Young adult migrants role in stimulating participation in breast cancer screening of older female family members

Müjde Durmaz
MSc Biomedical Sciences
Young adult migrants role in stimulating participation in breast cancer screening of older female family members

By
Müjde Durmaz

A Report Submitted In Partial Fulfillment Of The Requirements For The Degree Of

Master Of Science

In

Biomedical Sciences

For The Research Specialization International Public Health

At The

Free University,
Amsterdam, August 2011
Acknowledgements

This report is a product of my internship period at Pharos for partial fulfillment of my specialization International Public Health for the master Biomedical Sciences at Free University in Amsterdam. My thanks goes out to my supervisor Dr. Maria van de Muijsenberg for allowing me to do my internship at Pharos and especially giving me the opportunity to do research on such a wonderful topic. My special thanks go to my daily supervisor Dr. Karen Hosper for her excellent advice, highly pleasant guidance, supervision and suggestions about the scientific part as well as the practical part of the project. And for her support and care at certain moments, I appreciated sincerely. Furthermore, I would like to thank all young adult migrants who participated in this study for their time, hospitality and pleasant time during interviews. I would also like to thank all members of the program Effectiveness of Somatic Health care, other interns and especially students for the nice and amusing time. Finally, I would like to thank my VU supervisor Dr. Daniel Puente Rodríguez for his advice and feedback during the research project as well as in the process of writing. Last but not least, working on this project was enjoyable and very special for me, especially because of my migrant background it was a great pleasure to me for being involved in the initial phase of such a great project.

Soest, August 2011

Müjde Durmaz.
STUDENT INFORMATION

Name: Müjde Durmaz
Student number: 1803468
Email: mujde.durmaz@gmail.com
Phone: 06 54 96 12 80
Master: Biomedical Sciences (BMS)
Specialization: International Public Health (IPH)

Faculty for Earth and Life Sciences, Vrije Universiteit, Amsterdam

INTERNSHIP PLACEMENT

Organization: PHAROS, National Dutch Knowledge and Advisory centre on migrants, refugees and health
Program: Effectiveness and quality of somatic health care and prevention/chronic diseases
Address: Herenstraat 35
Postbus 13318
3507 LH Utrecht
Phone: 030 234 9800
Fax: 030 236 4560
Email: info@pharos.nl

SUPERVISORS

External supervisor:

1st
Dr. K. Kosper, K.Kosper@pharos.nl.

2nd
Dr. M.E.T.C. van den Muijsenbergh, M.Muijsenbergh@pharos.nl.

First VU supervisor:

1st
Dr. Daniel Puente Rodríguez, d.puenterodriguez@falw.vu.nl, Athena Institute.

2nd
Dr. Marjolein Zweekhorst, marjolein.zweekhorst@falw.vu.nl, Athena Institute.

Title page photo by Carlijne Pieters (student at Hogeschool Utrecht- Art Academy)
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF ABBREVIATIONS</td>
<td>7</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>8</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>8</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>9</td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>11</td>
</tr>
<tr>
<td>1.1 Problem Statement</td>
<td>12</td>
</tr>
<tr>
<td>1.2 Aim of the Study</td>
<td>13</td>
</tr>
<tr>
<td>1.3 Central Research Question</td>
<td>13</td>
</tr>
<tr>
<td>1.4 Report Structure</td>
<td>13</td>
</tr>
<tr>
<td>2. BACKGROUND INFORMATION</td>
<td>14</td>
</tr>
<tr>
<td>2.1 Breast Cancer in the Netherlands</td>
<td>14</td>
</tr>
<tr>
<td>2.2 Breast Cancer Screening Program and Attendance</td>
<td>15</td>
</tr>
<tr>
<td>2.3 Reasons for Non-attendance of Migrant Women</td>
<td>16</td>
</tr>
<tr>
<td>2.4 Turkish and Moroccan Migrants as Language or Cultural Broker/Translator</td>
<td>17</td>
</tr>
<tr>
<td>2.5 Healthcare Decisions</td>
<td>18</td>
</tr>
<tr>
<td>2.6 Utilization of Online Social Media by Migrant Adolescents</td>
<td>19</td>
</tr>
<tr>
<td>3. RESEARCH AIM</td>
<td>21</td>
</tr>
<tr>
<td>3.1 Research Question</td>
<td>21</td>
</tr>
<tr>
<td>4. THEORETICAL FRAMEWORK</td>
<td>22</td>
</tr>
<tr>
<td>4.1 The Theory of Planned Behavior</td>
<td>22</td>
</tr>
<tr>
<td>4.2 Concepts of TPB Related to Behavior of Interest</td>
<td>27</td>
</tr>
<tr>
<td>5. METHODOLOGY</td>
<td>34</td>
</tr>
<tr>
<td>5.1 Qualitative Study</td>
<td>34</td>
</tr>
</tbody>
</table>
6. RESULTS

6.1 DESCRIPTION CHARACTERISTICS OF TURKISH AND MOROCCAN PARTICIPANTS

6.2 BACKGROUND INFORMATION "BROKERING" ROLE IN HEALTH CARE DECISIONS

6.3 KNOWLEDGE

6.4 ATTITUDE

6.5 SUBJECTIVE NORM AND PERCEIVED BEHAVIORAL CONTROL

6.6 INFLUENTIAL FACTORS

6.7 POSSIBILITIES AND CONTEXTUAL BARRIERS

6.8 ATTITUDE TOWARDS BEING INFORMED THROUGH SOCIAL MEDIA

7. CONCLUSION

7.1 FINAL CONCLUSION

8. DISCUSSION

8.1 BROKERING IN HEALTH CARE DECISIONS

8.2 KNOWLEDGE

8.3 ATTITUDE

8.4 SUBJECTIVE NORM AND PERCEIVED BEHAVIORAL CONTROL

8.5 ATTITUDE TOWARDS BEING INFORMED THROUGH SOCIAL MEDIA

8.8 LIMITATIONS

9. RECOMMENDATIONS FOR THE ONLINE EDUCATIONAL CAMPAIGN

10. REFERENCES

APPENDIX I - INTERVIEW
## List of abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Attitude</td>
</tr>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>BC(S)</td>
<td>Breast Cancer (Screening)</td>
</tr>
<tr>
<td>BSE</td>
<td>Breast Self Exam</td>
</tr>
<tr>
<td>CBS</td>
<td>Central Bureau of Statistics</td>
</tr>
<tr>
<td>GGD</td>
<td>Municipal Public Health Services</td>
</tr>
<tr>
<td>GP</td>
<td>General Practitioner</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>KWF</td>
<td>Dutch Cancer Society</td>
</tr>
<tr>
<td>LHA</td>
<td>Lay Health Advisors</td>
</tr>
<tr>
<td>MHE</td>
<td>Migrant Health Educator</td>
</tr>
<tr>
<td>MM</td>
<td>Marokko Media</td>
</tr>
<tr>
<td>NETB</td>
<td>National Evaluation Team for Breast Cancer Screening</td>
</tr>
<tr>
<td>NIVEL</td>
<td>Dutch Institute for Research of the Healthcare System</td>
</tr>
<tr>
<td>PBC</td>
<td>Perceived Behavioral Control</td>
</tr>
<tr>
<td>RIVM</td>
<td>Dutch National Institute for Public Health and the Environment</td>
</tr>
<tr>
<td>ROC</td>
<td>Regional Education centre</td>
</tr>
<tr>
<td>SCP</td>
<td>Social and Cultural Plan bureau</td>
</tr>
<tr>
<td>SM</td>
<td>Social Media</td>
</tr>
<tr>
<td>SN</td>
<td>Subjective Norm</td>
</tr>
<tr>
<td>SNS</td>
<td>Social Network Sites</td>
</tr>
<tr>
<td>TPB</td>
<td>Theory of Planned Behavior</td>
</tr>
<tr>
<td>VICKC</td>
<td>Association of Comprehensive Cancer Centre</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>
List of Figures

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
</table>

List of Tables

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Participants characteristics by ethnicity and gender</td>
<td>36</td>
</tr>
<tr>
<td>2</td>
<td>Reasons or motivations for stimulating mother to attend breast cancer screening</td>
<td>57</td>
</tr>
<tr>
<td>3</td>
<td>Contextual barriers in informing mother to attend BCS</td>
<td>58</td>
</tr>
</tbody>
</table>
Summary

Background
Participation of Turkish and Moroccan women in the Dutch national breast cancer screening program is lower compared to the ethnic Dutch women. From previous studies we know that migrant children have an important role as a cultural/language broker in their parent’s use of health care. Therefore, a possible way to influence migrant women to attend breast cancer screening (BCS) might be by informing the adult migrant children about the importance of screening. We investigated the current knowledge, attitudes, social norm perceived behavioral control, influencing factors and barriers of adult migrant children towards informing and motivating their older female family members to attend BCS. In addition, we investigated their attitude towards being informed by social media in order to reach this population.

Objective
The objective of this study is to explore the level of knowledge and the attitude of Moroccan and Turkish young adult migrants towards breast cancer and breast cancer screening, and the subjective norm, perceived behavioral control, the intermediary role, but also the barriers they experience in the communication about breast cancer (screening) with their mother and other female family members. Additionally, views on the use of social media within this context will be explored.

Methods
Semi-structured interviews were held with twenty Turkish and Moroccan men and women aged 25-38 years with a mother still alive aged 50 or older. Participants were recruited through Turkish and Moroccan social networks. Interviews were held by a bilingual interviewer with a Turkish background. All interviews were recorded, transcribed and analyzed using qualitative techniques.

Results
Most participants had general knowledge about breast cancer (diagnose, treatment, risk factors), but few were familiar with the BCS program. All participants were positive about informing and motivating their mother, but less positive about informing other female family members. Compared to the other groups, young adult Moroccan men have the most negative attitude towards discussing breast cancer and motivating female family members. The main important barrier in especially the Moroccan community is that speaking about breast cancer with other female family members is perceived as a taboo. Other barriers to motivate and support mothers to attend screening were practical (distance to home, being at work) or due to unwillingness of the mother to discuss health issues or difficulties to convince their mother. Social media is perceived by most participants as an effective means for informing young migrants. However, younger and lower educated migrants prefer different types of social media compared to the higher educated and older migrants.
Conclusion

Adult children of migrant women, except for Moroccan males, are willing to inform their mother about breast cancer screening and to motivate them to attend the screening. Social media could be used to inform the young migrants, but the type of social media should differ according to age and education level. In addition, attention should be paid to the perceived barriers for motivating older female family members.
1. Introduction

One of the basic principles accepted by the Dutch state and all other state members of the United Nations in the establishment of the Constitution of the World Health Organization in 1946 is that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition (Constitution of the WHO, 1946). According to this fundamental right together with article 1 and 22 in the Constitution of the Kingdom of the Netherlands, the government is obliged to provide accessible, appropriate and effective services to all inhabitants including migrants (Grondwet voor het Koninkrijk der Nederlanden, 1815).

However, in the Netherlands equal utilization of different types of health care and services has not yet been realized for migrant groups from different ethnic backgrounds in relation to the Dutch indigenous population (Stronks et al., 2001; Uiters et al., 2006). The utilization of healthcare services is an important aspect of migrants’ access to healthcare (Norredam et al., 2009). Improving the accessibility and increasing the effectiveness and quality of somatic health care for migrants not only leads to improved health but also reduces (health care) costs (Norredam et al., 2009; Pharos 2011). Pharos, in which this internship is conducted within the healthcare program somatic health care and prevention, is a knowledge and advisory centre on refugees, migrants and health with the aim to improve the health of migrants, refugees and newcomers, and to increase the accessibility of the healthcare system among these populations. Hereby improving preventive care for migrants is an essential aspect within somatic health care (Pharos, 2011).

The attendance of women at risk particular to recommended cancer prevention programs (breast and cervical screening) is necessary for cancer control reducing death rates and greatly improving cancer patients’ survival (USPSTF, 1996; CDC 2011). However, attendance of ethnic minorities to cancer prevention programs in the Netherlands like in other European countries lower compared to the indigenous population (Uiters et al., 2006; Norredam et al., 2009). In particular, attendance to breast cancer screening is of high importance due to the high breast cancer incidence and mortality among women in the Netherlands (Visser et al., 2004; Visser and van Leeuwen, 2007). Although, first generation migrant women have lower risk of developing breast cancer compared to native Dutch women (Stirbu et al., 2006) studies have shown that breast cancer risk among migrants increases with one or two generation (Zeeb et al., 2002; Andreeva et al., 2007) and that migrant mortality rates are converging to the levels of the native Dutch population (Stirbu et al., 2006).

In the Netherlands attendance to breast cancer screening programs is lower among migrant women with Turkish and Moroccan origin compared to native Dutch women (Visser et al., 2005; Vermeer & Van den Muijsenbergh 2010). For these reasons, attendance to the national breast cancer screening program of these ethnic minority...
groups needs to be stimulated. Achieving and maintaining a high rate of attendance is crucial for the improvement of the effectiveness of the breast cancer program (Bun & Kuyper, 2000). Eventually, the intended effect of increasing participation in breast cancer screening among migrant women is a significant health benefit, reducing socio-economic health disparities and cost savings.

At pharos, the reasons behind non-attendance of Turkish and Moroccan migrant women in the Netherlands and possible measures to improve their attendance rates were investigated. These studies revealed the importance of knowledge about cancer and prevention and of the role of children in the motivation and facilitation of Turkish and Moroccan migrant women to participate in the screening (Hartman & Van den Muijsenbergh 2009; Vermeer & van Muijsenbergh 2010). According to these findings Pharos will develop an online educational campaign directed to young Turks and Moroccans using social media. Aim of this educative online intervention is to improve in these youngsters their knowledge on breast cancer and prevention, and stimulate to inform, motivate and help their family members in participating in the breast cancer screening program. It is expected that more personal approach by their children will lead to awareness and higher motivation of older migrant women to attend in the breast cancer screening programs.

1.1 Problem statement

In order to connect this intervention program adequately to these youngsters, more understanding is necessary in their behavior. If we understand their needs with regard to information on breast cancer screening, their attitude towards informing and motivating female family members, and perception towards being informed through social media about breast cancer screening, a more efficient and effective educational campaign might be developed. Otherwise, the content of the information on breast cancer screening released in the campaign might be insufficient or less effective for educating these youngsters. Furthermore, understanding their intention or motivation to inform about this topic is necessary for making predictions about what group is most suitable in this informing process, and what group needs more attention or special focus to create more accessibility among them. And in addition it is useful to gain knowledge on whether social media is effective in this educational campaign on breast cancer screening to reach these youngsters. Otherwise, it might lead to less accessible young migrants, thus less awareness on the importance of breast cancer screening which eventually might lead to a lesser extent of informing and stimulating the older female migrant population to participate. For these reasons, an explorative research study is necessary to gain knowledge about young adult migrants by interviewing young adults with Turkish and Moroccan origin between 25 – 40 years of age with different education levels and a mother above the age of 50 resident in the Netherlands.
1.2 Aim of the study

The two major aims of the current study was: first, exploring the role of young Turkish and Moroccan migrants in informing and motivating older family members to attend breast cancer screening with focus on knowledge, attitude, subjective norm, perceived behavioral control, influential factors and perceived barriers. Secondly, exploring their attitude towards being informed through social media on breast cancer screening. Findings will be used for the implementation of an innovative educational online campaign which will spread out through social media directed to younger migrants in order to inform and motivate/stimulate their mothers or other female family members to participate in breast cancer screening programs.

1.3 Central research question

The underlying objective of this project is to improve the attendance of Turkish and Moroccan migrant women to participate in the Dutch breast cancer screening program by answering the following research question: What role young adult migrants have regarding informing and stimulating/motivating their mother and other female family members to attend breast cancer screening?

1.4 Report structure

The following chapters are devoted to background information (chapter 2), research aim (chapter 3) the theoretical framework (chapter 4) and methodology (chapter 5). The results of the qualitative study are presented in chapter 6 and the conclusion 7. It ends with a discussion in chapter 8 and recommendations/suggestions (chapter 9) for the implementation of the educational online intervention campaign.
2. Background Information

Worldwide, breast cancer is the second most frequently diagnosed cancer with an estimated 1.38 million (10.9% of all cancers) new diagnosed cancer cases in both male and female in 2008 (Globocan 2008 (IARC 2008); Ferlay et al., 2010). However, the number of estimated deaths due to breast cancer is 458,000 (6.1%) for both sexes and ranks fifth as cause of death (Globocan 2008 (IARC); Ferlay et al., 2010). In 2008, breast cancer incidence as well as mortality in women was by far the top in the world comprising 23% and 14% respectively of all female cancers (Globocan 2008 (IARC); Ferlay et al., 2010). The incidence of breast cancer is much higher in developed countries of the world compared to developing countries, but mortality differs much less (Globocan 2008 (IARC); World Health Organization [WHO] n.d; Ferlay et al., 2010).

2.1 Breast cancer in the Netherlands

In the Netherlands, breast cancer is the leading type of cancer with 30.2% of all cancer cases followed by colon cancer (27.1% cases) in female in the year 2008 (VIKC, 2010). In the Netherlands, women have 13% risk to develop breast cancer (Kiemenei et al., 2008) and each year approximately 12,000 women are diagnosed with breast cancer (Visser & van Noord 2005; KWF, 2010). Approximately 75% of women in whom breast cancer is detected is 50 years or older (Visser & van Noord 2005; KWF, 2011) and have a risk of almost 3% of being diagnosed with breast cancer before the age of 60 (Kiemenei et al., 2008). In 2010, 3,213 women died as a result of the disease (CBS, 2010). The likelihood to develop breast cancer during lifetime is higher among Dutch women being one in eight compared to Moroccan (one in thirty) and Turkish women (one in twenty) (Visser et al., 2004). However, studies have shown that the risk to develop breast cancer among migrant increases with one or two generations (McCredie 1998; Zeeb et al., 2002; Andreeva et al., 2007). In a study of Stirbu et al. breast cancer mortality rates among all migrant women was significantly lower compared to native Dutch women, but increased with younger age at migration and among second generation migrants converging to the levels of the native Dutch population (Stirbu et al., 2006). The main reasons for this increase are changes in lifestyle and environmental factors (Hemminki & Li 2002).

