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Community-Working Occupational Therapists' Involvement in Research and Development Projects in Norway

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ABSTRACT

The aim of this study was to explore community-working occupational therapists' involvement in research and development projects. A cross-sectional survey of occupational therapists working in community-based services in Norway ($n=617$) was conducted. In all, 117 of the 617 participants responded that they were involved in research and development projects. Greater likelihood of participation in research and development work were found for occupational therapists who had completed further education. Current and prioritized research topics were professional development and the development of interprofessional and professional service designs for occupational therapy. Service and quality development, rehabilitation and technology were areas where more knowledge was considered needed. To increase the growth and success of occupational therapy research and development, it is important that more occupational therapists in the municipality continue to complete further education. High-quality occupational therapy practice should be based on research and development projects in the municipalities.

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Introduction

In 2020, occupational therapy became a mandatory service in Norwegian municipalities (The Parliament's Committee for Health, 2015–2016). One

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of the consequences of this is that each of the 365 municipalities in Norway is obliged to provide occupational therapy services regarding health and participation in everyday life for different user groups.

Occupational therapy was established in Norway in 1956 and as a municipal service in 1987 (Ness & Horghagen, 2021). In Norway and in all Nordic countries, the occupational therapy education programmes are at the bachelor level. It is further possible to pursue a masters' and a PhD degree. Today, the municipalities employ 3,287 occupational therapists, which is more than half of the occupational therapists in Norway (Department of Health and Care, 2023; Statistics Norway, 2022). As stated in a report from Statistics Norway (SSB) about the future labor market, there was a 33% increase in the number of occupational therapists in the municipalities between 2015 and 2021 (Statistics Norway, 2022). However, there will be an increased need for occupational therapists in the next 17 years (Department of Health and Care, 2023; Statistics Norway, 2022) because of the national Coordination Reform (Department of Health, 2008–2009) that was implemented in 2012 (Arntzen et al., 2019). The reform assigned community-based health services increased responsibility for protecting and promoting the health of individuals living in their specific communities. Further, the reform required health personnel in the community health services to develop specialized competences that challenged therapists to expand their knowledge and skills (Grimsmo et al., 2015; Horghagen et al., 2020).

The inclusion of more groups of various health professionals in community health services is an international trend (Bolt et al., 2019; Halle et al., 2018; World Health Organization, 2008). In an international context, occupational therapy in community health services is not only concerned with individual healthcare, but also with groups and communities, with public health and social development (Bolt et al., 2019; Reitz & Scaffa, 2020; Scaffa, 2001).

To develop sustainable community health services, both research and development projects are needed (Bonsaksen et al., 2019; Scaffa, 2001). The occupational therapy profession as well as other health professions need to develop their roles within the community health services and adapt to the changing structures in the health services (Aas & Grotle, 2007; Bourke-Taylor & Hudson, 2005; Smith & Roberts, 2005; Tinelly & Byrne, 2016). In response to the changing demands of community-based healthcare, research investigating this development is needed.

Although academia-based researchers often engage in investigating occupational therapy delivery in community-based services, there is less knowledge concerned with practising occupational therapists' involvement and participation in research and development work (Bonsaksen et al., 2020). Occupational therapists in practice have direct access to questions that

are potentially relevant to research and development work. Occupational therapists' involvement in research and development activities is needed to perform knowledge-based practice (Kielhofner, 2009). Co-designs where researchers and practitioners cooperate might create professional development and change, and transfer knowledge into practice (Reitz & Scaffa, 2020). Exploring occupational therapists' own involvement in research and development activities might strengthen such knowledge transference, in line with the aims of the World Federation of Occupational Therapists (World Federation of Occupational Therapists, 2018).

