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Perceived occupational gaps among Ugandan general population
A pilot study

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Abstract

Purpose: To describe the self-perceived occupational gaps among a sample of general population of English speaking in Uganda, and to explore the differences in perceived occupational gaps to those of a sample from Swedish general population.

Design: Cross-sectional study.

Method: 252 individuals were recruited from 4 districts in Uganda. The data was collected using Occupational Gaps Questionnaire to assess occupational gaps among participants.

Results: Occupational gaps were reported by 91% of participants. The mean number of gaps per person was 5.8 (SD = 3.9). Gaps were more common, and number of gaps per person was higher, than in samples of general population, and even some patient groups in Sweden. The most common gaps were perceived in working (42%), studying (37%) and hobbies (35%). There was no significant difference in number of gaps depending on sex, vocation or living environment, but younger participants perceived more gaps compared to older.

Conclusions: Results of this study showed that a majority of the participants perceived gaps. The number of gaps and the activities in which most participants perceived gaps differed compared to a sample from the Swedish general population. This indicated that occupational gaps might be experienced to a greater extent in Uganda than in Sweden. Studies should be done on a larger population to enable better generalisability, and also as regards what creates participation restrictions, and what can be done to enable a higher level of participation.

Key words: *activities of daily living, participation, occupational gaps questionnaire*

Sammanfattning

Occupational Gaps Questionnaire är ett instrument som mäter delaktighet i dagliga livets aktiviteter. Det utvecklades i Sverige och har genomgått en kulturell anpassning för att kunna användas i Ugandisk kontext. Studiens syfte var att beskriva självskattade gap i dagliga livets aktiviteter bland engelskspråkig normalbefolkning i Uganda, och att undersöka skillnader i självskattade gap med en grupp normalbefolkning i Sverige. 252 deltagare rekryterades i fyra olika distrikt i Uganda. Datainsamling skedde med Occupational Gaps Questionnaire. Deskriptiv statistik användes för att beskriva och presentera resultaten. 91% av deltagarna angav att de upplevde ett eller fler gap i vardagens aktiviteter. Gap var vanligare, och medelantalet gap per person var högre, än vad studier på svensk normalbefolkning visat - och även högre än hos vissa svenska patientgrupper. De vanligaste gapen upplevdes i aktiviteterna arbete (42%), studier (37%) och hobbyer (35%). Det fanns ingen signifikant skillnad i antalet gap beroende på kön, sysselsättning eller livsmiljö, men yngre deltagare angav att de upplevde fler gap än äldre. Fler studier med större urvalsgrupper bör genomföras, och även studier som undersöker faktorer som skapar gap och faktorer som kan öka delaktighet i denna grupp.

Key words: *activities of daily living, occupational therapy, participation*

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1. Introduction

When I was seven, my father and I travelled to Gambia, a small country in West Africa. The man next to us on the flight invited us to visit his home village, which we did. One thing led to another and a year later my father was building a small house in the family's fruit garden. That village in Gambia has been a very important place for me growing up, and it felt like a must to take the chance to experience another African country by doing exchange studies as a part of the occupational therapy program. I came to Uganda for five weeks of clinical placement during my fourth semester, and worked at the psychiatric department at Mulago Hospital. I fell in love with Kampala, the patients, the people I worked with and the people I met, and knew that I wanted to come back.

During my occupational therapy studies, I have become very interested in the area of participation. It is such an important factor for quality of life, and restrictions in participation can have so many reasons, and so many consequences. Therefore, I was thrilled when I got the chance to write my bachelor's thesis about perceived occupational gaps in the Ugandan general population. It is an important subject, and as a larger study is currently being made about occupational gaps among Ugandan persons with stroke, I feel confident that the data collected can and will be useful.

2. Background

2.1 Occupational therapy, occupation and participation

Occupational therapy is a science and a profession that aims to enable engagement in occupation (Occupational Therapy Practice Framework: Domain and Process, 2002). Occupation was defined by Law, Polatajko, Baptiste, & Townsend (2002) as:

“Groups of activities and tasks of everyday life, named, organized and given value and meaning by individuals and a culture. Occupation is everything people do to occupy themselves, including looking after themselves (self-care), enjoying life (leisure), and contributing to the social and economic fabric of their communities (productivity) (p. 34).”

Participation is defined by the World Health Organization (WHO) (WHO, ICF, 2001) as involvement in a life situation, and is one of the main components of the International Classification of Functioning, Disability and Health (ICF) as well as an important aspect of individuals' everyday life. Participation is related to independence in daily activities but also encompasses other important domains such as community life (Desrosiers, Robichaud, Demers, Gélinas, Noreau & Durand, 2009), and has always been a central focus in occupational therapy (Law, 2002). Participation in occupation has been shown to have an important influence on health and well-being (Law, Steinwender & Leclair, 1998). According to Kielhofner in the Model of Human Occupation (MOHO) (2007) engagement in occupations is not limited to performing an activity, but also includes the subjective experience. A person's engagement in activity is affected by three elements: *volition*, what the individual enjoys and values, *habitation*, what and how the individual is used to doing something and what is expected of them, and *performance capacity* - physical and mental abilities (Kielhofner, 2007). A part of habituation is *roles* that give the individual an identity such as, for example, student, nurse and/or mother. The roles come with feelings of obligations and expectations from the environment and from oneself. Kielhofner also writes about the *occupational identity* - the result of the combination of one's feeling of capacity, interests, personality, roles, obligations, routines and the expectations of the environment. The occupational identity, the feeling of identity and competence in performing activities, is a key component in adaptation (the ability to develop oneself according to the challenges one faces). Christiansen (2004) also writes about this: we become who we are through occupation. If occupation is key to a person's experience of identity, it is accordingly likely to be problematic when one cannot participate in the activities one wants and needs to do.

2.2 Occupational gaps and participation restriction

Due to factors such as disability, there may be occupations that a person would like to engage in, but cannot. This is called an *occupational gap*: the discrepancy between the things you want to do and the things you actually do. Eriksson (2007) suggests the following definition of non-participation in everyday occupation (equivalent to the definition of occupational gaps), based on definitions of participation in everyday occupation by Kielhofner (2007) and WHO (2001):

the experience of not engaging in, or being involved in, occupations that are part of one's socio-cultural context and that are desired or necessary for one's well-being (Eriksson, 2007).

