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Morville, Anne-Le; Erlandsson, Lena-Karin; Danneskiold-Samsoe, Bente; Amris, Kirstine; Eklund, Mona

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LUND UNIVERSITY

PO Box 117  
221 00 Lund  
+46 46-222 00 00

## **Satisfaction with Daily Occupations amongst asylum seekers in Denmark**

Anne-Le Morville, Ph.D., Senior lecturer <sup>1 2</sup>

Lena-Karin Erlandsson, Ph.D, Associate Professor <sup>3</sup>

Bente Danneskiold-Samsøe, M.D, D.M.Sc, Professor <sup>1</sup>

Kirstine Amris, M.D, Senior Consultant <sup>1</sup>

Mona Eklund, Ph.D, Professor <sup>3</sup>

<sup>1</sup>The Parker Institute, Department of Rheumatology, Bispebjerg and Frederiksberg Hospitals, Denmark

<sup>2</sup>Metropolitan University College, Institute of Physiotherapy and Occupational Therapy, Dept. of Occupational Therapy, Copenhagen, Denmark

<sup>3</sup>Department of Health Sciences, Lund University, Sweden

Corresponding author:

Anne-Le Morville

Dept. of Occupational Therapy

Metropolitan University College

Sigurdsgade 26

2200 Copenhagen N

Denmark

Tel.: +45 7248 7657

Email: [almo@phmetropol.dk](mailto:almo@phmetropol.dk)

## **Abstract**

**Aim:** The aim of this study was to describe asylum seekers' satisfaction with daily occupations and activity level while in a Danish asylum centre, and whether this changed over time. Another aim was to describe whether exposure to torture, self-rated health measures and ADL ability were related to their satisfaction with daily occupations and activity level.

**Methods:** 43 asylum seekers at baseline and 17 at follow-up were included. The questionnaires; Satisfaction with Daily Occupations, Major Depression Inventory, WHO-5 Wellbeing, Pain Detect, a questionnaire covering torture and basic social information were used as well as Assessment of Motor and Process Skills.

**Results:** The results showed a low level of satisfaction with daily occupations at both baseline and follow-up. There was no statistically significant change in satisfaction or activity level between baseline and the follow-up. Associations between AMPS process skills; education, worst pain and activity level were present at baseline, as was a relationship between AMPS process skills and satisfaction. At follow-up, associations between WHO-5 and satisfaction and activity level and between MDI scores and activity level were found.

**Conclusion:** Asylum seekers experience a low level of satisfaction with daily occupations, both at arrival and after 10 months in an asylum centre. There is need for further research and development of occupation focused rehabilitation methods for the asylum seeker population.

**Keywords:** occupational deprivation, torture, ADL ability, self-rated health, rehabilitation

## **Introduction**

Research within occupational therapy and occupational science research has revealed that refugees often experience occupational disruption, and eventually occupational deprivation (1), but very few studies focus on asylum seekers (2-4), who, due to their legal position, experience uncertainty as opposed to those who have gained asylum and refugee status.

During their asylum-seeking period in Denmark, asylum seekers encounter legal constraints on access to work, education, private accommodation and regular social welfare benefits, although they do have access to activities such as courses and work-like activities for limited periods of time (5). One such period lasts for 12 weeks, includes 10 hours of activities per week and can be allowed a maximum of three times during the stay in Denmark (5). As a consequence, asylum seekers often experience a loss of identity due to bereavement of earlier life roles and a well-known cultural context (3, 6, 7). Literature has shown that asylum seekers amongst other institutionalised groups such as survivors of Nazi concentration camps have deliberately used activities as a way of surviving harsh conditions (3, 8). Although the activities used had an immediate value to the person they served only as a means to forget and cope with distress (3, 8).

Limited opportunities for activities and maintaining a normal daily rhythm as well as lack of satisfaction with one's life situation might be factors that contribute to the impairment of occupational performance, and the health problems that asylum seekers experience from the time of their arrival (4, 9). Studies on asylum seekers in Denmark have been focused on medical aspects and a study showed that asylum seekers in Denmark suffer from low well-being and more health problems than the background population (9). Moreover, those who had been exposed to torture had more health problems than the others (9). In an earlier study of asylum seekers in Denmark it was shown that having been exposed to physical torture also predicted a decline in the AMPS motor

skills exhibited when performing daily occupations (4). Regarding the performance skills, especially AMPS process skills have shown to deteriorate during detention (4). Moreover, health and well-being have been found to deteriorate even further during long detentions in asylum centres (4, 10, 11).

