Health status of older migrants in the Netherlands: Cross-cultural validation of health scales
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General Introduction
Chapter 1

Yaşlanmanın, yüzümüzden çok aklımızda buruşukluklar yaratacağından korkarım

- Veroudering, ik vrees meer voor de rimpels in ons hoofd, dan in ons gezicht

(Hz. Mevlana)

Aging migrants in the Netherlands
Currently, in the Netherlands, the largest migrant groups are from Turkish, Moroccan and Surinamese descent, which together represent 65% of all non-Western migrants. In 2014 they formed 4.7% of the Dutch population of 55 years or older, and in 2030 this percentage will be 8.5%. Health care, especially the care for older people, should therefore prepare for this group as well.

Among first generation Turkish and Moroccan older migrants, many have a low level of education or are illiterate. In the Netherlands 70% of the Turkish and 90% of the Moroccan people 55 years and older have no formal education. These individuals are not capable of completing a written questionnaire. Also, 60% lack proficiency in the Dutch language. By contrast, Surinamese older migrants are better educated, often speak Dutch, and are more familiar with the norms and values of the Dutch.

Vulnerable older migrants
Being old and having a migrant background implies a double risk of being vulnerable in terms of socioeconomic conditions and health. Although previous research and literature are scarce, we know that rates of general health problems are higher among older migrants and present at a younger age compared to the native older population. Migrants experience poorer general health, as well as higher rates of chronic diseases such as cardiovascular diseases, and hypertension, diabetes, and depression (which in turn influence cardiovascular health).

Unfortunately, there are still areas in health care that are underexposed for older migrants. Loneliness has become an important public health concern which has serious consequences for the health of older people. It may be a characteristic sign of depression in old age. As migration is associated with psychological distress, like homesickness, loneliness might be more common among older migrants.

Regarding vascular diseases, as higher rates of cardiovascular diseases are described among migrants, they also may be at greater risk for developing mild cognitive impairment (MCI) and dementia.

Before we can ask ourselves these questions, we need to explore the available diagnostic health measurements scales which are valid for use among this specific group of older people. This brings us to the first research question of this work: Are there appropriate
scales to assess loneliness, depression and cognitive impairment among older Turkish, Moroccan and Surinamese migrants?

**Lack of cross-culturally validated health assessment scales**

The exact rates of age-related diseases are not available yet, mostly due to the lack of adequate cross-culturally validated scales. This might lead not only to underestimations but also might give rise to undertreatment of these diseases and conditions. Although problems such as cardiovascular disease and depression have remained underinvestigated in older migrants, there is an even greater lack of data regarding MCI, dementia, and the prevalence of loneliness in this population.

For adequate diagnostics and health care for the older migrant population and to conduct cross-cultural research, researchers and clinicians need to have reliable and valid health assessment scales. This is an internationally well-accepted fact, and in this thesis we will focus on the situation in the Netherlands. The Netherlands has a substantial migrant population, which suggests a great need for cross-culturally validated scales for use in this population.

To address this need the SYMBOL study (Systematic Memory test Beholding Other Languages) was conducted in older community-dwelling Turkish, Moroccan and Surinamese migrants in the Netherlands. The aims of the study were 1) to assess the prevalence of MCI and dementia in the largest non-western migrant groups in the Netherlands, 2) to give insight into other relevant health problems and (geriatric) conditions in this group, and 3) to assess specific care needs and use of care by older migrants with diagnosed MCI and dementia. Within the SYMBOL study 2550 people aged 55 years and older were assessed, including a systematic comprehensive geriatric assessment (CGA). A CGA is a multidisciplinary, systematic diagnostic process to map the overall health status of older people, including psychological, functional and social domains, which is used to develop a plan for treatment and follow up. The CGA was performed by means of an interview and cognitive testing performed using a new cross-culturally validated cognitive screening test (the Cross-Cultural Dementia screening test). Participants were recruited via general practitioners in suburbs of the Netherlands with large migrant populations.

Part of the preparatory work for data collection in the interview was the cross-cultural adaptation of national questionnaires for The Older Persons and Informal Caregivers Survey - Minimum Data Set (TOPICS-MDS).

