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## Finnish professionals' views of the current mental health services and multiprofessional collaboration in children's mental health promotion

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### ABSTRACT


Promotion of children's mental health (MH) plays an important role in preventing further MH problems. In Finland, the well-being of children is supported in early childhood education and care (ECEC), basic education, maternity clinics, and child health clinics. Providing these services for children and families requires multiprofessional collaboration. The aim of this study was to investigate the current practice of children's MH promotion, more specifically children's MH services and multiprofessional collaboration between social and health care services and ECEC/basic education. The study focused on MH questions regarding children in 18 municipalities of Finland from the approach of socio-ecological model of health promotion. The participants of this cross-sectional study were ECEC professionals in municipal day care, basic education professionals, and primary health care professionals who work with children younger than 14. The data collected via questionnaires were analyzed using descriptive statistics, chi-squared analysis, principal component analysis (PCA), the Brown-Forsythe robust test, and Tukey HSD post hoc comparisons. A total of 482 professionals participated in this study. Overall, respondents indicated relatively poor satisfaction toward most aspects of current MH promotion. Professionals from municipalities that provided primary health care and social services independently evaluated MH promotion most positively. However, deficiencies in multiprofessional collaboration between organizations were reported. The work experience influenced professionals' perceptions of the challenges of collaboration; respondents with the least work experience were most critically concerned. These results imply that the promotion of children's MH and MH services needs to be further developed.

### KEYWORDS

Children; multiprofessional collaboration; mental health promotion; socio-ecological model

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## Introduction

Mental health (MH) is described by World Health Organization (WHO) (WHO, 2001) as “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively, and is able to make contribution to his or her community.” This description highlights the different aspects of positive MH, as well as MH promotion, the main aim of which is build strengths, competencies, and resources. The Ottawa Charter (WHO, 1986) provides a socio-ecological framework for MH promotion and underscores the importance of mediating structures and reorienting health services to promote MH (Barry and Jenkins, 2007). Based on the socio-ecological model of health promotion (Stokols, 1996), education, living environment, and lifestyle choices, among other factors, influence individual health on the intrapersonal, interpersonal, organizational, community, and policy levels (McLaren and Hawe, 2005). Each of these levels affects health-related behavior (Ikävalko et al., 2018). Therefore, a health promotion approach should be employed at each level (Weare, 2000). This study describes the MH promotion of children at the organizational level of the socio-ecological environment by focusing on the structures of children’s MH promotion, the organization of MH services, and the multiprofessional collaboration among professionals.

Worldwide, 10%–20% of children and young people suffer from MH disorders (WHO, 2013). MH problems are also a public health issue in Finland. The self-reported experience of moderate to severe depression among boys from lower secondary school (aged 13–16) was 6%, and among girls it was 20%. The gender gap may be because girls are ahead of boys in physical development and may be treated as older than they are. As a result, girls experience the pressure of coping independently at an earlier age than boys do (National Institute for Health and Welfare, 2019a). The largest patient groups for children’s psychiatric specialized health care in 2015 were children whose main diagnosis included activity and attention disorder and behavioral disorders (Huikko et al., 2017). Over the past decades, the use of MH services and the number of MH diagnoses provided for children has increased (Atladottir et al., 2015; Sourander et al., 2016). For example, the referral of 5- to 12-year-old children to specialized health care increased by 22% between 2011 and 2015 (Huikko et al., 2017). However, studies have not indicated any increase in the overall psychiatric symptoms in children (Bor et al., 2014; Sourander et al., 2016). The increased use of MH services has partially been explained by better identification of MH problems (Sourander et al., 2016). Even so, previous international studies indicate that problems presented by children and families have become more severe in recent decades (Reid and Brown, 2008; Nanninga et al., 2018). In addition, a Finnish report showed that approximately half of

adult MH disorders began before the age of 14, and three out of four before the age of 24 (Huikko et al., 2017). Thus, promotion of children's MH is essential in preventing further MH problems (Cefai and Camilleri, 2015).

Appropriate MH services are one central area of promotion of children's MH at the organizational level of the socio-ecological environment. Reorienting health services requires that MH services consist of promotion and prevention activities in addition to functional treatment and rehabilitation services. However, previous international studies have found several MH service-level barriers, including lack of available, high-quality, and developmentally appropriate MH services (Hoffman et al., 2016), lack of resources and providers of MH services (Reid and Brown, 2008; O'Brien et al., 2016), long waiting times (Prymachuk et al., 2012), inoperative system integration (Reid and Brown, 2008), and lack of information about available services, inflexible services, and complex administrative procedures (Anderson et al., 2017). These barriers, in turn, increase waiting times, reduce access to specialist services (O'Brien et al., 2016), increase costs, weaken users' expectations of providers' attitudes (Horwitz et al., 2012), and can negatively affect early intervention for children (Reid and Brown, 2008; Prymachuk et al., 2012), the importance of which international studies have recognized and emphasized (O'Brien et al., 2016; Bringewatt and Gershof, 2010; Colucci et al., 2017). Thus, the international studies presented above raise the question of how children's MH services function in Finland.

In addition to appropriate MH services, another central area of promotion of children's MH at the organizational level of the socio-ecological environment is active multiprofessional collaboration. In the literature, the term "interprofessional" is used to denote two professions and "multiprofessional" more than two professions; even according to (Roodbol, 2010), the difference between terms is subtle. Collaboration, in turn, has several definitions (Willumsen, 2008; Patel et al., 2012; Sørensen et al., 2018), such as working together toward a common goal (Clancy et al., 2013). In this study, multiprofessional collaboration is used to mean that professionals from two, or more than two, professions share power and knowledge, and work together in workgroups and networks to create solutions in services of children and families.