Diagnosis and therapy in an earlier stage of the disease with a view to reducing the chance of metastases is of high importance to increase survival (American Cancer Society, 2008; Berry et al., 2005; Lee et al., 2002; Nystrom et al., 2002). Cancers that are most often cured are breast, cervix, prostate, colon and skin, if they are diagnosed early (WHO Cancer fact sheet 2011). Breast cancer screening using X-ray mammography has been demonstrated to be effective by making earlier detection possible and hereby reducing mortality (Miller et al., 1993; Otto et al., 2003; Otten et al., 2008).
2.2 Breast cancer screening program and attendance

Although the first pilot programs were launched in 1975 in the cities of Utrecht and Nijmegen, it was in 1989 when the nationwide breast cancer screening program was fully implemented in the Dutch health care system (Verbeek & Broeder 2003). The Dutch breast cancer screening program offers mammography for all women between 50 and 75 years of age invited to participate every 2 year (Den Broeder, 2008; NIVEL, 2005). The reason for including only women between 50 and 75 years is because there is no evidence for the efficacy in women below 40 or over 69 years of age (Vainio & Bianchini, 2002).

The screening program works as follow; approximately one million eligible women registered at the local municipal authorities receive an invitation letter from the regional screening organization two weeks before the exam (Bevolkingsonderzoek borstkanker Nederland, n.d.). An information brochure about the goal of the breast cancer screening from the RIVM is attached to the letter. The letter provides the date, time and location where the women are expected to be seen. If women are not able to attend on the scheduled date, they are asked to phone the screening organization in order to make another appointment. Women, who do not respond to the first letter, receive a second invitation letter and health professionals at special screening units in the local area carry out the screening. The screening organization sends suspected abnormal test results of the patient to the General Practitioner (GP). The woman receives a letter and will be asked to phone their GP. The screening organization organizes the program from planning, execution to informing GPs and women. After this phase, the role of the GP includes referring women to the hospital for further tests (when required) and to provide information on the procedure.

Moreover, the National Evaluation Team for Breast Cancer Screening (NETB) monitors the program annually, collecting data on screening outcomes from eight regional screening organizations divided all over the country (van der Maas 2001). The attendance rate for the screening program is 80%, comprising 800,000 examinations yearly. From this approximately 28%, representing 700 women with a detection of breast cancer will not die from breast cancer as a positive result of screening (Verbeek & Broeder 2003). Although the overall participation rate to the breast cancer screening is high, this number is much lower for non-Western migrants than the average participation rate. Earlier studies have shown that the participation rate for breast cancer screening programs of immigrant women with Turkish and Moroccan origin are much lower compared to Dutch women (Hartman & Van den Muijsenbergh 2009). Research of Vermeer & Van den Muijsenbergh. (2010) has shown that women born in the Netherlands had the highest attendance rate (83 %), while the lowest attendance rates were observed for women born in Turkey and Morocco (65 % and 54 %, respectively), followed by women born in Surinam (Vermeer& Van den Muijsenbergh., 2010). To express this in numbers, approximately 6.531 Turkish migrant women out of 18.661 between 50 and 75 years old have not attend breast cancer screening in the year 2010. In the same year from the 22.021 Moroccan women in the age category 50-75, nearly 10.130 Moroccan women...
have not attend breast cancer screening. However, in general a higher non-attendance rate among migrants to (breast) cancer screening programs were also observed in other European countries (Norredam et al., 2009). The low participation rate of migrant women to breast cancer screening programs together with the increasing breast cancer incidences to be expected in the near future, special attention to these women on their non-attendance is essential for diminishing further health disparities.

2.3 Reasons for non-attendance of migrant women

Several studies so far investigated the reasons and factors behind the low participation rate of migrant women to screening programs in the Netherlands. Higher age (Visser et al., 2005) and demographic factors, such as socio-economic status, low level of education (Van der Velden et al., 1999; Lale et al., 2003; Hartman & Van den Muijsenbergh 2009), low income and having no partner (Petri et al., 2004; Lale et al., 2003; Hartman & Van den Muijsenbergh 2009) have been shown to be associated with low attendance rates among these women.

In a study of Hartman & Van den Muijsenbergh in 2009, conducted by Pharos, the reasons for non-attendance to breast cancer screening program of Turkish and Moroccan migrant women living in the Netherlands have been investigated (Hartman & Van den Muijsenbergh 2009). Results from this qualitative study showed that the main reasons for not attending the breast cancer screening was lack of knowledge and awareness of the value of the breast cancer prevention program among these women and other relatives who usually informed and encouraged them (Hartman & Van den Muijsenbergh 2009). Secondly, language barriers caused by illiteracy and insufficient language proficiency were mentioned as reasons for low attendance, and the invitation letter written in Dutch language was also a barrier for the literate women who only could read and write in own language (Arabic or Turkish (Hartman & Van den Muijsenbergh 2009). Informing and encouraging each other was also depended on the awareness of one or more persons within these groups of women about the importance and value of undergoing breast cancer screening (Lale et al., 2003). Research from these studies also revealed the importance of the role of children from Turkish and Moroccan women functioning as a language and cultural broker by informing, creating awareness, motivating and facilitating their mothers or other female family members to participate in the screening (Hartman & Van den Muijsenbergh 2009; Vermeer & Van den Muijsenbergh 2009). Finally, Moroccan women were more ashamed and showed more fear (taboo) towards breast cancer (Hamelinck 2009).

In addition to the results of this qualitative study Vermeer 2009 and Hamelinck 2009, investigated in their master report the role of involvement of general practitioners, Migrant Health Educators (MHEs) and Lay Health Advisors (LHAs) in the education and motivation of Turkish and Moroccan women about this topic. Unfortunately, little involvement of these key figures were observed, however they showed a willingness to play a role (Vermeer 2009; Hamelinck 2009). Findings from these studies suggested for a more sustainable and effective manner for informing migrant women, and for this reason the present study evolved.
2.4 Turkish and Moroccan migrants as language or cultural broker/translator

The Turks and the Moroccans share similar migration histories, as well as similar socioeconomic and religious backgrounds (Crul & Doomernik 2003). The education level of Turkish and Moroccan aged between 15 to 65 years old is lower compared to the native Dutch population (CBS.c, 2010). Studies have shown the importance of children's contributions to the functioning of families in the form of work contributions by doing chores or household work (Crouter et al., 2001; Goodnow 1998). However, the most striking examples of children's contributions to the family is among youth from migrant families (Parke et al., 2005). In a study conducted by Valenzuela in 1999 in the USA it was shown that youth as second generation migrant acculturate faster to their new environment and acquire the language easier than their parents and grandparents (Valenzuela 1999). Because of the fast understanding of their new cultural setting, they are expected to become language and cultural brokers or translators for their parents, younger siblings, peers and other family members (Orellana et al., 2003). This is one of the common types of assistance that children provide contributing to the acculturation process of their parents (Parke et al., 2005; Valenzuela et al., 1999). Hereby, being male or female and being eldest or the youngest sibling in the family play a role in brokering. In a study with Latin youth in the USA, females and eldest siblings reported brokering more than males and youngest siblings (Buriel at al., 1998) who is supported with additional research on this field (Orellana et al., 2003; Valenzuela 1999). Moreover, brokering is shown to be less demanding when distributed across siblings rather than one single child, especially in large families (Chao 2006). Documents that language brokers usually translate and interpret include notes and letters from school, bank/credit card statements, immigration forms, and job applications (De Ment & Buriel, 2005; McQuillan & Tse, 1995; Orellana, 2003; Valenzuela, 1999; Weisskirch, 2005; Weisskirch & Alva, 2002). Though, less brokering of their children is required for parents who are higher educated and fluently speak the native language, and of families with both parents (Chao 2006). To add, migration at a younger age leads to more acculturation and language proficiency in later years, and thus children of these migrant families have a less brokering role. (Chao 2006).

2.4.1 Effectiveness of informing in own language

In Hartman and Van den Muijsenbergh (2009), women reported that education should be provided verbally and in the native language. For these reasons, Hartman and Van den Muijsenbergh (2009) have suggested that involvement of Migrant Health Educators (MHEs) in the education and motivation of Turkish and Moroccan women could improve breast cancer screening uptake. In Lale et al. (2003), women stated that the availability of an interpreter could raise participation rates. Furthermore, Hartman and Van den Muijsenbergh (2009) have reported that women would also be better reached if written educational materials were provided in their own language. This all suggest that informing in own language will be highly effective in the attendance of migrant women to breast cancer screening.
2.4.2 Defining the age limits for brokering in breast cancer screening

The first-generation Turkish and Moroccan migrants in the Netherlands are low educated, have a lower SES and low health literacy (Kreuger et al., 1999; Van der Velden et al., 1999). Therefore it is expected that for them more brokering is required by their children. Nevertheless, there are only a few projects in the Netherlands in which the brokering role of migrant children is used in healthcare decisions, but in the field of breast cancer screening uptake there is none. The current research is initiated for exploring the possible role of young adult children of Turkish and Moroccan migrants in breast cancer screening promotion. In order to increase the chance to include migrant children with a mother between the age of 50 and 75 years, it was chosen to include only those migrants between 25 and 40 years of age with a mother belonging to the given age category. The reason for this was that mothers in the age category of 50-75 receive the invitation letter for breast cancer screening. Given that most children with a mother in her early fifties are mostly above the age of 25, the under age limit have been defined. By the same token, the upper age limit of 40 was decided by including elder aged mothers reaching the age of seventy-five. The purpose to include children with a mother between 50 and 75 years and so had received the invitation letter was for exploring whether they had read the letter and to see any differences in their acquaintances on breast cancer screening with and without reading the letter. In the Netherlands, the number of young adults with Turkish and Moroccan origin for the age group 18-40 years is in total 287,873 in the year 2010 (CBS.a, 2010). However, the number of Turkish young adults in this age category is higher than the Moroccanes, namely 155,972 and 131,901 respectively (CBS.b, 2010). And as previously described, the number of elderly women between 50-75 years of age of Moroccan origin is higher in contrast to Turkish migrant women in the same age category. Considering these facts, the number of young adult Moroccan migrants against the elderly migrant women is proportionally lower compared young adults and women aged between 50 and 75 of Turkish origin. This indicate, that in order to achieve a higher uptake of Moroccan women to BCS, its necessary to reach a larger group of Moroccan young adults as much as possible.

2.5 Healthcare decisions

In medical/health care decisions, role of migrant children are large enough for not being underestimated. They schedules appointments with family’s doctor, serve as translator for parents during doctor’s visits and consult parents in private when making medical decisions (Orellano et al., 2003). In a study of Washington et al. among Latino migrants in the USA which are comparable with migrant populations in the Netherlands where difficulties like insufficient language proficiency exist, it was shown that in mother–adult daughter communication daughters influenced their mothers’ choice of health care practitioner as well as when to seek care and how often to visit a health care provider. In some cases, their influence was aided by their ability to fluently speak the native language (Washington et al., 2009). Interestingly, in the study of Sinicrope and colleagues, mothers played an opposite role in providing advice to their adult daughters on what they should do to prevent breast cancer especially when cancer risk was high within the family (Sinicrope et al., 2009). From this we could understand
that mother-daughter communication and related decision making could be important factors to create awareness about breast cancer (Sinicrope et al., 2009). It is expected for this reason that daughters of migrants would show more willingness to inform other women about breast cancer screening then men. However, to find out the possible role of young adult male migrants on this topic on informing about breast cancer screening both sexes are included in the present study. Equally important to include male as well as female young adults is that eventually the online educational campaign will be directed to all migrant children regardless of gender and age. Moreover, in a Dutch survey more than half of the youth who visited the website Marokko.nl indicated that they themselves were most appropriate for informal care (in Dutch known as ‘Mantelzorg’) for their parents (Gomes C. and Moha. A., 2007). This is relevant because it shows that children of migrants do care about their parents’ health and wellbeing, and that they feel responsibility towards the care of their parents. For this reason, in the year 2008 under direction of Marokko Media (MM), an online informative webpage (in Dutch named as zorgvoorjouder.marokko.nl) was launched with the aim to provide support to young Moroccan informal care providers with the underlying purpose to diminish health gaps of first generation Moroccans (Marokko Media, 2008). So we see that informal care takers of Moroccan migrant families are informed and guided by their children on several common health problems in this community like diabetes and overweight. From this we could understand that support, care and informing by members of the family is of great importance in migrant families, especially for first generation migrants. Family might be important in informing about breast cancer screening and a highly effective way in stimulating and encouraging elderly first generation migrant women to attend screening. Previous research on emotions evoked by memorable breast cancer messages and their association with prevention and detection behaviors showed that friends and family are important sources of memorable messages about breast cancer (Smith et al., 2010). These research findings are valuable and contribute for using migrant children in the online health promotion campaign on breast cancer screening. The online health promotion campaign who will be spread through social media on platforms which are mainly visited by the two migrant populations of interest is for this reason considered as an useful tool for reaching these two groups of young adult migrants.

2.6 Utilization of online social media by migrant adolescents

In the project “social media as a tool for increasing participation of migrant women to breast cancer screening” which will be carried out under direction of Pharos and is going to be financed by Achmea and KWF Kankerbestrijding is the utilization of internet of great importance. The access to internet of non-western migrants in the last 10 years increased substantially and with a percentage of 96% it is even higher than the native Dutch population being 93% (Sleijpen; CBS 2009). Following this growth, the use of social media or social network sites (SNSs) applications have also been increased steadily over the past years (Ellison et al., 2009). Native youngster are visiting Dutch websites more often than Moroccan youth (around 63%), though this number
is much lower among Turkish youth. They are visiting often sites of their own culture, but this number is only 8% (SCP, 2006).

Motivation, a researchdesk, investigated the popularity of cultural websites (e.g. Marokko.nl, hababam.nl, etc) among a group of 800 immigrants aged between 13 and 65 year. Results have shown that almost 30% of the Moroccan community in the Netherlands visit at least once a week Marokko.nl and 24% even daily which counts for 50,000 visitors each day (Motivaclon, 2007; Marokko Media, 2008). Moroccan discussion forums are very popular among Moroccan youth. It is a place where they can meet others Moroccans and share knowledge about each other views. These discussions are mainly about religion and identitiy, but love and current situations in the news are the most popular discussion topics, where it always indirectly refer to islam and taboes in the islam (Nijntjes & Wijma, 2006). Discussions about health related topics also takes place for example topics about cancer were mentioned several times to be very helpful and moderators were asked to make a topper(a topic which always remains at the top of the forum, so continuously visible) of the topic. It was also observed that topics about breast cancer attract much attention and empathy towards the topic-starter by the members (Marokko Media, 2010). In contrast, Turks do not visit comminity webpages often compared to Moroccans (SCP, 2006). The website lokum.nl is the most visited website in the Netherlands by 18% of Turks. All in all, social media takes an important place in the lives of young migrants and the fact that internet have become an important tool in health promotion campaigns in the last decade (Goske et al., 2008) we may suggest that utilization of social media in the promotion of participation to breast cancer screening will be highly effective.

For these reason, it is necessary to gain insight and create an overview of which social media web pages young adults of both migrant groups prefer most to be informed. This is important for reaching both groups effectively in the online social media campaign. In this report, a small part of the questions are dedicated to the views on the use of social media in the promoting attendance to breast cancer screening.
3. Research aim

The two major aims of the current study was: first, to explore the role of young Turkish and Moroccan migrants aged between 25-40 years with different education levels in informing and motivating older family members to attend breast cancer screening with focus on knowledge, attitude, subjective norm, perceived behavioral control, influential factors and perceived barriers. Secondly, their attitude towards being informed through social media was investigated. Findings will be used for the implementation of an innovative educational online campaign which will spread out through social media directed to younger migrants years in order to inform and motivate/stimulate their mothers or other female family members to participate in breast cancer screening programs.

The underlying objective of this project is to improve the attendance of Turkish and Moroccan migrant women to participate to the Dutch breast cancer screening program by improving the knowledge and attitude of the younger migrants.

3.1 Research Question

What is the role of young adult migrants with regard to informing and stimulating/motivating their mother and other female family members to attend breast cancer screening?
4. Theoretical Framework

The present study is a needs assessment study, which is the first step of the intervention mapping technique. This technique is a six step protocol for planning and developing effective behavior change interventions applied mostly in health promotion programs which should not be confused with a theory or a model. It starts with recognition of the need or problem and ends with the identification of a solution (Bartholomew et al., 2001). In this first step of the intervention mapping technique the aim is to "get to know," or begin to understand the character of the community, their needs, and their strengths. This is in purpose for planning and implementing the intervention adequately to the needs of the community for ultimately reaching the population of interest properly (Bartholomew et al., 2001). Within this, the theory of planned behavior (TPB) of Icek Ajzen (1985) was utilized to predict and explain the intention of informing and stimulating/motivating behavior of Turkish and Moroccan young adult migrants of their mother or other female family members to attend breast cancer screening. The reason to chose for the TPB was that this theory predict and explain the intention to perform or not to perform a particular behavior with high accuracy (Ajzen, I. 1985). Using the concepts of the TPB, an exploration and prediction can be derived about Turkish and Moroccan young adult migrants informing and stimulating/motivating behavior about breast cancer screening program.

To understand how the theoretical framework for this study was developed, a brief introduction to the concepts of the TPB will be given and it will be explained how this is applied to the current study.

4.1 The theory of planned behavior

The theory of planned behavior is a theory which predicts deliberate behavior, because behavior can be deliberative and planned. The TPB was proposed by Icek Ajzen in 1985 as an extension of the theory of reasoned action and is one of the most predictive persuasion theories (Ajzen, I. 1985). Since then the model has been widely used in various social psychology studies for explaining and changing health-related behaviors for example, exercising, using condoms for AIDS prevention, using illegal drugs, wearing a safety helmet, and many more as described in several literature reviews about campaigns, educative programs and other different fields (Ajzen 1991; Sutton, 1998; Blue, 1995; Armitage & Conner, 2001; Hagger, Chatzisarantis, & Biddle, 2003; Ajzen & Fishbein, 2005). It is a very powerful and predictive model for explaining human behavior (Sutton 1998). Furthermore, it also help to explain why advertising campaigns merely providing information do not work, implying that increasing knowledge alone does not help to change behavior very much (Ajzen and Sexton 1999).

