Launching a video consultation service for child psychiatry in Pohjois-Savo region: opinions and experiences of the trained target groups

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Abstract

Video conferencing (VC) and other telemedicine tools may help to improve the quality and availability of care in remote, sparsely populated areas. The transnational "eHealth Services for Child and Adolescent Psychiatry (eCAP), 2015-2018" project aims at developing new solutions for mental health care for children and adolescents in remote communities. In Finland, the Department of Child Psychiatry at Kuopio University Hospital (KUH) launched in early 2017 an online booking system and a browser-based VC solution to support the primary healthcare and other professionals working with children in Pohjois-Savo region by facilitating video-based consultations, supervision and support for treatment. Over 200 professionals in the region were trained to use the service.

For evaluating the provided training and gaining insight for the revealed non-use of the service, an online survey was administered to the trained persons in December 2017-January 2018. The respondents (n=89, response rate 45 %) demonstrated high satisfaction with the provided training, yet majority of them had not used the service and could not assess its functionality. They embraced the idea of video consultations, but there had been no need for that in practice yet, or more training or reminding about the service was desired. Some had faced technical problems preventing them from using the service. However, nearly 90 % of the respondents said that they will or might use the service in the future – often conditionally, *"if there will be a need"*.

The results clearly demonstrate the importance of customer-orientation, training, constant promotion and reinforcement when introducing new telemedicine services.

Keywords: telemedicine, child psychiatry, referral and consultation, feedback, surveys and questionnaires

Introduction

Using video conferencing (VC) for different purposes in healthcare is not new; already for decades it has been used e. g. for meetings, supervision, professional education, training and teaching, clinical consultations and tests or demonstrations, peer support, administration and linking families [1,2,3]. Even when there have been some technical issues, the feedback from the participants may have been favorable [1,4].

Distance consultations via VC have contributed to improving transfer of care between primary and tertiary mental healthcare providers [5]. The ability for the centrally located specialist to see remote mental health patients via VC has reduced the probability of transfer-

ring the patient to the central mental health unit [6]. According to Pignatiello et al. [7], access to pediatric psychiatrists and other specialist mental health service providers by VC facilitates clinical consultation, collaborative care, education and training, evaluation, and research. Improved access, reduced travel time and care provided closer to home in their communities are the main benefits of VC from the patients' point of view [6,8].

Despite the established benefits of using VC in healthcare, launching a new service is not easy. Albeit Grealish et al. [9] found the patients and their carers to be satisfied with the telemedicine service, the clinicians were resistant. The barriers to the up-take of telemedicine may include funding, time, infrastructure, equipment, skills, and preference for the traditional approach, which together may lead "old ways" to be more rational [10]. Hence, engaging the service users at an early stage is imperative for successful introduction of new telehealth services: prior to the implementation, the needs and resources of staff must be assessed [11]. Further, for smooth adoption of a new telemedicine service involving VC equipment Brebner et al. [12] urge to complement a 'hands on' training programme with an instruction booklet and to ensure regular use of the service.

However, the key predictor of the intention of the practitioners to use telemedicine may be how useful they expect it to be for their patients, which, in turn, effects the attitudes towards the technology, and perceived ease of use enhances perceived usefulness [13].

Background and objectives

The transnational "eHealth Services for Child and Adolescent Psychiatry (eCAP), 2015-2018" project aims at developing, testing, and disseminating new solutions for services that improve the quality and availability of mental health care for children and adolescents in remote, sparsely populated areas.

For supporting the primary healthcare and other professionals working with children in Pohjois-Savo region

to prevent, detect and treat the mental health problems of children, the Department of Child Psychiatry at Kuopio University Hospital (KUH), Finland, introduced a VC service for video-based consultations, supervision and support for treatment. The service consists of an online booking system embedded in the KUH extranet, and the browser-based VC solution. In addition, the service portal in the extranet provides instructions, questionnaires and other tools and materials about child psychiatry for the primary healthcare professionals.

The services were launched in early 2017 with the first on-site training sessions, in which the target groups (e.g. public health nurses, school nurses, GPs) were trained to make an appointment in the online booking system and to use the VC. In addition, they received printed manuals and other materials. In total 38 sessions with 217 participants were organized in different municipalities in January-December 2017, but practically no video consultations took place in 2017.

The aim of this paper is to describe the target groups' opinions and experiences on the provided training and the service itself, as well as explore the reasons for the unexpectedly rare use of the service.

Methods and results

Questionnaire

The online questionnaire was developed by the project team. It consisted of items about the sufficiency of the provided training, the frequency of contacts with the Department of Child Psychiatry for consultation purposes, the perceived functionality of the service, experiences and suggestions for improvement of the service, the intention to use it in the future, and some background information.