Previous research has found a significant relationship between the extent of occupational gaps and perceived life satisfaction after acquired brain injury (Eriksson, Kottorp, Borg & Tham, 2009; Fallahpour, Tham, Joghataei, Eriksson & Jonsson, 2011), as well as a moderate association between number of occupational gaps, participation and self-rated recovery after stroke (Eriksson, Aasnes, Tistad, Guidetti & Koch, 2012). A previous study from Iceland (Arnadottir, Gunnarsdottir, Stenlund & Lundin-olsson, 2011) showed that perceived participation restriction was significantly associated with variables from all ICF components (personal factors, environmental factors, body functions and activities). Thus, it is important to be able to assess the occurrence of occupational gaps among individuals and among different groups of people. In order to achieve this, an instrument was recently developed called the Occupational Gaps Questionnaire.

2.3 Assessing occupational gaps - The Occupational Gaps Questionnaire

Occupational Gaps Questionnaire (OGQ) (Eriksson, 2007) is an instrument for measuring occupational gaps. The OGQ was developed in Sweden and has been found to provide a valid generic instrument that measures participation in activities of daily living (Eriksson, Tham & Kottorp, 2013; Eriksson, Jonsson, Tham & Eriksson, 2012). The OGQ is based on Model of Human Occupation (Kielhofner, 2007), that emphasises the importance of the individual's own subjective experience of activities and participation (Eriksson, 2014). The OGQ is used both clinically and in research in Sweden (Eriksson, 2014), and has also been translated into English and Persian. Fallahpour et al (2011) produced the Persian translation of the OGQ, along with a few cultural adaptations. The subsequent study showed that the Persian version of OGQ could be used to make valid estimations of occupational gaps for patients with stroke in Iran. However, the authors conclude that there is a need for more studies of OGQ applications in other cultures in order to examine the unidimensionality of the scale.

2.4 Studies on occupational gaps in the general population

One way to better understand the findings from OGQ studies on different diagnose groups could be to examine reference groups from the general population. A recent unpublished study on the general population with a sample of 711 adults in Sweden (Eriksson, 2014) showed that the median number of occupational gaps were three for the whole sample, with some differences depending on age - younger persons had more gaps. Another Swedish study showed that although most participants from a reference group of general population perceived occupational gaps, they reported fewer gaps than the rehabilitation group (Eriksson, Jonsson, Tham & Eriksson, 2011). The findings of that study show that the reference group also perceived more gaps related to performing an activity although they did not want to do it, compared to the rehabilitation group, who perceived more gaps related to not doing things they wanted to. In a recent study using OGQ among persons with stroke it was concluded that data on occupational gaps from reference samples should be collected to use for comparison (Eriksson, Aasnes, Tisdad, Guidetti & von Koch, 2012). There has so far been no study published using the Occupational Gaps Questionnaire in an African context.

2.5 Uganda

The East African country Uganda differs from Sweden in many ways, with a GDP of \$1,226 per capita (International monetary fund, 2014) a population density of 152/km² (Department of Economic and Social Affairs Population Division, 2008), and an estimated total population of 34,856,813 persons in 2014 (Uganda bureau of statistics, 2014), compared to Sweden's GDP of \$46,386 per capita (International monetary fund, 2014) and population density of 21.7/km² (Department of Economic and Social Affairs Population Division, 2008). The population of Uganda consists of many different ethnic groups that differ among themselves with regards to culture and language (Uganda Bureau of Statistics, 2006). Different parts of the country have a majority of different tribes - for example, the Central Region has 63% Baganda, and in the Northern Region the Langi are the biggest group, with 30,7% (Uganda Bureau of Statistics, 2006). Uganda has an occupational therapy school since 1994, but according to an overview of

occupational therapy in Africa (Béguin, 2013) there was only 120 trained occupational therapists in the country in 2012.

2.6 Research problem area

As shown in the literature mentioned above, participation is an important factor related to health and well-being. Occupational Gaps Questionnaire measures participation, and can thus be a valuable tool in occupational therapy practice. There is a need for more testing of the questionnaire in different cultures. The OGQ has gone through a cultural adaptation to be used in the Ugandan context, and there is a need for testing it on the general population to establish a baseline to help understand the results of patient groups. There has been no testing of the OGQ in an African context. These factors led to the aim of this study.

3. Aim

The aim of this study was to describe the self-perceived occupational gaps among a sample of general population of English-speaking in Uganda, and to explore the differences in perceived occupational gaps between samples of general population in Sweden and Uganda

The specified research questions were:

1. How many and which occupational gaps were perceived by a sample of English-speaking general population in Uganda?
2. Are there differences in self-perceived gaps depending on age, sex, living environment and vocation?
3. What differences in occupational gaps can be seen between Swedish and Ugandan general population?

4. Material and methods

4.1 Design

The project was made with a cross-sectional design and had a quantitative approach which according to Ejvegård (2003) enables accessible presentations of large amounts of data with Tables and diagrams.

4.2 Participants

A total of 252 participants were included in the study. The participants are presented in Table I. The inclusion criteria were: 1) living in Uganda, 2) 18 years or older, and 3) literate, 4) English-speaking. 62 participants (24%) reported that they were living in rural environment, and 191 (76%) in urban environment. Only 16% of the Ugandan population are living in urban areas (United Nations Statistics Division, 2014), so the population of this study is not representative for the general population in this respect.

A surprisingly small number of people refused to participate in the study when approached by the author. An estimate might be that around 50 persons in total were approached who declined to participate. 15 questionnaires that were collected were too incomplete to be included in the study. For most of these questionnaires, only one of the two questions for each activity had been answered, making it impossible to analyse any occupational gaps. This group consisted of both men and women, and did not differ from the sample population with regards to age, educational level or living environment.

The study received ethical approval from Uganda National Council for Science and Technology (UNCST).

Table I. Characteristics of the participants in the study (n=252). SD=standard deviation.

