# Characteristics of community-based occupational therapy: Results of a Norwegian survey

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# Characteristics of community-based occupational therapy: Results of a Norwegian survey


## Abstract

*Background:* Ongoing changes in healthcare delivery systems in Norway increasingly require community-based services, and the changes will likely affect the working conditions and opportunities for occupational therapists.

*Aim:* To characterize occupational therapy in community-based practice in Norway.

*Material and methods:* A cross-sectional, descriptive survey design was applied using a questionnaire related to personal and organizational characteristics. Participants ($n$=561) were recruited among community-working occupational therapists in Norway registered as members of Ergoterapeutene. Data were analyzed with descriptive statistics.

*Results:* The majority of the participants was female and had an average of 16.5 years of professional experience. They reported to spend about half of their working hours on direct work with clients. For many, work with assistive technology was a main task, accounting for approximately half their working hours. Only a small proportion worked in municipalities that had merged with others, but for a larger proportion (27%) a merger had been decided and was in preparation.

*Conclusion:* This study established some basic information regarding Norwegian community-based occupational therapy and the municipalities where occupational therapists work.

*Significance:* With this study serving as a baseline, we may be able to track how changes will affect community-based occupational therapy practice in the near future.


*Keywords*: assistive technology, local healthcare, municipalities, primary care

## Introduction

In Norway, occupational therapy will become a mandatory healthcare service in the municipalities from 2020 [1]. A white paper discussing the future in healthcare in the country suggested that the Government should triple the amount of occupational therapists working in the municipalities, and that the implementation of technology in healthcare services is under-utilized and should continue to grow [2]. While the actual changes may not be as radical as proposed, the ongoing changes are expected to have implications for the working conditions and opportunities of occupational therapists [3, 4, 5]. The present study intends to serve as a baseline for a future follow-up study planned in 2022. The focus of this article, which is based on data from 2017, is to report on the characteristics of occupational therapists, aspects of their practice, and their employing municipalities.

Currently, Norway has a population of 5.2 million people. The public healthcare sector has two levels, a regional specialised hospital service and the community healthcare of services taking place in the country's 422 municipalities. The municipalities vary extensively in both population size and geographical extent. The amendment in Norwegian legislation occurs in the context of demographic and societal changes, most importantly an aging population and the current restructuring of the entire public sector [6]. In view of these changes, the municipalities have been given new tasks and responsibilities and have expanded the scope of responsibility for public healthcare. At the same time, many of the current municipalities will be merged into larger units, such that the number will be reduced to 356 by 2020 [7]. The overall changes are expected to have consequences for healthcare providers working in the municipalities, including occupational therapists.

In 2015, approximately 2600 occupational therapists worked in community-based health services in Norway [8], representing more than half of all occupational therapists in the country. Still, approximately one in four of the municipalities lacks occupational therapists

[2]. These are mainly small municipalities in rural districts. The change in legislation from 2020, by which time occupational therapy will become a mandatory service required by law, will thus pave the way for occupational therapy in community-based health services.

In Norway, occupational therapy is described as a solution-oriented practice promoting increased participation in daily life through person-centered and community-oriented approaches [9]. Occupational therapists in community-based services have been described as linked to four ideal types; 'the all-rounder', 'the provider of assistive device', the fire extinguisher', and 'the innovator' [3], indicating a variety of work-tasks. In 2012, a reablement project started in Norway [10], and in 2016 it was implemented in about 146 Norwegian municipalities [11]. Reablement is an intervention targeting home-dwelling older adults who experience a decline in health and function. The intervention is multi-professional, home-based and time-limited, focusing on maintaining functional independence for 'aging in place' [12]. In maintaining clients' independent living, a systematic review showed the efficacy of occupational therapists' advising on assistive technology [13]. Assistive technology was also identified as one of the top research priorities among Norwegian occupational therapists [14]. This research topic was emphasized related to clients with cognitive problems or related to reablement interventions, accordingly indicating a need for more knowledge and competence development.