Data collection

The questionnaire was emailed in December 2017 to all those who participated in the training sessions in February-December 2017. In addition, 10 names had been

added to list by colleagues. After removing duplicates, the list included 219 email addresses, 20 of which returned an error message, resulting in the target population of 199 persons. Two reminders were sent (after a week and in January after Christmas period). By the deadline 89 questionnaires were returned (response rate 45 %). In addition, some commented the survey by email, and one team informed that they had filled in one questionnaire for five persons.

Respondents

The respondents were from 15 of region's 18 different municipalities, the biggest groups being from Kuopio and Iisalmi (Table 1).

Most respondents worked in well-child clinics (28 %), in school healthcare and welfare (27 %) and in family counselling clinics (18 %) (Figure 1).

Table 1. Respondents' working municipalities.

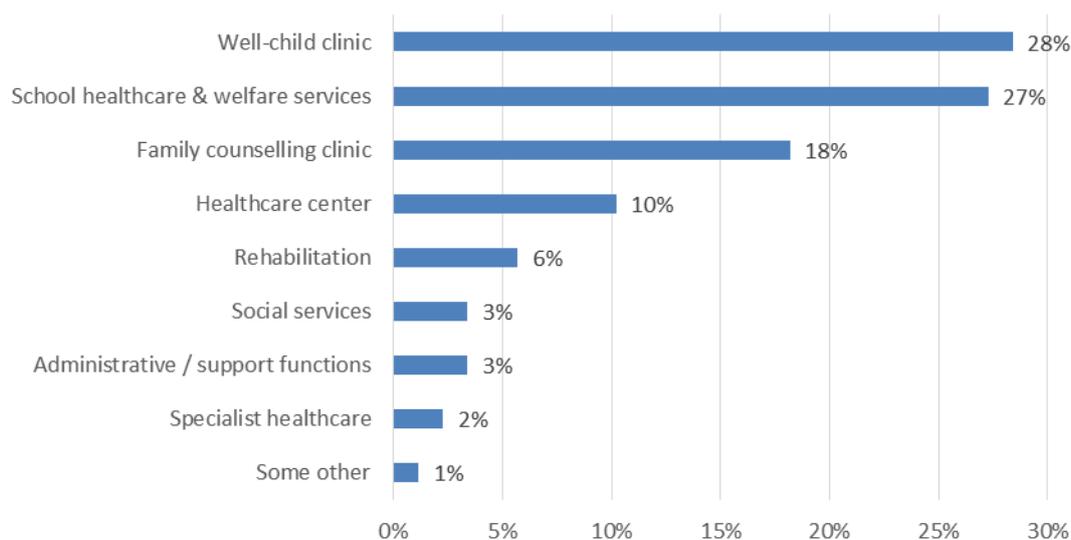| Working municipality	Trained persons	n	%
Kuopio	56	27	31 %
Iisalmi	38	19	21 %
Siilinjärvi	34	8	9 %
Tuusniemi	13	2	2 %
Varkaus	12	4	5 %
Leppävirta	11	5	6 %
Suonenjoki (+Rautalampi)	8	4	5 %
Kaavi (+ Rautavaara)	8	4	5 %
Kiuruvesi	8	2	2 %
Lapinlahti	7	2	2 %
Keitele	6	2	2 %
Pielavesi	5	2	2 %
Vieremä	4	4	5 %
Vesanto	4	2	2 %
Sonkajärvi	3	1	1 %
Total	*217*	*88*	*100 %*

Figure 1. Respondents' working organizations (n=88).

Correspondingly, the biggest staff groups were nursing staff (54 %) and allied health professionals, e.g. psychologists and social workers (26 %). Doctors / GPs constituted only 4 % of the respondents, while fourteen (16 %) respondents associated themselves with some other staff group.

Slightly more than half (51 %) of the respondents had participated in the training in the spring. Six persons had not participated in the training at all.

Sufficiency of training

The respondents demonstrated high satisfaction with the received training (Table 3) with nearly three quarters considering it sufficient. Only three persons considered the training not sufficient.

In open-form comments, the possibility to try the service in practice was considered very important. Many confessed that the service had been forgotten as there had not been an immediate need for it; *"Training took*

place before summer holidays – after holidays everything was forgotten!" and a "rehearsal package" e. g. for watching in the net was requested. In some cases there had been technical problems e.g. *"installing the loudspeakers prevented the use of the Dictaphone, which the person doing the training couldn't fix"* or the internet connection was unreliable. The service itself was claimed to be complex and illogical, and several respondents felt uncertain on what kind of cases they were expected to request a VC.

Contacts for consultation purposes

Despite the perceived adequacy of training and materials, the service was not used: 94 % of respondents had neither made any appointments in the online booking system nor taken part in child psychiatric video consultation with the Department of Child Psychiatry (Table 3). However, to some extent consultations had taken place via some other means (e.g. phone): approximately 15 % had consulted child psychiatrist at least once after the training.

Table 2. Opinions on the sufficiency of the provided training.