Characteristics	Number of participants (%)
Vocation	
Studying	97 (39)
Working	95 (38)
Unemployed	50 (20)
Retired or sick leave	10 (4)
Gender	
Male	155 (62)
Female	96 (38)
Other	1 (0,4)
Age	
18-29	168 (67)
30-49	60 (24)
50-64	18 (7)
64-82	5 (2)
Living environment	
Urban	191 (76)
Rural	61 (24)
Children living at home	
Range	0-26
Mean (SD)	3.5 (4.4)
Level of education	
No education	4 (2)
Primary	14 (6)
Secondary	57 (22)
Tertiary (university)	125 (50)
Other	52 (21)

4.3 Data collection

The data was collected between 24/4 and 15/3 2015, at 8 different places in four different districts in Uganda - Kampala, Masaka and Wakiso in Central Region, and Lira in the North Region. The geographic places have been marked on the map (see Figure 1). However, due to lack of time and logistical resources, 76% of surveys were collected in Kampala. The author collected the data by approaching persons in public areas. They were invited to participate in the study if they fit the inclusion criteria. The inclusion criteria were: 1) living in Uganda, 2) 18 years or older, 3) literate and 4) English-speaking. Data collection was also made with the help of Ugandan collaborators who assisted the author in finding participants from the rural areas, where data collection in public areas was found to be very difficult. This kind of recruitment is a form of convenience sampling, which according to Petrie & Sabin (2000) can be used when it is difficult or too expensive to construct a sampling frame for random sampling. Bell (2006) writes that it in small projects might be hard to achieve a truly random sample and in these cases one might have to settle with persons from the population who are reachable and who want to participate.



Figure 1: Map of Uganda, with places of data collection marked.

4.4 Instrument

The Occupational Gaps Questionnaire (OGQ) (Eriksson, 2014) was used for collecting the data. OGQ is an instrument that has been tested in several studies (Fallahpour, Tham, Joghataei, Eriksson & Johnsson, 2011; Eriksson, Jonsson, Tham & Eriksson, 2012) and has been found to provide a valid generic measure (Eriksson, Tham & Kottorp, 2013). OGQ is an instrument that measures engagement in activities of daily life (Eriksson, 2014). It has been proven in several studies to be valid and reliable both in Sweden (Eriksson, Tham & Kottorp, 2013) and, after cultural adaptation, in Iran (Fallahpour, Tham, Joghataei, Eriksson & Johnsson, 2011), for persons with acquired brain injury. OGQ is a self-rating questionnaire consisting of the yes/no questions: “Do you perform this activity?” and “Do you want to perform this activity?”, regarding 30 activities. There are thereby three possible outcomes for each activity: no gap, gap related to not wanting to do the activities one does (gap type 1), and gap related to not doing the activities one wants to (gap type 2). See Table II for further definition of the types of occupational gaps. The original OGQ questionnaire consists of 30 activities in four areas: I-ADL, leisure activities, social activities and productive activities (Eriksson, 2014). In the Ugandan version of OGQ, OGQ-U, activities have been adapted and some merged, so that the questionnaire includes 22 activities (see attachment 3), still covering the same four areas of activity (I-ADL, leisure activities, social activities and productive activities). More information on the changes can be found in Attachment 4. The developer of the OGQ, Gunilla Eriksson, has approved of these changes. In addition to the questionnaire, the participants were also asked to answer 7 sociodemographic questions, such as age, gender and vocation. These questions were chosen to match the questions asked in the Swedish general population study, to enable comparability. The cultural adaptation of OGQ was made in cooperation between Swedish and Ugandan occupational therapists and it has been tested on Ugandan occupational therapy students. The letter to participants and sociodemographical questions were also developed in collaboration with Ugandan occupational therapists to avoid cultural clashes. The participants independently filled out the questionnaire, with the possibility to ask questions to the data collector.

Table II: Different types of occupational gaps

<p>The two types of occupational gaps</p> <p>Gap 1: doing an activity without wanting to do it.</p> <p>Gap 2: not doing an activity, although one wants to do it.</p>
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4.5 Data analysis

The responses from the questionnaires were entered manually into spreadsheet software. Cross-tabulations were used to describe the sample group and the presence of occupational gaps. Descriptive statistics were used to describe the characteristics of the participants in the study. Chi-square test was used to analyse differences between groups for nominal or ordinal variables (Petrie & Sabin, 2005). One-way ANOVA was used to analyse differences in the mean number of gaps depending on age (Petrie & Sabin, 2005).

4.6 Ethical considerations

Participation in the study was voluntary and based on informed consent, which is important according to Kvale (1997). Information was given both orally and in writing about the aim and methods of the study, and that it was voluntary to fill out the questionnaire. All participants were offered to have the finished report sent to them by e-mail. The data and the project might help to improve people's health, fulfilling the knowledge requirement [kunskapskravet] for medical research (Medicinska forskningsrådet, Nämnden för forskningsetik, 2000). No data that made it possible to identify the participants was collected, which ensured that the project did not risk violating the privacy of the participants, fulfilling the requirement of protection [skyddskravet] (Medicinska forskningsrådet, Nämnden för forskningsetik, 2000). All data is presented anonymously and group-wise. Karolinska Institutet published new ethical guidelines for international co-operations in late March 2015. These guidelines were not in place during the start of this project, however there is nothing in this project that contradicts the guidelines. Ethical approval was given by Uganda National Council for Science and Technology (UNCST).

5 Results

In this section the results are presented in different sections as below:

1. Description of the perceived occupational gaps in the sample

Type 1 gap: Occupational gaps related to doing without wanting to do

Type 2 gap: Occupational gaps relating to not doing the activities one wants to

2. Differences in self-perceived gaps depending on sociodemographic factors

Differences depending on age

Differences depending on living environment

Differences depending on sex

Differences depending on vocation

3. Differences in occupational gaps between Swedish and Ugandan general population

5.1 Description of the perceived occupational gaps in the sample

91% of participants perceived one or more occupational gaps. The five most common activities to have gaps in were working (42% of participants), studying (37%), hobbies (35%), laundry (34%), and voluntary work (34%). Table III, Figure 2 and Table IV presents the frequency distribution of the perceived occupational gaps in the sample.

