies applying Burnett's and Jaeger's and Chatman's theories on the micro level in a work-related setting. The study indicate that the theory of information worlds could be applied in wider contexts to increase understanding of the interaction among individuals in small worlds, in the meso worlds in which they work, and in the macro world in which they live. As a methodological point of departure social constructivism (Talja *et al.*, 2005) was well suited to this case study approach.

Information value of biomedical knowledge prevails in the ICP. The boundary between primary and special health care is based on the structure and historical development of the Finnish health care system, but it is also culturally defined. Collaboration between primary and special health care is rare. In primary health care the professional boundaries are not so strong. In special health care these exist but can be diminished by teams. However, one's own professional group is preferred when sharing information and knowledge. Similarly close work teams share information inside the team and tend to reject ideas from outside (Riege, 2006).

The embedded conceptions of the health professionals' savant role and the patients' role as a receiver of health information and care are still deeply rooted. The value is created as a life-long project aiming at health and well-being in the patients' and the families' everyday life.

References

Askola, K., Känsäkoski, H. and Huotari, M.-L. (2014), "Knowing and actional information in web based weight management services", *Journal of Documentation*, Vol. 70 No. 5, pp. 759-781.

Atwall, A. and Caldwell, K. (2002), "Do multidisciplinary integrated care pathways improve interprofessional collaboration?", *Scandinavian Journal of Caring Science*, Vol. 16 No. 4, pp. 360-367.

Bronstein, J. (2014), "Is this OCD?: exploring conditions of information poverty in online support groups dealing with obsessive compulsive disorder", *Proceedings of ISIC, the Information Behaviour Conference, Leeds, 2-5 September*, available at: http://InformationR.net/ir/19-4/isic/isic16.html (accessed 29 September 2015).

Burnett, G. and Jaeger, P.T. (2008), "Small worlds, lifeworlds, and information: the ramifications of the information behavior of social groups in public policy and the public sphere", *Information Research*, Vol. 13 No. 2, available at: http://InformationR.net/ir/13-2/paper346.html (accessed 20 October 2014).

Chatman, E.A. (1991), "Life in a small world: applicability of gratification theory to information seeking behavior", *Journal of the American Society for Information Science*, Vol. 42 No. 6, pp. 438-449.

Chatman, E.A. (1992), *The Information World of Retired Women*, Greenwood Publication, Westport, CT.

Chatman, E.A. (1996), "The impoverished life-world of outsiders", *Journal of the American Society for Information Science*, Vol. 47 No. 3, pp. 193-206.

Chatman, E.A. (1999), "A theory of life in the round", *Journal of the American Society for Information Science*, Vol. 50 No. 3, pp. 207-217.

Cox, A.M. (2012), "An exploration of the practise approach and its place in information science", *Journal of Information Science*, Vol. 38 No. 2, pp. 176-188.

Currie, G. and Suhomlinova, O. (2006), "The impact of institutional forces upon knowledge sharing in the UK NHS: the triumph of professional power and the inconsistency of policy", *Public Administration*, Vol. 84 No. 1, pp. 1-30.

Davenport, E. and Hall, H. (2002), "Organisational knowledge and communities of practise", in Cronin (Ed.), *Annual Review of Information Science and Technology (ARIST)*, Vol. 36, American Society for Information Science, Chicago, IL, pp. 171-227.

Engeström, Y., Engeström, R. and Vähäaho, T. (1999), "When the center does not hold: the importance of knotworking", in Chaiklin, S., Heedegaard, M. and Jensen, U.J. (Eds), *Activity Theory and Social Practice*, Aarhus University Press, Aarhus, pp. 345-374.

Ensio, A. and Ryynänen, O.-P. (Eds) (2007), *Akuutin sydänpotilaan hoitoketjun arvioinnin kaksi näkökulmaa (Integrated Care Pathway of Acute Coronary Heart Disease Patients – A Multiple Constituency Evaluation)*, Kuopion yliopiston julkaisuja E, Yhteiskuntatieteet 141, Kuopio University Press, Kuopio.