TPB has been also employed with evaluative purposes. The study of De Wit, Kok, Timmermans, and Wijnsma (1990), evaluated the effectiveness of a health education program designed to promote condom use that was developed by Dutch Educational Television. Secondary-school students completed questionnaires at two time-points. In the intervening period half the students were exposed to the AIDS health education program, and the other half were not. Condom use intentions were significantly predicted by attitudes towards condom use,
subjective norms concerning condom use, and the perceived effectiveness of using condoms. However, although exposure to the program increased knowledge about, it had little effect on these antecedents of intentions or on the intentions themselves. Such findings are consistent with the TPB in the sense that there is no reason to believe the mere provision of information about a behavior will affect intentions or behavior unless the underlying behavioral, normative or control beliefs about the behavior are changed. Even where an intervention is not successful, application of the TPB can enlighten on why it is not successful. A considerable strength of the TPB as a tool for designing effective interventions is the fact that—provided the necessary preliminary research has been carried out—it enables health educators to devise focused interventions (De Wit et al., 1990). This is relevant, because playing into the needs and behavior of the community of interest is essential in achieving and maintaining an effective intervention program.

Whether a particular behavior will be expressed depends on several factors (described below). The strength of the intention (motivation) of an individual to perform that particular behavior under consideration depends on the degree of favorableness of the attitude towards the behavior, on when people believe that most respected others would expect them to perform the behavior or are themselves performing the behavior (subjective norm) (Ajzen, I. 1985) and the perception that one has or does not have the capacity to carry out the behavior referred also as self-efficacy (Bandura, 1977) or perceived behavioral control (Ajzen, I. 1991). Other variables (demographic, socio-psychological and structural) can also influence an individual's behavior. Furthermore, the three main concepts prior to intention described above, namely attitude, subjective norm and perceived behavioral control influence each other too. For example, the social norm within a community influence a persons' attitude towards informing and eventually affecting his/her intention to perform or not to perform this behavior.

Next, we elaborate the six central concepts of the TPB and afterwards we operationalize them within the framework of the current research. These concepts of the TPB are intention, subjective norm, attitude, perceived behavioral control, knowledge and other influential factors and barriers. In addition, past behavior and social media have been explored separately. First, we will start with the elaboration of language brokering in relation to past behavior.

4.1.1 Language brokering in relation to past behavior
As described earlier, children from ethnic minority groups are expected to become language and cultural brokers or translators for their parents, younger siblings, peers and other family members (Valenzuela et al., 1999; Orellana et al., 2003; Parke et al., 2005). They interpret various documents (De Ment & Buriel, 2005; McQuillan & Tse, 1995; Orellana, 2003; Valenzuela, 1999; Weisskirch, 2005; Weisskirch & Alva, 2002) schedules appointments with family’s doctor, serve as translator for parents during doctor’s visits and consult parents in private when making medical decisions (Orellano et al., 2003). This brokering or translating behavior of children occurs highly often in certain migrant families (Chao 2006). The repeated performance of a behavior along with a
stable context have shown to result in the formation of a habit, and behavior at a later time occurs at least in part habitually, without the mediation of beliefs, attitudes, or intentions. Once a habit has been established, initiation of the behavior is said to come under the direct control of external or internal stimulus signals (Ouellette & Wood, 1998; Bargh & Chartrand, 1999). In the presence of these stimuli, the behavior is assumed to be automatically activated (Bargh et al., 2001). These finding implies that a measure of intention should be a good predictor of relatively novel or unpracticed behaviors, but it should lose its predictive validity when it comes to routine or habitual responses in familiar situations. However, meta-analysis based on several data sets dealing with a behavior that can be performed frequently (e.g., seat belt use, coffee drinking, class attendance) or infrequently (e.g., flu shots, blood donation, nuclear protest) showed that prediction of behavior from intentions was found to be quite accurate for both types of behavior which was in contrast to the habit hypothesis (Ouellette & Wood, 1998). Nevertheless, the theory assumes that, after repeated opportunities for performance of a given behavior, deliberation is no longer required because the intention to perform (or not perform) the behavior is activated spontaneously in a behavior-relevant situation (Ajzen & Fishbein, 2000). Implied that the behavior has become so routine that it is initiated with minimal conscious effort or attention. For this reason, the brokering or intermediary behavior role of migrant children in the past in relation to informing or translating various documents could be seen as an antecedent of later behavior. However, it should not be assumed as automatically or unconsciously activated behaviors (habitual) without prior intentions, but as spontaneous activated intentions without much conscious effort. Therefore, adding past behavior as a predictor to the TPB model might enhance the relation between prior and later behavior and thus the prediction of both intention and behavior, because this is often not fully mediated by the predictors of the TPB (Albarracin et al., 2001; Conner & Armitage, 1998; Ouellette & Wood, 1998). And according to Ajzen, the correlation between past and later behavior is an indication of the behaviors’ stability or reliability, and it represents the upper limit for a theory’s predictive validity (Ajzen, I. 1991). The fact that past behavior significantly moderated the intention–behavior (Lambert & Manstead 2005) is especially for this reason relevant within the context of the study. For this reason, the concept of past behavior of brokering has also been included in the background variables of the TPB model.

4.1.2 Knowledge
Knowledge is the ability to recall or recognize something such as a fact concept, principle or custom (Kalua, 2001). It is further stated that knowledge can be acquired through formal or informal settings either by the help of someone or alone. Knowledge is said to be a source of power necessary for everyone to make informed decisions about one’s health and participate actively in promoting health of the community (Kalua, 2001). Ajzen regarded knowledge as a foundation on which attitudes, subjective norms, and perceived behavioral control are built. Meaningful knowledge positively influences attitude formation because of the recipient’s comprehension of health facts. It is positive attitude formation which leads to positive behavior (Ajzen, I. 1985). On the contrary, superficial knowledge leads to misconception of facts and development of negative attitudes. Negative attitudes
result in practicing harmful behavior (Bedworth & Bedworth, 1992: cited by Kalua, 2001). There is evidence supporting the notion that amount of knowledge is associated with attitude-behavior consistency (Ajzen 1991).

4.1.3 Attitude
The first antecedent independent factor determining or predicting intention is the attitude toward the behavior and contains instrumental (e.g., desirable–undesirable, valuable –worthless, positive-negative) as well as experiential (e.g., pleasant –unpleasant, interesting–boring, like-dislike) aspects (Ajzen & Driver, 1991; Crites, Fabrigar, & Petty, 1994), and attitude measures that contain items representing these two sub-components. This behavior could be people, objects and ideas (Zimbardo et al., 1999). Research shows that attitudes have an important function by helping us for example in making rapid assessments (Armitage & Conner, 2000). However, a problem that existing attitudes entail is that we are narrower in our views, biased in the way we interpret new information and we will resist more to change (Ajzen & Fishbein, 2005). Attitudes influence behavior, though human behavior not always represent the attitudes they have (think of social desirability behavior) (Ajzen, I. 1985). Research has shown that the theory of planned behavior and attitude functions can provide more theoretical explanation and precise practical guidance regarding behavioral prediction in health campaigns. For this reason it is important that campaign planners consider the use of more-detailed attitude constructs (Wang 2009). However, the relative importance of attitude, subjective norm, and perceived behavioral control in the prediction of intention is expected to vary across behaviors and situations (Armitage & Conner 2000). In some applications it may be found that only attitudes have a significant impact on intentions, in others attitudes and perceived behavioral control are sufficient to account for intentions, and in still others that all three predictors make independent contributions (Ajzen, I. 1991). The current research will focus merely on attitude, because considering the intervention program it is necessary to explore whether young adult migrants have a positive or a negative attitude towards informing older female family member on breast cancer screening.

Each of the mentioned component antecedent to intention also have prior determinants. Attitudes toward a behavior are a function of behavioral beliefs about the perceived consequences of behavior. It is based upon two perceptions: the likely consequences of an outcome occurring as a result of performing the behavior and the evaluation of that outcome (Ajzen, I. 1985).

4.1.4 Subjective norm
The second antecedent of intention is a social factor named subjective norm; it refers to the perceived social pressure to perform or not to perform the behavior (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). The behavior of people are often guided by existing social norms within society (Fishbein et al., 1992).

Subjective norm is a function of normative beliefs, which represent normative expectations of specific others about whether one should or should not engage in a behavior. The subjective likelihood that specific salient groups or individuals (referents) think the person should perform the behavior gets stronger when the person is motivated to comply with that referent’s expectation behavior (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980).
4.1.5 Perceived behavioral control
The third predictor of behavioral intention is perceived behavioral control, it refers to the perception of an individual about the extent in which performance of a certain behavior is easy or difficult (Ajzen, I. 1988). The perception of a particular behavior is assumed to reflect past experiences as well as expected difficulties and obstacles (or barriers). Research shows that the higher the perceived behavioral control, the greater the chance that you get a desired outcome. This is because people with a high degree of perceived behavioral control tackle a problem faster, put more effort, are less likely to give up and thus ultimately more likely to succeed (Cheung & Chan 2000). Perceived behavioral control has direct and indirect influence on behavior. When the degree of perceived behavioral control is high, then there is an indirect link between perceived behavioral control and behavior through intention. When there is a low degree of perceived behavioral control, then a direct relationship between perceived behavioral control and behavior is shown (Ajzen & Madden, 1986).

The perceived behavioral control is influenced by control beliefs concerning the presence and accessibility to the necessary resources and opportunities to perform the behavior in a successful manner. This is weighted by the perceived power of each factor to facilitate or inhibit the execution of the behavior (Madden et al., 1992).

4.1.6 Influential factors
Internal control factors (e.g. information, personal deficiencies/traits, communication skills, abilities, emotions, concern on mothers’ health) also known as personal factors, and external control factors encompassing environmental (e.g. social media exposure, barriers, opportunities) and demographic factors (e.g. age, gender, ethnicity, education, income, religion) all have influence on a persons’ attitude, subjective norm and perceived behavioral factor (Conner & Norman 2005). In the context of the theory of planned behavior, such factors (personal, environmental and demographic) are considered background variables that only influence behavior indirectly by affecting behavioral, normative, and control beliefs. These background variables can point towards potentially relevant factors to be considered, but by themselves they do not provide an explanation for observed differences in behaviors (Ajzen & Manstead 2007).

4.1.7 Possibilities and contextual barriers
The role of migrant children in informing, creating awareness, motivating and facilitating their mothers or other female family members to participate in the screening was revealed earlier (Hartman & Van den Muijsenbergh 2009; Vermeer & Van den Muijsenbergh 2009). These behavior of children from migrant families arise from their intention or motivation towards the given object, person or idea. According to TPB, the most direct and important predictor of behavior is the intention to engage in that particular behavior (Ajzen, I. 1985). Intention is the motivation of a person to behave in a certain way and which possibilities someone is perceiving to behave in that way. It shows how far one is willing to try according to what reasons or motives, which could be a conscious plan or decision and how much time and effort a person is willing to spend to perform the behavior (Fishbein & Ajzen, 1975). Intention is the immediate antecedent of actual behavior and there are three antecedent independent
factors determining or predicting intention: attitude toward the behavior, subjective norm, and perceived behavioral control (Ajzen, I. 1985).

On the opposite, there are perceived or objective barriers which in presence could inhibit and in absence allow to perform a specified behavior or their desired goal status on that behavior. In the theory of planned behavior barrier is defined as a perceived effect of each condition in making behavioral performance difficult or easy (Ajzen & Fishbein 1975). This could be a person’s estimation of the level of challenge of social, personal, environmental, and economic obstacles (Ruelaz et al., 2007).

4.1.8 Attitude towards being informed by social media

According to Kaplan and Haenlein there are six different types of social media: collaborative projects (e.g. Wikipedia), blogs and microblogs (e.g. Twitter), content communities (e.g. Youtube), social networking sites (e.g. Facebook), virtual game worlds (e.g. World of Warcraft), and virtual social worlds (e.g. Second Life) (Kaplan and Haenlein, 2010). It is an powerful tool which is used in various fields and for different purposes by millions of people to converse and to connect (Social media, 2011). For these reasons, it may also be a valuable and effective way to communicate health information to young adult migrants in an effort to promote attendance to breast cancer screening of their mothers. In the context of the intervention, we here define social media as the use of forums, blogs, and social networking sites (SNSs).

4.2 Concepts of TPB related to behavior of interest

The conceptual framework see figure 4.1 used for this study which is the modified model of the theory of planned behavior of Ajzen 1991. The most direct antecedent of behavior is the intention to engage in that particular behavior. The three antecedents of intention are the attitude (A), subjective norm (SN) and perceived behavioral control (PBC). In this model of the Theory of Planned Behavior, these three antecedents of intentions are each affected by various background variables. These background variables include; influential factors, knowledge, and the role of young adult migrants as a language broker (past behavior). However, performing this informing behavior could be disturbed or inhibited by some contextual barriers like distance, being employed etc.

The concept of attitude towards the informing behavior on BCS is more general and thus it has been separated in different topics and measured as a single behavior, namely; attitude towards cancer, attitude towards prevention, attitude towards breast cancer, attitude towards communication about cancer, attitude towards communication about breast cancer with parents or family and attitude towards informing or motivating mothers or other female family members to attend breast cancer programs. In addition, the attitude towards being informed through social media have been explored which will be discussed separately than the other attitude ideas and objects. The main focus of this report was to explore the attitude and for this reason less emphasis on the concepts SN and PBC has been put. From the background variables, the operationalization of knowledge have been performed in more detail compared to the other two background variables (other influential factors and past behavior of brokering).
The operationalization of each concept of the modified TPB used for this research will be explained below in more detail.

**Figure 4.1** Modified conceptual framework of Theory of Planned Behavior (Ajzen I. 1991). Understanding the possible role of young adult children of Turkish and Moroccan migrants in stimulating participation in breast cancer screening of older female family members.

### 4.2.1 Language brokering in relation to past behavior

The language brokering or intermediary role of migrant youth in healthcare decisions of their mother can be perceived as a past behavior, and in some cases as a still persisting behavior varying in time and frequency. This past behavior of young adult migrants is questionable in relation to past communication with their mother about her health issues, and when this occurs. And whether this is also the case after each mother's hospital or GP visits. Furthermore, comprehension about personal experiences when functioning as translator during GP visits, and efforts in the sense of carrying out this job are necessary to understand their brokering role in more detail. Hereby, identifying earlier experienced difficulties of young adult migrants in the informing and/or assisting process of their mother in health care issues is of major importance. It may reveal barriers which can also be influential in the informing behavior about breast cancer screening. On the other hand, factors contributing to involvement or brokering role of young adult migrants are also essential to know, because this might help in identifying motivating factors or possibilities which might also be relevant for informing about breast cancer screening. All in all, information about their past behavior might be highly valuable in understanding and predicting the informing behavior of young adults on breast cancer screening.
4.2.2 Knowledge
The level of knowledge will be defined as none-, low-, some-, and high-level of knowledge on breast cancer and breast cancer screening. In the assessment of knowledge about breast cancer, the following major topics are questionable: sign and symptoms, risk and causative factors, treatment, incidence and recovery. For the assessment of knowledge on breast cancer screening the acquaintance with the program (for who it is intended and to what age group), and purpose, but also the advantage of the screening is questionable. In addition, the views of young adults about mothers’ or fathers’ acquaintance with the program is also beneficial to know. This is important for revealing the acquaintance with the invitation letter of both sides. Furthermore, the source of information about cancer in general, which could be through television, school, internet etc., is important to know in order to create a better overview of their level of knowledge and types of sources used in acquiring information. Knowledge, might depend, for example on the level of education and family history about cancer. Last, whether the acquired information on breast cancer screening will affect their attitude towards breast cancer screening is also questionable for a more direct answer.

4.2.3 Attitude
In order to understand the influence of attitudes on behavior, we must distinguish between two types of attitude. The first type are general attitudes toward physical objects, racial, ethnic, or other groups, institutions, policies, events or other general targets. The second type are attitudes toward performing specific behaviors with respect to an object or target. These attitudes will be referred to as attitudes toward a behavior (Ajzen & Fishbein 2000). It was reviewed by Ajzen & Fishbein that general attitudes fail to predict a given behavior with respect to the attitude object or behavior. In contrast, single behaviors with general attitudes tend to correlate better (Ajzen & Fishbein 2005). For this reason we will explore different types of attitude towards behavior. This will create a better insight of the overall evaluation of the informing and stimulating/motivating behavior of young adult migrants. In this study both types of attitudes will be measured. First general attitudes toward cancer, prevention and screening will be investigated. The second type measurement involves attitude towards communication about cancer and breast cancer with parents, particularly mother or other female family members and attitude towards informing about breast cancer screening. For more detail of the content of the execution of the semi-structured interview see Appendix I. Below the operationalization of the different attitude-object and attitude-behavior relationships are described. All the different attitude relationships represented below are based upon two perceptions which need to be kept in mind. Namely, the likely consequences of an outcome occurring as a result of performing the behavior and the evaluation of that outcome.
4.2.3.1 Attitude towards cancer
Exploring the beliefs and thoughts of young adult migrant towards cancer in general with regard to familiarity with cancer within family or surrounding and the prevention of cancer is an indication of whether cancer is taken seriously. Fearing cancer and perceiving it as a preventable disease might influence in a positive way a persons’ attitude towards informing and stimulating someone dear to take preventable measures against cancer.

4.2.3.2 Attitude towards prevention
Perceptions on disease prevention and beliefs on staying healthy are important in attitude formation in relation to prevention. It include young adult migrants thoughts and beliefs on staying healthy, and personal experiences or measures which might token for staying healthy like sport, eating healthy etc. This is an indication of their capability to monitor dangerous consequences and observations when no preventive measures are taken. Moreover, views on participating to offered health tests, and how often GP is consulted and that during such visits call for more information on health issues is requested will create a better understanding on whether young adult migrants take measures to prevent diseases.