Multiprofessional collaboration in the children's services and in the school environments have been examined in previous international studies (Ekornes, 2015; Hesjedal et al., 2016; Moon et al., 2017; Sormunen et al., 2018; Cooper et al., 2016; Brennan et al., 2008). In addition, the importance of multiprofessional collaboration has emerged in the studies on children's MH promotion and MH services (Hoffman et al., 2016; Anderson et al., 2017; Clancy et al., 2013; Huggins et al., 2016; Kanste et al. 2013; Handley

and McAllister, 2017). Teachers in early childhood education and care (ECEC) and elementary school settings are frontline professionals who promote, prevent, and identify children's MH problems (Ekornes, 2015; Hesjedal et al., 2016; Moon et al., 2017). Teachers in basic education also have an important role in supporting children's health learning and information exchange between school and home (Sormunen et al., 2018). However, children's increasing MH needs concern most teaching personnel and student welfare personnel, such as special education teachers, student councilors, special needs assistants, principals, and school psychologists, nurses, doctors, and social workers due to multiprofessional collaboration. Addressing children's MH needs calls for new ways to solve problems, and additional support and information through collaboration (Anderson et al., 2017; Ekornes, 2015; Hesjedal et al. 2016; Moon et al., 2017). Cooper et al. (2016) concluded in their systematic review that both service users and professionals perceive interagency collaboration across children and young people's services as helpful and important (Cooper et al., 2016). For example, collaboration among different services can increase the knowledge of MH and related problems, as well as the benefits of MH services (Huggins et al., 2016). In contrast, a literature review from the USA reported benefits directly to professionals. Collaboration through consultations with MH professionals can improve and support teachers with coping, increase self-efficacy, and reduce stress and turnover (Brennan et al., 2008).

Collaboration in the services for children and families requires supportive management structures, awareness of services (Kanste et al., 2013), respect, communication, negotiation, and appreciation of differences (Handley and McAllister, 2017). Previous studies have found multiple issues that can pose a challenge for collaboration, such as the obscurity of professional roles and responsibilities and various aspects of children's behavior (Anderson et al., 2017). Problems can also arise from discrepancies between professionals' perceptions of typical early childhood development and MH and parents' perceptions of child development and MH (Hoffman et al., 2016). Clancy and others (Clancy et al., 2013) found associations between multiprofessional collaboration and municipality size: collaboration works better in small municipalities and has an impact on the quality of the services. However, previous studies have not investigated multiprofessional collaboration and challenges related to it specifically in children's MH issues from several different professional groups' points of view.

### ***Mental health promotion among children in Finland***

In Finland, the well-being of children and families is systematically supported throughout childhood. Maternity and child health clinics are a key

part of preventive and health promotion activities in primary health care. The services take into account the needs of individuals and families (Ministry of Social Affairs and Health, 2010). ECEC refers to children's planned education and care. The aim of ECEC is to support the growth, development, and learning of children and to promote their well-being (Ministry of Social Affairs and Health, 1973). The organization of basic education is governed by education legislation, the national curriculum, and the local curriculum. They define the issues that are central to education and teaching, such as student guidance, support and assessment, and student care policies (Ministry of Education and Culture, 1998).

Municipalities are in charge of organizing social and health care services, including health promotion (Health Care Act of Finland, 2010). Children's basic MH services offer promotion, prevention, detection, and support of MH problems in primary health care (e.g., child guidance and family counseling centers, child health clinics, and school health care). Child psychiatric services (special services) are provided at child psychiatric clinics and in psychiatric hospital care. Furthermore, primary health care and social services are organized in three ways: (a) services can be provided by a municipality (MUN), which means that the municipality determines the scope, content, and organization of services; (b) the Joint Municipal Authority (JMA) is a consortium of municipalities, to which municipalities have to supply municipal tasks; the JMA acts as the organizer of services on behalf of the member municipalities; (c) in the Host Municipality Model (HMM), one municipality carries out tasks on behalf of other municipalities under the agreement. Regardless of the model, social and health care services are mainly financed by municipal taxes (The Association of Finnish Local and Regional Authorities, 2017).

Many sectors of society, including ECEC and basic education providers, co-operate to provide MH services. Child health care provides support for the prevention, detection, and appropriate treatment of MH problems in children. Multiprofessional collaboration is carried out among ECEC, basic education, and social and health services. The promotion of MH in the environments of everyday life affects the well-being of individuals in the long term; therefore, early intervention is particularly important for preventing children's MH problems.

This study is part of the international eCAP (e-Health Services for Child and Adolescent Psychiatry, 2015–2018) project, the aim of which was to improve the quality and availability of child psychiatric services for children under 14. This study was carried out in the North Savo region in Finland, where mental disorders are more common than the rest of Finland (National Institute for Health and Welfare, 2017).

## **Aim**

The aim was to study children's MH promotion practices from the multi-professional perspective in the North Savo region of Finland. The research questions were as follows:

1. How do professionals working with children younger than 14:
  - Describe the current MH services in municipalities?
  - Perceive multiprofessional collaboration among professionals regarding children's MH issues?
  - View challenges related to multiprofessional collaboration in children's MH issues?
2. How do background variables (work experience, working organization, form of organization of primary health care and social services; MUN, JMA, or HMM) relate to professionals' perceptions of current MH services, multiprofessional collaboration, and challenges related to collaboration?

## **Methods**

### **Sample**

The participants of this cross-sectional study were 1) early childhood education professionals in municipal day care (heads of day care centers, kindergarten teachers, kindergarten special education teachers, and day care nurses), 2) basic education professionals (teachers, special education teachers, student councilors, special needs assistants, principals, school psychologists, and school social workers), and 3) primary health care professionals who work with children younger than 14 (child health care nurses, school nurses, general practitioners, specialist doctors, psychologists, nurses, speech therapists, physiotherapists, social workers, occupational therapists, and family therapists) in the 18 municipalities of the North Savo region. According to municipal statistics, the population of professionals was 5,834, and they were divided into three groups according to their administrative sector. Sufficient sample size was calculated from the total number of the professionals, and it was 355 (confidence level 95%, confidence interval 5%). All professionals from all municipalities were invited in the study, and 482 professionals participated. Consequently, sufficient sample size was achieved. (Tabachnick and Fidell, 2013).

### **Instrument**

An electronic questionnaire was developed based on current research knowledge on the topic (e.g., O'Brien et al., 2016; Cooper et al., 2016; Honkanen et al., 2010; Roberts et al. 2010; De Weger et al., 2013; Stingley and Schultz,



2014) by the international research team. First, the questionnaire was commented by the professionals from basic education, primary health care, and child psychiatric special health care, and appropriate changes were made. After that, the questionnaire was piloted in two municipalities in 2016, and minor changes were made to improve the understandability.

In addition to the demographic characteristics of respondents (municipality, organization, job/profession, age, gender, and years of work experience), the instrument consisted of six components, two of which are reported here: 1) MH services and promotion of children's MH (10 items), and 2) collaboration between social and health care services and ECEC/basic education (22 items). The remaining four components including information about children's mental health problems and electronic remote applications will be reported in other publications. Hence, components 1 and 2 contained total 32 items and one open-ended question. The response scale was 1 = *totally agree/very well/always*, 2 = *somewhat agree/somewhat well/somewhat often*, 3 = *do not agree or disagree/not well or poorly/occasionally*, 4 = *disagree/poorly/somewhat rarely*, 5 = *totally disagree/very poorly/never*, and "I cannot say," "service is not provided by the municipality," or "I have not needed this type of support" categories. The open-ended question was, "Do you want to say something else about the MH services or multiprofessional collaboration regarding the MH promotion of children?" The purpose of the question was to deepen the quantitative data.