Human occupation is closely linked to health and well-being (12-14). This is particularly true for subjective perceptions of occupations, such as satisfaction with daily occupations (15). According to occupational therapy theory, the concept of satisfaction is complementary to occupational performance and is used to describe personal evaluations of day-to-day engagement (16, 17).

Whereas findings from objective assessments of asylum seekers' occupational performance per se have been reported (4, 18), there is a lack of knowledge regarding the personal satisfaction derived from performing occupations in the asylum centre context. There is also a scarcity of knowledge regarding whether the asylum seekers' general activity level changes over time. Such knowledge would be important in order to get a fuller picture of the influence that time spent in an asylum centre has on human occupation and could be applied in for example the development of specific rehabilitation and preventive measures. Therefore, it is relevant to assess the satisfaction with daily occupations and activity level in a population such as asylum seekers who might be at risk of occupational dissatisfaction and a subsequent further decline in occupational performance, well-being and health. Since torture and health-related factors, such as physical and psychological symptoms, have been shown to influence occupational performance (4, 18), these factors might also be associated with both satisfaction with occupations and activity level.

One aim of this study was to describe asylum seekers' satisfaction with daily occupations, as well as their activity level, while living in a centre, and whether these factors changed over time.

Another aim was to investigate whether activities of daily living (ADL) skills, exposure to torture

and general health variables were associated with measures of satisfaction with daily occupations and activity level.

## **Methods**

This was a combined longitudinal and correlational study, which included a baseline measurement and a 10-month follow-up.

The local ethical committee approved the study in 2010 (KF 01-045/03). The project was also reported to the Danish Data Protection Agency.

### *Assessment instruments*

Instruments were chosen to address the phenomena targeted in the aim while also being validated with the current population. A baseline interview included a questionnaire used to retrieve socio-demographic data in terms of age, country of origin and education (years). In addition, the instruments described below were employed.

### *Satisfaction with occupations*

The Danish version of the Satisfaction with Daily Occupations (SDO) questionnaire was used to assess the participants' satisfaction with their daily occupations. It consists of thirteen items covering four different areas of daily life, i.e. work, leisure, home chores, and self-care (19, 20).

Figure 1 in here

As seen in Figure 1, each item is rated in two ways; first, the participant states whether or not he or she presently performs daily occupations within the area. The number of activities in which the

participant is engaged reflects the level of activity (0-13). The second rating indicates satisfaction with daily occupations, where the participant rates each item ranging from 1 (worst possible) to 7 (best possible). The participant is instructed to rate his or her satisfaction with having or not having the occupation on the repertoire, not the quality or outcome of the occupational performance. Both ratings were used in this study.

The Danish version of the SDO has shown satisfactory internal consistency and criterion and concurrent validity with asylum seekers (15). The SDO was administered at baseline and the follow-up.

#### *Self-rated health questionnaires*

The participants were asked at baseline whether they had been exposed to torture. A torture item checklist was developed by the authors. It consists of eight physical items (systematic beatings, suspension, falanga (beatings of the soles), forced positions, rape or other sexual assault, strangulation, electricity and other) and eight psychological items (deprivation of basic needs, isolation, sensory over- and/or under-stimulation, humiliation, witnessing torture of others, witnessing sexual assaults on others, simulated executions and other).

The following standardized questionnaires were applied at baseline and the follow-up:

*Well-being* was measured using the WHO-5 Well-being Index (WHO-5). WHO-5 is a five-item questionnaire used to calculate the risk for stress and depression (21). The raw score may range from 0 to 25 and is transformed into a scale from 0 (worst thinkable well-being) to 100 (best thinkable well-being). A raw score below 13 indicates poor well-being (21).

*Depression* was measured using the Major Depression Inventory (MDI). The MDI is a validated 10-item self-report instrument for depression that can be scored both according to a severity sum score, the DSM-IV and the ICD-10 algorithms (22). A sum score above 30 indicates severe depression,

between 26 and 30 moderate depression, between 21 and 25 mild depression and below 21 no depression.

*Self-Rated Health* (SRH) was measured by using the first item of the Medical Outcomes Scale (MOS) 36-item, short-form health survey (SF-36) (23). It gives an overall self-estimate of health and is considered a reliable and valid one-item estimate of self-rated health (24).