Training was sufficient concerning…		Yes		Partly		No	
	n	n	%	n	%	n	%
the operational model	88	66	75 %	19	22 %	3	3 %
how to make an appointment	86	63	73 %	20	24 %	3	3 %
how to use the VC solution	87	61	70 %	23	27 %	3	3 %
how to use the necessary computer equipment	85	61	72 %	21	25 %	3	3 %
the training materials	85	64	75 %	18	22 %	3	3 %

Table 3. Contacts with the Department of Child Psychiatry for consultation purposes.

How many times after training you have…		0 times		1-2 times		>3 times	
	n	n	%	n	%	n	%
made yourself an appointment for a child psychiatric video consultation in the online booking system?	88	83	94 %	4	5 %	1	1 %
requested child psychiatric video consultation by telephoning the Department of Child Psychiatry?	88	87	99 %	-	-	1	1 %
actually participated in child psychiatric video consultation?	88	82	94 %	3	3 %	3	3 %
consulted a child psychiatrist some other way, e. g. by phone?	87	74	85 %	9	10 %	4	5 %

Five respondents explained that such consultations were actually not considered a part of their duties (not working with patients, changing the job). Equally often cases requiring consultation had not yet appeared, as the equipment had been received only a short while ago. In some working communities, the employees had been instructed to primarily consult their own experts and things had been sorted out locally. Only one respondent explicitly referred to his/her personal incompetence to use the service, while majority of respondents did not provide any clarification.

Functionality of the service

Most respondents had not used the service and therefore were not able to rate it (Table 4). Still, only few disagreed that the booking system or sound had functioned well, while the others agreed or did not comment.

Some respondents complained about bad sound quality and difficulties to install the loudspeakers when the dictaphone was plugged in. At first it had been hard to find available time slots in the booking system, but *"then there appeared more of them".*

Experiences and suggestions for improvement

Many respondents praised the idea of video consultations, but either there had been no need for that or the option had not even occurred to one's mind. One third of responses contained a request for further training / reminding about the service, as the training had taken place *"a long time ago".* Some had faced technical problems and were therefore afraid to use the service especially when other participants, e.g. other professionals or family members, would be involved. Case examples and a jointly agreed operational model about when to use the service would be helpful, and the timeslots should be made available significantly earlier and preferably by certain identifiable specialists.

Likelihood of using the service in the future

After all, 38 % of the respondents stated that they *will* use the service in the future, and 52 % assumed that they might use – in open answers often conditionally *"if there will be a need"*, if they learn and remember how to do it, if the technicalities function. Six respondents declared they will not use the service mainly due to their job description, but even they would encourage colleagues or subordinates to use it.

Table 4. Perceived functionality of the elements of the service.

Functionality of the service		Agree		Neither agree nor disagree		Disagree		Haven't used the service	
	n	n	%	n	%	n	%	n	%
Booking system has functioned well.	86	4	5	4	5	1	1	77	89
Joining in to the VC has been easy.	84	5	6	3	4	-	-	76	90
VC solution has functioned well.	85	7	8	3	4	-	-	75	88
Video connection has functioned well.	80	6	7	3	4	-	-	71	89
Sound has functioned well.	81	4	5	3	4	2	2	72	89

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Discussion

Our results show that the respondents were very satisfied with the received training and materials and had favorable attitudes towards the VC, but no one had actually used the service after the training session. Some had faced technical problems, but that obviously was not the main reason for the revealed non-use of the service. Instead, majority claimed that there had been no need for the service yet, which may indicate the local capacity and networks to be sufficient for managing the children's mental health problems without help from the child psychiatric specialist healthcare. However, considering the high numbers of child psychiatric referrals in the region, we might assume that there actually is a need for improving multi-professional collaboration and transferring knowledge and treatment capability from child psychiatric specialist healthcare to primary health care. VC could be used to bridge the gap, but the target groups need more encouragement and support for adopting the new method, e.g. guidance when video consultation would be appropriate and how to do that in practice. Our results did not clearly affirm that, but the question might actually be about self-confidence: am I capable of doing the VC, am I allowed to do it, or should I, as a professional, rather be able to manage my patients myself without specialist help?

Even those who were doubtful of using VC still considered it possible if they would get further training and the service will actually turn out to be useful and convenient enough, which emphasizes the importance of customer-oriented approach in developing new services. The end users' perceptions of how useful the service is or how easy it is to use are crucial for real-life implementation to happen and successful experiences encourage further. As Pignatiello et al. [7] point out: *"the committed and enthusiastic champions, a positive attitude, creativity, and flexibility are a few of the necessary attributes ensuring viability and integration of telemental health programs".* In Child Psychiatry in the Pohjois-Savo region the work must go on to get not only the few champions but also others onboard.

Acknowlededgements

Conflict of interest statement

None of the authors has any conflicts of interest.

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