### **Data collection**

The data were collected between December 2016 and February 2017. Prenotification and information were sent to leaders of the different municipal services with two reminders. Leaders were asked to forward the invitation to professionals via e-mail with a link to the questionnaire. Participation was voluntary, and confidentiality was guaranteed. The ethical statement (7/2016, 25.5.2016) was obtained from the Ethics Committee of the University. In addition, a research permit was applied separately from each of the North Savo municipalities.

### **Data analysis**

The data were analyzed using IBM SPSS statistics (version 21). Variables were reorganized from 5-point scales to 3-point scales (1 = *agree/well/always*, 2 = *do not agree or disagree/not well or poorly/occasionally*, 3 = *disagree/poorly/never*). The "I cannot say" answers were defined and treated as missing data. There were four types of organizations: ECEC, basic education, primary health care, and other (e.g., social security,



disability services, and MH services for children and young people). The “other” group was formed because it contained only a few respondents from the professional groups in it, and the survey was mainly directed at professionals who administratively work in ECEC, basic education, and primary health care. Primary health care was divided in school health care, child health clinic, and family counseling center when analyzing multiprofessional collaboration in children’s MH issues in municipalities. The statistical significance of differences between groups was tested using the chi-square test ( $\chi^2$ ). Cross-tabulation was used to reveal individual characteristics for each professional group and for the organizational form of primary health care and social services. Descriptive statistics and multivariate methods were used to discover patterns in responses from different professional groups and different organizational forms of primary health care and social services. Statistical difference was set at the 95% level.

The 10 items of the challenges of multiprofessional collaboration were subjected to principal component analysis (PCA). The suitability of the data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of all, with three exceptions of coefficients of 0.3 and above. The Kaiser-Meyer-Olkin value was 0.85, exceeding the recommended value of 0.6 (Tabachnick and Fidell, 2013), and Bartlett’s test of sphericity reached statistical significance, supporting the factorability of the correlation matrix. Communalities varied between 0.318 and 0.865. PCA revealed the presence of three components with eigenvalues exceeding 1, explaining 48.5%, 12.3%, and 10.4% of the variance, respectively. The three-component solution explained a total of 71.1% of the variance. Factor analysis was used to select aggregate variables for mean variables. The values of the variables based on the mean variables were counted together and recoded so that the values of the summation variables ranged from 0 to 3 (the higher the points of the mean variables, the higher the agreement). The Cronbach’s alpha coefficients for summation variables were as follows: challenges related to the collaboration structures = 0.861, challenges related to the personnel = 0.646, and challenges related to the attitudes = 0.829. The Brown-Forsythe robust test and Tukey HSD post hoc comparisons were used to analyze the differences between the mean scores of the outcome variables. The open-ended answers were categorized by content.

## Results

### *Background information*

In all, 482 professionals completed the questionnaire; all North Savo municipalities were represented (Table 1). The majority of respondents were women

**Table 1.** Background information of the respondents ( $N = 482$ ).

Variable	Total n %		Mean (Md; SD)
Gender ( $n = 479$ )			
Female	404	84	
Male	75	16	
Age ( $n = 481$ )			43.9 (45; 10.2)
Under 30	50	10	
30–39	120	25	
40–49	152	32	
50–59	138	29	
60 or beyond	21	4	
Work experience in years ( $n = 475$ )			16.2 (15; 10.1)
Under 5	72	15	
5–14	152	32	
15–24	138	29	
25–34	87	18	
35 or beyond	26	5	
Working organization ( $n = 481$ )			
Early childhood education and care	84	17	
Basic education	250	52	
Primary health care	91	19	
Other <sup>1</sup>	56	12	
Number of inhabitants in the working municipality ( $n = 482$ )			
<10,000	236	49	
10,000–50,000	127	26	
>50,000	118	25	
Organization of health services ( $n = 481$ )			
Municipality	71	15	
Joint Municipal Authority	253	52	
Host Municipality Model	157	33	

<sup>1</sup>In basic education and early childhood education, social security, disability services, dental care, and mental health services for children and young people.

(83%). The average age was 43.9 ( $SD = 10.2$ ), and the average years of work experience were 16.2 ( $SD = 10.1$ ). More than half (52%) worked in basic education, 19% in primary health care, 17% in ECEC, and 12% somewhere else. Half of the respondents (49%) worked in a municipality with fewer than 10,000 inhabitants, one-fourth (26%) in a municipality with 10,000–50,000 inhabitants, and one-fourth (25%) in a municipality with more than 50,000 inhabitants. Organizers of primary health care and social services in respondents' municipalities were JMA (52%), HMM (33%), and MUN (15%). The number of respondents was representative of the relative size of the municipality except in a small municipality (population under 10,000), where the number of respondents was slightly overrepresented.

### **Current mental health services for children and organization of the services**

Fewer than half of the respondents (46%) reported that *intervention for children's MH symptoms occurred at a sufficiently early stage in their municipality* (Table 2). A majority of the primary health care personnel (57%) agreed with the proposition compared to ECEC and basic education personnel. Respondents from MUN agreed more with the statement that

**Table 2.** Agreement of current mental health promotion for children, mental health services, and organization of the services.