*Pain assessment:* current, average and worst pain was measured on 10 cm visual analogue scales (VAS) with the ends labelled 0 (no pain) and 10 (worst possible pain). In order to assess the likelihood of neuropathic pain, the Pain Detect Questionnaire (PDQ) was used (25). The PDQ is a screening questionnaire developed and validated to predict the likelihood of a neuropathic pain component being present. A validated algorithm is used to calculate a total score ranging from 0 to 38 based on the participant's answers. A total score above 18 indicates that a predominantly neuropathic pain component is likely, whereas a total score below 12 indicates that this is unlikely (25). Pain location was assessed by asking the participant to identify number of predefined body regions in pain and by filling in a body chart. Time with pain was recorded as time with pain (0-3 months, 4-6 months, 7-12 months and 12 months or more).

#### *ADL ability*

ADL ability was measured using the Assessment of Motor and Process Skills (AMPS). AMPS is an observation based ADL assessment and has been standardized on more than 100,000 individuals globally (and cross-culturally), and several studies support good test-retest and intra-rater reliability as well as validity across diagnostic groups (26).

The results of the AMPS test include the expected range of ADL measures for healthy, age-matched peers and indicate whether the person tested has ADL motor and/or ADL process scores that are within the expected range of ADL ability (26).



## **Procedure**

### *Selection of participants*

The participants were recruited through Danish Red Cross during the spring of 2011. The first author was responsible for recruiting newly arrived (< 4 weeks) asylum seekers from Afghanistan, Syria and Iran, among others which Denmark and the international community received the largest numbers of asylum seekers at the time (27, 28). Written information about the project was prepared in Dari, Arabic and Farsi and included information about voluntary participation, confidentiality of identity and of the collected data. The participants were invited to participate in the project during their initial medical screening, then referred to the first author and if interested, receive an introduction to the project. All information was given with the aid of an interpreter and final inclusion in the study was based on written informed consent.

Males and females, aged 20-50, were invited. Exclusion criteria at baseline were severe mental illness and severe physical handicap. Pregnancy in the last trimester was another exclusion criterion as it might influence satisfaction with daily occupations and activity level. Exclusion criteria at follow-up were having received refugee status or not living in an asylum centre.

### *The sample*

In all 176 asylum-seekers from the selected countries were referred to the Red Cross Centre during the recruitment period (spring 2011). Figure 2 show that 89 of these declined participation, leaving 87 eligible for inclusion. Out of these, 67 gave informed consent, but as illustrated in Figure 2, an additional 20 participants were excluded from the study for various reasons, such as e.g. moving to another centre or not showing up at appointed times. Moreover, interviews and AMPS observations

were terminated prematurely for four of the participants due to emotional reactions, limiting the total study sample for the baseline measurement to 43 persons.

At follow-up, ten participants had gained refugee status and no longer fulfilled the inclusion criteria. Another was imprisoned, five disappeared without known reasons and five had left the country. This left 22 potential participants, of which 2 refused further participation and 3 who did not turn up at appointed times, leaving 17 individuals included in the follow-up study.

Figure 2 in about here

Baseline data were collected during spring 2011 and follow-up data during fall/winter 2011/12. The first author conducted the interviews and AMPS test on both occasions. Interviews took place in an office in the asylum centres' medical clinic and the AMPS test were performed in the participants' own rooms. Interview and test duration lasted approximately two hours.

The Red Cross' telephone interpreters were available during all phases of the data collection. In order to ensure that misunderstandings due to language barriers were minimised, interpreters were on stand-by regardless of whether the asylum seeker and the interviewer were able to communicate in the same language. Use of a telephone interpreter has the advantage that the presence of a third person does not disturb the data collection during interviews and observations.

The participants took part in normal daily activities, such as taking care of their own rooms, communal kitchens and bathrooms in the centres between baseline and follow-up. Asylum centres in Denmark are usually placed in rural areas. The rooms hold two to four beds, some with a private kitchenette and a bathroom. Others have communal kitchens and bathing facilities located on each floor.

## **Data analysis**

Analyses were conducted with imputation for missing data. Two-sided statistical significance tests were used and  $p$ -values  $< .05$  were considered statistically significant. In order to analyse change from baseline to follow-up, data regarding satisfaction with daily occupations and activity level were analysed with the 'Wilcoxon Signed Rank' test.

The Mann-Whitney test was used to test for differences in demographics between participants and dropouts, as well as between the follow-up sample and dropouts. The Chi-square test was used for categorical data.

The Spearman Rank Order correlation test was used to assess if correlations between ADL ability, self-reported variables and exposure to torture were associated with satisfaction with daily occupations and activity level. Power analysis was not carried out specifically for this study, as it was part of a larger project. The power analysis was made to estimate a sample size large enough to detect differences in occupational performance between tortured and non-tortured asylum seekers, with AMPS process skills as the main outcome measure (18). Nineteen in each group was sufficient to gain a power of 0.85 to detect the targeted difference (between means of 2.0 and 1.5 logits) in ADL process ability. Due to the dropouts the present study was thus underpowered.