How occupational therapists adapt to a forthcoming change of occupational therapy being a mandatory service in Norwegian municipalities however, would depend on their personal resources for managing within a changing healthcare context and on how they perceive their current employment. To evaluate possible implications of this change descriptive knowledge of today's status is needed. Therefore, the aim of this study was to characterize Norwegian occupational therapy in community-based practice; including aspects of the occupational therapists' practice and the municipalities where they work.

## Methods

### Design

This study has a cross-sectional, descriptive design based on survey methodology.

### Survey and procedure

Based on the ongoing changes in Norwegian healthcare, with more emphasis on community-based services, a questionnaire was developed to explore a range of aspects related to the practice and context of community-working occupational therapists. The survey tool is available from the authors upon reasonable request. The themes covered sociodemographic information, educational level, work experience, municipalities and organization of occupational therapy, practice and interprofessional collaboration. A draft questionnaire was set in "Easyfact", an electronic survey program. Seven randomly chosen occupational therapists working in rural or urban community practices agreed to pilot test the electronic draft version of the questionnaire. Based on their experiences of text, questions, options and relevance, the questionnaire was revised and the final electronic "Easyfact" version was set. On behalf of the project group, an e-mail with the survey and an invitation to participate was sent through Ergoterapeutene (the Norwegian Occupational Therapy Association). Two reminders were given, after one and two weeks, respectively. The survey was closed after three weeks, and all data were transferred to the project group.

### Participants

Eligible participants were occupational therapists who were members of Ergoterapeutene (The Norwegian Occupational Therapy Association) and worked in community-based practice in Norway. The membership list of Ergoterapeutene was used to identify relevant informants. The survey took place in 2017. Out of 1833 occupational therapists identified from the member list to be eligible for participation, the survey was sent to 1767 occupational

therapist who had a valid e-mail address. Of the 1767, 561 (31.8 %) chose to participate in the study. The age and gender distribution in the sample ($M$ = 42.2 years, $SD$ = 11.5 years, age range 22-66 years, 92.9 % women) was similar to that of the identified population ($M$ = 41.2 years, $SD$ = 11.7 years, age range 22-68 years, 92.0 % women). Thus, in these respects we considered the population to be well represented by the sample that took part in the survey.

### Data analysis

The data were analyzed descriptively, using frequencies and percentages for categorical variables and means and standard deviations for continuous variables. Differences between men and women in the sample were analyzed with $\chi^2$-tests (or Fisher's Exact test, if appropriate) for categorical variables and with independent $t$-tests for continuous variables. Effect sizes were calculated as Cohen's $d$, where $d > 0.50$ was considered a medium size and therefore noteworthy [15]. Statistical significance was set at $p < 0.05$.

### Ethics

Approval for the study was obtained from the Norwegian Data Protection Official for Research, Norwegian Centre for Research Data (project number 52827). Participants were informed that participation was voluntary and that their responses would be treated confidentially.

## Results

### The occupational therapists

The characteristics of the study sample are shown in Table 1. The mean age of the sample participants was 42.2 years ($SD$ = 11.5 years), and 521 (92.9 %) of the participants were female. The mean duration of experience working as an occupational therapist was 16.5 years ($SD$ = 9.9 years), with women having significantly more years of experience than men ($M$ = 16.8 years [$SD$ = 10.0 years] vs. $M$ = 11.9 years [$SD$ = 7.1 years], $p < 0.001$, $d$ = 0.57). No

other gender differences were statistically significant. Of the participants, 94.5% reported that their highest educational level completed was a bachelor's degree, and 5.5% had a master's degree. Slightly more than half, 53.3%, reported having additional education, whereas 3.6% reported having received certification as clinical specialists.