4.2.3.3 Attitude towards communication about cancer
In order to explore young adult participants attitude towards communication about cancer in general, the following questions are considered to be essential: how they would react on a birthday party when someone is telling them that he or she has cancer?, would they show understanding?, or think it is appropriate or bad?. Apart from a birthday how would they react normally?, speak or report to others?, visit more or less often?. The first question assess the communication about cancer in more socially inappropriate circumstance and the second at a normal occasion. The idea behind this questions is that it involves two different situations, which will give an indication whether attitude change depends on time or location.

4.2.3.4 Attitude towards (breast cancer) screening
Beliefs and opinions of young adult migrants about the importance of breast cancer screening programs, and expectations of the mother or other family members with regard to support in health problems and more specifically with breast cancer might provide a better understanding of their position as an informant in relation to breast cancer screening. And how they would deal when their mother or a dear family member would have breast cancer might provide further inside in their reaction in dealing with breast cancer. In addition, advices or solutions on helping women to attend breast cancer screening from their point of view is important in revealing whether they see themselves rather than others like governmental or community organizations (e.g. mosques) as key figures in informing.
4.2.3.5 Attitude towards communication and informing about (breast cancer) screening with parents and other older female family members

In the communication about breast cancer, it is important to make a distinction between mother and other older females in the family. Because mother-child relationship tend to be stronger compared to other female family members like grandmother and aunt. However, each mother-child relation differs between persons and the strength of this relationship depends on various aspects like the way of education in early childhood or personal characteristics in sense of care and openness towards parents. There also a difference in gender and communication with own mother and other older female family members about cancer and particular breast and vagina in this community. In order to understand whether young adult migrant children are open in discussing breast cancer with their parents and older female family members and their views with regard to this subject it is important to reveal the attitude of young adult migrants in the communication on breast cancer. Hereby, exploring early experiences with breast cancer within family or close vicinity, their feelings and reactions are important indicators of a persons’ attitude in relation to communication about breast cancer.

4.2.4 Subjective norm and perceived behavioral control

4.2.4.1 Subjective norm

The concept of subjective norm is operationalizable by questioning what mothers and other female family members would think when informing them about breast cancer screening. Is this behavior socially acceptable or unacceptable within the community? The performance of a particular behavior which is seen as socially acceptable within a community is more likely to be performed. For this reason, young adult migrants perception on whether informing their mother or other female family members about breast cancer screening is socially acceptable within their community is of high interest. Because undesirable behavior from the community influence a persons’ intention to perform the informing behavior negatively.

4.2.4.2 Perceived behavioral control

The concept of perceived behavioral control is operationalizable by exploring views on whether informing mother or other family members on breast cancer screening is perceived as a task or a duty, their concerns on performing this task, and whether they perceive themselves as being capable to perform the behavior of interest. This involves the beliefs on having control in informing mother or other female family members about breast cancer screening. These beliefs are antecedents of PBC and are concerned with the perceived power of specific factors (more general, external factors) facilitating or inhibiting performance of the behavior. In addition, the capability of convincing mother about the importance of the breast cancer screening program and how this will be achieved is questionable under the term self-efficacy. Self-efficacy is more concerned with cognitive perceptions of control based internal factors (e.g. forgetfulness, perseverance). The higher a persons’ PBC and self-efficacy towards informing about breast cancer screening, the higher the chance of performing that behavior.
4.2.5 Influential factors
The role of religion and culture is within the context of this topic important factors because of the sensitivity of breast cancer within both societies. This could have an influence on the informing behavior through attitude and subjective norm and need to be explored too. Furthermore, personal factors like shame towards mother when having breast cancer is an indication of their openness about the subject, for this reason it might add essential information about a persons’ attitude. In addition, the informing behavior could also be predicted from the relationship of young adult migrants with their mother, because the type and strength of this relationship might be valuable in the informing process.

4.2.6 Possibilities and (contextual) barriers

4.2.6.1 Possibilities in informing and stimulating (intention)
In order to identify what possibilities (intentions/motivations) young adult migrants perceive towards informing and stimulating mother or older female family members to attend breast cancer screening, it is essential to know and understand the direct reasons or motivations which young adult migrants to perform this behavior. The mentioned reasons or motivations (arguments) of young adults in informing/stimulating their mother to undergo breast cancer screening is an indication of their actual behavior. However, to understand the intention more precisely the three antecedent independent factors determining or predicting intention: attitude toward the behavior, subjective norm, and perceived behavioral control needs to be analyzed first (Ajzen, 1991; Fishbein, 2000).

4.2.6.2 (Contextual) barriers in informing and stimulating
Thoughts or believes on remembering mother every 2 year about the screening program and how to achieve this are important elements in order to understand young adult migrants willingness to inform their mother, and it will help in revealing possible barriers in informing. And views on assisting or accompanying mothers’ visits to the BCS centre for a mammography of the breast might also reveal influencing factors or barriers in performing the behavior. In addition, it will give an indication of their degree of motivation to perform this task on informing. Other contextual barriers could be the distance of children to their parental house, taking hours off from work, and/or other barriers which are necessary for exploring during the interview.

4.2.7 Attitude towards being informed through social media
Social media is within the context of this study operationalizable by investigating whether social media is perceived as a good way to be informed on health related issues. Also exploring earlier personal experiences in relation to discussing health problems on forums or other social networking sites (SNSs) is essential in identifying the role of social media for the intervention program.
Sub questions

1. How do young adult migrants perceive their role as language broker or translator in relation to health issues of their mother? (past behavior)

2. What do Turkish and Moroccan young adult migrants know about breast cancer and the breast cancer screening program (level of knowledge)?

3. What is their attitude towards;
   a. Cancer?
   b. Prevention?
   c. Communication about cancer?
   d. (Breast cancer) screening?
   e. Communication and informing about (breast cancer) screening of parents (especially mother) and other older female family members?

4. What is their subjective norm, perceived behavioral control and self-efficacy towards informing, stimulating & motivating their mother and/or other female family members about breast cancer screening?

5. Which factor(s) has/have influence on their attitude towards breast cancer screening program and on their attitude to inform and stimulate/motivate their mother or other female family members?

6. What possibilities and what (contextual) barriers they see in informing, and stimulating/motivating their mothers and older female family members?

7. How do they perceive the use of social media to inform young adults about breast cancer screening?
5. Methodology

In the present study a qualitative research approach was used. First, an elaborated literature research on the topic was conducted. Secondly, semi-structured face-to-face interviews was carried out and data from the interview-questionnaires were analyzed for the result part. These data is further used by combining with existing literature on the topic for the discussion and conclusion part of this report.

5.1 Qualitative study

5.1.1 Literature research
First, literature research was conducted using Pubmed and online books. Background information was collected on breast cancer (screening) in the Netherlands and reasons for (non)-attendance among migrant women to breast cancer screening. Furthermore, information on of the role of migrant children as language brokering or cultural brokering, attitude formation, theory of planned behavior and the use of social media by migrants were gathered. The following Pubmed search terms were included: ‘breast cancer screening’, ‘attendance’, ‘participation’, ‘young (im)migrants’, ‘internet’, ‘social media’, ‘adolescents’, ‘healthcare’, ‘attitude’, ‘role of migrant children’, ‘communication’, ‘Turkish immigrant adolescents’, ‘Moroccan immigrant adolescents’, ‘language brokering’, ‘cultural brokering’. Only English and in Dutch published articles, reports, brochures and websites were used.

5.1.2. Semi-structured interviews
Second, a qualitative exploration research was conducted consisting of semi-structured face-to-face interviews. First, socio- demographic and socioeconomic characteristics of Turkish and Moroccan young adults participated in this study were asked before each interview. The following items were asked or noted; name, gender, age, age of mother, marital status, educational level of own and of mother, position at labor market and living situation. Using interviews we investigated the subjective interpretation of topics related to cancer, prevention, and its social impact on the community of interest. Because attitude is within the context of this study the most important determinant in predicting behavior. To understand attitude towards informing on BCS, it is important to understand the behavioral beliefs and perceptions on several single behaviors before making predictions. Using semi-structured interviews, the diverse qualities and meanings of the respondent’s experience and their social organization related to this topic can be explored (Gubrium and Holstein, 2001). It is a valuable research method for exploring "data on understandings, opinions, what people remember doing, attitudes, feelings and the like, that people have in common (Arksey and Knight, 1999, p.2). The outcome of the interview together with literature research will form an input for the development of an online educational campaign directed to young migrants through social media.
5.1.2.1 Study population
The study population consists of Turkish and Moroccan young adult children of migrants between 25 and 38 years of age which mostly were resident in big cities of the Netherlands. According to the following two criteria’s respondents were recruited; different educational background and a mother aged 50 years or older resident in the Netherlands. We thought that this these criteria’s might be relevant because the degree of education level could cause bias when assessing the level of knowledge on breast cancer and screening. And a mother equal and or above the age of 50 was essential with regard to make comparison of those who had read the invitation letter and those not.

These young adults were recruited through Turkish and Moroccan informal social networks which were from “online” and “offline” contacts. These networks were from personal networks (e.g. an old classmate, a neighbor, and friends from family and vice versa) as well as persons recruited at social network meetings. Social network meetings were attended for meeting especially persons with a higher educational background. And other social community centers were visited to attract more women from Moroccan origin or women with lower educational level. Furthermore, known and unknown persons or intermediaries working with or in close vicinity of migrants at foundations or voluntary organizations, and store owners or employees of migrants in disadvantages districts like the Kanaalstraat (Lombok) in Utrecht were approached by asking, e-mailing, making phone conversations, visiting, and hereby sending or handing out the invitation for the interview. Moreover, women from community centers and younger migrants from schools (ROC) were asked to distribute the interview invitation letters. The recruited Turkish and Moroccan male as well as female respondents were also asked whether they knew other young adults suitable for this study which might be willing to participate. Via this snowball process in total 20 young adult migrants resident in different cities, particular major cities like Rotterdam, Amsterdam, Den Haag, Utrecht, Amersfoort, but also in smaller towns like Soest, Vlaardingen and Almere of the Netherlands were recruited.

5.1.2.2 Procedure
Qualitative data were obtained through semi-structured in depth interviews as a means of gathering information on the attitude, SN, PBC, the concept of background variables including; influential factors, knowledge and language brokering in the context of past behavior. Additionally, the attitude towards social media were elaborated, but in less detail. The interview allowed gaining a response on questions, but still gave the stakeholder freedom to answer the rationale behind their beliefs, to give the opportunity to develop his/her ideas and to introduce new topics.

The participants were informed about the purpose of the study and the time limit of the interview, which took around 45-60 minute for each interview with room for questions asked by the participants. Interviews were conducted at their homes, work offices or other work settings which were comfortable to them.
The interview questionnaire arose from the conceptual framework by covering all concepts (antecedent predictors of intention-behavior and background variables) for explaining and predicting the behavior with regard to this topic. The interview was tested in a preliminary phase among two persons for checking the clarity of the items. Slight modifications were made according to the responses to the interview. Each participant was informed about that the interview will be voice-recorded (with permission) using a digital recording device. This was for ensuring accuracy of their experiences and personal reflections. Although the respondent's identity was known to the researcher, the participants were informed that their responses were anonymous and were ensured of privacy. After informed consent by the participants, the interview was carried out. Each participant received an incentive of 10 euro after the interview. The interview was taken by a bi-lingual researcher with Turkish background. The researcher was familiar with the cultural and social settings of both ethnic groups. Information from the respondents and during the interview was treated confidentially. Before placing statements and information gathered during the interview, transcribed interviews of several participants were send back via email. Data collection took place from March to June 2011.

5.1.2.3 Data-analytics
Before analyses of the interview responses style, the tape-recorded interviews were transcribed verbatim for data integrity. The data of this study have been analyzed explorative by generating meaning, and then findings were tested and confirmed by several tactics given by Miles and Huberman (1994). The following tactics were used to generate meaning; patterns, themes were noted by (1), seeing plausibility (2), and clustering(3) which helped to see ‘what goes with what’ and more integration was achieved among diverse pieces of data. And counting (4) words e.g. when assessing the level of knowledge, words mentioned under sign & symptoms like ‘lump’ was counted among participants to ‘see what’s there’. Furthermore, contrast/comparisons (5) were made to sharpen understanding. In addition, to see things and their relationship more abstractly particular findings were subsumed into the general (6), or by enumerating factors (7), or noting relationship between variables (8). Finally, a logical chain of evidence were build (9) to clarify the findings.

The researcher did the initial coding of all interviews, but important and essential findings were discussed with an expert colleague at Pharos in order to achieve consensus. In addition, several transcribed interviews were sent to their respondents to strengthen statements, check for errors and increase internal validity of the content. For all interviews, the coding and analysis process were conducted in Dutch and the quotations given were translated.
6. Results

6.1 Description characteristics of Turkish and Moroccan participants

An overview of socio-demographic and socioeconomic characteristics of Turkish and Moroccan young adults participated in this study are shown in Table 6.1.

Table 6.1 Participants characteristics by ethnicity and gender

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Turkish</th>
<th>Moroccan</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>(N = 7)</td>
<td>(N = 5)</td>
<td>(N = 5)</td>
</tr>
<tr>
<td></td>
<td>(N = 20)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sociodemographic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age in years (individual)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>28.6</td>
<td>30.6</td>
<td>31.6</td>
</tr>
<tr>
<td>- range</td>
<td>(25-32)</td>
<td>(27-33)</td>
<td>(25-38)</td>
</tr>
<tr>
<td><strong>Age in years (mother)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>55.9</td>
<td>55.8</td>
<td>64</td>
</tr>
<tr>
<td>- range</td>
<td>(50-65)</td>
<td>(50-70)</td>
<td>(53-73)</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>4</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Unmarried</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Divorced/Separated/Widowed</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Socioeconomic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Education level (individual)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Moderate (MBO)</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>High (HBO &amp; University)</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Education level (mother)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiterate</td>
<td>5</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Low</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Position at labor market</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Home (housewife)</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Employed</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Student</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Living situation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With parents</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Own family</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

In total twelve young adult migrants of Turkish origin were recruited for the study of whom seven was female with a mean age of 28.6 ranging between 25-32 years. The mean age of the five Turkish male participants interviewed was 30.6 years, ranging almost similarly as in the Turkish female group. The number of Moroccan young adults participated was seven in total. Only three Moroccan males were interviewed with a mean age 28.5. The mean age of Moroccan females was the highest among all groups ranging from 25-38 years. Within female Moroccan
participants two were sisters with a 73 years old mother. The mean age of mothers in the other groups were close together and the total mean age of mothers in all the four groups was 58.3 years ranging from 50 to 70 years. Most participants were married, and unmarried young adults lived with their parents both were composed of conjugal families including husband, wife, and unmarried children who were not of age. Except one female of Moroccan origin was divorced and single mother living with her children. Illiteracy among mothers was the highest in all of the groups and in total about 75% of the mothers were illiterate. Furthermore, more than half from the participants of both ethnic groups have a moderate level of education and worked fulltime in most of the cases. First, the results involving the role of young adult migrants as cultural or language broker or translator will be evaluated. This is important for a better understanding of this group because of their past behavior in relation to informing and assisting their parents in various health care decisions.

6.2 Background information “brokering” role in health care decisions

6.2.1 Past behavior of language brokering in mothers’ health issues
Young adult migrants of Moroccan and Turkish origin interviewed in this study, were nearly all involved language as brokers in mothers’ health and wellbeing in the past and in most cases it was a still existing behavior. Their tremendous contact, interest and care towards their mother supporting her in various ways and in different settings including health concerns was highly evident in nearly all participants. The many ways in which they spoke, read, wrote, listen and did things for mother and others, using their knowledge of two languages was reported highly often. Especially, young adults whose mother had diseases like diabetes, high blood pressure, overweight, phenomena during menopause, pain or complaints, or other health related problems reported more often brokering.

6.2.2 Communication of health issues
Communication with mother about her health or wellbeing was something very usual and occurred highly often in a week. Regular contact via phone with mother differed between 2-8 times a week among young married adults, who were not living with their parents, and particular those who lived at far distance from parental home. Some lived in the same city and visited mother 2 to 4 times a week. Furthermore, communication after consult of mother at the general practitioner or hospital occurred especially when there was a major health concern or investigation at the hospital. Mothers seeking highly often GP for example for regular blood sugar level control or depressive disorders were remarked as being less often brokered for. Hereby, the amount of distance to parental home and lack of time played a role too. Although, during regular phone conversations or visits it occurred that GP consults of mother were discussed too.
6.2.3 Brokering inquiry of mothers

However, there was some difference in the frequency of brokering among young adult migrants. Turkish young adult migrants and those with a mother having insufficient Dutch language skills were highly often inquired by their mother for translating or brokering.

Mothers from both origin who were literate were reported as independent and being confident of themselves, for example, these mothers were reported to have driver license or made use of public transport (bus, tram, subway or some even with train) on their own. These young adults reported less involvement and a few reported even that they never went with mother to the GP for brokering. Although, inconvenient explainable health related issues, were explicated sometimes by writing small notes for GP or calling GP after mothers' consult. To mention, according to some female from Turkish origin their GP was less interested, spend short time, listened inadequately and was less involved in mothers' health concerns which led at some moment to frustrations. Yet, this was by some understandable, because of the time required for translating which might impedimentary for some GPs. Nevertheless, Turkish young adults reported more often brokering for their mother or grandmother, or by other members within their family like own wife, sister-in-law or father when they themselves were prevented.

6.2.3.1 Ways of showing interest towards mothers' wellbeing

Warning, keeping eye on mothers’ diet, stimulate or urge to see doctor, and informing when necessary about mothers’ health were reported several times. Other arrangements reported by young adults in general were: ‘reminding mothers’ appointment by calling (married young adults)’, ‘when new medicines were prescribed calling GP for explanation’, ‘arranging someone to look after kids to accompany mothers at GP consults’, ‘taking off from work by asking in advance’, ‘making time free’ and ‘married women had to take their husband into account’.

In general, mental, financial and physical support (doing household work etc), create or spend more time, search for solutions like advanced or better treatment methods or doctors, and seek information about disease for own and for mothers’ assurance were mentioned as manners to show compassion or concern towards mothers’ well being.