Eriksson-Piela, S. (2003), *Tunnetta, tietoa vai hierarkiaa? Sairaanhoidon moninainen ammatillisuus (Emotion, Knowledge or Hierarchy? The Multiplicity of Professionalism in Nursing)*, Acta Universitatis Tamperensis 929, Tampere University Press, Tampere.

Gardetto, N.J., Greaney, K., Arai, L., Brenner, A., Carroll, K.C., Howerton, N.M., Lee, M., Pada, L., Tseng, M. and Maisel, A.S. (2008), "Critical pathway for the management of acute heart failure at the veterans affairs San Diego healthcare system: transforming performance measures into cardiac care", *Journal of Evidence-Based Medicine*, Vol. 7 No. 3, pp. 153-172.

Gerards, S., Dagnelie, P., Jansen, M., De Vries, N. and Kremers, S. (2012), "Barriers to successful recruitment of parents of overweight children for an obesity prevention intervention: a qualitative study among youth health care professionals", *BMJ Family Practise*, Vol. 13 No. 37, available at: http://bmcfampract.biomedcentral.com/articles/10.1186/1471-2296-13-37 (accessed 10 February 2016).

Giddens, A. (1984), *The Constitution of Society*, Polity Press, Cambridge.

Habermas, J. (1989), *The Structural Transformations of the Public Sphere: An Inquiry into a Category of Bourgeous Society*, Massachusetts Institute of Technology Press, Cambridge MA.

Han, J.C., Lawlor, D.A. and Kimm, S.Y. (2010), "Childhood obesity", *Lancet*, Vol. 375, May, pp. 1737-1748.

Hjorland, B. and Albrechtsen, H. (1995), "Toward a new horizon in information science: domain analysis", *Journal of the American Society for Information Science*, Vol. 46 No. 6, pp. 400-425.

Holste, S.J. and Fields, D. (2010), "Trust and tacit knowledge sharing and use", *Journal of Knowledge Management*, Vol. 14 No. 1, pp. 128-140.

Holttinen, H. (2010), "Social practices as units of value creation: theoretical underpinnings and implications", *International Journal of Quality and Service Sciences*, Vol. 2 No. 1, pp. 95-112.

Huotari, M.-L. and Chatman, E.A. (2001), "Using everyday life information seeking to explain organisational behavior", *Library and Information Science Research*, Vol. 23 No. 4, pp. 351-366.

Ipe, M. (2003), "Knowledge sharing in organizations: a conceptual framework", *Human Resources Development Review*, Vol. 2 No. 4, pp. 337-359.

Isma, G.E., Bramhagen, A.-C., Ahlström, G., Östman, M. and Dykes, A.-K. (2012), "Swedish child health care nurses conceptions of overweight in children: a qualitative study", *BMC Family Practise*, Vol. 13, p. 57, available at: http://bmcfampract.biomedcentral.com/articles/10.1186/1471-2296-13-57 (accessed 10 February 2016).

Jaeger, P.T. and Burnett, G. (2010), *Information Worlds. Social Context, Technology, and Information Behavior in the Age of the Internet*, Routledge, New York, NY.

Känsäkoski, H. (2014), "Value creation in childhood obesity care and prevention", academic dissertation, Acta Universitatis Ouluensis B Humaniora 199, Juvenes Print, Tampere, available at: http://herkules.oulu.fi/isbn9789526204130/isbn9789526204130.pdf (accessed 4 October 2015).

Kasila, K. (2007), "School children's oral health counselling within the organisational context of public oral health care. Applying and developing theoretical and empirical perspectives", academic dissertation, Studies in sport, physical education and health 124, University of Jyväskylä, Jyväskylä.

Kerosuo, H. (2006), "Boundaries in action. An activity-theoretical study of development, learning and change in health care for patients with multiple and chronic illnesses", academic dissertation, Helsinki University Press, Helsinki.