[TABLE 1 ABOUT HERE]

**The occupational therapists' practice**

Details of the participants' practice and working conditions are shown in Table 2. In the sample, 20.9% had changed their positions during the preceding year. Three of four participants worked full-time. More than 80% reported having clients referred to them by colleagues in the same municipality and by a client's family members, and more than 70% had clients referred by other healthcare facilities – and by the clients themselves. The participants reported to spend about half (48%) of their time on client-directed work. Of the sample, 88% reported being in positions where they worked with assistive technology to some degree, and among these 88%, about half (51%) of their time was spent on work related to assistive technology. We note, however, that the response categories were not mutually exclusive. For example, parts of the time spent working with assistive technology could also be time that was dedicated to client-directed work.

More than 70% had participated in a course or other professional development activity paid for by the employer during the preceding year. More than 40% took part in projects or development work as part of their positions, whereas one of four served as a union representative. A minority of approximately 6% had administrative responsibilities for employees and economy. The participants' line managers were predominantly from the physiotherapy (35.7%), nursing (26.2%) and occupational therapy (22.8%) professions.

[TABLE 2 ABOUT HERE]

**The municipalities**

The characteristics of the municipalities where the participants worked are displayed in Table 3. Most of the occupational therapists (n=442, 78.8%) worked in municipalities with up to 99.999 inhabitants. A small proportion (*n* = 19, 3.4%) worked in a municipality that had already merged with another, whereas a larger proportion (*n* = 148, 26.4%) worked in a municipality where such a merger had been politically decided. Of the participants, 96 (17.1%) reported that occupational therapist positions had been created in the municipality after 2012, which was the year of the implementation of the Coordination Act [6] and the time when reablement was initiated in Norway. The larger proportion of the sample (*n* = 409, 72.9%) had positions that were not based at an institution, whereas the proportions working as part of an occupational therapy service, a multiprofessional service, or a service that combined the previous were more evenly distributed. The larger proportion of the sample (*n* = 376, 67.0%) reported that their jobs were located together with those of other occupational therapists.

[TABLE 3 ABOUT HERE]

## Discussion

This study was instigated by the ongoing changes in the Norwegian public sector and in the healthcare services within which a majority of Norwegian occupational therapists work. In view of this development, including the changes in legislation implying that occupational therapy will become a required part of community-based services beginning in 2020, we

inquired about what presently characterize Norwegian occupational therapy in community-based practice; including the occupational therapists, their practice, and the municipalities where they work.

First, our preparations for the study showed that community-based services are a cornerstone of occupational therapy in Norway. The number of occupational therapists working in municipalities is large and represents more than half of the total number of occupational therapists in the country – and their number is expected to grow in coming years [4, 5]. This is in contrast to studies from several other countries, where the accessibility and distribution of occupational therapy in community-based services have been questioned [16]. In Norway, the expected growth is partly due to the upcoming legislative changes [1], but is assumed to also be related to the public recognition of occupational therapy as a part of reablement, which is increasingly employed in community healthcare services for elderly persons [17].

With a view to the personal characteristics of the community-working sample, their mean age (42 years), gender proportion (93%), mean duration of professional experience (17 years), and proportion having further education (53%) largely mirror the results of a previous study targeting the membership population of Ergoterapeutene [18, 19]. The gender proportion was similar to the proportion found in another, more recent study of Norwegian community-working occupational therapists [5]. In an Australian survey, the majority of the participating community-based occupational therapists were similarly described as mature in age and widely experienced [20]. The sample in the previous Norwegian study represented 34% of the total members of Ergoterapeutene [18, 19] compared to 32% of the community-working population responding in the current study. This may indicate that these characteristics are similar for the community-working segment of the occupational therapist population in Norway and the general Norwegian population of occupational therapists.

Judging from a recent study of occupational therapy students enrolled in a Norwegian university [21] that found a female proportion of 79%, the dominance of females in the profession is expected to continue in the years to come, although to a lesser extent than suggested by this study.

The current study found that 95% of the participants reported a bachelor's degree as their highest level of education, and less than 4% had received accreditation as clinical specialists in their field of practice. In light of the large proportion (53%) having additional education, it appears that community-working occupational therapists in Norway do seek further education after having completed the three years of required basic training. However, only a minority have aimed for advanced degree courses or established themselves as clinical specialists in a given field of practice.