All statistical analyses were done applying the SPSS software, version 20.

## **Results**

### *Demographics*

Participants and non-participants did not differ in baseline characteristics regarding marital status, gender, age or education, as seen in Table I. A statistically significant difference between the participants and the group of dropouts was found regarding mean age (27 years vs. 30 years,  $p=$

.013). No statistically significant differences between groups were found regarding gender, marital status or education.

Table I in about here

At baseline, 33 (77 %) of the participants reported having been exposed to torture before arriving in Denmark. Four reported exposure to physical torture, three to psychological torture and 26 to both. At follow-up four of the remaining participants had been exposed to psychological torture, two to physical torture and nine to both. There were no statistically significant differences between drop-outs and participants at follow-up regarding number of physical torture methods ( $p=.119$ ), number of psychological torture methods ( $p=.288$ ) and of the total number of torture methods ( $p=.142$ ) the participants had been exposed to.

Frequently applied torture methods were systematic beatings, deprivation of basic needs, and suspension from limbs, forced position and isolation. All participants had experienced personal threats or threat to their families, or had in other ways been exposed to traumatic incidents.

#### *Satisfaction with Daily Occupations and activity level at baseline and follow-up*

At baseline the mean ratings (SD) were 38.9 (10.6) on the satisfaction scale and 7.9 (2.08) for activity level. Corresponding values at the follow-up were 37.25 (9.26) on the satisfaction scale and 8.56 (2.13) for activity level. There was no statistically significant difference between baseline and follow-up in measures of satisfaction ( $p=.909$ ) or activity level ( $p=.056$ ).

#### *ADL ability and self-rated health measures at baseline and follow-up*

The baseline and follow-up measures of self-rated health are described in Table II. All, but two, of the variables showed a statistically significant change, indicating a decrease in ADL ability, self-rated health and well-being and an increase in depression and pain measures. The most used AMPS tasks performed were within household activities, such as cleaning and cooking.

Table II in about here

#### *Correlations between the ADL ability, self-rated health variables and SDO variables*

At baseline, statistically significant correlations were found between AMPS process skills and activity level ( $r_s=.36$ ;  $p=.019$ ) and the satisfaction score ( $r_s=.35$ ;  $p=.021$ ). Statistically significant correlations were also observed between intensity of worst pain and activity level ( $r_s=-.32$ ;  $p=.038$ ) and education and activity level ( $r_s=.32$ ;  $p=.37$ ). No other socio-demographic or health-related variables were related with occupational satisfaction or activity level, p-values ranging between .076 and .998.

At follow-up statistically significant correlations were found between WHO-5 and satisfaction ( $r_s=.73$ ;  $p=.002$ ) and activity level ( $r_s=.77$ ;  $p=.001$ ). Statistically significant correlations were also observed between depression as measured with the MDI and activity level ( $r_s=-.57$ ;  $p=.028$ ).

No other socio-demographic or health-related variables were related with occupational satisfaction or activity level, p-values ranging between .145 and .873.

## **Discussion**

#### *Satisfaction with daily occupations and activity level*

A low level of satisfaction with daily occupations at both baseline and follow-up was observed in our study population, compared to a study sample of healthy Danes (15). Among these healthy individuals, the average rating of satisfaction with daily occupation was 54.3, which is almost 40% higher than that of the asylum seekers. Also people with severe mental illness have been found to rate their satisfaction with daily occupations better than the present sample, as shown in a Swedish study (2, 29). A shorter version of the SDO was used in the Swedish study, but transformed the scores for both samples into mean scores instead of sum scores (i.e., an average of 3 instead of 39 for the present sample) indicated that the Swedish sample with severe mental illness also scored about 40% higher than the asylum seekers. A low level of satisfaction with daily occupations was not surprising, as the selection of activities at hand in an asylum centre is very limited and often unrelated to the persons' former daily occupations (2, 3, 5). At follow-up no changes in activity level were found, although in regard to occupational performance an earlier study showed a decline in the asylum seeker group. The limited range of accessible activities in an asylum centre might cause the low satisfaction, though earlier research has shown that it is not the number of engaging occupations or time spent in the occupations that is crucial for the experience of satisfaction or self-rated health (30). However, low satisfaction with daily occupations could be a sign of imbalance in daily occupations. Because of the restrictions mentioned earlier in this paper, it is also likely that there are few opportunities for feeling engaged, challenged and competent through occupations in asylum centres. Studies have shown that when a large proportion of one's time is spent doing nothing, or when just filling time with activities that are not engaging, satisfaction with daily occupations and general well-being decrease (29, 31). Lack of occupations and daily structure has been shown to be related to negative stress, which can come from doing nothing as well as doing too much. The findings in the current study also support earlier studies showing that the activities

available in asylum centres have very little or no value, which might be due to restrictions with respect to work and education and/or the nature of the activities (2, 3).