Variable	Early childhood education and care			Basic education			Primary health care			Other			$\chi^2$	p	p
	Total n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)			
Intervention for children's mental health symptoms occurs at a sufficiently early stage in my municipality	201 (46)	36 (47)	96 (42)	47 (57)	22 (45)	13.8	0.032	39 (61)	120 (51)	42 (30)	27.5	<0.001			
Children's mental health services can be found easily from the municipal internet pages	147 (42)	31 (49)	71 (40)	27 (38)	18 (43)	5.70	0.457	30 (59)	68 (37)	49 (41)	8.04	0.090			
Children's mental health services can be sought without fear of stigma in my municipality	252 (59)	39 (52)	131 (60)	53 (65)	29 (56)	5.43	0.490	41 (67)	138 (60)	73 (53)	4.49	0.344			
The geographical distances are suitable for arranging mental health services for children in my municipality	199 (49)	30 (43)	109 (53)	40 (48)	20(40)	5.54	0.477	37 (60)	96 (44)	66 (51)	6.86	0.143			
Children's mental health services works well in my municipality	118 (33)	19 (32)	58 (29)	25 (31)	16 (36)	10.5	0.104	20 (35)	69 (34)	29 (23)	12.7	0.013			
The financial resources of mental health care for children are sufficient in my municipality	43 (12)	5 (9)	24 (12)	12 (16)	2 (5)	9.23	0.161	8 (14)	29 (15)	6 (5)	20.3	<0.001			
The referral process between primary and special health care is well implemented in my municipality	96 (27)	12 (24)	30 (17)	38 (48)	16 (36)	40.6	<0.001	21 (40)	47 (26)	28 (24)	10.5	0.033			
Workers who work with children with psychiatric symptoms have arranged enough occupational counseling in my municipality	39 (11)	4 (9)	18 (9)	11 (16)	6 (17)	8.98	0.175	8 (18)	23 (13)	8 (7)	6.70	0.136			
Children's mental health services (basic services) function well	141 (45)	18 (43)	54 (36)	49 (61)	20 (48)	14.3	0.027	29 (60)	70 (48)	42 (36)	12.0	0.017			
Child psychiatric services (special services) function well	117 (42)	15 (43)	38 (29)	44 (59)	20 (50)	20.2	0.003	26 (62)	49 (38)	42 (38)	9.97	0.041			

Table describes agreement numbers of proportions.

<sup>a</sup>MUN = Municipality (self-organized).

<sup>b</sup>JMA = Joint Municipal Authority.

<sup>c</sup>HMM = Host Municipality Model.

intervention occurred at a sufficiently early stage (61%) than respondents from municipalities where services were organized by JMA (51%) or HMM (30%,  $x^2 = 27.5$ ,  $p < .001$ ).

Among all respondents, 42% agreed that children's MH services can be found easily from the municipal Internet pages, and 59% reported that children's MH services can be sought without fear of stigma. According to 49% of respondents, geographical distances were suitable for arranging MH services for children in their municipality, and 33% of respondents agreed that children's MH services work well in their municipality. From respondents, 35% from municipalities where primary health care and social services were organized by MUN, 34% from JMA, and 23% from HMM reported that children's MH services work well in their municipality ( $x^2 = 12.7$ ,  $p = .013$ ).

Only 12% of respondents stated that the *financial resources of MH care for children were sufficient* in their municipality. Financial resources were reported to be the most insufficient in the municipalities where primary health care and social services were organized using HMM (MUN: 14%, JMA: 15%, and HMM: 5% of respondents agreed,  $x^2 = 2.3$ ,  $p < .001$ ). Less than one third (27%) thought that *the referral process between primary and special health care was well implemented in the municipality*, but when examining among primary health care personnel, almost half (48%) agreed, while 24% of ECEC personnel and 17% of basic education personnel agreed ( $x^2 = 40.6$ ,  $p < .001$ ). Less than half (40%) of respondents from municipalities where health services were organized by MUN, 26% from JMA, and 24% from HMM reported that guidance for special health care was well implemented in the municipality ( $x^2 = 10.5$ ,  $p = .033$ ).

A total of 11% reported that *professionals who work with children with psychiatric symptoms have arranged enough occupational counseling in the municipality*.

### **Functionality of children's mental health services**

Less than half (45%) reported that the *children's mental health services (basic services) function well* (Table 2). Professionals from primary health care were more satisfied with functionality (61%) compared to early childhood education (43%) and basic education (36%) personnel ( $x^2 = 14.3$ ,  $p = .027$ ). In addition, considering the organization of health services indicated significant differences among groups from differently organized services (MUN: 60%, JMA: 48%, HMM: 36%,  $x^2 = 12.0$ ,  $p = .017$ ).

Among respondents, 42% reported that *child psychiatric services (special services) function well*. More than half (59%) of health care personnel

reported that these services function well; percentages were lower among ECEC (43%) and basic education personnel (29%,  $\chi^2 = 20.2$ ,  $p = .003$ ).

### **Multiprofessional collaboration in children's mental health issues in municipalities**

Basic education professionals assessed the collaboration as functioning well between *school and parents* (86%), *school and school health care* (85%), *school and family counseling unit* (64%), *school and social services* (52%), and *school and child psychiatric special health care* (38%) (Supplementary Table S1). Similar to basic education professionals, most ECEC professionals assessed the collaboration as working well between *ECEC and parents* (94%), followed by *ECEC and child health centers* (84%), *ECEC and family counseling* (71%), *ECEC and social services*, and *ECEC and child psychiatric special health care* (both 58%).

Additionally, the school health care professionals saw the collaboration between *school and school health care* functioning well (97%), and high percentages were also obtained with *family counseling* professionals' assessment of their work with *school* and *ECEC* (both 86%). Collaboration between *ECEC and child health clinic* was also assessed as working well in the opinion of child health clinic professionals (87%).

Based on the established factors, *the challenges of multiprofessional collaboration* were distributed between the *challenges related to the collaboration structures*, *challenges related to the personnel*, and *challenges related to the attitudes* (Supplementary Table S2). The impact of work experience on *challenges related to the collaboration structures* was statistically significant,  $F(4, 143) = 3.18$ ,  $p = .015$ , as was the impact of work experience on *challenges related to the attitudes*,  $F(4, 257) = 4.69$ ,  $p = .001$ . On the other hand, the work experience on *challenges related to the personnel* did not reach statistical significance (Table 3). Post hoc comparison indicated differences among work experience groups. Regarding the variable *challenges related to the collaboration structures*, the groups *under 5* and *5–14* years of work experience differed from the group *35 or beyond* years of work experience. Hence, the less work experience, the more collaboration structures were perceived as a challenge. In addition, there were differences among work experience groups in terms of the variable *challenges related to the attitudes*. The groups *under 5*, *5–14*, and *15–25* differed from the group *35 or beyond*. The less work experience, the more the attitudes were perceived as a challenge.

### **Description of open-ended question**

The open-ended question (*Do you want to say something else about the MH services or multiprofessional collaboration regarding the MH promotion*

**Table 3.** Challenges of multiprofessional collaboration.

Challenges are related to	Years of work experience												F	p
	Under 5		5–14		15–24		25–34		35 or beyond		N	M (SD)		
	N	M (SD)	N	M (SD)	N	M (SD)	N	M (SD)	N	M (SD)				
multiprofessional collaboration structures (n = 324)	45	2.57 (0.52)**	99	2.44 (0.64)**	96	2.39 (0.68)	61	2.28 (0.72)	23	1.99 (0.84)	23	1.99 (0.84)	3.18	0.015
personnel (n = 361)	43	2.59 (0.55)	123	2.63 (0.48)	102	2.63 (0.50)	69	2.61 (0.51)	24	2.38 (0.79)	24	2.38 (0.79)	1.06	0.382
attitudes (n = 368)	46	1.86 (0.81)**	124	1.68 (0.74)**	105	1.66 (0.70)**	68	1.56 (0.62)	25	1.18 (0.41)	25	1.18 (0.41)	4.693	0.001

Brown-Forsythe robust test.