The proportion of clinical specialists in the current sample was lower than the proportion reported (8.7%) in a previous study of the general population of Norwegian occupational therapists [18]. A recent study [22], found that Norwegian community-based occupational therapy served clients of all age-group and with a variety of impairments and activity limitations, and in small, rural municipalities a generalist competence was thus required. Moreover, in cities and larger municipalities with more occupational therapists they became more specialized.

The sample of this study reported to spend about half of their working time on direct client work, and 88% of the sample reported to work with assistive technology as part of their work. Donnelly and co-workers' findings from a Canadian survey [23], in which the participants' most frequent activity was found to involve equipment prescription (75%), support the high proportion engaged in these tasks. Among those who worked with assistive technology devices, about half of their time at work was dedicated to it (Table 2). The time proportions dedicated to tasks related to assistive technology are in line with the study of

Gramstad and Nilsen [14] showing that community-working occupational therapists also prioritize research in this area. Their study identified assistive technology as one of the top research priorities in this group of occupational therapists. More specifically, they emphasized research on assistive technology related to clients with cognitive problems or related to reablement interventions. In light of the focus on the reablement of community-living elderly [17], the expected increase in dementia [24], and current suggestions and priorities for the public healthcare sector in Norway [2, 25], the focus on assistive technology as a prioritized area for both practice and research seems warranted. Indeed, Gramstad, Storli and Hamran [26] interpreted the service users' description of the assistive technology delivery process as an 'enigmatic journey', clearly emphasizing the need to spend time during the delivery and/or installment process helping users try out and incorporate devices into their daily lives. This may also suggest that there is at least a partial overlap between working directly with clients and working with assistive technology. However, the sample results (Table 2) may provide reasons for individual therapists to consider whether they spend their time in the most effective way. With regard to other work tasks, taking part in courses or other professional development activity were reported, and more than 40% were involved in projects or development work. A recent qualitative study however, revealed that project-oriented work often was considered an extra burden, adding to the occupational therapists' workload [3]. Community-based occupational therapists have described that a large amount of time spent on administration tasks can be perceived as a barrier to direct work with clients [27].

The changes in the organization of the public sector in Norway are currently affecting community-based occupational therapy. At the time of the data collection, only a small proportion worked in municipalities that had merged with others, but for a larger proportion (27%), such a merger had been decided and was in preparation (Table 3). This suggests that

community-working occupational therapists should prepare for organizational changes that will likely affect their tasks and their working conditions in the years ahead.

The larger part of the sample reported working in combined occupational therapy/interprofessional settings, and most had positions where they were physically located together with other occupational therapists (Table 3). At the same time, only 23% had a line manager with an occupational therapy background, and more than 60% had a line manager who was either a nurse or a physiotherapist (Table 2). Negotiating the influence by a line manager from a different and at times more powerful profession may potentially detract from one's ability to define the occupational therapist role according to the profession's own standards and values [28]. Previous research [29, 30] have suggested that, feelings of being under-utilized or experiencing conflicting views of what the occupational therapist role should entail, may be challenging. For example, studies have been concerned with occupational therapists' desires to engage in health-promotion activities and programs [27, 31]. However, this desire has apparently been transformed into actual practice to a limited degree, owing to personal constraints (a perceived lack of knowledge) as well as to system-level constraints. Such system-level constraints may well be related to influence and leadership from within and outside the profession. The ability to establish a unique discourse, using a shared terminology with fellow occupational therapists, can foster the development of communities of practice to the benefit of occupational therapists' professional identity [32].

**Study limitations**

The study is limited by the cross-sectional descriptive research design. As a result of the design, we cannot infer causal associations but merely describe the sample of occupational therapists and their reports of aspects of their work and the workplace as well as organizational factors affecting them. The questionnaire was developed for this study, and several of the questions utilized have not been used in research previously. A pilot study was

conducted, and the participants' suggestions were assessed and largely incorporated into the survey before the main study was conducted.