In this thesis we focused on the cross-cultural validation of a loneliness and depression scale (one of the CGA assessment scales used in SYMBOL), and also evaluated the psychometric properties of a new dementia screening test in poorly-educated and illiterate older migrants.
Loneliness
Migrants are also vulnerable from a social perspective. Older adults are particularly vulnerable to loneliness due to the increase of multiple losses, changes, and transitions in later life. In addition, migrants are often burdened by a lack of financial resources and poor health, which limit their mobility, access to social activities, and connection with family and friends. This results in a narrowing of social relations and potentially increased likelihood of loneliness in comparison to native older individuals.
Feelings of loneliness have serious consequences for the health of older people. Despite the rapid growth in the number of older migrants in Europe, research on loneliness among this group is still rare and in an explorative stage.

Loneliness and chronic diseases
Studies in native older adults have been conducted more frequently, and have consistently reported significant correlations between loneliness and both physical and mental health problems. There is evidence that loneliness elicits a stress response. It is believed that through this and other mechanisms, loneliness may be linked to multiple chronic diseases, including hypertension. Loneliness is also associated with mental health decline, with functional decline and increased mortality. To date, there have been only a few qualitative or quantitative small-scale studies among older migrant groups. These consistently report high levels of loneliness.

However, proper cross-culturally validated loneliness scales appropriate for use in the Netherlands’ population of older Turks, Moroccans and Surinamese are not available. Therefore we cannot even be certain whether these scarce research findings provide a valid estimate of loneliness in this population.

Loneliness scale
The De Jong Gierveld Loneliness Scale (DJGLS) is a frequently used loneliness scale and has been cross-culturally validated in several countries, but only for use in natives of those countries. A study of Fokkema & Naderi reports the use of DJGLS in a study among Turks in Germany. They report good reliability of the scale, but further psychometric properties are not described in the article.

Within the SYMBOL study we translated the DJGLS into Turkish, two Moroccan languages and two Surinamese languages, and cross-culturally validated the DJGLS for use among older migrants in the Netherlands. We also provide some insight into occurrence of loneliness among older migrants.

Loneliness and mental health problems
Various studies in middle-aged and older adults have shown that loneliness is not only a risk factor for somatic problems but also for depressive symptoms. The impact of
loneliness on the later onset of depression is independent of other risk factors such as age, gender, ethnicity, education, income, marital status, social support and perceived stress. Higher rates of depression are expected among older migrants and therefore it is of interest to have a reliable geriatric depression scale for use among older migrants.

**Depression**
Depression is a common mental disorder among older people and is associated with higher utilization of in- and out-patient services and increased mortality risk. Physical limitations, chronic medical diseases and living under adverse socio-economic circumstances are important risk factors for the development of depressive symptoms and depression among older people, and especially older migrants. Altogether, multiple risk factors for depression are present among older migrants.

In the Netherlands, the prevalence of depression among native Dutch people above 55 years is 14.5%. Among migrants these numbers are even higher. Previous research found that the prevalence of self-reported depressive symptoms was around 34% for Moroccan and 61% for Turkish older migrants living in the Netherlands.

Important in these studies was that depression among people could be adequately studied after translation of generic depression scales, like the Center for Epidemiologic Studies Depression Scale (CES-D).

**Geriatric Depression scale**
The Geriatric Depression Scale (GDS) is a commonly used self-reporting questionnaire specifically developed to screen for depression in geriatric populations. To ensure that we are able to reliably measure the geriatric depressive state in our particular group of older people, as part of the SYMBOL study we cross-culturally validated the GDS for use among older Turkish, Moroccan and Surinamese people, and thus provide insight into the occurrence of self-rated depression in older migrants.

**Depression and other mental health problems**
Depression and dementia are mental health problems commonly encountered in neuropsychiatric practice in the elderly. Depression has been both proposed to be a risk factor for dementia as well as a prodrome of dementia. Compared to people who had never been depressed, those who experienced symptoms of depression in mid-life were about 20% more likely to develop dementia. We expected to demonstrate that the prevalence of dementia was higher in older migrants.

**Mild cognitive impairment and dementia**
With the aging of the population, the incidence of both mild cognitive impairment (MCI) and dementia will increase accordingly. The worldwide occurrence of dementia in 2000
was estimated at about 25 million persons \(^67\). An increase of 38 million persons is expected over the next 30 years. Dementia is an umbrella term used to describe a collection of symptoms or syndrome, associated with many subtypes of dementia. MCI is defined as the symptomatic predementia stage on the continuum of cognitive decline, characterized by objective impairment in cognition that is not severe enough to require help with usual activities of daily living \(^68,69\). The most common subtype of MCI, presents with memory impairment and is likely to progress to dementia in 10 to 15% of persons afflicted per year \(^70\).