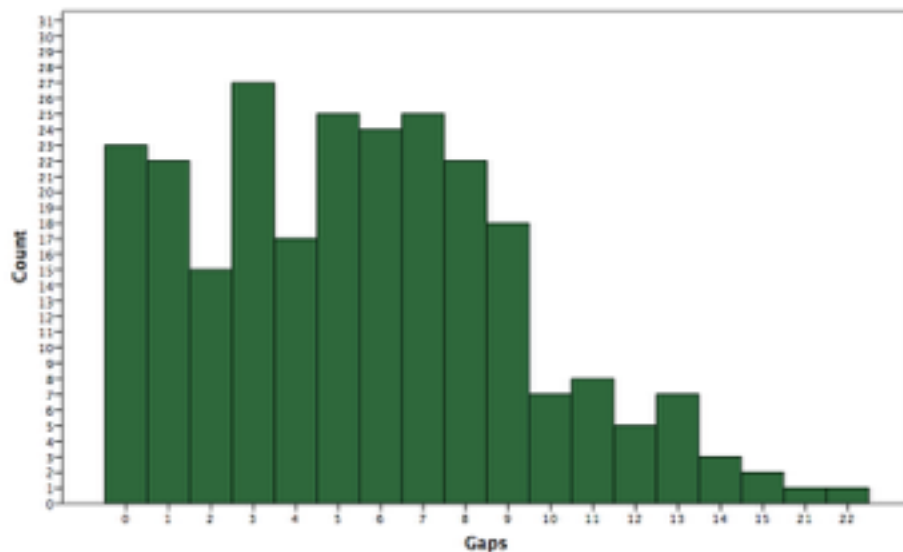


Figure 2. Frequency distribution of gaps per person in the sample (n=252)

Table III. Description of the perceived occupational gaps in the sample (n=252)

Mean (standard deviation)	5.8 (3.9)
Median (interquartal range)	5 (5)
Range	0-22

Table IV. Frequency distribution of perceived occupational gaps in the sample (n=252)

Activity	Number of participants reporting gaps (%)	Gap 1 (% of gaps for activity)	Gap 2 (% of gaps for activity)	Missing data
1. Shopping	49 (19)	24 (49)	25 (51)	5
2. Cooking	69 (27)	37 (54)	32 (46)	4
3. Laundry	86 (34)	72 (84)	14 (16)	4
4. Cleaning	78 (31)	62 (79)	16 (21)	6
5. Heavy-duty maintenance	52 (21)	26 (50)	26 (50)	3
5. Personal finances	55 (22)	7 (13)	48 (87)	2
6. Transports	64 (25)	18 (28)	46 (72)	3
8. Sport / outdoor activities	69 (27)	10 (14)	59 (86)	3
9. Hobbies	88 (35)	9 (10)	79 (90)	0
10. Cultural activities	63 (25)	12 (19)	51 (81)	1
11. Radio/TV	18 (7)	8 (44)	10 (56)	3
12. Reading	44 (17)	9 (20)	35 (80)	4
13. Writing	70 (28)	17 (24)	53 (76)	2
14. Playing/gaming	58 (23)	11 (19)	47 (81)	3
15. Visiting	40 (16)	12 (30)	28 (70)	1
16. Helping	52 (21)	11 (21)	41 (79)	3
17. Religion	17 (7)	6 (35)	11 (65)	3
18. Restaurants	70 (28)	9 (13)	61 (87)	1
19. Working	107 (42)	25 (23)	82 (77)	0
20. Studying	94 (37)	36 (38)	58 (62)	2
21. Childcare	79 (31)	11 (14)	68 (86)	1
22. Voluntary work	85 (34)	12 (14)	73 (86)	1
TOTAL	1407	444 (32)	963 (68)	

5.2 Type 1 gap: Occupational gaps related to doing without wanting to do

32 percent of the gaps reported were related to performing activities one did not want to perform (type 1 gap). For the Ugandan population, the activities that had the largest number of type 1 gaps were laundry (29% of participants), cleaning (25%), and cooking (15%). Figure 3 shows the distribution of gaps for laundry.

The activities that had the largest proportion of type 1 gaps in relation to type 2 gaps were laundry (84%), cleaning (79%) and cooking (54%).

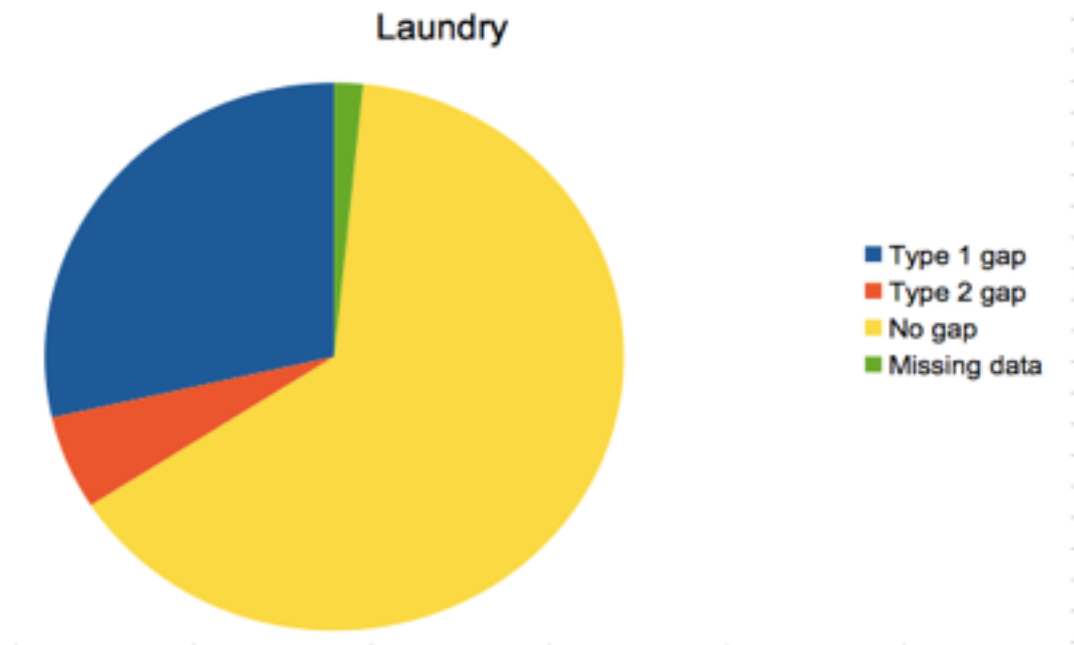


Figure 3. Description of the types of perceived occupational gaps for activity Laundry (n=248)

5.3 Type 2 gap: Occupational gaps related to not doing the activities one wants to do

Sixty eight percent of the gaps reported were related to not doing the activities one wants to do (type 2 gap). For the Ugandan sample, the activities that had the largest number of type 2 gaps were working (33% of participants), hobbies (31%) and voluntary work (29%).