However, we acknowledge some important limitations. Some of the questions were not optimal, allowing for individual interpretation among the participants. Some of the responses to the survey questions were also difficult to interpret in the analysis stage. The use of response categories that were not always mutually exclusive makes it difficult to interpret the extent to which responses were meant directly as stated, or as overlapping with other responses. For example, we do not know the time proportion spent on 'client-directed work' that was also spent 'working with assistive technology'. The same response categories also illustrate differences with regards to item specificity. While working with assistive technology is quite specific, it is difficult to speculate about the content of 'client-directed work'. Thus, perhaps excepting the specific information about work with assistive technology, there is much yet to be discovered about the content of the occupational therapists' practice. More research is needed to gain knowledge about what and how they assess their clients' needs, how they intervene, and against which standards or measures they evaluate their practice.

The sample size is considered appropriate for a quantitative study, but the response rate of 32% is a limitation. It is, however, comparable to the response rate obtained in a previous member survey [18, 19] and is generally considered the approximate response rate that can be hoped for in large population surveys [33]. Research has also shown that response rates at this level do not necessarily reduce the validity of the data [34]. A limitation of the study is that data relating to occupational therapy tasks in community-based practice was limited to the provision of assistive technology. The roles and tasks of community-working occupational therapists, however, are planned to be explored further in qualitative studies.

## Conclusion

In 2017, Norwegian occupational therapists were predominantly female and had, on average, many years of experience in occupational therapy practice. Their proportion of time spent on direct client work was about 50%. Almost 90% worked with assistive technology to some degree. The organization of community-based occupational therapy may see changes in the years to come owing to the restructuring of the entire public health sector in Norway, a merging of municipalities into larger units, and occupational therapy to become a mandatory community service from 2020. In 2017, only a small proportion of occupational therapists worked in municipalities that had merged with others. With this study serving as a baseline, we may be able to track how such changes will affect community-based occupational therapy practice in the not too distant future.

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Table 1

*Characteristics of the study participants (n = 561)*

| | All | Men (*n* = 40) | Women (*n* = 521) | |
|---|---|---|---|---|
| Variables | *M ( SD)* | *M ( SD)* | *M ( SD)* | *p* |
| Age | 42.2 (11.5) | 39.7 (11.1) | 42.4 (11.6) | 0.14 |
| Years of experience as occupational therapist | 16.5 (9.9) | 11.9 (7.1) | 16.8 (10.0) | < 0.001 |
| *Employment unit* | *n* (%) | *n* (%) | *n* (%) | |
| Municipality | 436 (77.7) | 30 (75.0) | 406 (77.9) | 0.76 |
| District | 77 (13.7) | 3 (7.5) | 70 (13.4) | |
| Service | 48 (8.6) | 7 (17.5) | 45 (8.6) | |
| *Education level* | | | | |
| Bachelor level | 530 (94.5) | 36 (90.0) | 494 (94.8) | 0.27 |
| Master level | 31 (5.5) | 4 (10.0) | 27 (5.2) | |
| Doctoral level | 0 (0.0) | 0 (0.0) | 0 (0.0) | |
| *Further education* | | | | |
| With further education | 299 (53.3) | 23 (57.5) | 276 (53.0) | 0.58 |
| Without further education | 262 (46.7) | 17 (42.5) | 245 (47.0) | |
| *Clinical specialist* | | | | |
| Specialist | 20 (3.6) | 3 (7.5) | 17 (3.3) | 0.16 |
| Not specialist | 541 (96.4) | 37 (92.5) | 504 (96.7) | |
| *Work change* | | | | |
| Changed work during the last year | 117 (20.9) | 8 (20.0) | 109 (20.9) | 0.89 |
| Did not change work during last year | 444 (79.1) | 32 (80 .0) | 412 (79.1) | |

*Note*. Of the 117 who changed work during the last year, 63 (53.8 %) remained working within the same municipality. Employed statistical tests are $\chi^2$-tests or Fisher's exact test for categorical variables and independent *t*-tests for continuous variables.