In their everyday working lives, occupational therapists take part in continuing professional development through formal meetings, lectures, the pursuit of a formal degree, and informal learning activities where colleagues share their knowledge and experiences and take local responsibility for doing so (Fänge & Ivanoff, 2009; Roberts, 2002). However, there seems to be few research studies that have examined factors associated with occupational therapists' involvement in research and development projects. An exception is a Norwegian study about occupational therapists' involvement in development and research in community health services (Bonsaksen et al., 2020). Their results showed that almost half of the participants took part in research and development activities. Moreover, being involved in research and development projects was associated with lower age, further education, and more years of work experience. The study also showed that current and prioritized topics for research and development projects were reablement (home-based rehabilitation focusing on the management of everyday life activities) and assistive technology. The results also showed that therapists were involved, or eager to become involved, in research and development (Bonsaksen et al., 2020). The result of that study resonates well with the rapid changes taking place in community-based services.

To be clear, when using the term “research” in this context, we refer to the systematic inquiry to obtain new knowledge, and when using the term “development project,” we generally refer to the systematic application of existing knowledge to develop or improve processes or products. Involvement in research and development activities is needed if the profession is to increase its overall research capacity (Bonsaksen et al., 2020).

Thus, the aim of this study was to explore the degree to which community-working occupational therapists participated in research and development projects, the characteristics of the occupational therapists who participated, and the issues addressed in the projects in which they were involved. This follows up on an earlier study that investigated community-working occupational therapists' involvement in research and development projects in Norway (Bonsaksen et al., 2020). There were two specific objectives: 1) to investigate involvement in research and development

projects and the factors associated with such involvement among community-working occupational therapists in Norway and 2) to classify and rank topics for ongoing and desired research and development projects.

Materials and methods

Design

The study utilized a cross-sectional, mixed-method electronic survey design. Approval for the study was obtained from the Norwegian Center for Research Data (project number 52827).

Participants

Of the 2,122 potential participants, 617 occupational therapists (29.1% response rate) chose to participate in the survey. Participants were informed that participation was voluntary and anonymous, and completing the survey was considered informed consent. The participants were occupational therapists working in community-based practice in Norway. Working in community-based practice entails being employed by a municipality (local public administration level, like a city or a district), or by a subsection of a municipality.

The same population as in the studies from the 2017 material—i.e. occupational therapists in municipality services—was studied, although this was not necessarily the same sample. On behalf of the project group, an e-mail with a link to the online survey and an invitation to participate was distributed by a staff member at the Norwegian Association of Occupational Therapists (*Ergoterapeutene*) to the eligible participants. Three reminders were provided following the initial survey distribution, after 1, 2 and 3 weeks, respectively. The survey was closed after four weeks, and all data was downloaded from Easy Fact and transferred to the project group in 2022.

Instrument

The survey tool was initially developed in 2017 and was based on the researchers' literature review and their experience as researchers and occupational therapists (Bonsaksen et al., 2019). The tool was further developed in 2020–2022 to collect more detailed information about the occupational therapists' practices in research and development projects after the profession became a mandatory service in municipalities in 2000. The questionnaire was piloted by seven occupational therapists ($n=7$), representing two municipalities (13,500 and 33,500 inhabitants), to ensure that all

relevant response options were included and to prevent ambiguity in the phrasing of questions. Based on their experiences, the questionnaire was revised. The revisions included altering the numbering of three questions, changing the layout of two of the questions with multiple-choice alternatives, adding two answer options to one multiple-choice question, and changing one multiple-choice question into an open-ended question.

Survey questions included a) whether the informant participated in any research/developmental project (yes/no); and b) whether the informant wished to participate in any such project (yes/no). These were followed by open-ended questions: c) to describe the topic projects that informants were involved in; and d) to describe knowledge needs and define interesting topics. It also included sociodemographic characteristics and work conditions. The data used in this article relates to some of the questions in the survey and is quantitative; however, we have also analyzed the participants' responses to the open-ended questions in the survey.

Data analysis

The quantitative data was transferred into the statistical software SPSS for Windows, version 29 (IBM Corporation, 2022). Variables were described with frequencies and percentages for categorical variables and means and standard deviations for continuous variables.

A comparative analysis of background variables was conducted to investigate differences between the occupational therapists who participated in research/development work and those who did not. Independent *t*-tests and chi-square tests were used for continuous and categorical variables, respectively.