The higher the values of the mean variables, the higher the agreement.

\*\*Differs significantly from group "35 or beyond."

of children?) received 57 responses. Answers constituted four categories: 1) disadvantages linked to the exchange of child-related information, 2) deficiencies of multiprofessional collaboration, 3) disadvantages linked to the lack of resources, and 4) disadvantages linked to the early intervention and offering of services. Lack of communication and feedback on the progress of children's treatments were common problems that professionals from schools and ECEC mentioned.

Information does not move from child psychiatric special health care to primary health care. It requires work, and in my opinion special health care should encourage parents/young people to transfer information. And special health care could also call school nurses to the meetings. (School nurse)

Professionals were not satisfied with the multiprofessional collaboration among organizations, especially the collaboration with child psychiatric services.

Clear operating models are missing, there should be agreed guidelines. Now, the collaboration between different domains depends on the employees. (Special education teacher)

The respondents described how financial and human resources did not allow them to focus attention on the needs of children with psychiatric symptoms. Furthermore, symptomatic children were not sufficiently considered in basic services; for example, there were not enough special classes for challenging children.

It is very challenging that children or adolescents [with special needs] are integrated into the same classroom with other pupils, while the resources of the school assistants are minimal. This means mainly survival with certain children. (Teacher)

## Discussion

MH services and multiprofessional collaboration are two central areas of promotion of children's MH at the organizational level of the socio-ecological environment. The main finding was that ECEC, basic education, and primary health care professionals were not satisfied with the current children's MH services in municipalities. First, more than half of the participants reported that childhood MH symptoms did not receive intervention at a sufficiently early stage. The focus should be more on early intervention because the symptoms often worsen as time goes on (Huikko et al., 2017). The symptomatic children's access to treatment could be improved. Mental disorders are a public health challenge, demanding sufficient and timely MH services. (Vorma et al., 2020). Also, a lack of financial resources emerged in the results of this study. According to the respondents, the inadequacy of resources weakens the quality of services. Making relatively



small investments in early intervention, such as providing information to parents about available services and benefits to which their children are entitled, providing better coordination across the service systems, and providing a mechanism for children with MH needs and their families to be heard, could prevent complex and expensive problems, which could result in savings (Hoffman et al., 2016; Bringewatt and Gershof, 2010; Colucci et al., 2017).

Moreover, disadvantages in the working conditions of professionals who work with children can affect the staff's ability to cope with the quality of services. Only a small number of respondents felt that they had enough occupational counseling. In addition, teachers felt that they were alone with the problems encountered with symptomatic children and did not get occupational counseling, though they felt they needed it. However, occupational counseling could improve staff confidence related to working with challenging children. Pryjmachuk et al., (2012) found that the lack of confidence was one of the barriers of doing MH work from the school nurses' point of view. Moreover, occupational counseling is one of the facilitators of doing MH work in addition to communication and interpersonal skills and supportive networks. Compared to ECEC and basic education professionals, health care professionals were clearly most satisfied with early intervention, the referral process between primary and special health care, and both basic MH services and children's psychiatric services. These results may indicate teachers' and ECEC personnel's concerns about children's MH symptoms and insecurity when facing challenging situations.

Second, although multiprofessional collaboration among professionals regarding children's MH issues functions mainly well, the MH promotion of children requires broader cross-sectoral collaboration. In this study, professionals reported good collaboration, especially with parents and social services, but professionals were not satisfied with the collaboration with child psychiatric services. Regarding the challenges related to multiprofessional collaboration, the lack of communication with child psychiatry and feedback on the progress of children's treatments were common problems that professionals from schools and ECEC mentioned. Lack of communication was explained, for example, by organizations' different practices, lack of time, employees' working habits, and data protection that prevents the transmission of information. Similar results have been obtained in previous studies. In a study that explored the views of school nurses regarding MH problems in young people and their potential for engaging in MH work with this client group, participants experienced poor relationships with children and adolescent MH services as a barrier. Major irritants were referrals being rejected without explanation, long waiting times, scant feedback on the progress of children accepted by MH services, and a lack of

communication (Prymachuk et al., 2012). In addition, a study on an intervention program for child and adolescent fire setters provided collaboratively by fire service and MH professionals found differences in rules and expectations regarding information sharing and confidentiality, which presented challenges to collaborations (Henderson et al., 2010). Furthermore, in a study about interdisciplinary collaboration between pediatric primary care providers and MH providers, barriers to effective communication included time constraints, failure to receive timely information, and the fact that the information was not always comprehensible (Greene et al., 2016).

The challenges related to multiprofessional collaboration confirm that structures need further development. Challenges were not related to the attitudes, but they were related to the factors that professionals cannot change, such as lack of technical solutions required by multiprofessional collaboration. Furthermore, the lack of experience increases uncertainty. Work experience influenced respondents' perceptions of the challenges of multiprofessional collaboration; respondents with less experience perceived the collaboration structures and the attitudes more challenging than others. Thus, there is a true need and desire for multiprofessional collaboration and support. As Labrague et al. (2018) point out, interprofessional education builds competencies needed in collaborative practice, such as interprofessional communication, or appreciation of interprofessional team roles (Labrague et al., 2018). Similarly, Fox et al. (2018) emphasize the positive results of learning activities when interprofessional teams study together (Fox et al., 2018). Moreover, the role of leaders in promoting and sustaining multiprofessional collaboration cannot be overemphasized (Bennett et al., 2011).

Third, the results of this study showed that the organization method of the primary health care and social services affects respondents' satisfaction in some respects. Primary health care and social services are organized in three different ways in Finland. Professionals were more satisfied with childhood MH services when the municipality organized social and health care services itself. In addition, satisfaction with financial resources was higher among professionals from municipalities where the municipality organized social and health care services itself. The results of this study can support findings that services are more easily managed when the area to be managed is smaller (Clancy et al., 2013). Currently, only 27% of municipalities organize the services themselves in Finland, and about 53% of the population lives in these municipalities (The Association of Finnish Local and Regional Authorities. Organization of social and health care, 2017). If the social and health care reform in Finland actualizes in the future, as is the current aim, the social and health care areas will be arranged as larger entities (National Institute for Health and Welfare, 2019b).