Kinsman, L. (2004), "Clinical pathway compliance and quality improvement", *Nursing Standard*, Vol. 18 No. 8, pp. 33-35.

Kinsman, L., James, E. and Ham, J. (2004), "An interdisciplinary, evidence-based process of clinical pathway", *Lippincott's Case Management*, Vol. 9 No. 4, pp. 184-196.

Lehtomäki, L. (2009), "Valtakunnallisista suosituksista terveyskeskuksen talon tavoiksi (From national guidelines to local practises)", academic dissertation, Tampere university, Tampere.

Loeb, M., Carusone, S.C., Goeree, R., Walter, S.D., Brazil, K., Krueger, P., Simor, A., Moss, L. and Marrie, T. (2006), "Effect of a clinical pathway to reduce hospitalizations in nursing home residents with pneumonia: a randomized controlled trial", *Journal of the American Medical Association*, Vol. 295 No. 21, pp. 2503-2510.

McAllister, D.J. (1995), "Affect- and cognition-based trust as foundations for interpersonal cooperation in organisations", *Academy of Management Journal*, Vol. 38 No. 1, pp. 24-59.

Mertala, S. (2011), "Yhdessä tietämisen episodeja. Terveydenhuollon kompleksiset työympäristöt (Episodes of knowing together. Complex working enviornments of health care)", academic dissertation, Acta Universitatis Lapponiensis 201, Lapland University Press, Rovaniemi.

Miles, M.B. and Huberman, M.A. (1994), *Qualitative Data Analysis*, 2nd ed., Sage Publications, Thousand Oaks, CA.

Ministry of Justice (1999), "The Constitution of Finland 731/1999", available at: www.finlex.fi/fi/laki/kaannokset/1999/en19990731.pdf (accessed 30 May 2014).

Ministry of Social Affairs and Health (MSAH) (1972), "Primary Health Care Act 66/1972", available at: www.finlex.fi/en/laki/kaannokset/1972/en19720066.pdf (accessed 31 May 2014).

Ministry of Social Affairs and Health (MSAH) (1989), "Act on Specialized Medical Care 1062/1989", available at: www.finlex.fi/fi/laki/kaannokset/1989/en19891062.pdf (accessed 12 December 2014).

Ministry of Social Affairs and Health (MSAH) (1992), "Act on the status and rights of patients 17.8.1992/785", available at: www.finlex.fi/fi/laki/kaannokset/1992/en19920785.pdf (accessed 10 March 2015).

Ministry of Social Affairs and Health (MSAH) (1994), "Health Care Professionals Act 28.6.1994/559", available at: www.finlex.fi/en/laki/kaannokset/1994/en19940559.pdf (accessed 10 February 2016).

Ministry of Social Affairs and Health (MSAH) (1999a), "Medical research act 488/1999", available at: www.finlex.fi/fi/laki/kaannokset/1999/en19990488.pdf (accessed 10 March 2015).

Ministry of Social Affairs and Health (MSAH) (1999b), "Medical research decree 986/1999", available at: www.finlex.fi/en/laki/kaannokset/1999/en19990986.pdf (accessed 10 March 2015).

Ministry of Social Affairs and Health (MSAH) (2010), "Health Care Act 1326/2010", available at: www.finlex.fi/en/laki/kaannokset/2010/en20101326.pdf (accessed 10 March 2015).

Ministry of Social Affairs and Health (MSAH) (2012), "Social and Health Services", Ministry of Social Affairs and Health, available at: www.stm.fi (accessed 10 March 2015).

Niemelä, R., Ek, S., Eriksson-Backa, K. and Huotari, M.-L. (2012), "A screening tool for assessing everyday health information literacy", *Libri: International Journal of Libraries and Information Services*, Vol. 62 No. 2, pp. 125-134.

Normann, R. and Ramirez, R. (1994), *From Value Chain to Value Constellation*, John Wiley & Sons, Chichester.