Subsequently, to explore whether personal and structural background variables were associated with occupational therapists' participation in research/development projects, or their motivation to participate in such projects, two multivariate logistic regression analyses were performed with the categorical variables (yes/no) used as outcomes (e.g. "involvement in research and development project," "desire to become involved in research and development projects").

In both analyses, included variables were all single items. The following personal and background variables were included as independent variables: age (continuous), gender (male/female), years-of-experience (continuous), location with other occupational therapists (yes/no). Size of job role was recoded (full/not full) as well as whether the informant had some kind of further education before the analysis (yes/no). Effect sizes in the logistic regression analysis were calculated as odds ratio (OR) and the level of significance was set at $p < 0.05$.

Open ended questions

An inductive content analysis of the responses to the open-ended questions was conducted to gain an overview about the topics of research/developmental projects that occupational therapists were engaged in and to explore knowledge needs. The answers varied in length from one to several sentences. First, all authors looked at the answers to the open-ended questions, discussed and agreed to follow the analyzing procedures of O’Cathain and Thomas (2004) which included: i) reading all comments; ii) key words explored; iii) the keywords were organized into categories and iv) categories were ranked according to their frequency of listing. In sum, 117 text responses related to the topic of the research or development project were registered, and 355 responses were registered related to the topics that they believed required additional knowledge and research to meet the future challenges in the municipalities. The analysis was carried out separately by three of the authors (SH, LS, and TB), and at three meetings at different times, they shared their analysis and received responses from the other authors. The analyses resulted in three distinct categories regarding the first question, and three distinct categories regarding the second question.

Results

Table 1 shows the sociodemographic composition of the sample.

The age and gender distribution in the sample was quite similar to that of the previous survey that was conducted among a similar, but not the same, population ($M=42.2$ years, $SD = 11.5$ years, age range 22–66 years, 92.5% women). Therefore, we considered the population to be well represented by the sample that took part in the survey.

Group comparisons

In the sample, 117 participants (19.0%) reported that they participated in research and development projects. Of the 500 participants who were not

Table 1. Sample characteristics.

Variables	M (SD)	n (%)
Sociodemographic variables		
Age/years	42.1 (11.3)	
Female gender		575 (93.2)
Years of experience as OT	14.4 (9.8)	
BSc level education		267 (43.3)
Further education		282 (45.7)
MSc level education		50 (8.1)
PhD level education		2 (0.3)
Work structure variables		
Located with other OTs		443 (71.8)
Not located with other OTs		174 (28.2)
Full job (100%)		523 (84.8)
Less than full job (<100%)		94 (15.2)

Table 2. Characteristics of the study sample ($n=617$).

Variables	Participates in research and development projects ($n=117$, 19.0%)	Does not participate in research and development projects ($n=500$, 81.0%)	Mean difference	Test statistic	df	p
	M (SD)	M (SD)				
Age	43.6 (10.4)	41.8 (11.5)	-1.738	2.980	615	.07
Work experience	16.2 (9.4)	13.9 (9.8)	-2.322	0.685	615	.02*
	n (%)	n (%)				
Gender (female)	108 (92.3)	467 (93.4)		1.294	2	.52
Male	8 (6.8)	32 (6.2)				
Other	1 (0.9)	1(0.2)				
Further education	86 (73.5)	264 (52.8)		16.557	1	<.01**
Physically located together with other occupational therapists	88 (75.2)	355 (71.0)		0.0831	1	.36
Full-time employment	102 (87.2)	421 (84.2)		0.0652	1	.42

Note. Statistical tests were independent t -test for continuous variables and Chi-square tests for categorical variables. Statistical significance was set at $p < .05$.

* $p < .05$.

** $p < .01$.

currently involved in projects, 168 (33.6%) reported that they had a desire to become involved in research and development project work, and 202 (40.4%) were unsure. The participants who were engaged in such projects were compared against those who were not (see Table 2). Statistically significant group differences occurred on two variables—work experience and further education. Table 2 shows that those who were involved in projects had more years of work experience than those who were not ($p < .05$) and had more often completed further education ($p < .01$), compared to their counterparts.