6.2.3.2 Expectations in support by healthcare problems or decisions

‘Translating and explaining medical letters’, ‘making doctors appointments’, ‘contributing or helping anytime by doing household work or chores’, physical and financial support when necessary, but more specifically mental support in any case’, ‘helping with healthcare decisions’, ‘functioning as translator at GP/doctor visits’, ‘mobility’, ‘keep them aware of certain issues like new curative methods or how to prevent diseases’, ‘showing commitment (visiting often or making phone calls more than 4 to 6 times a week)’, ‘express love, respect and submission’, ‘make sacrifices’ and ‘share information and knowledge' were stated to expected from the perspective of their mother. On the other hand, other female family members expectations were thought to be mainly based on sharing knowledge or information when asked by these family members itself or when it was necessary. Also
visiting these family or showing commitment by making phone calls were more often mentioned by some young adults, particular by female participants.

6.2.4 Difficulties in brokering
In general young adult migrants experienced less difficulties as interpreter or broker for their mother during GP consults. However, one Moroccan women reported that it was much more difficult in the past when she was young and had to translate for mother. It was explained by feeling ashamed or embarrassed to talk about certain health topics with the GP. Another female from Moroccan origin indicated that situations in which she had to communicate psychological problems of her mother to the GP was extremely difficult, because the underlying cause of her mothers' psychological distress had to do with her own children including her. To act as translator at such moments was difficult and not preferred by both of them. Furthermore, it was mentioned by only a few participants to have some difficulties in translating. Especially, insufficient language skills and vocabulary in the past (younger age) were experienced as difficulties in brokering.

On the contrary, a Turkish male expressed having no shame to talk about private body parts, mentioning that mother had no daughter, but only three sons, so mother was partly dependent on them. This also counted for older brothers or sisters in the family who acted considerably more often as a translator or actor/agent by arranging, assisting, and helping mother, father and other siblings. However, in larger families particular in Moroccan families varying between 2 – 11 siblings, the task of brokering was divided among older siblings. And it was also remarked that, among siblings the task of doing “chores” for parents was something usual and tasks were not equally distributed among them.

6.2.4.1 Requiring information to inform parents
Young adults demand for more information when informing parents about specific health issues. First, they should be certain themselves of the acquired information and be well acquainted, especially to avoid unnecessary stress or fear of their parents. To be acquainted with a health problem of interest was seen as important to create a better idea of the disease, and for an easier expression towards their parents. However, being acquainted with a specific health issue was dependent on the topic and whether the person was engaged with the subject. Then it was easier to explain about the cause(s), how to deal and how it looks like. Furthermore, confidentiality of the source and the official form of the information being offered were mentioned as being important (e.g. an health information flyer within advertisements was not be taken seriously). The information must first of all ought to be right and make sense before it could be passed on to others. To give an example about an experienced difficulty about a health issue, three female participants reported the insufficient information provision and their uncertainty at the time with the Mexican flu vaccination on whether mother was eligible for getting vaccinated because of her diabetes. Rumors about side-effects and insecurity of the vaccine had been floated around, eventually their mother did not get vaccinated due to lack of confidential and official information.
6.2.5 Contributing factors to brokering
Factors that contributed to involvement or brokering role of young adult migrants were; ‘living at or close to parental home’, ‘in possession of a car’, ‘appointments of mother at the doctor during school hours of children’, ‘having less or no sisters or brothers who can assist’ and ‘the easiness of taking off from work (own business)’ or ‘flexible study hours of few young adult students’. However, nearly all indicated that they would do their ultimate best for mother when she had an important health problem.

In general, young adult migrants perceive their role as language broker or translator as very important. Despite some difficulties (shame) at the GP or other contextual barriers, broking is perceived as something usual and occurs highly often in various ways. However, there is some variation in the Turkish and Moroccan groups, as Moroccan mothers inquired less often brokering.

6.3 Knowledge
6.3.1 Knowledge young adult migrants about breast cancer
In order to obtain a general overview of the level of knowledge of young adult children of Turkish and Moroccan migrants about breast cancer and breast cancer screening explorative questions with regard to these two topics were asked. Starting with an opening question on what he or she knew about breast cancer, most participants acknowledged their unknowingness or having less acquaintance with the disease, and did not pretend to know everything. However, when asked more specifically about signs or symptoms, risk and causative factors, treatment methods, incidence and cure of breast cancer, then it was revealed that they did posses the basic knowledge on breast cancer in general.

6.3.1.1 Frequent mentioned signs and symptoms
The most common sign or symptom of developing breast cancer mentioned by all participants was feeling a lump. A lump is a swelling or a small palpable mass which could be soft, but often it feels hard (Carlson et al., 2009). Other features mentioned were loose of weight, feeling something strange in or near your breast, swelling or pain of the breast, certain skin changes on the outside of the breast like spots, or having no signs and pain at all. Secondly, it was remarkable that in particular breast self-exam (BSE) were mentioned by several female as well as some male participants for detection of a disease of the breast in an early stage. Some women were controlling their breast regularly for example when taking shower and indicated that when you feel anything odds then you always have to see the general practitioner right away. One Moroccan female described cancer in a far correct manner, namely the uncontrolled cell growth and division of cells which eventually could infiltrate and spread to other organs in the body. This detailed explanation of breast cancer was because of an early experience with breast cancer, not by herself but her Dutch female neighbor. From this we could understand that past experiences with breast cancer within family or close vicinity might have an influence on knowledge and
Young adult migrants role in stimulating participation in breast cancer screening of older female family members

6.3.1.2 Perceptions about risk and causative factors
It was very interesting to notice the different perceptions of young adult migrants about the risk and causative factors of breast cancer. In the first place most of the participants mentioned their unknowingness and for this reason only could make assumptions about the possible risks and causes of breast cancer. However, a common risk factor mentioned by few of the participants with certainty was genetic inheritance or family history in the development of cancer in general and so this could also be the case for breast cancer. Next, breast-feeding women were stated to have lower risk in contrast to women with a delayed childbirth. Moreover, having an unhealthy lifestyle, smoking, sun, nutrition (lack of certain vitamins and mineral), bad habits, wearing a bra, taking birth control pills, hormonal imbalance, stress, or having a benign breast lump in the past were other enumerated factors. Nevertheless, some of the participants and in particular males from both origin stated that developing breast cancer was not due to any particular cause or factor. This was supported by their religious statements about fate or destiny (fatalism). Even though women were religious and believed in fate too it was observed that they were much careful in these kind of statements. Like one Turkish female participant explicitly indicated that developing breast cancer should not be attributed to fall by religious or cultural grace. Further, it was told that breast cancer was the result of exposure to multiple or different causative factors and thus not necessarily was depended on the age of a person whereby everyone in fact had risk. Mainly, estimations about the age of having higher risk of developing breast cancer differed enormously. Opinions ranged between 25 to 60 years old women or only (older) women going through menopause. It was highly remarkable that the age of 30 was mentioned by most of the married female as well as male participants from both ethnic groups. These young adults were obviously confused with cervical cancer screening program which is offered for women between 30 and 60 years invited each 5 year for a Pap smear. Finally, it was remarked that breast cancer was more often heard in Dutch women.

This all indicate that young adult migrants have various perceptions towards risk and causative factors. However, the major important factor is within the scope of this study the purpose and the age, because acquaintance about at what age the risk of developing breast increases is necessary in creating awareness about the BCS program.

6.3.1.3 Known treatment methods
Despite the different educational levels of each participant there was less variance between the mentioned causative or risk factors and the methods applied for treatment of breast cancer. The general and well known treatment techniques for all cancer types like chemotherapy was by far the most often appointed therapy method by all respondents, and after surgical removal of the breast, the use of radiation therapy made up the three main procedures mentioned to treat breast cancer. Most of the participants knew quite well that when treated (using...
chemotherapy or medicines) in an early stage, the metastatic spread of the malignant type of breast cancer might be prevented and thus also surgical removal of the breast could be avoided.

The statement; ‘the sooner it is detected, the more likely it is curable’ was used by many among these group.

Mastectomy was mentioned by more than half of the participants, but there was quite some misunderstanding about in which stage of breast cancer this method was applied. According to a few it was the only method to cure breast cancer, and the type of cancer being a benign or malignant type was confused too.

A Moroccan female stated ‘the only possible way of treating breast tumors is by mastectomy’.

Another young unmarried female participant from Turkish origin indicated that she had never heard before of a benign disorder of the breast. A few indicated medicines as a way to treat breast cancer when it was not spread, however, among these it was observed that in fact some were not sure about this method. Further, witnessing a female neighbor dead as a cause of breast cancer was a reason for one young unmarried female participant to conclude that breast cancer was absolutely not treatable at all. She was convinced that once you had it, then sooner or later dead will follow, and for this reason she had no believe in the medical world. Only a few were unaware of treatment methods carried out when breast cancer was detected and only could say that you should directly see your GP.

6.3.1.4 BC incidence estimations in young and older women
On the question of ‘how common is breast cancer?’, an obvious difference between male from Moroccan origin and the rest of the participants was apparent. Moroccan male participants did not heard of breast cancer in their surrounding not often or not at all. It was assumed by them that breast cancer was probably an uncommon disease among Moroccan female. In addition, to this assumption, a Moroccan male and female revealed that among female family members perhaps having the disease may have been hidden and for this reason she might not have noticed it most of the time. Furthermore, two females being sisters from Moroccan origin mentioned independently of each other that the word ‘breast cancer’ was more often heard nowadays than previously. Among Turkish male participants nearly all participants except one had experienced or heard about the disease because of his grandmothers’ dead as a consequence of metastatic spread of breast cancer. Secondly, a second cousin of one male had died too due to breast cancer, and other two Turkish male had have Dutch colleagues with breast cancer of which one of them was male. In the same way, Turkish women indicated that breast cancer was more heard nowadays especially among Dutch women seen on television or at their working environment. Additionally, one participant among these group was aware of the fact that breast cancer was worldwide number one most frequent cancer type in women after doing some research when lumps in mothers’ breast were discovered several years ago.
Estimation about the incidence were merely based on breast cancer cases heard in surrounding, mainly among Dutch women. Additionally, breast cancer within family or close vicinity contributed to their acquaintance about BC. However, Moroccan males heard less often about breast cancer in their families.

6.3.1.5 Recovery from BC

Nearly all participants agreed that recovery was possible when breast cancer was detected in an early stage when it was not spread yet. Even when breast cancer is detected recovery is perceived by some as higher compared to past due to improved scientific and medical technologies in the field of health.

A Turkish women mentioned ‘cancer isn’t scary as 10 years back, because of the advanced technology now you have pretty more chance of succeeding and that you heal well’.

However, some remarked that there was always a risk of returning and the chance for total recovery was dependent on whether metastatic spread had yet occurred or not. And thus having a benign or malign type of breast cancer made difference in recovery, and having a doctor or medical check-up over a period of 6 years were indicated to play an important role in increasing total recovery and cure. Additionally, some women expressed their believe in BSE in order to discover breast cancer in a begin stage, and hereby enhancing the curing process when treated in a proper manner. A last interesting finding was that there is some believe that mastectomy is sufficient for being cancer free.

In brief, early detection is perceived as highly important for recovery, but despite beliefs of medical improvement the risk for returning of cancer still exists. And there is uncertainty of cure in relation to type of cancer, being invasive or not and treatment methods among the participants.

6.3.2 Knowledge young adult migrants about breast cancer screening

In spite of their general knowledge about breast cancer in basic terms, the Dutch breast cancer screening program was in first instance less recognized by some or even not known at all by few participants from both origin, hereby indicating their unfamiliarity with this preventive program. There were misconceptions about the purpose of the screening program.

It was thought by some as ‘a program on television’, ‘a knowledge or advice centre’ and according to some statements a ‘curative or healing centre’ were indicated.

Early detection and improper self control were mentioned by only a few participants as purpose of the screening program. There were similar misconceptions about from what age the program was offered to women. The age of 30 and 40 were mentioned by many participants and again there was some confusion with cervix cancer screening control due to age. Furthermore, it was thought by one men from Moroccan origin that women with breast cancer in the family and women going through menopause were invited too.
Another interesting statement made by one female participant from Moroccan origin was that ‘Moroccan female had higher risk in developing breast cancer which was reported in the invitation letter her mother had received’. For this reason specifically these women were invited for screening, she declared.

This all indicate that perceptions on which women are eligible to undergo breast cancer screening differ enormously between participants and could be considered as improper.

Several participants reported about the invitation for breast cancer screening directed to their mother in form of a letter. Those who had read the letter translated and recommended mother to attend the screening. Some female even accompanied mother to the screening center, even despite the far distance (married) to their parental home. The following features about the group who were aware about the invitation letter and whose mother had attended the screening program could be remarked:

- Higher educated.
- Unmarried.
- Living with parents or higher responsibility translating letters in overall.
- Married but having no children.
- Closer relationship with mother (some despite the far distance to parental home involved considerable in mothers’ healthcare decisions).
- Age of mother being far over the age of 50, (a sign of having received and read invitation letter many times).
- High involvement healthcare decisions of mother.
- Breast cancer in family or surrounding (colleagues at work, friends etc.).
- Large family size (siblings living at parental home or role of siblings in the family)

However, when asked further about BCS there was still some uncertainty with regard to purpose and the certain age group which it was directed to. Also a few indicated that it was probably becoming a more common disease among women and that they heard more often nowadays.

Last, participants of whose mother had received an invitation letter and attended screening, their mother was according to them aware about the meaning and the profits of the screening program. Unlike the unawareness of some participants, they indicated that their mother may knew about the aim of such preventive programs.

6.3.2 Information sources on cancer
Sources which are commonly known were utilized for acquiring information with regard to cancer (and diseases) in general. Namely, television, flyers from GP or hospital waiting rooms, (breast)cancer in surrounding (family, friends, neighbor, work etc.), information evenings at the health municipality (GGD) about breast cancer and breast self-exam, school or medical education, magazine, (news)paper, media or internet. The last mentioned
information source (internet) was mentioned only by four of the participants which was quite remarkable. Internet was only utilized when participants had themselves or someone else in this case their mother had a certain health problem.

6.4 Attitude

6.4.1 Attitude towards cancer
Nearly all participants indicated that they had experienced cancer within family, rather outside then direct own family. The most mentioned family members were uncle, aunt, grandfather, grandmother on both fathers and mothers side. All in all, cancer was in general an often heard disease in the lives of these participants through their families, friends, colleagues and surrounding.

6.4.1.1 Fearing cancer
The disease was feared, due to several reasons, for example the ‘association of cancer immediately with dead’ was reported often. And beside the disease cancer, the word itself was perceived as something highly unpleasant and frightening. Furthermore, side-effects of the heavy treatment methods of cancer such as chemotherapy or radiation was perceived as frightening too. Hereby several side-effects were mentioned like feeling pain, loss of hair, eyebrow or teeth, inability to walk, loss of weight and the pathetic state of a person etc which implied their awareness with regard to heavy treatment methods and side-effects. Additionally, late discovery of cancer or the chance that it may return and thus not being (fully) healed were stated as a negative observation regarding cancer. On the other hand, a few participants indicated that this negative perception or fear may also be dependent on the type of cancer. Breast cancer was indicated by some female participants as less frightening or worrisome. Remarkably, Turkish participants and particularly females who experienced cancer within family were less anxious and more positive towards recovery from cancer in contrast to young adults from Moroccan origin. It was less feared compared to the past, especially when detected in an early stage, and one female even made the comparison of cancer with seasonal flu. Although both groups indicated their anxiety, fear and concerns when they themselves or someone dear within the family will develop cancer, and especially if it is the mother this fear and concerns would be doubled. One Turkish female stated that she would worry more intense when mother would have cancer, because of her mothers’ diabetes. All in all, all participants indicated that when mother would have cancer that they would show enormous concern and grief.

6.4.1.2 Prevention of cancer
The perception between sexes showed difference with regard to preventing of developing cancer. Females were more negative towards preventing to develop cancer which was often stated as ‘that everyone had a chance of getting cancer, for reasons like genetic predisposition, diet and destiny.'
‘I understand that it is a dormant “virus” and certain life styles could wake it up’, a Moroccan female participant stated.

However, only one female, and one other male who had a higher vocational medical background indicated that when informed well enough, control yourself regularly or take precautions than cancer could be prevented. Last, main basic precautions mentioned were no smoking or alcohol, healthy lifestyle, avoid stress, eat healthy and sport or exercise regularly.

To sum up, the attitude of young adult migrants towards cancer is unfavorable. It is a feared disease, particular the heavy side effects, though in general Turks were more positive towards recovery from cancer and females were negative towards preventing of developing cancer, but showed a higher concern when mother would develop cancer. This all indicated that cancer is taken seriously, only preventive measures against cancer is perceived by some female participants as less effective.

6.4.2 Attitude towards prevention

To explore the attitude of these young adult participants towards prevention, first their opinion about whether people can do much to stay healthy were asked. Nearly all of them shared the view that everyone could do anything to work on his or her condition to stay healthy. The most common mentioned ways to stay healthy were to take precautions like eat healthy (fresh, natural and varied food), drink much water, exercise (walking), slenderize (maintain a healthy body weight), live in a healthy environment, make use of the many facilities offered by the government, make sacrifices in time or other things to work on own wellbeing, live a structural life, avoid artificial colors and sweeteners in food, avoid stress and stop smoking or alcohol. Although, the higher educated participants or those having acquaintance with health aspects, their perception about staying healthy was highly skeptical. Reasons like unnatural processing of foods and that it may be genetic or your destiny to develop certain diseases and particularly cancer were mentioned. According to those, staying health in the current society was impossible.

6.4.2.1 Personal measures for staying healthy

Those below the age of 30 or who were unmarried devoted more attention to their health mainly through regular exercise (at the gym or walking) than married or young adults at the age of 30 and older. Married and “older” participants indicated that paying attention on nourishment (fruit, vegetables and no snacks) and no smoking or alcohol use at all was merely the only thing what they did for their health. Other reasons for being unable to work on own health was high costs of gym, after giving birth to a child, sickness, no time (due to work or children), high prices of biological food were reasons of inability to work on condition or live healthy. Although, action was merely depended when there was serious health complaints.