The findings of this study emphasize the importance of understanding the organizational-level factors of socio-ecological environment in a children's MH promotion context. Considering that several levels influence children's MH, the findings suggest a need to engage professionals from different organizations and enhance collaboration in promoting the MH of children.

### **Limitations**

This study has some limitations. First, no standardized, validated instrument of children's MH promotion that is suitable for the study existed. The questionnaire used in this study was therefore developed. More advanced statistical validation or additional in-depth interviews would have increased its validity. However, the questionnaire was developed both multidisciplinary and multiprofessionally, and pretested, which increased the reliability of the questionnaire.

Second, in this study, leaders of the different municipal services were asked to forward the questionnaire link to professionals via e-mail. Limited information about how many professionals actually got the link to the questionnaire was provided. Previous studies have found that obtaining answers from professionals is challenging, especially using electronic questionnaires (Kanste et al., 2013; Tolonen et al., 2006; Nicolaas et al. 2014; Suhonen et al., 2015). Also, in this study, the number of respondents was relatively small, but still sufficient to answer the research questions, and the respondents represented the participant group well. The data were analyzed consulting the statistician.

Third, the results illustrate the situation in the region of North Savo, and the extent to which the results of this study are generalizable is limited to the certain areas of Finland with similar characteristics in municipalities. However, the results may also be useful in countries where practices related to the organization of social and health care services are relatively similar.

### **Conclusion**

This study focused on children's MH promotion practices; current MH services and collaboration between social and health care services, and ECEC/basic education related to MH questions. Based on the results, more than half of ECEC, basic education, and primary health care personnel were not satisfied with most aspects of current mental health promotion of children, but differences among professionals emerged: health care personnel assessed promotion more positively than ECEC and basic education professionals did. Furthermore, there was an association between the

organization of social and health care services and satisfaction with the MH promotion and services. It was also found that respondents with the least work experience were most critically concerned about the challenges related to multiprofessional collaboration. These professionals especially need multiprofessional support and education. The results indicate a real need to develop children's MH services and work in municipalities. Specifically, more financial resources are needed, which can be achieved through working with policymakers. In addition, interprofessional education could benefit all professionals, especially ECEC and basic education professionals, who were found to need knowledge about children's MH issues and available services, and it would develop and strengthen multiprofessional collaboration. Effective communication among professionals and families could improve early intervention and promote the MH of children in the future. Thus, interprofessional education should also be highlighted more in the education of future professionals.

Furthermore, in the current large social and health care areas, personnel may not be familiar with all the services available, as well as professionals of the other organizations, making it difficult to guide families to appropriate services. Personnel turnover is making the situation even more difficult. Services would be easier to manage if the area to be managed were smaller. In addition, low-threshold MH services are needed between school health care/child health centers and special health care.

The findings of this study would benefit qualitative enquiry in municipalities with differently organized social and health care services. Qualitative enquiry is necessary to gain a greater understanding of how the importance of children's MH promotion activities at different levels of the socio-ecological environment in addition to the organizational level are understood by professionals working in the municipalities.

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## **Ethical approval**

The ethical statement was obtained from the Ethics Committee of the University (statement 7/2016, 25.5.2016). In addition, a research permit was applied separately from each of the North Savo municipalities.

## **Disclosure statement**

The authors have stated explicitly that there are no conflicts of interest in connection with this article.

## Author contributions

OS, MS, KB, JK, KK, and HT designed the study. OS and KB collected the data. OS analyzed the data. OS, MS, and HT prepared the manuscript. All authors contributed to the revision of the manuscript and all authors read and approved the final version.

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## References

- Anderson, J. K., Howarth, E., Vainre, M., Jones, P. B., & Humphrey, A. (2017). A scoping literature review of service-level barriers for access and engagement with mental health services for children and young people. *Children and Youth Services Review*, *77*, 164–176. <https://doi.org/10.1016/j.childyouth.2017.04.017>
- Atladottir, H. O., Gyllenberg, D., Langridge, A., Sandin, S., Hansen, S. N., Leonard, H., Gissler, M., Reichenberg, A., Schendel, D. E., Bourke, J., Hultman, C. M., Grice, D. E., Buxbaum, J. D., & Parner, E. T. (2015). The increasing prevalence of reported diagnoses of childhood psychiatric disorders: A descriptive multinational comparison. *European Child & Adolescent Psychiatry*, *24*(2), 173–183. <https://doi.org/10.1007/s00787-014-0553-8>
- Barry, M. M., & Jenkins, R. (2007). *Implementing mental health promotion*. Churchill Livingstone, Elsevier.
- Bennett, P. N., Gum, L., Lindeman, I., Lawn, S., McAllister, S., Richards, J., Kelton, M., & Ward, H. (2011). Faculty perceptions of interprofessional education. *Nurse Education Today*, *31*(6), 571–213. <https://doi.org/10.1016/j.nedt.2010.09.008>
- Bor, W., Dean, A. J., Najman, J., & Hayatbakhsh, R. (2014). Are child and adolescent mental health problems increasing in the 21st century? A systematic review. *The Australian and New Zealand Journal of Psychiatry*, *48*(7), 606–616. <https://doi.org/10.1177/0004867414533834>
- Brennan, E. M., Bradley, J. R., Allen, M. D., & Perry, D. F. (2008). The evidence base for mental health consultation in early childhood settings: Research synthesis addressing staff and program outcomes. *Early Education and Development*, *19*(6), 982–1022. <https://doi.org/10.1080/10409280801975834>
- Bringewatt, E. H., & Gershof, E. T. (2010). Falling through the cracks: Gaps and barriers in the mental health system for America's disadvantaged children. *Children and Youth Services Review*, *32*(10), 1291–1299. <https://doi.org/10.1016/j.childyouth.2010.04.021>
- Cefai, C., & Camilleri, L. (2015). A healthy start: Promoting mental health and wellbeing in the early primary school years. *Emotional and Behavioural Difficulties*, *20*(2), 133–152. <https://doi.org/10.1080/13632752.2014.915493>
- Clancy, A., Gressnes, T., & Svensson, T. (2013). Public health nursing and interprofessional collaboration in Norwegian municipalities: A questionnaire study. *Scandinavian Journal of Caring Sciences*, *27*(3), 659–668. <https://doi.org/10.1111/j.1471-6712.2012.01079.x>