Involvement in research and development projects

Two logistic regression analyses were performed, and the full models were both statistically significant ($p = .002$ and $p < .001$ respectively). While controlling for the remaining variables' effects, the odds ratio of being involved in research and/or development were higher for those with further education (OR = 2.32, $p < .01$), compared to participants without further education. Among the participants who were not involved in research and/or development work, further education was related to a desire to become involved in research and/or development work, while controlling for the other variables (OR = 2.57, $p < .01$). The results of the multivariate logistic regression analyses are displayed in Table 3.

Table 3. Multivariate logistic regression analysis showing analysis between study variables and (1) involvement in research and development projects, (2) a desire to become involved in research and development projects ($n=617$).

Independent variables	B	SE	OR	95% CI	P
<i>1 (Involvement in research and development projects)</i>					
Age	-0.014	0.018	0.99	0.95 – 1.02	.44
Gender	-0.164	0.428	0.85	0.38 – 1.96	.70
Work experience	0.027	0.021	1.03	0.99 – 1.07	.18
Further education	0.844	0.237	2.32	1.46 – 3.80	<.01*
Physically located together with other occupational therapists	0.210	0.242	1.23	0.77 – 1.98	.39
Full-time employment	0.199	0.311	1.22	0.66 – 2.25	.52
(Cox & Snell $R^2 = 0.033$, Nagelkerke $R^2 = 0.054$) Statistical significance was set at $p < .05$. * $p < .01$					
<i>2 (desire to be involved in research and development projects)</i>					
Age	-0.024	0.014	0.98	0.95 – 1.00	.08
Gender	-0.300	0.332	0.74	0.39 – 1.42	.74
Work experience	0.013	0.016	1.01	0.98 – 1.05	.40
Further education	0.945	0.180	2.57	1.80 – 3.66	<.01*
Physically located together with other occupational therapists	0.143	0.189	1.15	0.79 – 1.67	.45
Full-time employment	0.359	0.243	1.43	0.89 – 2.30	.14
(Cox & Snell $R^2 = 0.056$, Nagelkerke $R^2 = 0.076$). Statistical significance was set at $p < .05$. * $p < .01$.					

Table 4. Categories and examples of current research and development projects ($n=117$) in which community-working occupational therapists were involved in.

Rank (n)	Category	Topics examples
1 (27)	Professional development	OT and welfare technology, OT, and early intervention, rehabilitation, palliative care, home-based OT
2 (21)	Development of interprofessional service designs	OT in inter-/multiprofessional teamwork, digitalization and reorganization of the services, individual plans, ambulatory teams, comprehensive patient pathways
3 (15)	Development of the service designs for the occupational therapy profession	Develop the occupational therapy service designs for children, youths, and elderly with dementia. Designs for student placement and supervision.
4 (32)	Other	Different OT and interprofessional research/projects

Topic of research or development project

The categories identified for the first question were: i) professional development; ii) development of interprofessional service designs; and iii) development of the service designs for the occupational therapy profession (Table 4).

Professional development

Most of the participants described their active participation and engagement in research and development projects as related to professional development. Occupational therapy and the use of welfare technology was

especially highlighted and concretized as increasing people's participation, independence activities, feelings of security, how to master technology, how to adjust assistive technology and technical aids to different user groups, and how welfare technology could improve people's lives in one way or another. Research and projects concerning universal design were also included and named. Not all the participants specified what kind of welfare technology they were involved in developing.

The second most frequently named issue was research and development projects about early intervention, everyday life rehabilitation, and occupational therapy and palliative care for children and youths. Transition from education to work for students with disabilities was also described. Finally, another project within the context of professional development was the health and well-being of older adults. This was research and projects about preventive healthcare and health promotion for older adults and persons with dementia and/or substance abuse problems.