*Satisfaction with daily occupations and the relation to health amongst asylum seekers*

Based on the limits proposed by Cohen (32), a low to moderate correlation between education and activity level was observed at baseline. It has been shown that a higher educational level is important in order to maintain health, but also for coping with traumatic experiences such as exposure to war, civil unrest and/or torture (33, 34). This capacity to cope could also be reflected in the association between process skills and satisfaction with daily occupations found at baseline. Those with higher process skills are generally better at adapting and change the environment in order to better function (26). Lack of meaning and balance in life has shown to be closely associated with low ratings of well-being and high stress levels, depression and general health, problems often seen in the asylum seeker population (9, 10). In this study we did not find any statistically significant associations between self-rated health variables and satisfaction with daily occupations at baseline. This differs from previous research on, e.g. people with severe mental illness (13, 30), women with rheumatic diseases and healthy women (31), where clear associations between health-related factors and satisfaction with daily occupations have been observed. There was an association between activity level at baseline and worst pain. Accordingly pain is often reported to be associated with a restricted range of activities (35) and pain related to loci of torture and widespread pain is a predominant physical complaint in survivors of torture (36, 37). As an association between pain location and activity level above the limit proposed by Cohen, though not statistically significant, were found at follow-up, it seems plausible that such an association also might have an influence on activity level (32, 35).

There was a change over time in the health-related variables, which has also been shown in other studies, including an earlier study on this sample (4, 10). At follow-up there were strong correlations between WHO-5 and both the satisfaction score and activity level, and between depression (MDI) and activity level, which confirms earlier findings of associations between occupational factors and well-being. Previous research has generally indicated that the association between health-related factors and activity level is weaker than that between health factors and subjective perceptions of occupation (13), but this was not the case in our follow-up. While considering the limited selection of available occupations in an asylum centre, the fact that there was a very strong correlation between WHO-5 and activity level suggests that, for asylum seekers, anything one could occupy oneself with might promote psychological well-being. Qualitative studies of asylum seekers and other institutionalised persons (3, 8, 38) confirm that they try to cope with the limitations in the environment by filling their days the best as they can, and trying to find meaning in the activities at hand. However, the results show that there are occupational challenges, due to the poor alignment between the capacity of the person, the demands of the occupation and the environment (39), and thus a need for interventions that enable not any occupation, but meaningful occupation.

#### *Methodological considerations*

Asylum seekers are difficult to follow up, as illustrated by the present study. The follow-up data were based on only 17 participants, which substantially limited the statistical power of the study. At follow-up there were non-significant associations above  $r_s = .35$ , often regarded as moderate relationships (32), between process skills and satisfaction ( $r_s = .36$ ) and between physical torture and satisfaction ( $r_s = -.40$ ). The same was seen regarding current pain and activity level at follow-up ( $r_s = .40$ ). Relationships of that size could be of importance, and further studies are needed to



investigate whether such associations can be replicated in longitudinal research based on larger samples.

This was an explorative study and the first of its kind, as studies focusing on an asylum seeker population from an occupational perspective are very few. As such, it should be seen as mainly generating hypotheses and research questions for future research.

## **Conclusion**

The asylum seekers experienced a low level of satisfaction with daily occupations, both at arrival and after 10 months detention in an asylum centre. Neither the level of satisfaction with daily occupations nor the activity level changed from baseline to follow-up. The results are supported by earlier qualitative studies which have pointed at asylum seekers' need for occupations that can lead to a more satisfactory daily life, while being in detention. Considering the meagre opportunities for daily occupations available in asylum centres in general, the strong correlations between WHO-5, MDI and the SDO variables found at follow-up suggest that in a situation with limited access to daily occupations, any activity will give some satisfaction and heighten well-being. Even though few associations were statistically significant in this study, the size of some of the non-significant associations ( $>r_s=.35$ ) signals that they need to be examined in larger studies.

The asylum seeker population is a vulnerable group, and the current results can be used as background for further development of research within this population. The asylum seeker population is in need of specific attention related to both the study of occupation and the development of occupation focused support and rehabilitation methods.