**MCI and dementia among aging migrants**
The greatest known risk factor for dementia is advancing age. Knowing that the determinants of dementia, vascular risk factors and psychiatric disorders, occur more frequently among older migrants, the prevalence of dementia among this specific group is expected to be higher \(^71-73\). Further, the rate of “graying” of the migrant population of the Netherlands is currently higher than that of the native Dutch population, meaning that we can expect the number of older migrants with dementia to rise even more than in the general population \(^74\).

Accurate information about the prevalence of MCI and dementia among non-western migrant groups in European countries is scarce. The preliminary available research described higher prevalence rates of MCI and dementia among migrant populations in the United Kingdom (UK) and Denmark, in comparison to the native population \(^59,60,75,76\). Because migrant populations in the UK differ from the non-western migrants in the rest of Europe, the prevalence of MCI and dementia might also differ \(^77\). The Denmark study concluded that a culture-specific test would have been preferable.

**Cognitive screening**
The challenges in diagnosing dementia in older migrants are enormous. Language barriers, low education or illiteracy, and cultural barriers impede the usual cognitive assessment that is essential for diagnosing dementia \(^78-83\). Due to these barriers, cognitive testing in these groups is more difficult. Attempts at diagnosis often result in an inaccurate interpretation of the actual cognitive situation, overestimating the severity of cognitive impairment due to the minorities’ poor results on conventional cognitive screening tests. This in turn leads to possible misclassifications, due to general obstacles that are present in cross-cultural cognitive screening.

Reports of proper cross-culturally validated cognitive screening for our specific group are not available. Because of these barriers, memory clinics across Europe are currently not well prepared for diagnosing dementia or cognitive impairment in older migrants \(^81,82\). Therefore a new cognitive screening test is required. We validated the newly-developed CCD.
Outline of this thesis
The overall aim of the thesis is to improve health diagnostics for older migrants, with help of cross-culturally validated scales. Therefore the primary focus of this thesis is to translate and validate a loneliness scale and a depression scale, and to validate a newly-developed dementia screening test, the CCD, all for use among older Turkish, Moroccan and Surinamese people in the Netherlands. The secondary objective of this thesis was to give insight into the age-specific prevalence of MCI and dementia in community-dwelling older Turkish, Moroccan and Surinamese migrants in the Netherlands.

We hypothesized that a) the translated De Jong Gierveld Loneliness Scale and the GDS-15 would be reliable and valid for use among older migrants from Turkish and Moroccan descent and that the Dutch version of these scales would also be valid for Surinamese migrants in the Netherlands; b) the CCD would be a culture-fair test that could discriminate between demented patients and cognitively healthy controls; c) the prevalence of dementia for Turkish, Moroccan and Surinamese older migrants would be higher than the prevalence found in native Dutch people.

Following chapters:
Chapter 2 presents a review of the quality of the cross-culturally adapted health assessment scales for use with Turkish, Arab, and Surinamese older people. We focussed on translated scales, which assessed the psychological, functional and social domains needed in geriatric assessment and determined their psychometric properties. Chapter 3 presents the SYMBOL study protocol, in which a cross-culturally adapted comprehensive geriatric assessment, including the CCD, was used to assess the prevalence of MCI, dementia and other health problems in the largest non-western migrant groups in the Netherlands. This thesis presents the first results of the study. Chapters 4 and 5 address the cross-cultural validation of mental health scales for loneliness and depression, the DJGLS and GDS, respectively. Chapter 4 presents the psychometric properties of the DJGLS when used among Turkish and Moroccan older people. This chapter also gives some insight into the occurrence of perceived social and emotional loneliness among Turkish, Moroccan and Surinamese older migrants. In Chapter 5 we translated the GDS-15 into Dutch and five mother-tongue languages of the migrant population of the Netherlands: Turkish, Moroccan-Arabic, Tarifit (a Berber language spoken among Moroccan migrants), Hindi and Sranantongo (Surinamese languages). In this chapter the psychometric properties of the translated GDS are reported. Chapter 6 reports the evaluation of a new neuropsychological dementia screening test, the Cross Cultural Dementia screening (CCD). This test was specifically designed to circumvent linguistic, educational or literacy and cultural barriers in dementia screening in older migrants. This method could be used among older migrants living in the Netherlands and other countries which are facing these issues. Chapter 7 reports the results of the SYMBOL study with regard to the prevalence of MCI and dementia in community-dwelling older migrants in the Netherlands. This thesis
concludes with Chapter 8 in which a general discussion of the results is presented. The method of the studies will be considered and recommendations for use of the cross-culturally validated scales and future research will be made.
References

Chapter 1

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General Introduction

Chapter 1