One female stated ‘only when you’ve an illness or complaint or want to lose some weight then you’ll take action’.
Next, whether they would let themselves tested when a health test is offered nearly all participants indicated being positive, except those who were not willing to participate for clinical trials, who were against the government (particular research without any proved action) and one who was not willing to take the initiative. A young adult male participant who sported intensively in a week, indicated that he felt healthy and so there was no reason to test, it would be unnecessary effort.

6.4.2.2 Young adult migrants’ GP visits
The general practitioner was less visited under more than half of the respondents. Only if the pain or complaint persisted, for prescription of medicines, sickness of children, after (car) accident, and for mental illness or small physical complaints the GP was visited. During a GP consultation, Moroccan participants asked in contrast to Turkish young adults more often for other health related information adjacent to their complaints at that moment. In contrast, from Turkish young adults, only better/higher educated along with those with a disease history asked for more other health related information or alternative medical advice during a consult. Last, all participants indicated to appreciate when their GP would provide additional extra information and denounce when certain health tests were being offered freely.

In brief, young adults being married, and older of age (>30) have a more negative attitude towards prevention.

6.4.3 Attitude towards communication about cancer
First of all, communication about cancer when being at a birthday party most participants indicated that they would show understanding when someone familiar or unfamiliar would tell of having cancer.

‘No matter it is a birthday party or on the day of ‘Sacrifice’ of us, or ‘Eid’ (Islamic festivities), I wouldn’t find it strange’, stated one Turkish male respondent.

The following reactions were given also by participants; show compassion and sympathy; listen and react in a normal manner by asking what it is; being in first instance scared and shocked; feel sorry and terrible; cry when it is someone dear or family (just female); not panic; search for solutions and ask how he or she can help; being surprised; not show anxious or angry behavior; not letting know or give the feeling being pathetic; morally support and by helping to fulfill needs when necessary.

However, a quarter of the participants indicated that still it would be inappropriate or weird on a festive occasion, especially when it is someone unknown, but this was still highly dependent on degree of contact. However, showing compassion or sympathy was reported by all of them despite of the relational unfamiliarity.

A Turkish male stated ‘you don’t even wish your enemy to have cancer’.
Secondly, the main message that these young adults gave about someone who told him or her out of trust of having cancer, was to remain loyal to this person by not speaking or ‘trumpeting’ to others. Unless this person would not mind, or only with permission, or to warn or let notify his or her family friends and relatives, or for own mental wellbeing to talk with someone close and at moments unfavorable to the person (e.g. gossip), but still be careful by not mentioning any names. Furthermore, the person and situation were merely determinative in supporting the person suffering of cancer. A person close or dear would be treated differently than who is not. A Moroccan participant, told that during the period when the 4 years old daughter of her closest friend had cancer, she had supported her through many ways e.g. taking care of her other children by bringing them to school etc. Another male, asked the doctor whether he was suitable for a bone marrow transplantation for her second cousin who had leukemia and mentioned that it did not matter whether it was a friend or family in a situation like this. In contrast, some indicated that they would visit or call by phone more often and others believed that reacting different than normal by showing extreme anxiety or attention would let him or her feel pathetic. To avoid such situations, only visiting in hospital or call by phone was seen to be sufficient.

Nevertheless, in general communication about cancer was unpleasant by rather all of the participants. Only when someone was dealing with cancer (in- or outside family), or at moments when a conversation was started and when necessary (e.g. informing, reassuring, warn children when scold/insult with the word cancer) then cancer was a topic to talk about, otherwise it was not a nice topic at all to talk about for no one. Remarkably, participants reported that they only talked with own sexes (mother, girl-/boyfriend, sister,-(in-law)) and/or husband or wife about cancer.

In short, young adult have less favorable attitude towards communication about cancer in general, only at certain moment when it was necessary to speak than cancer was a topic to talk about. Hereby, loyalty and the strength of the relationship with that person were merely determinative in speaking about cancer, rather than time or location.

6.4.4 Attitude towards (breast cancer) screening

There were some misconceptions by some young adults about the purpose and content of breast cancer screening program as explained earlier. Despite their unknowingness and misunderstanding it was remarkably that these group youngster together with other participants who were aware about the purpose indicated being favorable towards breast cancer screening. However, their favorable attitude reported by this group who was unaware was just an expression of their own view about breast cancer screening before the exact purpose of the screening was clarified. Explanations of these group youngsters was that most migrant women were unaware, and could only be satisfied with the information because of the increased attention now for breast cancer. Also this “informing centre/program” could lead to informing and creating awareness among others. Although, one female participants having the same misconception was positive but expressed also her disinterest. Another male
participants, same origin being unmarried and lived with his parent was obviously not interested too. This
disinterest was mainly a reason of their misconception about the purpose of the screening program which the
male participant imagined as a program broadcasted on national television. However, during the course of the
interview, it was revealed that both of them in fact did knew, even had read the invitation letter and also were
acquainted with her mothers’ attendance after she had received a recall letter. Last, a male from Turkish origin
having a mother in her early fifties showed and mentioned honestly his unawareness. On the contrary, most of
the participants who were aware about the purpose had a highly positive attitude towards breast cancer
screening.

‘Good initiative, because as just I said, I think it is very difficult to detect. Unless you check every day, but I think
the symptoms are not very clear. At some point you feel a lump and you suddenly have it, I think. So, I think this
screening is surely important for being aware whether it is something or not’, stated one Moroccan male.

Furthermore, other statements like ‘(very) useful or good, that it could work preventively, easily detectable,
important method to discover in an early stage and preventing spread and the sooner you discover faster the
cure’ were made. In addition, sending an invitation letter was mentioned to be important and the language in
which the letter was written should be taken into consideration when directed to migrants. Moreover, one female
participant indicated that perhaps women under the age of 50 should also be eligible for BCS, since it also
occurred among young women. And a more extended form of such preventive screenings, like a total body check
was much preferred by some Turkish females.

6.4.4.1 Breast cancer occurrence by themselves or their mother
On the question what they should do when they themselves or their mother would developed breast cancer, all of
them indicated to feel enormous grief and feel terrible particularly when mother would have develop breast
cancer. A few were speechless and expressed that is will be an unpredictable situation thus how they would have
reacted or would have felt was somehow difficult to describe. And three female participants became even highly
emotional that they howled just by the thought of losing their mother. To be specific, unmarried female Moroccan
young adults were those who shed tears. Young people suffering from cancer were indicated to be more
sorrowed by one married young adult than someone older with cancer. The following reactions were given: feel
highly awful, -bad, -terrible, -frightening, -sad, make aware that mother is precious, even the word itself was nasty
to hear, ‘feeling helpless’ or ‘would just howl’. Additionally, one female indicated to have still hope in religious
faith, so this would help her to stay strong. Some showed their concern towards mother by naming that even with
a normal seasonal flu they were worried and felt worse.

In brief, young adult migrants have a negative attitude towards breast cancer, especially when their mother would
develop breast cancer. Extreme emotional feelings of grief, anxiety were commonly envisioned towards mother
having breast cancer. In the attitude-BCS relation, young adult have a positive attitude towards breast cancer
screening, in spite of their unknowingness and misunderstanding of the purpose of the breast cancer screening program. This favorable attitude increases with higher knowledge about the purpose of the program. And from the perspective of these young adults elder migrant women, and particular their mothers have many expectations with regard to their brokering role in health care decisions. This may suggest that in informing about breast cancer screening the same brokering role from them might also be expected. However, many key figures or methods were mentioned to inform elder migrant women about breast cancer, but one thing is very clear; the information transfer to elder migrant women should take place in a spoken way and in own language by someone with authority or someone with close relationship.

6.4.5 Attitude towards communication and informing about (breast cancer) screening with parents or elder female family members

In general young adult migrants have a positive attitude towards informing and stimulating about participating in the breast cancer screening program. However, main remarkable findings from this part of the study with regard to communication about breast cancer and breast cancer screening of young adults with their mother, other female family members and relatives was that Moroccan males explicitly appointed that speaking about breast cancer (screening) was a taboo in the Moroccan society. Especially, with other female family members and relatives, along with males who could be the father, uncle or friend was speaking about breast cancer inappropriate or rather unusual when their mother or someone else would have it.

One Moroccan male stated, ‘No problem with my mother, rather with other family members. And I think my mom is easier than with my father to talk about. Why? Because you do not talk about breasts with your dad’.

This statement was also shared by another Moroccan female, who mentioned that from cultural perspective it is not allowed to speak easily with your father and other males about reproductive body parts and breasts, despite being ill or unless it is a doctor. Moroccan and two Turkish males, indicated that it would be hard to communicate righteous about breast cancer prevention with other female family members particular with the older generation above the age of 50. From the 20 participant included in this study, all of them had female family members over 50 years and older who lived in the Netherlands. Yet, a male from Moroccan origin conveyed that when it is of absolute necessity to speak with this generation women, than he surely would do it. Although, a few represented being not enthusiastic and felt that it should come from their side, thus they would not be the first one who take the initiative to start communicate about BK(S). Females showed less difficulty in communicating with other women, but father or uncle was indicated as still not being easy to talk about these kind of health issues. One female from Turkish origin made an overall statement about communication on subjects against norms and values within the Turkish community.
She stated ‘In Turkish culture you do not talk about breasts, vagina, menstruation, if you smoke cigarettes as a girl then you don’t talk, if you drink alcohol as a girl then you also don’t talk about this. That’s the culture. You can do it, it’s fine, but you do not let it know’.

6.4.5.1 Early experiences with breast cancer
There was only two Turkish male who reported having breast cancer within the family. Despite being the grandmother of one male participant, he reacted calm and only mentioned that it was frightening. During the course of the interview with this man, it was observed that he in comparison to other male participants including Moroccan male, found it very hard to talk about this topic. From own social network known as a conservative Muslim family and the place where he originate from native country which is known as the most religious place in Turkey, the difficulty with answering some questions was very obvious. Furthermore, the neighbor of one female died because of breast cancer when it was returned after 15 years, this event damaged the believe and faith in recovery from cancer. The same Moroccan male who stated about that it was being a taboo in the Moroccan culture to speak about certain body parts, remarked that some women within family might have or had have breast cancer, but this could be remained unnoticed or unheard.

6.4.5.2 Informing after reading invitation letter
More than half of them had read the invitation letter which their mother had received for breast cancer screening. Those who were aware of this letter reported that they had read, translated, explained, recalled appointment, informed and stimulated mother to attend breast cancer screening. Beside moments when the letter was read, some of them spoke (e.g. symptoms, SBE, treatment etc) with mother about breast cancer at other moments like; when mother had investigations of the breast due to complaints (cysts), or when a close one had breast cancer and when heard that mother or others were false informed (e.g. using deodorant, or sleeping with bra will cause BK). A few whose mother was literate, indicated that mother had read letter by her own, and that they (sisters) were not involved in mothers’ decision making to attend screening.

6.4.5.3 Informing about breast cancer screening
Acquiring information about breast cancer screening had a positive effect on almost all participants. The main messages were that being informed about breast cancer will have a positive influence with regard to inform or stimulate others, it will create more responsibility and engagement. The following possible change in behaviors after being informed were reported ‘serve as information or skill resource for others when called for’, ‘communicate the message more often now or more precisely’, ‘be more open’, ‘increase of alertness and awareness towards the importance of screening and informing’, ‘less fear towards the disease, when knowing that early detection is important for healing from cancer’, ‘show more empathy and coercion when it comes closer to you’, ‘being active and concerned’, ‘having more affinity with the subject and deal differently’. However, one young adult women mentioned that own experience rather than knowledge had created more awareness about
breast cancer. Some indicated that it only will make them aware and that’s it, and ‘not feel responsible at all because it is a duty of the government to inform and not my’, was stated by one Turkish female participant.

To sum up, all participants were positive about informing and motivating their mother, but less positive about informing other female family members. Compared to the other groups, young adult Moroccan men have the most negative attitude towards discussing breast cancer and motivating female family members.

6.4.5.4 Memorizing mothers’ appointment
It was highly often expressed that mother memorized own appointments rather than being remembered by them, because she cared about own health too. In the case with BCS, it was mentioned that they would call by phone or remember her before (one week, one day or on the day itself) the moment which the screening is carried out and check for control after her visit. Several participants indicated that they would memorize, or write it up in their agenda or father was reported as the one who kept appointments (by writing it up on a whiteboard or calendar). However, it was more often remarked that mother self was remembering them about the appointment and asked to bring. In addition, in larger families it was described that siblings kept each other informed about mothers’ appointments and call the one who accompanied before and sometimes after to control. However, males and married ones reported more often that one of their siblings, mainly a younger sister who stayed at their parents’ home made appointments for mother. Last, distance again, and being up to date of mothers’ healthcare appointments or choices was influential too in the collaboration of young adults with mothers health.

6.4.5.5 Advices for participation of women to breast cancer screening programs
The main advices who are mentioned to help women participate to breast cancer screening was information communication in own language via community centers, mosques, neighborhood meetings or social gatherings by women from same ethnicity. To abolish language barriers, informing in a language understandable by illiterate or insufficient language proficient older women were reported to be important for information transfer. This transfer should mainly in a spoken way, reported by many participants of both origin. However, written letters, flyers or leaflets in Turkish and Arabic about breast cancer screening could be useful for literate women. Although, most Moroccan(s) (women) living in the Netherlands were Berbers who spoke only “Tamazight” which is one of the Berbers non-written languages. For this reason, information providers should consider the eligibility of such information flyers or meetings when informing non-Arabic speaking Moroccan women, which was pointed out by few Moroccan participants. Furthermore, the general practitioner was mentioned several times as well as the Imam in a mosque as someone being authoritarian and appealed trust due to its knowledge, vision and opinion on issues about wellbeing of humans in general. This could be effective in stimulating women within these two communities as well as their husband. To reach a larger group of older women above the age of 50, the mosque e.g. after the usual Friday prayers might be a right place to inform. Other ways mentioned to reach more migrant women to inform were the following manners; “BCS information busses” like dentist busses for younger kids at school (the same may also be done for older migrant women in neighborhoods with high density migrants
living together), via lay health advisors, television channels in own language, internet and via children. The last one were stated a few times, and it was indicated that the older generation talked easier with people familiar to them, like children, family, relatives and neighbors being acquainted with a certain health issue for example by visiting such gatherings/meetings (or BCS).

Additionally, substantive advices were made by telling to put more emphasize on the negative consequences of not attending BCS, particular by showing story’s or examples of women dealing with breast cancer or having experience with BCS, this could be useful for the composition of informative flyers or letters about BCS. This correct information transfer about the importance of detecting breast cancer on time and that life’s could be saved will consequently create more awareness and knowledge, according to some of the participants.

6.5 Subjective norm and perceived behavioral control

6.5.1 Subjective norm
As already mentioned, these two communities share the same migration history, socio-economic and religious background. And have comparable moral values and norms despite some loose of its original roots over time in both societies. In order to discover whether informing or announcing within family or relative circles in the Turkish and Moroccan community about breast cancer screening is socially acceptable behavior we explicitly asked only one question with regard to this issue. In short, the social acceptable beliefs of this act, in this case the mother and in particular other female family members in both communities might be addressed first as being gender dependent.

6.5.1.1 Gender related social acceptance
There was obviously difference between male and female informants, males were thought to be considered as unsuitable or socially undesirable of getting informed from the perspective of other female family members on this topic. Females from both origin indicated that their mother as well as other female family members would be very pleasant and appreciate when being informed by them. Some even reported being already involved in providing information to these members of the family on many issue. On the other hand, the effectiveness of the informing was merely dependent on how appropriate and comprehensible the information was being communicated to the older illiterate and unaware generation.

One Moroccan women stated, ‘you should be very distinctive even while informing about whether it is done by a male or women, when they see a male they immediately will return even at the door’.

Young adult males described the perceptions of other female family members with regard to this topic as ‘taboo’, ‘shameful’, ‘not in our culture’, ‘unpleasant’, and it may cause astonishment among the elderly women when a male would inform about BCS. These statements did not count for their mother, reported by some.
One Moroccan men noted, 'I would like to inform them, but I’m not sure if they would appreciate it, they’re not waiting to be informed by a male about breast cancer screening'. Another Moroccan stated ‘I would do it if it really needs to be done’.

However, there was some male like one Turkish young adult who responded that he was willing to inform female members of the family, like aunt where he had no barriers towards. And by another Turkish male, the fact that having no sisters, especially among a few Turkish male participants was mentioned to feel responsible towards mother and others.

In brief, informed by male young adults about breast cancer screening is perceived as socially undesirable by the elder migrant women, especially in the Moroccan community.

6.5.2 Perceived behavioral control & self-efficacy
Young adult migrants perception about being capable to inform and stimulate about breast cancer screening was higher towards their mother in contrary to other female members. Towards their mother nearly all participants answered that informing about BCS was a highly important task. In spite of male participants female young adults showed more willingness to inform other female family members and expressed the necessity and seriousness of their action more precisely by addressing the essence for informing them too. The following external factors driving this perception were reported ‘illiteracy of their mother’, ‘higher risk of developing cancer in general within family’, ‘familiarity with breast cancer in surrounding’, ‘when breast cancer is common disease among Moroccan or Turkish female’, ‘healthcare facilities from state should make use of it’, ‘reading the invitation letter’, ‘asked for their view or advice sometimes by coincidence’, and ‘religion’. However, all participants mentioned that they were able to convince mother about the importance of breast cancer screening, but showed a lower self-efficacy towards other female family members. The way or strategies they mentioned varied across male and female participants, but it was clear that they would show higher effort to convince their mother to attend breast cancer screening.

6.5.2.1 Strategies of convincing mother to attend screening
On the question how they would accomplish this were by just translating the letter as some of them previously had done in the past. Some of them indicated having already influence on mothers’ lifestyle or choices, particular in healthcare decisions. Beside translating the invitation letter to their mother, explanation on the importance of detection in an early stage was revealed to be of high importance for recovery or survival and thus might be effective in convincing. Other convincing methods were: ‘telling mother that she has nothing to lose; or ‘that it was only good for her health’; ‘better now than later when you have it’; ‘it will cost her nothing’, ‘only time and that time could be of essential value’; ‘explain the consequences of late detection’; and ‘talk seriously’, ‘clearly’ and ‘effective’, were stated. One Moroccan female explained that the main reason for her mother attendance to BCS was after she had read and told her about the increased risk of Moroccan women to develop breast cancer, which
in fact was a misconception explained earlier in the result part of this report. Another male from Turkish origin, stated that he would use tactics like whether she wanted to see more grandchildren to grow up and added that he will remember mothers’ wish to go on pilgrimage to Mekka. Next, communication between siblings to convince mother all together were mentioned that it may also affect mothers’ decision positively. One female reported that she will use her teacher techniques and would let realize her the value of her health, and explicitly should do it from own volition.