References

1. Whiteford G. Occupational issues of refugees. *Occupation for occupational therapists*: Wiley-Blackwell; 2004. p. 183-99.
2. Steindl C, Winding K, Runge U. Occupation and participation in everyday life: women's experiences of an Austrian refugee camp. *J Occup Sci* 2008;15:36-42.
3. Morville A-L, Erlandsson L-K. The Experience of occupational deprivation in an asylum centre: The narratives of three men. *J Occup Sci* 2013;20:212-23.
4. Morville A-L, Amris K, Eklund M, Danneskiold-Samsøe B, Erlandsson L-K. A longitudinal study of changes in asylum seekers ability regarding activities of daily living during their stay in the asylum centre. *J Immigrant Minority Health* 2014; Early Online 1-8
5. DIS. Conditions for asylum seekers Denmark: Danish Immigration Service; 2013 [cited 2013.04.29]. Available from: [http://www.nyidanmark.dk/en-us/coming\\_to\\_dk/asylum/conditions\\_for\\_asylum\\_applicants/conditions\\_for\\_asylum\\_applicants.htm](http://www.nyidanmark.dk/en-us/coming_to_dk/asylum/conditions_for_asylum_applicants/conditions_for_asylum_applicants.htm).
6. Bhugra D, Becker MA. Migration, cultural bereavement and cultural identity. *World psychiatry* 2005;4:18-24.
7. McElroy T, Muyinda H, Atim S, Spittal P, Backman C. War, Displacement and productive occupations in Northern Uganda. *J Occup Sci* 2012;19:198-212.
8. Nelson AMP, Wilson LH. Occupational understandings from the experiences of holocaust survivors. *J Occup Sci* 2012;19:178-90.
9. Masmans TN, Møller E, Buhmann C, Bunch V, Jensen JH, Hansen TN, et al. Asylum seekers in Denmark--a study of health status and grade of traumatization of newly arrived asylum seekers. *Torture* 2008;18:77-86.
10. Ryan DA, Benson CA, Dooley BA. Psychological distress and the asylum process: a longitudinal study of forced migrants in Ireland. *J Nerv Ment Dis* 2008;196:37-45.
11. Hallas P, Hansen AR, Støhr MA, Munk-Andersen E, Jørgensen HL. Length of stay in asylum centres and mental health in asylum seekers: A retrospective study from Denmark. *BMC Public Health*. 2007;7.
12. Law M, Steinwender S, Leclair L. Occupation, health and well-Being. *Can J Occup Ther* 1998;65:81-91.
13. Eklund M, Leufstadius C. Relationships between occupational factors and health and well-being in individuals with persistent mental illness living in the community. *Can J Occup Ther* 2007;74:303-13.
14. Erlandsson L-K, Eklund M, Persson D. Occupational value and relationships to meaning and health: Elaborations of the ValMO-model. *Scand J Occup Ther* 2011;18:72-80.
15. Eklund M, Morville A-L. Psychometric evaluation of the Danish version of Satisfaction with Daily Occupations (SDO). *Scandinavian Journal of Occupational Therapy*. 2014;21:166-71.
16. Law M, Baptiste S, McColl M, Opzoomer A, Polatajko H, Pollock N. The Canadian Occupational Performance Measure: an outcome measure for occupational therapy. *Can J Occup Ther* 1990;57:82-7.
17. Carswell A, McColl MA, Baptiste S, Law M, Polatajko H, Pollock N. The Canadian Occupational Performance Measure: a research and clinical literature review. *Can J Occup Ther* 2004;71:210-22.
18. Morville A-L, Erlandsson L-K, Eklund M, Danneskiold-Samsøe B, Christensen R, Amris K. Activity of daily living performance amongst Danish asylum seekers: A cross-sectional study. Accepted for publication in *Torture Journal* 2014.