Development of interprofessional service designs

The most frequently described concern within this category pertains to the development and research related to the overall organization of services within the community health systems. Some were involved in reorganization and digitalization of the services, and the development of interprofessional cooperation. Additionally, a few participants described involvement in research/projects about effective patient pathways and individual plans (Table 5).

Some described their efforts to organize teamwork in an interprofessional context and striving to optimize user experiences through individual plans.

Table 5. Categories and examples of research and development projects ($n=168$) in which community-working occupational therapists would like to become involved.

Rank (n)	Category	Topics examples
1 (143)	Service development	Develop OT and interprofessional services, procedures, and quality of services, leadership competences, collaboration with specialized health services, digitalization of services, promoting OT services, sustainability, evidence-based services, effect of OT services, priorities of tasks
2 (84)	Rehabilitation	Habilitation, coping strategies in everyday life, cognitive examination, energy economy, work
3 (68)	Technology	Welfare technology, assistive technology, universal design, VR, digitalization, technical aids
4 (49)	Elderly	Dementia, local communities, elderly, and drug abuse, home-based OT, housing, falls
5 (131)	Other	Different OT projects

Note. The analysis is based on the responses of participants who reported that they currently were not involved in research and development projects. Not all participants concretized desired projects and some concretized more than one suggestion.

Others engaged in the establishment of interprofessional ambulatory teams, specifically focusing on services for children and youths. Additionally, projects were undertaken to enhance internal interprofessional logistics related to technical aids and welfare technology. Participants also contributed to projects aimed at developing interprofessional health promotion services within the municipality. Projects addressing the organization of services within the community health systems were also described, as well as developing comprehensible patient pathways.

Development of the service designs for the occupational therapy profession

Some research and projects were concerned with the development of service designs for the occupational therapy profession. The respondents described their participation to develop the occupational therapy services, with plans and strategies in areas related to children and youths, as well as the occupational therapy services for older adults, particularly the individuals with dementia. They also described research/projects where they developed new ways to organize students' practice placements and supervision. They stated that occupational therapists in the municipalities in general had an increasing number of tasks to do, and they were involved with research/projects to find out how they might reorganize the occupational therapy services in a more effective way and ways to promote occupational therapy in municipalities.

Meet future challenges

Of all respondents in the study, 341 provided a description of their desired research and development projects. There were 168 participants who were not involved but who wanted to be involved in future projects. From the analysis of the material, the three most highlighted topics were: i) service development; ii) rehabilitation; and iii) technology.

Service development

This category was related to the development of occupational therapy and interprofessional services, and included the development of procedures, development of the quality of services, leadership, and collaboration with the specialized services in hospitals. The suggested research/projects included changes in the health and social policies as a background to the formation and development of their services. Some underlined topics related to structural and organizational changes in their local community services and new technological systems. Others desired research/projects related to the change toward a health-promotion perspective. Some specified research/projects to normalize the community services after the COVID-19 pandemic and to develop more sustainable services. Some underlined the need for projects

to challenge occupational therapists in the communities to make their work more knowledge-based and to update their knowledge from research. Related to this issue, they also suggested initiating research/projects to strengthen the quality of the occupational therapy services.

Rehabilitation

The next category included rehabilitation, and different concepts related to rehabilitation such as reablement, habilitation and coping strategies. Different user groups were specified, such as people needing rehabilitation after a stroke or people with obesity. Some highlighted projects focused on post-cancer treatment and rehabilitation by strengthening the collaboration between occupational therapists, users, and users' relatives. They also suggested research/projects related to the development of knowledge about how to increase the independence of the users, and to promote the users' resources and their possibilities to cope in everyday life. Some suggested research/projects related to mental health and drug addiction challenges and described the need to decrease taboos about disabilities and to develop more dignity related to the rehabilitation of vulnerable user groups.