The activities that had the largest proportion of type 2 gaps in relation to type 1 gaps were hobbies (90%), visiting restaurants (87%) and managing personal finances (87%). Figure 4 shows the distribution of gaps for hobbies.

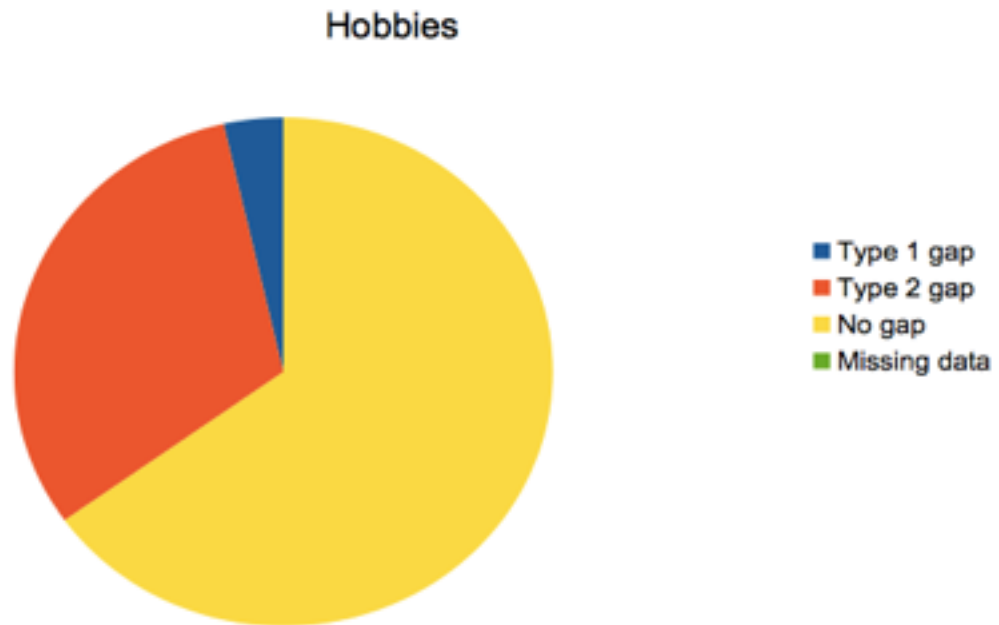


Figure 4. Description of the types of perceived occupational gaps in activity Hobbies

5.4 Differences in self-perceived gaps depending on age

The data was sorted into 4 age groups - 18-29, 30-49, 50-64 and 64 and up. Although the participants aged over 50 were considerably fewer than the younger, a oneway ANOVA test showed that there was a statistically significant difference in mean of perceived gaps between the groups (p -value < 0.001), where the younger participants had more gaps compared to the older. The number of gaps is highest for the youngest group, and lower for the older participants. A post-hoc test showed that the differences were statistically significant between the age groups of 18-29 and 30-49 (p -value = 0.045) and 18-29 and 50-64 (p -value = 0.003). Table V shows the mean, standard deviation and range for number of gaps depending on age.

Table V. Number of perceived gaps in different age groups (n = 252). P-value <0.001.

Age group (participants %)	Mean (SD)	Range
18-29	6.25 (3.910)	0-22
30-49	4.75 (3.671)	0-15
50-64	2.94 (3.233)	0-13
65+	2.20 (2.387)	0-6

5.5 Differences in number of perceived gaps depending on sex

Chi-Square test showed that there was no significant difference in the number of perceived gaps depending on sex in the sample (p -value =0.634). However, the most common activities to have gaps in differed between men and women in the study. Working, studying and voluntary work were in the top-five most common activities to have gaps in for both groups. For women the activities laundry and childcare were also in the top five, and for men hobbies and cooking. Table VI shows the most common activities to have gaps in for men and women.

Table VI. Comparing most common perceived gaps among men and women (n=251).

Activities with most gaps among women	Number of women reporting gaps in activity (% of women) n=96	Activities with most gaps among men	Number of men reporting gaps in activity (% of men) n=155
Working	49 (51)	Studying	62 (40)
Laundry	37 (39)	Working	58 (37)
Voluntary work	35 (36)	Hobbies	55 (35)
Childcare	34 (35)	Cooking	52 (34)
Studying	32 (33)	Voluntary work	49 (32)

5.6 Differences in self-perceived gaps depending on living environment

Chi-Square test showed that there was no significant difference in the number of perceived gaps depending on living environment in the sample (p -value = 0,749). However, a non-significant

difference was that the group of participants living in an urban environment had a mean of 5.82 gaps (SD = 3.56), while the participants living in rural areas had a mean of 4.84 (SD = 4.01).

5.7 Differences in self-perceived gaps depending on vocation

There were few participants in who reported that they were retired (7 participants) or on sick leave (3 participants), so for the Chi-square test of differences in number of gaps depending on vocation, those groups were combined with the group of unemployed. Chi-square test showed that there was no significant difference (p-value >0.05) in number of gaps between the studying, the working or the group of unemployed, retired and on sick leave. The distribution of gaps depending on vocation can be seen in Table VII. 27% of the participants that reported studying as their vocation also reported that they did study, but did not want to (gap type 1).