On the questions what they would do when mother refuses to go, many of them reacted heavily, most mentioned reactions were ‘I’d drag her’; ‘I’d make a new appointment for her by myself, then she is obliged’; ‘she has no choice and nothing to say about, she must go, afterwards she will understand that it is meant to be good’.

One Turkish female stated ‘She knows that I’m not an enemy of her, and that I only want what’s good for her’.

In short, young adult migrant have a higher perceived behavioral control in general, but towards their mother they feel higher capable of performing the behavior than towards other female family members. And show a remarkable high self-efficacy towards their mother about performing this informing behavior.
6.6 Influential factors

6.6.1 Religion and culture in informing BCS

Islam was the only religious believe among young adult migrants except for one Turkish female participant saying that she did not had any religion, despite her faith in god. Normally these young adults had learned to be respectful towards their parents, but caring and serving your parents played also an important role according to their religious beliefs. For this reason creating awareness about issues which could be beneficial to them, in this case informing about breast cancer screening were interpreted as religiously valuable and a manner to show respect and serve others. Furthermore, several participants indicated that Islam emphasized respect for the body as a gift from Allah by stating; ‘A Muslim should not assume absolute "ownership" of his or her body, but only should care for it as a precious gift while he/she lives, until it is returned to its Creator upon death’.

It is not allowed to have any stake in your dead, so taking preventive measures to stay healthy as long as possible from religious viewpoint was something very important and accepted.

Moreover, ‘the 1st generation migrants could have wrong beliefs or misinterpretations regarding this issue, but with the 3th generation this may not be expected’, it was stated.

‘Islam was a religion of easiness’, stated a Turkish female. However, she then made the assumption that such screening was intended to discover breast cancer, but showing your breast to a male technician while you may not even have the disease or feel no pain at all just because of curiosity was against the Islam. For these reason, it was preferred that screening for breast or cervical cancer should be carried out only by a female technician. Furthermore, it was indicated that informing about breast cancer was absolutely not a sin or a taboo according to their religious beliefs, it was merely a barrier or obstacle from cultural perspective rather than religion, which was expressed mainly by Moroccans and some Turkish participants. In addition, shame was something that was extremely ignored by all participants.

A few remarked that ‘cancer or any other disease no matter whether it has to do with breast was something given by Allah, so there was nothing to shame’. Although male from Moroccan origin expressed that breast cancer was not a topic to talk with an uncle or friend.

Unlike barriers like distance, being married and having children there is a highly strong commitment towards their mother. Paying attention to mothers’ needs, requests or wishes of their mother were experienced as a matter of ‘listening or spending time with her’, ‘giving presents or gifts which mother liked’, shopping (e.g. grocery), being more often at home particularly young adults who were unmarried and lived at parental home, regularly making phone calls and especially make sacrifices in time. Each mother-child relationship was expressed to be different for each child, being characteristic dependent or having more sisters or brothers.
6.7 Possibilities and contextual barriers

6.7.1 Possibilities in informing or stimulating (intention)
Young adult participants reported several reasons and/or motivations for themselves to stimulate their mother to attend breast cancer screening as shown in table 6.2. The most often mentioned reasons and/or motivations to comply to this stimulating behavior have shown to be based on two main principles, namely the importance of mother and the importance of the breast cancer screening program. In addition, personal internal drives play also a role in informing or stimulating about breast cancer screening.

| Table 6.2 Reasons or motivations for stimulating mother to attend breast cancer screening |
|---------------------------------|-------------------------------------------------|
| **Mother..** | **Breast cancer screening..** |
| is extremely dear and important. | detects breast cancer (easily) in an early stage and so the occurrence of metastatic spread can be prevented. |
| is loved, cared and respected. | increases chance to cure/recover from breast cancer. |
| deserve to live a healthy life as long as possible. | have no side-effects and no costs. |
| to develop breast cancer is feared. | costs only time which could be of essential value. |
| ’s’ loss is feared (dead). | can be carried out by female technicians when asked for. |
| should not suffer pain as consequences of breast cancer or treatment of breast cancer. | is preventive. |
| have higher risk to develop BC, because of older age, ethnicity and heredity of cancer. | is offered by the state, and thus should make use of it. |
| is important from religious viewpoint (stimulate respect towards body health and mother). | is communicated through an invitation letter (in own language). |
| have breast cancer in the family or (is common) near surrounding. | is (very) useful or good for mothers’ health. |
| had earlier breast complaints (cysts). | |
| have other health complaints (diabetes, which could worsen the healing process). | |
| wants to see her children and grandchildren to grow up. | |
| wish to go on pilgrimage to Mekka. | |
| is willing to participate in the screening. | |

Additional reasons or motivations to advice or share knowledge with others were personal internal drives like; ‘caring, loving and feeling (highly) responsible to help other people’, ‘guilt feelings when something happens to others when informed improperly or not’, ‘for own imperturbability’, ‘feeling obliged’ and when acquaintance and awareness was created by themselves about the necessity of BCS, than this would motivate them to stimulate mother or others to attend screening. However, reasons like ‘impatient’, ‘fear to be taken unserious’, ‘not enthusiastic’, and ‘perseverance’ were indicated too, particular towards other female family members.
6.7.2 Contextual barriers in informing or stimulating

In general, most participants indicated to have no difficulties at all to inform/stimulate or even accompany mother in certain healthcare problems. Female showed more willingness to assist mother to a screening centre than male participants. More than half of all male respondents mentioned that they only would bring mother to a screening centre, but not go inside. A few other males reported that it was more appropriate that his sister would go with her. Nevertheless, several barriers as shown in table 6.3, were mentioned in informing or stimulating mother in participating to BCS. First, having less time, the far distance to parental home, and being employed were reasoned factors of their inability to inform or assist. The invitation letter was mentioned by nearly all of them as being very important in memorizing appointment and remembering mother to attend BCS each 2 year. Without reading the letter, because of e.g. being less home, merely all young adults indicated that it might be difficult to memorize. However, some indicated that they should notice when after couple of years still mother would not attend BCS. Yet, mother would be the first one who will be noticing this. Moreover, forgetfulness and perseverance due to far distance or personal character were also important for remembering data. Some indicated to have problems, especially when mother was not willing to listen for example when warned to stop excessively use of painkillers or was not paying attention on her diet (e.g. mothers’ diabetes). Furthermore, other barriers mentioned were mother’s unwillingness to communicate health concerns or complaints to their children for not bothering them; or the obstinate older generation were difficult to convince because they want to drive their own sense. Also insufficient language proficiency of the Berber language was a barrier too, particular among Moroccan young adults who were below the age of 30. Last, being at a young age to talk about breast with mother or doctor was experienced as embarrassing in the past. This might also count for the younger migrants in this time.

<table>
<thead>
<tr>
<th>Table 6.3 Contextual barriers in informing mother to attend BCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less time (due to several reasons)</td>
</tr>
<tr>
<td>Far distance to parental home.</td>
</tr>
<tr>
<td>Employed (work).</td>
</tr>
<tr>
<td>Not reading the invitation letter (less home or contact with parents).</td>
</tr>
<tr>
<td>Forgetfulness and perseverance.</td>
</tr>
<tr>
<td>Mother is unwilling to listen (stubborn older generation which are hard to convince).</td>
</tr>
<tr>
<td>Mother is unwilling to communicate health information or complaints.</td>
</tr>
<tr>
<td>Insufficient proficiency of the Berber language by Moroccan young adults.</td>
</tr>
<tr>
<td>Feeling embarrassed to talk about breast cancer with doctor, particular younger migrants.</td>
</tr>
</tbody>
</table>
6.8 Attitude towards being informed through social media

In general, Turkish and Moroccan young adults had a favorable attitude towards the use of social media to inform about breast cancer screening. However, opinions on the use of social media differed between both ethnic groups with regard to age and education level. Despite the occasionally visiting of marokko.nl by Moroccan participants some of them had doubts whether the information would be notable and attract their attention. A female from Moroccan origin who was a journalist as profession was extremely negative about marokko.nl.

She stated that *this medium is known to me as a platform for idiots, it is a certain level of intelligence that prevails there which is very low, mainly low-skilled or –educated writers*.

Moreover, a female, 36 years old same origin, indicated being still old fashioned, and preferred a letter via post. An internet link could only attract her attention when a ‘story or a picture’ was displayed. One Moroccan male participant who 12-13 years ago was actively been involved in the establishment of marokko.nl, also reported about his doubts whether younger people will use this kind of media to inform their parents.

On the other hand *when the aim is to encourage young people than it may be effective*, he stated.

In contrary, Turkish young adults were nearly unacquainted with forums like hababam.nl, yet they were more favorable towards being informed through social media. It was very surprising that the only male participant from Turkish origin who was familiar with the Turkish forum hababam.nl was also highly cynical about the visitors and writers of this platform like the Moroccan female participant. The Turkish participants were more active on Facebook, in comparison to Moroccan young adults. To be informed via FB was considered to be positive, but some working participants and the time of being active could lead for missing information.

All of the participants mentioned that Google was a popular Web search engine, and dependent on the topic being searched, it occurred on occasion that such forums were visited. It was mentioned by some that searching on internet about issues important at that moment was more preferred, rather than information being just released or offered. However, the tendency to read or click on a link about breast cancer screening was higher when it was attractive or had affinity with the subject. Additionally, it was stated by a few that (any) information was of value, but the time and demand was of importance. Another important factor stated was that the unofficial manner of information provision was influential in the assessment of the reliability of the source because this could raise uncertainty.

Other social media, like Linkedin also were mentioned to be useful, particularly among higher educated and professional laboring male. Last, nearly all participants were unfavorable towards discussing health problems or responding on health issues openly on forums, facebook, hyves, twitter etc.
7. Conclusion

In the Netherlands, participation rates in the breast cancer screening program for women belonging to ethnic minorities are lower than participation rate of the native Dutch women. Hartman and Van den Muijsenbergh (2009) have reported various reasons that could influence Turkish and Moroccan women’s participation. In order to increase participation of these women, their findings have shown that children of migrants have influence in their mothers’ attendance. The present study has attempted to explore the past behavior of brokering, attitude, subjective norm, perceived behavioral, knowledge, influential factors, possibilities and barriers, and the role of social media in the process of informing or educating young adult children of migrants about the importance of breast cancer screening, who will in turn inform and stimulate/motivate their mother or other female family members regarding attendance to breast cancer screening programs. As a result, this study is of great relevance for the implementation of the online educational campaign directed to younger migrants.

First, the developed sub-questions will be answered based on the results from the interviews, which than will be linked to concepts and further elaborated within the conceptual framework used in this study. Eventually, these findings will lead and form the answer of the central research question of this study which is;

What is the role of young adult migrants with regard to informing and stimulating/motivating their mother and other female family members to attend breast cancer screening?

The first question was how young adult migrants perceive their role as language broker or translator in relation to health issues of their mother?. This was merely based on past as well as current or still existing experiences with regard to brokering in healthcare issues of mother. According to our results, Turkish and Moroccan young adults perceive their role as language broker or translator in relation to health issues of their mother as highly important in their lives, and in many cases it has become a normal and usual act. Especially when mother have disease(s) or other health complaints. This brokering role is reported highly often among the participants. This behavior arise mostly from their high responsibility feelings, care and respect towards their mother, mainly as a consequence of their mothers’ illiteracy. However, religious, cultural and family or household teachings influence this behavior also, which will be explained later. Furthermore, this brokering is also perceived as a task or even sometimes as an obligation executed in many various ways (i.e. mental, financial and physical support) towards their mother. This include also communication after mothers’ GP/doctor consults, which was reported often, and Turkish mothers and illiterate or low Dutch language proficient mothers inquired more often brokering by their children. Despite less difficulties was reported among participants, however brokering costs time, effort and other barriers which is risked to face when brokering sensitive health issues. And this might influence their informing or stimulating role in relation to breast cancer screening and which therefore should taken into consideration. However, this brokering role in relation to past and existing behaviors might have a positive influence on their attitude towards informing or stimulating in relation to breast cancer prevention.
Because, past experiences with regard to informing about preventive measures is perceived as valuable. This past behavior also influence their perceived behavioral control in a favorable way, because brokering in health care decision is executed many times before and beliefs on performing this behavior exists. However, awareness or acquaintance on the information and whether it is relevant or not are essential in informing about a certain issue, and in this case parents or others about health related issues. In addition, the confidentiality of the source and the official form of the information being offered are also important. This all might induce a higher capability towards performing this informing behavior. In relation to subjective norm, we could suggest that this brokering behavior is perceived as something highly usual and is well known in their community and by their mothers. It is an expected behavior from their children to broker, assist or accompany in health care issues, especially by illiterate or insufficient Dutch language proficient mothers. To conclude, past brokering behavior of informing mother in health care issues is highly advantageous, and influence A, SN and PBC of young adult in relation to informing older female family members to participate to breast cancer screening positively.

The second question was about what Turkish and Moroccan young adult migrants know about breast cancer and the breast cancer screening program?

In general young adult migrant had some knowledge about breast cancer, but the breast cancer screening program was less understood or recognized. Especially, the purpose and the age group on which women are eligible to undergo breast cancer screening is less known. This insufficient knowledge about the breast cancer screening program might influence their attitude towards this preventive program and also informing their older female family members in participating to this program negatively. For this reason increasing knowledge about BCS is important for creating a positive attitude. This is also important on their perceived behavioral control, because less understood or insufficient information have an unfavorable effect on a persons’ capability to perform a certain behavior. People who are acquainted with a subject, and also have affinity with that subject have more chance to feel capable in carrying out that particular behavior than whose not. This acquaintance with breast cancer might also be formed by experiences with breast cancer within family or close vicinity in the past. According to our findings, Moroccan males reported less often breast cancer in their surrounding compared to other young adults. This suggest that acquaintance about breast cancer and BC screening should be mainly created by information provision about BCS, otherwise awareness among this particular group will remain low. In relation to SN, a person having insufficient or unreliable information have a higher chance to fail in to be taking seriously. Knowledge of a person on a specific health issue in particular this community is important, especially due to the perceived language barriers among the elder first generation migrant population. However, considering their basic knowledge about the importance of early detection of breast cancer, signs and symptoms, and recovery, it might be expected that this acquaintance will contribute for the creation of a rapid and fast assessment of the purpose of the online educational campaign on breast cancer screening. Herewith, more emphasis must be paid for the description of the aim of the program, the age of increased risk and a clear distinction should be made with cervical cancer screening.
The third general question was related to attitude towards objects and behaviors in sense of breast cancer screening and informing on BCS. According to our results about attitude towards cancer we could suggest that cancer is perceived as an unpleasant disease, particular among Moroccans. However in general, it was feared more intensely when mother would have cancer, and the heavy side effects were also feared. Though in general Turks were more positive towards recovery from cancer, especially when detected in an early stage. And females were more negative towards preventing to develop cancer, but showed a higher concern when mother would develop cancer. This all indicated that cancer is taken seriously, but only preventive measures against cancer is perceived by some female participants as less effective. Nevertheless, Moroccan have a more negative attitude towards cancer compared to Turks.

The second attitude-object/behavior relation was attitude towards prevention. In general young adult migrants attitude towards prevention differs. Younger aged (<30 year), and unmarried migrants have higher beliefs in staying healthy. And Moroccans, high-educated Turks and those with a disease history asked for more additional information during GP consults. This suggest that, attitude towards prevention differs among young adults, and this might influence development of strategies to change behavioral beliefs of young adults in relation to informing about BCS.

The main findings from the third attitude-behavior relation, namely attitude towards communication about cancer was that the young adults have less favorable attitude towards communication about cancer. Only when it is requisite, and loyalty and the strength of the relationship with that person (with own sex) were merely determinative in speaking about cancer, rather than time or location.

In relation of attitude towards breast cancer, young adult have an unpleasant attitude towards breast cancer when they themselves would have BC, but this negative attitude is doubled when their mother would have breast cancer. Excessive emotional feelings of grief, anxiety were commonly envisioned towards mother having breast cancer. Feelings which arise from underlying fears are mostly more eligible to take precaution measures.

And results from attitude towards breast cancer screening showed that young adult migrant have a favorable attitude towards breast cancer screening, despite unknowingness and misunderstanding of the purpose of the BCS program. This favorable attitude increases with higher knowledge about the purpose of the BCS program. The negative attitude towards BC and positive attitude towards BCS are in relation to informing and stimulating about breast cancer screening highly essential and valuable. It will contribute to awareness and sensitivity creation about the BCS among migrant youth.

The attitude- communication about breast cancer screening relation showed that communication about BCS was positive and occurred after BCS invitation letter was read by young adult migrant children of mainly illiterate mothers. And also when breast cancer or breast complaints/false information prevailed
Young adult migrants role in stimulating participation in breast cancer screening of older female family members

among the community than it was communicated too. Hereby, information acquisition influence attitude formation towards informing and stimulating about breast cancer screening in a far more positive way by generating engagement and creating responsibility or obligation to inform. Memorizing mother about BCS occurred more often through mother itself and also younger female siblings living at parental home were influential in remembering about appointments in health. The information provision in own language is hereby of great relevance, particular for illiterate and insufficient language proficient elder migrant women. Hereby, authoritarian (e.g. GP or Imam in a mosque) and familiar people with knowledge are the most important figures to influence these women’s’ choice in participating to BCS.

The attitude-informing about BCS, all participants have positive attitude about informing or stimulating their mother, but less positive about informing other female family members. However, compared to the other groups, young adult Moroccan men have the most negative attitude towards discussing breast cancer and motivating older female family members.