Technology

The third category was related to different forms of technology, such as welfare technology, assistive technology and universal design, and procedures related to these issues. There was a particular desire to develop knowledge and skills to facilitate the integration of technology in everyday life for different user groups, such as people in palliative care and older adults. As there is a political objective that older adults should live in their own homes for as long as possible, respondents concretized a need to develop research knowledge on how technology can contribute to achieving this goal. The participants described a need to increase awareness to support older adults to cope with technology in different ways with the goal of independent living. They also stressed the value of establishing projects that can produce more knowledge and better and more nuanced procedures related to assistive technology dissemination.

Discussion

This study aimed to investigate involvement in research and development projects among occupational therapists working in Norwegian municipalities. One of the key findings of the study indicates that 19% were involved in research and development projects. Compared with the results from a study in 2017 (Bonsaksen et al., 2019), community-working occupational therapists in 2022 were less involved in research and development projects.

No data explaining this change was obtained through this study. However, there is evidence that the COVID19 pandemic has impacted negatively on research productivity, especially for female academics, early career researchers and scholars with caregiving responsibilities (Harrop et al., 2021). Given that most of the healthcare professionals are women, many of them were dealing with an increased workload during the COVID19 pandemic (Schou-Bredal et al., 2022), so the lower inclination among the occupational therapists to become involved in research and development projects is understandable. The change of context gave the therapists challenges to proceed as usual. Occupational therapists in the municipalities have needed to solve the everyday challenges in a special context, finding new ways to conduct their praxis during the lockdown.

Another explanation for the reduced participation in research and development projects could be the increased pressure placed on health professionals in municipality services. Policy documents (Department of Health, 2008–2009) declare that health professionals in the community services should provide a faster and more efficient patient recovery after hospital discharge. Moreover, they shall deliver specialized rehabilitation, and the municipalities must pay the hospitals if they cannot receive patients that are defined as ready for discharge from the hospitals. There exists a discrepancy between the occupational therapists' service deliveries in the municipalities and the wide range of tasks that the profession is expected to provide (Donnelly et al., 2014; Roberts et al., 2014). The challenging economic situation placed more pressure on the healthcare workers in municipalities (Lillefjell et al., 2023). There might also be few incentives from the leaders to give the occupational therapists in community-based services time to participate in research and development projects. This might also explain the second key finding that, of the 500 participants who were not currently involved in projects, only 27.2% reported that they had a desire to become involved in project work, while as many as 40.4% were unsure.

Furthermore, the results showed that both involvement and a desire to participate in research or development projects were associated with having completed further education. Further education indicates a certain level of competence, and it could ease the person's access to tasks that require higher levels of knowledge and skills (Littenberg-Tobias & Reich, 2020), including research and development projects. In fact, higher education levels among practitioners may facilitate collaboration between academics and practitioners on concrete projects, and, in several countries, such collaboration has been viewed as particularly valuable for the development of partnerships between different segments of the profession, and for reducing the research-practice gap (Bonsaksen et al., 2013; Crooke & Olswang, 2015). Therefore, the detected association between further education and project involvement seems logical.

The results of the open-ended questions revealed that occupational therapists were predominantly engaged in research and development projects focusing on professional development, the development of multiprofessional service designs and the development of service designs for the occupational therapy profession. Involvement in research and development activities is needed to conduct knowledge-based practice (Reitz & Scaffa, 2020). The continuous development of the profession in community services seems to be of importance to the development of occupational therapists' core knowledge and competences (Horghagen et al., 2020; Wilcock, 2006), and this might be guided by an occupation-centred approach (Fisher, 2014).

Many of the participants were involved in projects related to service delivery. One interpretation of this is that occupational therapists have a significant role to play in service development—specifically regarding participation and mastering everyday life, which are competences that are required in the municipalities (Enemark Larsen et al., 2021). The municipalities in Norway, as well as in other countries, have been given new tasks and have also expanded the scope of responsibility for public health-care (Arntzen et al., 2019; Department of Health, 2008–2009). The health policies require that health professionals interact in close cooperation with different professionals and across diverse sectors and administrative levels.