Table VII. Number of perceived gaps depending on vocation (n=252)

Vocation (% of participants)	Mean of occupational gaps	Standard deviation	Range
Studying (38)	6.24	3.874	0-21
Working (38)	5.37	4.029	0-22
Unemployed (20)	5.10	3.644	0-13
Retired (2)	2.29	2.430	0-6
Sick leave (1)	4.33	2.082	2-6

5.8 Comparing perceived occupational gaps in Ugandan and Swedish general population

Table VIII. Age distribution of the Swedish sample (n=771).

Age	Number of participants (%)
20-29	99
30-49	257
50-64	221
65-85	170

The Swedish sample was collected with a postal questionnaire (Eriksson, 2014) and consisted of 771 participants, 45% women and 55% men. The age distribution is shown in Table VIII. In the Swedish sample the median of perceived gaps was 3, with an interquartile range of 4. In the total Ugandan sample the median was 5, with an interquartile range of 5. In the Swedish sample, the four most common activities to have gaps in were cleaning, participating in sports, participating in hobbies and travelling for pleasure. Travelling for pleasure is one of the activities that is not present in the OGQ-U. In the Ugandan sample the four most common activities to have gaps in were working, studying, hobbies and laundry, which is also shown in Table IX.

Table IX. Comparing most common perceived gaps among Swedish (n=711) and Ugandan (n=252) samples

Most common activities to have gap in for Swedish sample (% of participants)	Most common activities to have gap in for Ugandan sample (% of participants)
Cleaning (29)	Working (42)
Participating in sport (23)	Studying (37)
Hobbies (20)	Hobbies (35)
Travelling for pleasure (20)	Laundry (34)

6 Discussion

6.1 Result discussion

The aim of this study was to explore the self-perceived occupational gaps among general population of English-speaking in city and countryside in Uganda, and the differences in occupational gaps between general population in Sweden and Uganda. The results showed that a large number of the sample experienced gaps in occupation, and that there are differences in the number of gaps experienced depending on age: the older participants perceived fewer gaps than younger participants.

The results will be discussed in sections based on the research questions in the study:

- Occupational gaps perceived by English-speaking general population in Uganda
- Differences in self-perceived gaps depending sociodemographic
- Differences in occupational gaps between Ugandan and Swedish samples

6.1.1 Occupational gaps perceived by English-speaking general population in Uganda

The most common activity to have gaps in for the whole sample was working (42% of participants). Most of these gaps were related to wanting to work, but not doing it. The unemployment rate in the whole of Uganda was 4.2 percent in 2009/2010 - however there was a big difference in unemployment rates between rural and urban areas, with a rate of 11% unemployed in Kampala (Uganda Bureau of Statistics, 2010). Therefore it can be discussed whether this finding might be different if more participants had been recruited in the rural areas. Unemployment has been linked to many adverse health outcomes (Jin, Shah & Svoboda, 1995; Zagożdżon, Parszuto, Mathers & Schofield, 1998; Wrotkowska & Dydjow-Bendek, 2014).

The questionnaire did not differentiate between different terms of employment, for example full- or part time. The only options were: “Having a job (full-time/part-time)”, “Studying”, “Unemployed”, “Retired”, and “Sick leave”. However, several participants marked if they worked full or part time, or commented on it to the data collector, and others wrote about not working the way that they wanted in the qualitative questions - for example working part-time with unsafe conditions and salary. It might have yielded interesting results to differentiate between the different ways of working - for example being self-employed, housewife, being employed full time or being employed part time.

The second most common activity to have gap in was studying (37%). It is relevant to point out that the sample had 39% students, which might have affected the high level of gaps in this activity. The education system in Uganda consists of primary, secondary and tertiary level. The education in public primary and secondary schools is free (Asankha & Takashi, 2011). There are also private schools with tuition fees, and many parents who can afford it choose to send their children there, which might be because they believe that the education is of higher quality there

(Asankha & Takashi, 2011). Public tertiary education, such as university, has fees. There is a big difference between the number of children who go to primary school and those who continue to secondary, and very few make it to the tertiary level. UNESCO (2010) reported that the secondary school enrolment rate was 34% in 2007 for sub-Saharan Africa. This might be a part of the explanation of the type 2 gaps, the participants who said that they wanted to study but did not. However, 38% of the gaps were type 1 gaps - participants who marked that they did study but did not want to. 27% of the participants who had studies as their vocation gave this answer. This could be an interesting field for future studies: the reasons for not wanting to study, and the reasons for doing it anyway.

Both working and studying is part of the concept *productivity/work* in Model of Human Occupation (Kielhofner, 2007), and work has been an important part of occupational therapy treatment since the birth of the profession (Fenton, Gagnon & Pitts, 2003). Not being able or allowed to engage in productive activities affects an individual's roles, and the experience of having too few roles in everyday life can lead to problems with sense of self, meaningfulness, and structure in everyday life (Kielhofner, 2007).

The third most common activity to have gaps in was hobbies (35% of participants, see Figure 4). Hobbies had 90% type 2 gaps: participants who wanted to participate in hobbies, but did not. Hobbies is a part of the MOHO (Kielhofner, 2007) concept of *play*: activities we do for their own sake. According to Reilly (1974), leisure activities such as hobbies are valuable since they provide a break from work or studies and can provide recreation and meaningful occupation. Several studies have found associations between participation in leisure activities and positive outcomes such as self-perceived health and quality of life (Pressman, Matthews, Cohen, Martire, Scheier, Baum & Schulz, 2009; Nummela, Sulander, Rahkonen & Uutela, 2008; Lee, Lee & Park, 2014).

There are two kind of occupational gaps (see Table 2). Most activities in this sample had an uneven distribution of type 1 or type 2 gaps, for example it was more common for participants to want to participate in for example hobbies or voluntary work but not being able to do it, than to

participate in them without wanting to. However, the activity heavy duty maintenance has 50% type 1 and 50% type 2 gaps, and shopping has a 51/49% distribution. A possible reason for the equal distribution for these activities might be that they are activities that can be seen as boring or unsatisfying to do when you are able to, but that might be restricting and/or stigmatising not to be able to do.