- Colucci, E., Valibhoy, M., Szwarc, J., Kaplan, I., & Minas, H. (2017). Improving access to and engagement with mental health services among young people from refugee backgrounds: Service user and provider perspectives. *International Journal of Culture and Mental Health, 10*(2), 185–196. <https://doi.org/10.1080/17542863.2017.1279674>
- Cooper, M., Evans, Y., & Pybis, J. (2016). Interagency collaboration in children and young people's mental health: A systematic review of outcomes, facilitating factors and inhibiting factors. *Child: Care, Health and Development, 42*(3), 325–342. <https://doi.org/10.1111/cch.12322>
- De Weger, E., Macinnes, D., Enser, J., Francis, S. J., & Jones, F. W. (2013). Implementing video conferencing in mental health practice. *Journal of Psychiatric and Mental Health Nursing, 20*(5), 448–454. <https://doi.org/10.1111/j.1365-2850.2012.01947.x>
- Ekornes, S. (2015). Teacher perspectives on their role and the challenges of interprofessional collaboration in mental health promotion. *School Mental Health, 7*(3), 193–211. <https://doi.org/10.1007/s12310-015-9147-y>
- Fox, L., Onders, R., Hermansen-Kobulnicky, C. J., Nguyen, T.-N., Myran, L., Linn, B., & Hornecker, J. (2018). Teaching interprofessional teamwork skills to health professional students: A scoping review. *Journal of Interprofessional Care, 32*(2), 127–135. <https://doi.org/10.1080/13561820.2017.1399868>
- Greene, C. A., Ford, J. D., Ward-Zimmerman, B., Honigfeld, L., & Pidano, A. E. (2016). Strengthening the coordination of pediatric mental health and medical care: Piloting a collaborative model for freestanding practices. *Child & Youth Care Forum, 45*(5), 729–744. <https://doi.org/10.1007/s10566-016-9354-1>
- Handley, C., & McAllister, M. (2017). Elements to promote a successful relationship between stakeholders interested in mental health promotion in schools. *Australian Journal of Advanced Nursing, 34*, 16–25.
- Henderson, J. L., MacKay, S., & Peterson-Badali, M. (2010). Interdisciplinary knowledge translation: Lessons learned from a mental health: Fire service collaboration. *American Journal of Community Psychology, 46*(3–4), 277–288. <https://doi.org/10.1007/s10464-010-9349-2>
- Hesjedal, E., Iversen, A. C., Bye, H. H., & Hetland, H. (2016). The use of multidisciplinary teams to support child welfare clients. *European Journal of Social Work, 19*(6), 841–855. <https://doi.org/10.1080/13691457.2015.1084268>
- Hoffman, J. A., Bunker, A. C., Robertson, H. A., Cao, Y., & West, K. Y. (2016). Child welfare caseworkers' perspectives on the challenges of addressing mental health problems in early childhood. *Children and Youth Services Review, 65*, 148–155. <https://doi.org/10.1080/14623730.2015.1079424>
- Honkanen, M., Moilanen, I., Taanila, A., Hurtig, T., & Koivumaa-Honkanen, H. (2010). Class teacher as a child's mental health promoter and predictor. *Duodecim, 126*, 277–282.
- Horwitz, S. M., Hurlburt, M. S., Goldhaber-Fiebert, J. D., Heneghan, A. M., Zhang, J., Rolls-Reutz, J., Fisher, E., Landsverk, J., & Stein, R. E. (2012). Mental health services use by children investigated by child welfare agencies. *Pediatrics, 130*(5), 861–869. <https://doi.org/10.1542/peds.2012-1330>
- Huggins, A., Weist, M. D., McCall, M., Kloos, B., Miller, E., & George, M. W. (2016). Qualitative analysis of key informant interviews about adolescent stigma surrounding use of school mental health services. *International Journal of Mental Health Promotion, 18*(1), 21–32. <https://doi.org/10.1080/14623730.2015.1079424>
- Huikko, E., Kovanen, L., Torniaainen-Holm, M., Vuori, M., Lämsä, R., Tuulio-Henriksson, A., & Santalahti, P. (2017). *A survey of the treatment and rehabilitation system for mental*

- disorders in children aged 5–12 years in Finland*. National Institute of Health and Welfare. Report 14.
- Ikävalko, T., Lehto, S., Lintu, N., Väistö, J., Eloranta, A.-M., Haapala, E. A., Vierola, A., Myllykangas, R., Tuomilehto, H., Brage, S., Pahkala, R., Närhi, M., & Lakka, T. A. (2018). Health-related correlates of psychological well-being among girls and boys 6–8 years of age: The Physical Activity and Nutrition in Children study. *Journal of Paediatrics and Child Health*, 54(5), 506–509. <https://doi.org/10.1111/jpc.13891>
- Kanste, O., Halme, N., & Perälä, M.-L. (2013). Functionality of cooperation between health, welfare and education sectors serving children and families. *International Journal of Integrated Care*, 13(4), 1–15.
- Labrague, L., McEnroe-Petitte, D., Fronza, D., & Obeidat, A. (2018). Interprofessional simulation in undergraduate nursing program: An integrative review. *Nurse Education Today*, 67, 46–55. <https://doi.org/10.1016/j.nedt.2018.05.001>
- McLaren, L., & Hawe, P. (2005). Ecological perspectives in health research. *Journal of Epidemiology and Community Health*, 59(1), 6–14. <https://doi.org/10.1136/jech.2003.018044>
- Ministry of Education and Culture. Basic Education Act of Finland. (1998/628).
- Ministry of Social Affairs and Health. Daycare Act of Finland. (1973/36).
- Ministry of Social Affairs and Health. Health Care Act of Finland. (2010/1326).
- Moon, J., Williford, A., & Mendenhall, A. (2017). Educators' perceptions of youth mental health: Implications for training and the promotion of mental health services in schools. *Children and Youth Services Review*, 73, 384–391. <https://doi.org/10.1016/j.childyouth.2017.01.006>
- Nanninga, M., Jansen, D. E. M. C., Knorth, E. J., & Reijneveld, S. A. (2018). Enrolment of children in psychosocial care: Problems upon entry, care received, and outcomes achieved. *European Child & Adolescent Psychiatry*, 27(5), 625–635. <https://doi.org/10.1007/s00787-017-1048-1>
- National Institute for Health and Welfare. (2019a). School health study. September. [https://sampo.thl.fi/pivot/prod/fi/ktk/ktk1/summary\\_perustulokset?alue\\_0=87869&mittarit\\_0=187209&mittarit\\_1=200386&mittarit\\_2=199373&vuosi\\_0=v2017&kouluaste\\_0=161293#](https://sampo.thl.fi/pivot/prod/fi/ktk/ktk1/summary_perustulokset?alue_0=87869&mittarit_0=187209&mittarit_1=200386&mittarit_2=199373&vuosi_0=v2017&kouluaste_0=161293#)
- National Institute for Health and Welfare. (2019b). *Social welfare and health care reform*. December. <https://thl.fi/en/web/social-welfare-and-health-care-reform>
- National Institute for Health and Welfare. (2017, June). *Morbidity index*. <http://www.terveytemme.fi/sairastavuuksindeksi/>
- Nicolaas, G., Calderwood, L., Lynn, P., & Roberts, C. (2014). *Web surveys for the general population: How, why and when? Report 28/02*. National Centre for Research Methods.
- O'Brien, D., Harvey, K., Howse, J., Reardon, T., & Creswell, C. (2016). Barriers to managing child and adolescent mental health problems: A systematic review of primary care practitioners' perceptions. *The British Journal of General Practice: The Journal of the Royal College of General Practitioners*, 66(651), e693–e707. <https://doi.org/10.3399/bjgp16X687061>
- Patel, H., Pettitt, M., & Wilson, J. R. (2012). Factors of collaborative working: A framework for a collaboration model. *Applied Ergonomics*, 43(1), 1–26. <https://doi.org/10.1016/j.apergo.2011.04.009>
- Pryjmachuk, S., Graham, T., Haddad, M., & Tylee, A. (2012). School nurses' perspectives on managing mental health problems in children and young people. *Journal of Clinical Nursing*, 21(5–6), 850–859. <https://doi.org/10.1111/j.1365-2702.2011.03838.x>
- Reid, G. J., & Brown, J. B. (2008). Money, case complexity, and wait lists: Perspectives on problems and solutions at children's mental health centers in Ontario. *The Journal of*