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19. Eklund M. Satisfaction with Daily Occupations – A tool for client evaluation in mental health care. *Scand J Occup Ther* 2004;11:136-42.
20. Eklund M, Gunnarsson AB. Satisfaction with Daily Occupations (SDO): Construct validity and test-retest reliability of a screening tool for people with mental disorders. *Australian Occupational Therapy Journal* 2007;54:59-65.
21. Bech P. Measuring the dimensions of psychological general well-being by the WHO-5. *QoL Newsletter* 2004;32:15-6.
22. Bech P, Rasmussen NA, Olsen LR, Noerholm V, Abildgaard W. The sensitivity and specificity of the Major Depression Inventory, using the Present State Examination as the index of diagnostic validity. *Journal of Affective Disorders*. 2001;66:159-64.
23. Ware JE, Sherbourne CD. The MOS 36-item short form health survey (SF-36). I *Medical Care* 1992;30:473–81.
24. Bowling A. Just one question: If one question works, why ask several? *J Epidem Comm Health*. 2005;59:342-5.
25. Freynhagen R, Baron R, Gockel U, Tolle TR. painDETECT: a new screening questionnaire to identify neuropathic components in patients with back pain. *Curr Med Res Opin* 2006;22:1911-20.
26. Fisher AG, Jones KB. Assessment of Motor and Process Skills. Volume 1: Development, Standardization, and Administration Manual. Fort Collins, CO: Three Star Press; 2010.
27. DIS. Immigration: Numbers and facts 2013 (In Danish: Tal og fakta på udlændingområdet 2013) Denmark: Danish Immigration Service; 2014 [cited 2014.8.26]. Available from: <http://www.nyidanmark.dk/NR/rdonlyres/3333AA1E-0107-423F-A859-0A25BF24CFA9/0/Talogfakta2013.pdf>.
28. UNHCR. Global trends 2012: UN Refugee Agency; 2013 [cited 2013.11.7.]. Available from: <http://www.unhcr.org/51bacb0f9.html>.
29. Argentzell E, Leufstadius C, Eklund M. Factors influencing subjective perceptions of everyday occupations: comparing day centre attendees with non-attendees. *Scand J Occup Ther* 2012;19:68-77.
30. Eklund M, Erlandsson L, Leufstadius C. Time use in relation to valued and satisfying occupations among people with persistent mental illness: Exploring occupational balance. *J Occup Sci* 2010;17:231-8.
31. Sandqvist G, Akesson A, Eklund M. Daily occupations and well-being in women with limited cutaneous systemic sclerosis. *Am J Occup Ther* 2005;59:390-7.
32. Cohen J. Statistical power analysis for the behavioural sciences. New York: Academic Press; 1988.
33. Quiroga JJ. Politically-motivated torture and its survivors: A desk study review of the literature. *Torture* 2005;16:3-101.
34. Marmot MG. Introduction. In: Marmot MG, Wilkinson RG, editors. *Social determinants of health*: Oxford University Press; 2006.
35. Crooks V. Exploring the altered daily geographies and lifeworlds of women living with fibromyalgia syndrome: A mixed-method approach. *Soc Sci Med*. 2007;64:577-88.
36. Williams AC, Amris K. Pain from torture. *Pain*. 2007;133:5-8.37.
37. Williams AC, Peña CR, Rice AS. Persistent pain in survivors of torture: a cohort study. *Journal of Pain & Symptom Management*. 2010;40:715-22.
38. Bennett KM, Scornaiencki JM, Brzozowski J, Denis S, Magalhaes L. Immigration and its impact on daily occupations: A scoping review. *Occup Ther Int* 2012.

39. Townsend E, Stanton S, Law M, Polatajko H, Baptiste S, Thompson-Franson T. Enabling occupation: An occupational therapy perspective (1. ed). Ottawa, Canada: Canadian Association of Occupational Therapists; 1999.

Figure I. Sample question from the original version of SDO

The SDO is an interview-based instrument and each item has two parts. The first is fact-oriented and asks if the client does the targeted occupation. Please ask the client, and then circle yes or no. Then ask about the client's satisfaction with the occupation, regardless of whether he or she presently performs the occupation or not. Show the satisfaction scale (see below) to the client, and ask him/her to give his/her rating.

**Work**  
2. Has been in competitive or supported work or has been studying during the past two months.  
yes                      no                      ALWAYS note the satisfaction score \_\_\_\_ (1-7)\*

**Leisure**  
4. Has during the past two months participated in some kind of organized hobby or leisure occupation (e.g., sports training or a study circle) at least once a week.  
yes                      no                      ALWAYS note the satisfaction score \_\_\_\_ (1-7)\*

**Domestic tasks**  
8. Has during the past two months been doing household chores almost daily (e.g., cleaning, cooking, doing laundry).  
yes                      no                      ALWAYS note the satisfaction score \_\_\_\_ (1-7)\*

**Self-care**  
11. Performs daily self-care on a daily basis (e.g., hygiene, care of the hair, dressing).  
yes                      no                      ALWAYS note the satisfaction score \_\_\_\_ (1-7)\*

**\*The patient's satisfaction with performing/not performing the occupation is noted. The result of the performed occupation is not rated per se, but should be weighed into the satisfaction rating in case the result influences the satisfaction.**

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The satisfaction scale is presented on a separate sheet of paper and is formulated as below:

1	2	3	4	5	6	7
Worst possible						Best possible

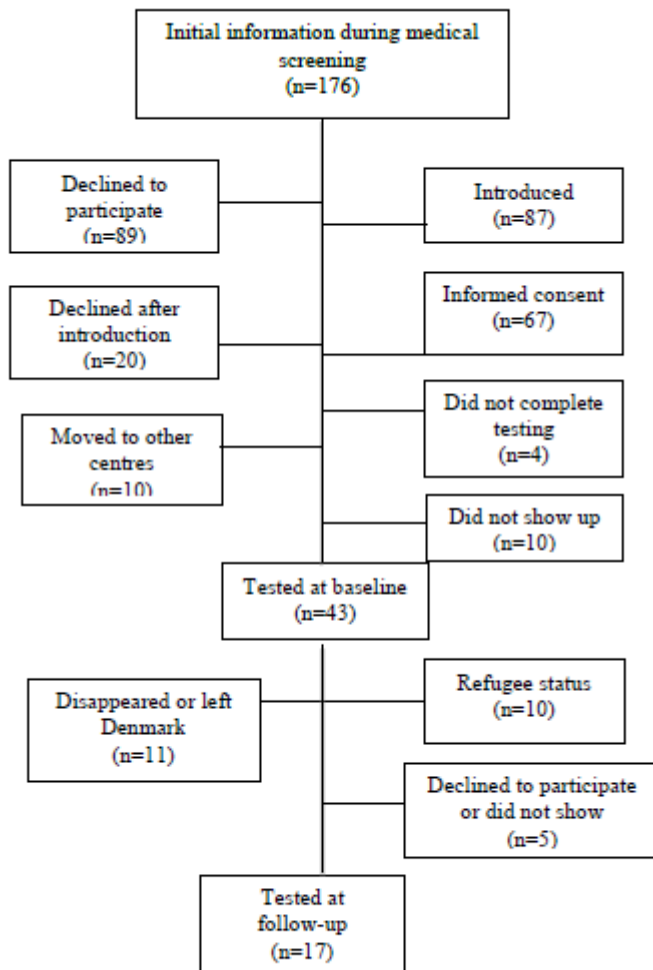


Figure 2: Flowchart of the inclusion process

## Running head: Asylum seekers' satisfaction with daily occupations

Table I.  
Differences in demographics between non-participants and participants

	Non-participants (n=133)	Participants at baseline (n=43)	Participants at follow-up (n=17)
Age (mean/SD)	31.32 (9.11)	30.05 (7.68)	27.24 (6.84)
Education (years) (mean/SD)	10 (5.0)	10.5 (5.35)	10.5 (5.02)
Marriage yes (%)	54 %	63 %	70 %
Gender male (%)	73 %	83 %	82 %

Table II.  
Changes in ADL ability and self-reported health variables from baseline to follow-up

N=17	Median (IQR)	Median (IQR)	Difference (95% CI)	p-value
Variables	Baseline	Follow-up		
AMPS motor ability	2.35 (2.04 – 2.56)	1.91 (1.36 – 2.50)	- 0.44 (-0.8 to -0.1)	0.017*
AMPS process ability	1.53 (1.25 – 1.94)	0.82 (0.64 – 1.08)	-0.71 (-1.1 to -0.3)	0.000**
WHO-5 Well-being index (Score 0-100)	36 (18 -42)	16 (6-40)	-20 (- 37.8 to -2.2)	0.025*
Major Depression Inventory (Score 0-50)	29 (22.5-34.5)	40 (31.5-42.5)	11 (2.7 to 19.3)	0.008*
Self Rated Health 1 (excellent) to 5 (poor)	2 (1-3.5)	4 (4-5)	2 (-0.8 to 4.8)	0.003*
Pain region distribution (0-4+)	1 (0 – 1.5)	2 (2 - 3)	1 (0.1 to 1.9)	0.047*
Pain Detcet Questionnaire (0-38) 1)	0 (0 - 11)	9 (0 - 9)	9 (3 to 15)	0.001*
NRS,current pain (0-10)	0 (0 - 1)	4 (0 – 6.5)	4 (1.1 to 6.9)	0.004*
NRS, average pain (0-10)	2 (0 - 5)	4 (0.50 -7)	2 (0.2 to 3.8)	0.026*
NRS, worst pain (0-10)	6 (0 – 8.5)	8 (1.25 – 9.75)	2 (-1.4 to 5.4)	0.276
Pain duration 1= 0-3 months 2= 4-6 months 3= 7-12 months 4= 12+ months	3 (0-4)	4 (2-4)	1 (-0.2 to 2.2)	0.141