6.1.2 Differences in number of self-perceived gaps depending on sociodemographic factors

There were significant differences between age groups in the sample - younger participants reported more gaps than older participants. These results correspond well with the result from the study of the Swedish general population, which also showed that the number of gaps were lower among older persons (Eriksson, 2014).

The most common activities to have gaps in varied between men and women, but working was in the top 2 for both groups. There were no significant differences in number of perceived gaps depending on two gender groups or the two different living environments included in the study. A Canadian study on elderly persons without disability (Desrosiers et al, 2009) found that the levels of participation in different areas of life varied depending on gender.

6.1.3 Differences in perceived occupational gaps between Ugandan and Swedish samples

In comparing the occupational gaps from the Ugandan sample and the Swedish sample from the general population, there were several differences. The Ugandan sample had more gaps per person in median (5 compared to 3), and a larger part of the sample reported gaps in the most common activity to have gap in (42% in working, compared to 29% in cleaning for the Swedish sample). There are studies on Swedish patient groups where the mean number of gaps is lower than in the sample of this study. One study showed the mean number of gaps for a group of patients one year after stroke to be 4, and the median 3 (Eriksson, Aasnes, Tistad, Guidetti & von Koch, 2012). For a group of patients with muscoskeletal pain or stress-related ill health however, the mean number of gaps was 8.7 (range 0-22, median 9). The reference group in the same study had 0-15 gaps, with a mean of 3.93 and a median of 4 (Eriksson, Jonsson, Tham & Eriksson, 2011).

The results thus indicate that the sample in this study perceive more gaps than the Swedish general population, and even some patient groups. Potential reason for this is a complex subject. Kielhofner (2007) states that all activity is performed in a complex environment and the physical and sociocultural surroundings affect the individual and their performance capacity. Class, gender, race, ethnicity, age and disability are examples that Sussenberger (2003) mention as socioeconomic factors that influence occupational performance, with regards to productive as well as leisure activities. There is also a big difference between the Swedish and Ugandan culture(s), which might of course also affect the results. Culture is an important factor for occupational therapists (McGruder, 2003) to understand the client's activity patterns.

There was a difference in the most common kind of gap perceived by participants compared to the Swedish sample. In a study that included 261 participants from the Swedish general population study (Eriksson, Jonsson, Tham & Eriksson, 2012), 77% of the gaps among this group was gap type 1 related to doing despite of not wanting to. In the Ugandan sample, only 32% of the gaps were type 1. There may be different explanations for this, such as a difference in the understanding of what it means to *want to do* something between the cultures. Several participants expressed confusion during the explanation of the questionnaire, about the fact that they had to answer the question "Do you want to perform this activity?" even if they answered yes on the question "Do you perform this activity?". Some participants expressed that if they perform an activity, this automatically means that they want to do it.

6.2 Method discussion

This project was done with a cross-sectional design, which according to Petrie & Sabin (2000) is suitable for estimating the point prevalence of a condition in the population. This project has several limitations with regards to external validity, i.e. generalisability (Malterud, 2009), as the sample differs in several ways from the population in Uganda. The Ugandan population is diverse in regards to ethnic groups, and different ethnic groups are in majority in different part of the country. Because of this, data collection was made in four different places in North and Central Uganda. Data collection was done both in rural and urban areas, to achieve a spread of

participants living in both kinds of living environment. Because of logistical limitations most of the data was collected in urban areas, and thus most participants were living in urban areas. This project did not register ethnic group for the participants, since that might be sensitive information.

The fact that participants had to be literate and English-speaking also makes the population less generalisable. According to UNESCO Institute for Statistics (n.d.), the literacy in the population above 15 in Uganda was 73% in 2010 - but among women over 65, it was only 16%. Bell (2006) writes that there in small projects can be hard to get a random sample and in these cases one might have to settle with samples from the population that are easy to find and who want to participate.

Answers in the questionnaires as well as discussions with participants and collaborators showed that there were several ways that the sociodemographical questions (see attachment 1) could have been improved. For example, there were many questions to the data collector about if university is tertiary level. Also, it proved to be more complicated than expected to assess whether a living environment was urban or rural. For example, Kampala is a very large city but it has suburbs that resemble villages (lower population, fewer buildings, etc). There are also small cities that are located in rural areas. In such areas, some participants reported that they were living in urban environment, and others in rural. This shows that “semi-urban” could have been a relevant option to add to this question.

The sociodemographic questions were developed in collaboration with Ugandan occupational therapists, but it would have been very useful to test the questionnaire on the population beforehand. This was, however, not possible due to logistical reasons.

A surprisingly small number of people refused to participate in the study when approached by the author. An estimate might be that about 50 persons in total who were approached declined to participate. However, the author only approached persons who looked as though they may have time, avoiding for example people who were obviously working, studying or speaking on the phone. The reasons given for not wanting to participate were usually that they were busy, waiting

for someone or just leaving. The fact that the data collection was done during daytime on persons in public area who did not look busy might have led to a bias which could be part of the explanation to why so many gaps were found in the activities work and studies.

One cultural clash experienced by the author was the expectations of some participants to receive some kind of payment for their participation in the study. Participants in this study got to keep the pen they used for filling in the questionnaire, but sometimes they expected more. In these situations, the data collector explained again the aim and purpose of this study. Also, all participants were offered to have the finished report sent to them by e-mail. However, not all participants had access to internet. This is an ethical problem, as participants who lack internet access are not able to take part of the results of the study.

In previous studies (Eriksson, 2007) as well as in this one, the two types of gaps (see Table 2) have been treated equally in the analysis, although there might be a difference in how the different types of gaps are perceived. However, both types of gaps are related to not engaging in the occupations that are desired.

The Swedish sample had a larger percentage of older participants compared to the Ugandan sample. As older participants reported fewer gaps in both samples, this might have affected the higher number of gaps in the Ugandan sample. One way of handling this could have been to take an age-matched sample of the Swedish sample and compared these to the Ugandan sample.