Service development, rehabilitation and technology emerged as frequently mentioned areas for initiating research or development projects in the future. Service development is still a topic to be developed further. The need to develop research and development projects related to rehabilitation is not surprising, as rehabilitation is a central field of competence for occupational therapists. Through rehabilitation, occupational therapists improve the performance of basic activities of everyday life, and improve the independence of the users (Fisher, 2014). There is still a need to improve access to rehabilitation services, and comprehensive and coordinated services for all users are far from having been achieved (Arntzen et al., 2019; Horghagen et al., 2020). The third focus of the participants' desired research or projects concerned technology, which was described as welfare technology and assistive technology. There is more focus in society on how diverse types of technology can enable people to be more independent in their everyday life (Liu, 2018). The participants' choice of technology as a desired topic is not surprising, considering that 88% of community-based occupational therapists in Norway work with assistive technology and report that they spend 51% of their time on it (Bonsaksen et al., 2020). Roberts et al. (2014) have also underlined the coherence between occupational therapy and competences with welfare and assistive technology, and transferring the perspectives from assistive technology to welfare technology and universal design is one of our future challenges, especially for the municipality services for older adults.

Limitations

The study employed a cross-sectional research design, with its inherent limitations. The survey tool followed up an earlier design from 2017, where some of the same questions were included. We consider the sample size appropriate for the analyses performed, although the response rate (29.1%) was low. However, this is the response rate that is generally hoped for in large population surveys (Schou-Bredal et al., 2022). Response rates at this level do not necessarily reduce the validity of the data, as has previously been shown (Holbrook et al., 2007). Engagement in professional development might be interpreted as the occupational therapists being concerned about the professional development, but it might be a bias that it is the most dedicated occupational therapists that have answered these questions.

We did not concretize how many participated in research and how many in development projects, because we did not differentiate between these terms in an earlier study. The responses were a result of how the participants interpreted what research and development projects were. As only 8.4% had completed further education at a master or PhD level, we might assume that most of the projects were professional development projects. In future research, there could be a clearer definition of these concepts. Regarding communities of practice, there might be grey areas between what is a development project and what is continuing professional development (Barry et al., 2017).

There are dilemmas involved in analyzing open answers from surveys, and this is discussed in methodological literature (e.g. Rich et al., 2013). Some discussions concern whether open answers should be included in the data material and whether a qualitative or quantitative analysis should be conducted. We chose to include the open answers that were given in response to these two free-text questions: i) Name current projects or research that you are involved with; and ii) Name projects that you wanted to participate in. We applied these two questions to offer the respondents an opportunity to voice their opinions. We decided to analyze these answers qualitatively (O’Cathain & Thomas, 2004), as they provide a wide picture of the range of topics in which occupational therapists are interested, and thereby provide complementary knowledge about relevant perspectives for occupational therapists and occupational therapy professional development. For future research, it is a matter for consideration as to whether to use open-ended questions in surveys, and how any open questions are to be designed.

Application to practice

To increase the growth and success of occupational therapy in community-based practice, it might be important for more occupational therapists in the municipality to continue and complete further education, which

appears to increase their opportunities for involvement in research and development work. High-quality occupational therapy practice should be based on research and development in the municipalities. There are some concerns related to the decreasing number of occupational therapists participating in research and development-projects, though we do not have any information about the reason for this. In response to the changing demands in community-based healthcare, occupational therapists need to continuously develop provision of the services. Engaging in research and development projects is therefore essential.

Conclusion

The overall aim of this study was, using a mixed-method cross-sectional survey, to explore community-working occupational therapists' involvement in research and development projects in Norway. A total of 617 respondents participated in the study, of which 117 responded that they participated in research and development projects. Having completed further education was associated with greater likelihood of participating in research and development work. However, the study shows that community-working occupational therapists in Norway are less involved in research and development projects compared to an earlier study from 2017. Their current and prioritized research topics were professional development, development of interprofessional and professional service designs for occupational therapy service designs for the occupational therapy. Service and quality development, rehabilitation and technology were areas where more knowledge was considered needed.

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Declaration of Interest

The authors report no conflict of interest. The authors are jointly responsible for the writing and content of the paper.

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