Obesity (children) Current Care guideline (2012), available at: www.terveysportti.fi/xmedia/hoi/hoi50034.pdf (accessed 22 February 2015).

OECD (2013), "Health at a glance", available at: www.oecd.org/els/health-systems/health-at-a-glance.htm (accessed 28 December 2014).

Patton, M.Q. (2002), *Qualitative Research and Evaluation Methods*, 3rd ed., Sage, Thousand Oaks, CA.

Pinder, R., Petchey, R., Shaw, S. and Carter, Y. (2005), "What's in a care pathway? Towards a cultural cartography of the new NHS", *Sociology of Health and Illness*, Vol. 27 No. 6, pp. 759-779.

Porter, M.E. (2010), "What is value in health care?", *New England Journal of Medicine*, Vol. 363 No. 26, pp. 2481-2483.

Riege, A. (2006), "Three-dozen knowledge-sharing barriers managers must consider", *Journal of Knowledge Management*, Vol. 9 No. 3, pp. 18-35.

Rotter, T., Kinsman, L., James, E.L., Machotta, A., Gothe, H., Willis, J., Snow, P. and Kugler, J. (2010), "Clinical pathways: effects on professional practise, patient outcomes, length of stay and hospital costs", *The Cochrane Library*, No. 7, pp. 1-163, available at: http://apps.who.int/rhl/reviews/CD006632.pdf (accessed 12 December 2014).

Saaren-Seppälä, T. (2004), "Yhteisen potilaan hoito: tutkimus organisaatiorajat ylittävästä yhteistoiminnasta sairaalan, terveyskeskuksen ja lapsipotilaiden vanhempien suhteissa (The treatment of a common patient. A study of organisational boundary crossing collaboration in the relationships of the hospital, the health centre, childpatients and parents)", academic dissertation, Acta Universitatis Tamperensis 1052, Tampere University Press, Tampere.

Saarivirta, T., Consoli, D. and Dhongt, P. (2012), "The evolution of the Finnish health-care systems early 19th century and onwards", *International Journal of Business and Social Science*, Vol. 3 No. 6, pp. 243-257.

Sabelli, M. (2014), "Health care information for youth in vulnerability contexts: designing a website with an interdisciplinary and participatory approach", *Proceedings of ISIC, The Information Behaviour Conference*, *Leeds*, *2-5 September*, available at: http://InformationR.net/ir/19-4/isic/isicsp6.html (accessed 29 September 2015).

Schatzki, T.R. (2000), "Practise theory", in Schatzki, T.R., Knorr Cetina, K. and von Savigny, E. (Eds), *The Practise Turn in Contemporary Theory*, Routledge, New York, NY, pp. 11-23.

Scott, J.G., Cohen, D., DiCicco-Bloom, R.N., Orzano, J., Gregory, P., Flocke, S.A., Maxwell, B.S. and Crabtree, B. (2004), "Speaking of weight: how patients and primary care clinicians initiate weight loss counseling", *Preventive Medicine*, Vol. 38 No. 6, pp. 819-827.

Sonnenwald, D.H. (2004), "Managing cognitive and affective trust in the conceptual R and D organisation", in Huotari, M.-L. and Iivonen, M. (Eds), *Trust in Knowledge Management and Systems in Organisations*, Idea Group Publishing, Hershey, PA, pp. 82-106.

Strauss, A. and Corbin, J. (1990), *Basics of Qualitative Research. Gounded Theory Procedures and Techniques*, Sage Publications, Newbury Park, CA.

Tagliaventi, M.R. and Mattarelli, E. (2006), "The role of networks of practise, value sharing, and operational proximity in knowledge flows between professional groups", *Human Relations*, Vol. 29 No. 3, pp. 291-319.

Talja, S., Tuominen, K. and Savolainen, R. (2005), "'ISMS' in information science: constructivism, collectivism and constructionism", *Journal of Documentation*, Vol. 61 No. 1, pp. 79-101.