7 Conclusions

The results of this study show that a majority of the participants in the sample perceive occupational gaps. 90.9% of participants perceived at least one gap, and the mean number of gaps per person was 5.8 (SD = 3.9) Gaps are more common, and the number of gaps per person was higher, than in samples of Swedish general population, and even some Swedish patient groups. The most common gaps were perceived in working, studying and hobbies. There was no significant difference in number of gaps in genders, vocations or various living environment. Results showed that younger participants perceived more gaps compared to older participants.

The results indicated that occupational gaps might be experienced to a greater extent in Uganda than in Sweden. More studies should be done that include a greater sample to enable better generalisability. Studies should be done with more data from rural areas. Furthermore, the findings of this survey indicate that additional studies are necessary to investigate which factors create participation restrictions, and what can be done to enable a higher level of participation for this group.

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12. Attachments

- Attachment 1: Sociodemographic questions
- Attachment 2: Letter to participants
- Attachment 3: Activities in OGQ-U
- Attachment 4: Changes made in OGQ-U

Attachment 1: Letter to participants**Invitation to take part in a survey**

A self-report questionnaire has been developed in Sweden to explore to which extent people participate in the activities in everyday life they want to perform. This self report questionnaire, named Occupational Gaps Questionnaire, was developed and tested at Karolinska Institutet among people with neurological disorders, as for example stroke, and in a Swedish reference group. The objective of developing the questionnaire was to be able to explore the extent of restrictions in the participation of everyday activities and to screen for rehabilitation needs among persons with functional limitations. The Occupational Gaps Questionnaire has been used in research projects in Sweden and is used clinically. Further the questionnaire is translated into English, French and Persian. The English version has been adapted to be used in Uganda in a research project conducted with persons having stroke.

Before using the Occupational Gaps Questionnaire among persons with stroke we want to explore and understand to which extent a random sample from Uganda perceive that they take part in the activities in everyday life that they want to do.

Therefore, you are now asked to take part in this study and to respond to the Occupational Gaps Questionnaire – Ugandan version. It is completely voluntary to take part in the study. If you choose to participate you respond to the questionnaire and return it to the data collector. You will be anonymous and no personal information on you will be used. The questionnaire takes about 10-15 minutes to fill out. The results from this survey will be presented in a bachelor thesis at Karolinska Institutet, Stockholm, Sweden. If you have any questions, please pose them to the data collector.

Sincerely

Matilda Utbult

Occupational Therapy Student

xxxx@xxxx.xx

Mandana Fallahpour

Supervisor

Attachment 2: Sociodemographic questions**Gender:**

Female
Male
Other

Age:

_____ years

Marital status:

Single
Married/cohabiting
Live-apart boyfriend/girlfriend
Divorced
Widowed

Number of children living at home:

—

Occupation:

Having a job (full-time/part-time)
Studying
Unemployed
Retired
Sick leave

Educational level:

No education
Primary School Level
Secondary School Level
Tertiary School Level
Other

Living environment:

Urban area
Rural area

Were you born in Uganda:

Yes
No

Attachment 3: Activities in the OGQ-U

1. Shopping (eg. go and buy item in a shop/market, pick from the garden)
2. Cooking (eg. preparing meals, baking, doing the dishes, setting the Table)
3. Doing the laundry (eg. washing, ironing, mending)
4. Cleaning, doing light maintenance (eg. dusting mopping, sweeping, smearing with cowdung, washing the car/bicycle, slashing compound, weeding)
5. Doing heavy-duty maintenance of home, garden, car (eg. Repairing the car, painting, remodeling, brick laying, repairing, renovating, making/mending fences)
6. Managing personal finances (eg. banking, budgeting, planning personal banking)
7. Transporting oneself (eg. driving, taking public transportation, riding, riding bicycle)
8. Participating/taking interest in sports, outdoor activities (eg. working out, walking, swimming, jogging, running, playing football, spectator sports)
9. Participating in hobbies (eg. doing a handicraft, playing drums, singing/singing in a choir)
10. Participating in cultural activities (eg. going to the movies, the theater, story telling, music, dancing, traditional dances, ceremonies, funeral activities)
11. Listening to radio/ watching TV/video
12. Reading newspapers, news magazines, books
13. Writing (eg. letters, e-mails, poetry)
14. Playing the lottery, cards, mobile phone/computer games, indoor games, surfing the internet
15. Visiting/having contact with family, relatives, friends, neighbors (eg. having dinner together, phone conversations, family gatherings)
16. Helping and supporting others (eg. baby-sit, grocery shopping)
17. Practising religion (eg. pray at home, going to church/mosque, take part in events/gatherings)
18. Visiting restaurants, going for an outing (eg. eating, take away, social gatherings).
19. Working, full or part-time.
20. Studying, full or part-time.
21. Taking care of and raising children.
22. Performing voluntary work, engaging in activities in societies, clubs, unions (eg. go to hospital/institution, volunteering for work, participating in campaigns, charity).

Attachment 4: Changes in the Occupational Gaps Questionnaire (English version) for the Ugandan version of the Occupational Gaps Questionnaire (OGQ-U)**Items changes**

Item 1 Grocery Shopping are integrated with item 9 Shopping to the new item 1 Shopping.

Item 4 Cleaning and item 5 Doing light maintenance are integrated to a new item 4 Cleaning , doing light maintenance.

Item 10 Participating in/taking interest in sports and item 11 Participating in outdoor activities are integrated to a new item 8 Participating in/taking interest in sports, outdoor activities.

Item 15 Reading newspapers, news, magazines are integrated with item 16 Reading books to a new item 12 Reading newspapers, news, magazines, books.

Item 18 Playing the lottery, cards, mobile phone games, indoor games and item 19 Playing computer games & surfing the internet are integrated to a new item 14 Playing the lottery, cards, mobile phone/ computer games, indoor games, surfing the internet.

Item 20 Visiting/having contact with partner and/or children and item 21 Visiting/having contact with relatives, friends & neighbours are integrated to the new item 15 Visiting/having contact with family, relatives, friends and neighbours.

Item 25 Visiting bars change item name to the new item 18 Visiting restaurants, going for an outing.

Item 23 Engaging in activities in societies, clubs and unions and item 29 Performing voluntary work are integrated to the new item 22 Performing voluntary work, engaging in activities in societies, clubs or unions.