- Behavioral Health Services & Research*, 35(3), 334–346. <https://doi.org/10.1007/s11414-008-9115-5>
- Roberts, A., Reponen, J., Pesola, U.-M., Waterworth, E., Larsen, F., Mäkiniemi, M., James Heaney, D., Wakeling, M., McFarlane, A., Winblad, I., & Christensen, B. (2010). Transnational comparison: A Retrospective study on e-Health in sparsely populated areas of the northern periphery. *Telemedicine Journal and e-Health: The Official Journal of the American Telemedicine Association*, 16(10), 1053–1059. <https://doi.org/10.1089/tmj.2010.0075>
- Roodbol, P. (2010). Multiprofessional education to stimulate collaboration: A circular argument and its consequences. *GMS Zeitschrift für medizinische Ausbildung*, 27(2), Doc28.
- Sørensen, M., Stenberg, U., & Garnweidner-Holme, L. (2018). A Scoping review of facilitators of multi-professional collaboration in primary care. *International Journal of Integrated Care*, 18(3), 13–14. <https://doi.org/10.5334/ijic.3959>
- Sormunen, M., Goranskaya, S., Kirilina, V., Bykachev, K., & Tossavainen, K. (2018). Home and school responsibilities for children's health literacy development: The views of Finnish and Russian parents and teachers. *Russian Journal of Communication*, 10(1), 70–90. <https://doi.org/10.1080/19409419.2017.1381570>
- Sourander, A., Lempinen, L., & Brunstein Klomek, A. (2016). Changes in mental health, bullying behavior, and service use among eight-year-old children over 24 years. *Journal of the American Academy of Child and Adolescent Psychiatry*, 55(8), 717–725. <https://doi.org/10.1016/j.jaac.2016.05.018>
- Sourander, A., McGrath, P. J., Ristkari, T., Cunningham, C., Huttunen, J., Lingley-Pottie, P., Hinkka-Yli-Salomäki, S., Kinnunen, M., Vuorio, J., Sinokki, A., Fossum, S., & Unruh, A. (2016). Internet-assisted parent training intervention for disruptive behavior in 4-year-old children. *JAMA Psychiatry*, 73(4), 378–387. <https://doi.org/10.1001/jamapsychiatry.2015.3411>
- Stingley, S., & Schultz, H. (2014). Helmsley trust support for telehealth improves access to care in rural and frontier areas. *Health Affairs (Project Hope)*, 33(2), 336–341. <https://doi.org/10.1377/hlthaff.2013.1278>
- Stokols, D. (1996). Translating social ecological theory into guidelines for community health promotion. *American Journal of Health Promotion: AJHP*, 10(4), 282–298. <https://doi.org/10.4278/0890-1171-10.4.282>
- Suhonen, R., Stolt, M., Katajisto, J., & Leino-Kilpi, H. (2015). Review of sampling, sample and data collection procedures in nursing research—An example of research on ethical climate as perceived by nurses. *Scandinavian Journal of Caring Sciences*, 29(4), 843–858. <https://doi.org/10.1111/scs.12194>
- Tabachnick, L. L., & Fidell, L. S. (2013). *Using multivariate statistics*. Pearson Education.
- The Association of Finnish Local and Regional Authorities. (2017, August). *Organization of social and health care*. <https://www.kuntaliitto.fi/asiantuntijapalvelut/sosiaali-ja-terveysasiat/sosiaali-ja-terveydenhuollon-jarjestaminen-2017>
- Tolonen, H., Helakorpi, S., Talala, K., Helasoja, V., Martelin, T., & Prättälä, R. (2006). 25-Year trends and socio-demographic differences in response rates: Finnish adult health behaviour survey. *European Journal of Epidemiology*, 21(6), 409–415. <https://doi.org/10.1007/s10654-006-9019-8>
- Vorma, H., Rotko, T., Larivaara, M., & Kosloff, A. (2020). *National mental health strategy and programme for suicide prevention 2020–2030*. Publications of the Ministry of Social Affairs and Health. 6.
- Weare, K. (2000). *Promoting mental, emotional + social health. A whole school approach*. Routledge.

- WHO. (1986). *Ottawa Charter for health promotion*. World Health Organization.
- WHO. (2001). *Mental health: New understandings, new hope*. The World Health Report.
- WHO. (2013). *Mental Health Action Plan 2013–2020*. World Health Organization.
- Willumsen, E. (2008). Interprofessional collaboration – a matter of differentiation and integration? Theoretical reflections based in the context of Norwegian childcare. *Journal of Interprofessional Care*, 22(4), 352–363. <https://doi.org/10.1080/13561820802136866>