Teperi, J., Porter, M.E., Vuorenkoski, L. and Baron, J.F. (2009), "The Finnish health care system: a value-based perspective", Sitra Reports No. 82, Sitra, Helsinki.

Van Beveren, J. (2003), "Does health care for knowledge management?", *Journal of Knowledge, Management*, Vol. 7 No. 1, pp. 90-95.

Vargo, S. and Lusch, R.F. (2008), "Service-dominant logic: continuing the evolution", *Journal of the Academy of Marketing Science*, Vol. 36 No. 1, pp. 1-10.

Virtanen, K. (2012), "Look, mummy, there are others like me here", Gymnastics associations and school health care supporting families in childhood weight control, academic dissertation, Acta Universitatis Ouluensis D Medica 1170, Juvenes Print, Tampere.

Vuorela, N. (2011), "Body mass index, overweight and obesity among children in Finland – a retrospective epidemiological study in Pirkanmaa district spanning over four decades", academic dissertation, Acta Universitatis Tamperensis 1611, Tampere University Press, Tampere.

West, E., Barron, D.N., Dowsett, J. and Newton, J.N. (1999), "Hierarchies and cliques in the social networks of health care professionals: implications for the design of dissemination strategies", *Social Science and Medicine*, Vol. 48 No. 5, pp. 633-646.

White, J.P., Armstrong, H., Armstrong, P., Bourgeault, I., Choiniere, J. and Mykhalovskiy, E. (2000), "The impact of managed care on nurses' workplace learning and teaching", *Nursing Inquiry*, Vol. 7 No. 2, pp. 74-80.

Wiili-Peltola, E. (2005), "Sairaala muutosten ristipaineessa. Hallinnan kehittämisen haasteita sairaalaorganisaatiossa (Hospital under the conflicting pressure of reform)", academic dissertation, HAUS-julkaisuja 1/2005, HAUS Kehittämiskeskus Oy, Helsinki.

Wikström, S., Normann, R., Anell, B., Ekvall, G., Forslin, J. and Skärvad, P.-H. (1994), *Knowledge and Value. A New Perspective on Corporate Transformation*, Routledge, London.

Wilson, T.D. (2010), "Information sharing: an exploration of the literature and some propositions", *Information Research*, Vol. 15 No. 4, available at: http://InformationR.net/ir/15-4/paper440.html (accessed 27 May 2014).

World Medical Association (2009), "Declaration of Helsinki" 16 April, available at: www.wma.net/en/30publications/10policies/b3/index.html.pdf?print-media-type&footer-right = [page]/[toPage] (accessed 31 May 2014).

Yamazaki, T. and Umemoto, K. (2010), "Knowledge management of healthcare by clinical-pathways", *Journal of Information and Knowledge Management*, Vol. 9 No. 2, pp. 119-125.

Yates-Mercer, P. and Bawden, D. (2002), "Managing the paradox: the valuation of knowledge and knowledge management", *Journal of Information Science*, Vol. 28 No. 1, pp. 19-29.

Yin, R.K. (2009), *Case Study Research. Design and Methods*, Applied Social Research Methods Series, Vol. 5, 4th ed., Sage Publications, Inc., Thousand Oaks, CA.

Yu, L. (2012), "Towards a reconceptualization of the 'information worlds of individuals' ", *Journal of Librarianship and Information Science*, Vol. 44 No. 1, pp. 3-18.

Further reading

Paane-Tiainen, T. (2013), "Murtuuko muuri. Lääkäriverkko pyrkimyksenä muuttaa alueellista yhteistyötä Kymenlaakson sairaanhoitopiirissä (Will the wall break? The doctor network as an aim to changes regional co-operation in the Kymenlaakso Hospital District), academic dissertation, University of Helsinki, Institute of Behavioural Sciences, Studies of Educational sciences 248, Unigrafia, Helsinki.

Corresponding author

Helena Känsäkoski can be contacted at: helena.kansakoski@fimnet.fi