Table 2

*Characteristics of the participants' practice and their working conditions (n = 561)*

| Variables | *n* (%) |
|---|---|
| Full-time employment | 425 (75.8) |
| | *M* (*SD*) |
| Proportion client-directed work (self-estimated) | 48.1 % (19.8 %) |
| *Assistive technology* | *n* (%) |
| Work includes assistive technology | 493 (87.9) |
| | *M ( SD)* |
| Time proportion spent on assistive technology tasks | 50.9 % (25.9 %) |
| *Other work tasks* | *n* (%) |
| Participated last year in course/professional event paid by employer | 401 (71.5) |
| Participates in project/development work | 245 (43.7) |
| Union representative | 150 (26.7) |
| *Own managerial responsibilities* | *n* (%) |
| Human resources responsibility | 36 (6.4) |
| Economic responsibility | 35 (6.2) |
| *Referral agencies* | *n* (%) |
| Primary healthcare | 430 (76.6) |
| Secondary or tertiary healthcare | 421 (75.0) |
| School | 186 (33.2) |
| Kindergarten | 162 (28.9) |
| After-school recreational program | 29 (5.2) |
| Refugee/asylum seeker reception center | 104 (18.5) |
| Clients | 420 (74.9) |
| Family members | 454 (80.9) |
| Colleagues in same municipality | 465 (82.9) |
| Service application office | 318 (56.7) |
| Other | 131 (23.4) |
| *Professional background of line manager* | *n* (%) |
| Nurse | 147 (26.2) |
| Physician | 6 (1.1) |
| Physiotherapist | 200 (35.7) |

| | |
|---|---|
| Occupational therapist | 128 (22.8) |
| Social educator | 25 (4.5) |
| Psychologist | 1 (0.2) |
| Social worker | 16 (2.9) |
| Child welfare officer | 6 (1.1) |
| Preschool teacher | 2 (0.4) |
| Teacher | 5 (0.9) |
| Other | 25 (4.5) |

1

2

1 Table 3

2 *Characteristics of the municipalities where the participants worked (n = 561)*

| Variables | *n* (%) |
|---|---|
| *Municipality population size* | |
| < 2000 | 207 (36.9) |
| 2000-19999 | 235 (41.9) |
| 20000-99999 | 119 (21.2) |
| > 100000 | 0 (0.0) |
| *Municipality merge after Coordination Act 2012* | |
| Merged | 19 (3.4) |
| Not merged | 528 (94.1) |
| Not sure | 14 (2.5) |
| *Municipality merge politically decided* | |
| Decided | 148 (26.4) |
| Not decided | 374 (66.7) |
| Not sure | 39 (7.0) |
| *Occupational therapy positions created after Coordination Act 2012* | |
| Positions created | 96 (17.1) |
| Positions not created | 240 (42.8) |
| Not sure | 225 (40.1) |
| *Work located at an institution* | |
| Located at an institution | 73 (13.0) |
| In part located at an institution | 79 (14.1) |
| Not located at an institution | 409 (72.9) |
| *Work organization** | |
| Occupational therapy service | 109 (19.4) |
| Multiprofessional service | 176 (31.4) |
| Combined multiprofessional/occupational therapy service | 202 (36.0) |
| Other | 74 (13.2) |
| *Work located with other occupational therapists* | |
| Located together with other occupational therapists | 376 (67.0) |
| Not located together with other occupational therapists | 185 (33.0) |

* The participants were asked to indicate whether their current working conditions meant working within a designated occupational therapy service; within a multiprofessional service (several professional groups working in a unit); within a combined service (a combined team with other occupational therapists and persons from other professional backgrounds); or whether they worked in other settings (not any of the types of services described above).