The social norm about the acceptability of the informing behavior on breast cancer screening within the Moroccan and Turkish community is gender dependent. Informed by a young adult migrant male is perceived as socially undesirable by the elder migrant women, especially in the Moroccan community. Nevertheless, the comprehensibility and justification of the information were also dependent in the acceptability by the community in spite of gender. In addition, the inability to be informed by a female family/relative, and the strength of contact with that person, merely counting for Turkish male than Moroccan men were in that case perceived as socially acceptable to inform this women. This influence their attitude towards informing, in a positive manner. However, males and especially Moroccan males attitude are in general influenced negatively as a consequence of this social norm within both communities.

The perceptions of young adult migrant about their capability to inform and stimulate about participation to breast cancer screening was high. However, their PBC was higher towards their mother in contrary to other female members. Particular male young adult perceive lower capability towards informing other female family members than female participants. However, in general young adult migrant would show higher effort to convince their mother to attend breast cancer screening. The availability of information and translation were the major effective strategies in their perception of self-efficacy and PBC of young adults. The high PBC and self-efficacy appointed by using various strategies towards their mother have a positive effect on their attitude and also directly on the intention to perform the informing behavior. However, we could also suggest that this high PBC and self-efficacy influence the attitude directly without any effect on young adults intention.

The question about what factor(s) has/have influence on their attitude towards breast cancer screening program and on their attitude to inform and stimulate/motivate their mother or other female family members were merely based on culture and religion. Religion had a positive influence on attitude, subjective norm and perceived
behavioral control towards informing and stimulating about breast cancer screening attendance. Religious beliefs influenced these three concepts by stimulating care, and serving of mother and others when there is need for. In addition, it influence the attitude towards prevention by emphasizing respect for the body, and the principle of ‘prevention is better than cure’ is also sensitized within Islam. And based on religious beliefs, a person should not shame of having cancer or breast cancer, because it has given by Allah which influence attitude towards C or BC positively. However, medical care should be in first instance preferred to be carried out by female doctors/technicians unless there are none than males are allowed. In contrast, the culture had a negative influence on especially Moroccan young adults attitude, SN and PBC towards informing and stimulating female family members about breast cancer screening. And cultural and religious values were mixed up, and so for medical purposes to be treated by a male was considered as ‘haram’ or forbidden. In overview, communication, informing, or stimulating about cancer, breast cancer (screening) towards other female family members was perceived as a taboo and in sometimes even a sin, particular among older Moroccan migrants.

According to findings on the sub-question on what possibilities and what (contextual) barriers they see in informing, and stimulating/motivating their mothers and older female family members, reasons and/or motivations (possibilities) to comply to this stimulating behavior are based on two main principles, namely the importance of mother and the importance of the breast cancer screening program. In addition, personal internal drives play also a role in informing or stimulating about breast cancer screening. The perceived barriers were more practical (e.g. distance, being employed, not reading invitation letter) and personal traits (e.g. perseverance, forgetfulness, unwillingness of mother etc). The perceived contextual barriers, might influence the informing behavior in spite of a positive attitude, SN and PBC towards informing female family members to participate in BCS.

The final sub-question was about how they perceived the use of social media to inform young adults about breast cancer screening?. This question was elaborated below the concept of attitude towards being informed via social media. Turkish and Moroccan young adults have a favorable attitude towards the use of social media to inform about breast cancer screening, but there was difference in preference of type of social media among the two ethnic groups in relation to age and education level. Moroccan younger adults are more acquainted with forums (marokko.nl) and Turkish young adults are more active on Facebook and are also highly positive towards being informed through this platform. Other media, like Linked is more preferred by higher educated professional laboring young adults. And older young migrants prefer to be informed by post. However, for all social media, the time, attractiveness, creating affinity with the subject, official information provision and reliable source are important factors to be considerate. This positive attitude towards being informed through different types of social media is of high importance for the construction of the online educational campaign via social media.
7.1 Final conclusion

Based on answers of the sub-question, the past brokering role and religion have positive influence on attitude, subjective norm and perceived behavioral control towards informing or stimulating about BCS. Together with these two background variables, and knowledge on BCS is of high importance and have much greater impact in the creation of a favorable attitude, SN and PBC. Thus increasing knowledge on BCS is highly essential in the informing or stimulating behavior of young adult migrants. And from the perspective of young adult migrants, informing in own language, mainly illiterate and insufficient language proficient elder migrant women is perceived as highly relevant.

And according to the three concepts prior to intention (A, SN, PBC) young adult migrants could have an essential role in informing or stimulating in particular their mother to participate in the BCS program. The fear or negative feelings when mother would develop breast cancer, the positive feelings with regard to BCS program and to communication after reading the BCS invitation letter, and open attitude towards informing and stimulating mother to participate in the screening program contribute to this finding. And the perception of capability or self-efficacy towards informing own mother is higher and that this behavior is accepted and favored by their mother play also a role. This role is strengthened and can be attributed to the great value and importance of mother in young adult migrants lives as consequence of personal, religious, cultural and family teachings.

On the other side, young adult migrants might not play an efficient role in informing, discussing or motivating other older female family members to participate in the breast cancer screening program, especially Moroccan males. Moroccan males have a more negative attitude, are undesired to inform by the elder migrant women about BCS in their social community, and have lower PBC towards informing other female family members. These are consequences of cultural perceptions as taboo or sin, which negative influence migrant young adult males A, SN and PBC towards informing other older women in the community about BCS.

In addition, social media could be used to inform the young migrants, but the type of social media should differ according to age and education level. In addition, attention should be paid to the perceived barriers for motivating older female family members.

For this reason, it can be suggested that young adult children of migrants are a highly suitable target group for the promotion of attendance of mainly illiterate and insufficient language proficient migrant mothers to breast cancer screening programs.
8. Discussion

In this study, first the past behavior of brokering role in health care decisions for mother in general, the knowledge about BC(S), and attitude of young adult children of migrants from Moroccan and Turkish origin towards informing and stimulating/motivating their mothers and other female family members to participate in the breast cancer (screening) have been explored. Secondly, the subjective norm, perceived behavioral control, influential factors, and the possibilities and barriers that young adults experience in informing and stimulating/motivating their mothers have been investigated. In addition, more insight in the applicability of social media in creating awareness on breast cancer screening from the perspective of young adults was obtained. The results of this research indicate that young adult migrant of Turkish and Moroccan origin have a favorable A, SN and PBC towards informing and stimulating/motivating their mother, but informing other female family members about the breast cancer screening program is less favored, particular among Moroccan males.

Here we will discuss indistinguishable issues of certain findings of this report. It will end with limitations of the report.

8.1 Brokering in health care decisions

Before discussing the main concepts related to the purpose of this study, more understanding is required of the brokering role of migrant young adults. The results on the background information about the brokering role of migrant young adults in medical/healthcare decisions showed that migrant children are highly involved in their mothers’ health and wellbeing by speaking, reading, writing, listening and do things for her, using their knowledge of two languages. These findings match with early studies on medical/health care decisions of children of migrant families, where migrant children schedules appointments with family’s doctor, serve as translator for parents during doctor’s visits and consult parents in private when making medical decisions (Orellano et al., 2003). And daughters were expected to be more involved in mothers’ healthcare decisions as described in the study of Washington et al. on mother–adult daughter communication which showed that daughters influenced their mothers’ choice of health care practitioner as well as when to seek care and how often to visit a health care provider (Washington et al., 2009). The findings from the current study corresponds with the results of Washington et al (2009) and show that daughters and being eldest in the family demands more brokering for mother. In addition, tremendous interest, care, respect and support towards mother have enhanced young adults involvement in mothers’ health. However, less brokering have shown to be required when mother is literate and speaks the Dutch language well, which correspond with findings from the study of Chao., showing that less brokering of their children is required for parents who are higher educated and fluently speak the native language (Chao 2006).
Another finding about less brokering of migrant children is when having siblings or other members of the family being able to call for to act as translator. And younger children and males reported less often brokering, which agree with earlier research among Latin youth in America (Buriel et al., 1998). Though this decreases when living at far distance to parental home, mostly when married and having children, and being employed. However, visiting or daily contact by phone was highly often mentioned by most of the respondents. Moreover, Turkish or illiterate and insufficient language proficient mothers applied more often to be brokered by their children than Moroccan and literate mothers. The last one induces less involvement of young adults in health care decisions.

To sum up, the persisting brokering role of migrant children as a consequence of being children from first generation Turkish and Moroccan migrants with low- education level, SES and health literacy (Kreuger et al., 1999; Van der Velden et al., 1999), it is expected that their attitude towards informing and stimulating/motivating behavior should be positively oriented. As it was revealed in the study of Hartman and Van den Muijsenbergh (2009) that women who were informed and stimulated by their children attended breast cancer screening more easily, supports this expectation. Young adult females who had read the invitation letter of their mother to attend breast cancer screening informed, stimulated and some even accompanied mother to the BCS centre. And male young adults mentioned that they would inform, and bring mother to the screening centre. Thus, mothers who are informed and stimulated by their children would attend more easily breast cancer screening which is in accordance to the findings of Harman and Van den Muijsenbergh.

8.2 Knowledge

Main findings from the analyses of the knowledge part of semi-structured interviews revealed that young adults had some knowledge about breast cancer in relation to sign & symptoms, treatment, diagnose and risk factors. The level of knowledge about breast cancer in women and male have shown to be dependent merely on two main factors: early experience and being acquainted with breast (cancer) related health problems. In contrast, the level of knowledge about breast cancer screening particular was commonly low, but despite of this, young adult migrants were highly positive towards breast cancer screening. This positive attitude in spite of insufficient knowledge can be explained by awareness of the importance of early detection and the positive perception of healthcare provisions in general with regard to prevention. Though in fact the invitation letter in its own contributed to this awareness being sufficient to inform and stimulate mother to attend breast cancer screening. A few participants had read the invitation letter for breast cancer screening in the past, and translate this letter as previous research of Hartman and Van den Muijsenbergh (2009) and Vermeer and Van den Muijsenberg (2009) revealed that migrant women who were informed by their children attend breast cancer screening easily (Hartman & Van den Muijsenbergh 2009; Vermeer & Van den Muijsenbergh 2009). And in the study of Lale et al., (2003) women stated that the availability of an interpreter could raise participation rates (Lale et al., 2003). In sum, knowledge about breast cancer and breast cancer screening induced by many dynamics directly affects the
behavior of interest and also indirectly by influencing attitude towards breast cancer screening positively. This in turn lead to the informing and stimulating behavior of young adult migrants. Although, this merely counts for females rather than male young adults.

8.2.1 Early experience with breast cancer
Young adult migrant who experienced breast cancer or breast related health complaints within family or surrounding are more acquainted with breast cancer. Considering the low mortality rates of migrant women as a consequence of breast cancer as shown in a study of Stirbu et al., their experience might remain low or restricted to their surrounding with native Dutch women who might have the disease. For this reason, they might perceive it as irrelevant and ignore the importance for women in their community to attend breast cancer screening. Thus, informing and educating on the increasing risk also under the migrant population as described in a study of Stirbu et al. that breast cancer mortality rates increased with younger age at migration and among second generation migrants converging to the levels of the native Dutch population (Stirbu et al., 2006). This might attract their attention, enhance or create awareness in these youngsters, especially among Moroccan males. Cancer is less often heard especially among this community as a consequence of cultural taboo perceptions, and particular breast cancer, because its related to breast. For this reason, it is of high necessity to create more awareness among Moroccans about breast cancer.

8.3 Attitude
This concept was divided in several parts to create more in-depth understanding and predict behavior more precisely. For this reason attitude towards cancer, attitude towards prevention, attitude towards communication about (breast) cancer and attitude towards informing and stimulating/motivating mother or other female family members to attend BCS have been explored and analyzed thoroughly to identify main key points which may support the informing behavior of this community.

Attitude towards an object or the behavior reflects the individual’s global positive or negative evaluations of that object or performing a particular behavior. In general, the more favorable the attitude towards the behavior, the stronger should be the individual’s intention to perform it (Ajzen, I. 1991). From the results on attitude towards cancer we can conclude that young adults are unfavorable towards cancer and preventing cancer in general. Although the degree of being unfavorable towards cancer has shown to be depended on type and stage of cancer, (side-effects of) treatment methods and cancer in close vicinity.

Young adults named nearly similar measures to stay healthy, like regular exercising or eating healthy food were precautions mentioned highly often. Screening or other routinely performed methods to prevent diseases has not been indicated at all. An explanation for this might be the young age of the migrants, especially those below the age of 30 were unaware or less interested in prevention programs, though cervical cancer screening programs
were more known among married adults above the age of 30. Overall, young adults’ attitude differed towards prevention and staying healthy.

GP was less consulted and information requirement during GP time was much depended on disease history, educational level and language skills. Openly speaking about cancer was mainly due to necessity, mainly in situations to support or advice then cancer, in spite of the unwillingness, yet favored to speak. In normal settings communication about cancer have explained to be unpleasant, and was favored only to speak with own sexes and husband/wife which might be due to norms and values within these communities. This might cause less informing towards other female family members. For this reason, more attention should be paid to the perceived barriers like taboo or shame, towards other female family members. And this could mainly occur by using moderators e.g. at Marokko.nl with own ethnic background, and hereby opening topics about that religion stimulates serving others, respect towards body etc. And that religion and cultural values are mixed up, especially among low educated or illiterate first generation migrants.

Attitude towards communication about breast cancer and screening have shown to differ between female and male participants about whether it is a mother or a female family member to communicate with. Female participants have expressed clearly willingness and consider no difficulties at all towards communication about breast cancer with mother as well as other female family members above the age of 50. In contrast, particularly Moroccan male participants explicitly appointed being negative towards communication about breast cancer and screening with other female family members in the family. In spite of speaking of cancer was indicated to occur more often with someone from own sex, still breast cancer was accepted as something unusual or inappropriate to talk about with males, which could be an uncle or friend when mother had breast cancer. The word ‘taboo’ was mentioned by nearly all Moroccan participants in contrast to Turkish young adult being none. However, in the last group aspects as shame or cultural constraints were mentioned a few times. And in spite of the high effort for recruitment of Moroccan young adults there was less interest and involvement of this particular group as a consequence of shame, taboo to talk (with a women) about breast cancer. These aspects were also found in the study of Hartman and Van den Muijsenbergh (2009) when exploring reasons for non-attendance of migrant women. They reported that migrant women whose husband did not allow them to be treated by a male doctor, because of his shame of showing her breasts and also feeling embarrassed against relatives to talk about breast cancer, were reasons for non-attendance (Hartman and Van den Muijsenbergh 2009). In conclusion, attitude of male Moroccan young adults towards communication about breast cancer and screening with other female family members was negative, but towards own mother it was more favored. And Turkish participants showed a positive attitude towards communication about breast cancer and screening with mothers as well as other female family members. Although this positive attitude of male participants counted merely for mother and differed towards other female family members. The reason for this difference can be attributed to personal characteristics, and still perceiving certain cultural and religious obstacles.
Misconceptions about the purpose and content of breast cancer screening program was highly evident in several participants. Young adults being acquainted trough reading of the invitation letter of mother were aware and showed a highly positive attitude towards breast cancer screening. For this reason and considering the findings from Hartman and Van de Muijsenbergh (2009) and Vermeer and Van den Muijsenberg (2009) on the positive influence of migrant children in the attendance of women, we may suggest that educating migrant children might be highly effective in the uptake of these women in the screening program. Remarkably, young adults with less acquaintance and misconceptions had also a favorable attitude towards breast cancer screening. To sum up, young adult migrants were positive towards being informed and informing their mother about BCS.

8.4 Subjective norm and perceived behavioral control

8.4.1 Subjective norm
Subjective norm refers to the individual’s perceptions of general social pressure to perform (or not to perform) the behavior. If an individual perceives that significant others endorse (or disapprove of) the behavior, they are more (or less) likely to intend to perform it. Informing and stimulating or motivating older female family members by male young adults about breast cancer screening was indicated as socially undesirable behavior. This contributed to the unfavorable attitude of male young adult migrants towards informing older female family members. In case with female, this behavior was socially acceptable towards older or other female family members. These findings are supported from earlier results of the study of Hartman and Van Muijsenbergh (2009), which stated that the Turkish and Moroccan communities are so closely knit, fear of gossip and the taboo of cancer can be a reason for these women to not attend in the screening program. Also feelings of fatalism could hamper women to attend, meaning that a screening program cannot protect them against a disease which was given by God (Hartman and Van Muijsenbergh 2009).

8.4.2 Perceived behavioral control
In contrast, both sexes have remarked to have a higher perceived behavioral control towards informing mother rather than other female family members. Informing mothers was indicated to be a highly important task and young adults have strong feelings for being responsible to fulfill this task. As shown in the study of Sinicrope et al., (2009) mother-daughter communication and related decision making could be important factors to create awareness about breast cancer (Sinicrope et al., 2009). Informing other female family members was generally lower in male participants, but female young adults show a bit more willingness to inform if it comes up and it was mainly characteristic dependent.

From religious perspective, informing about breast cancer screening have indicated to be valuable, and not a barrier or obstacle, rather culture was invoking negative perceptions in particularly the older generation migrants. Factors like distance, being married or having children affected younger migrant contact with mother less,
because of the daily contact of young adults by phone or regularly visits to parental home was highly often among the children.

8.5 Attitude towards being informed through social media

A clear implication of our findings was that the views about social media between Turkish and Moroccan young adults were merely divided. Forums directed to the Moroccan community (e.g. marokko.nl) have shown to be less favored by young adults. This platform might mainly be useful for informing younger Moroccan migrants. Though, almost all Moroccan participants mentioned being familiar with marokko.nl and all had read or discussed once in their lives on this forum with others on a topic. This was also in accordance with results of the research desk Motivation (2007), which found that almost 30% of the Moroccan community in the Netherlands visit at least once a week Marokko.nl and 24% even daily which counts for 50.000 visitors each day (Motivation, 2007; Marokko Media, 2008). This was also found in a study of Nijntjes & Wijma (2006), by reporting that Moroccan discussion forums were very popular among Moroccan youth which is a place where they can meet others Moroccans and share knowledge or views (Nijntjes & Wijma, 2006). According to our findings, mainly married young adult migrants above the age of 30 prefer to be informed by a letter. Turkish young adults prefer to be informed via Facebook, and forums were not popular among these group at all. During the implementation of the educational online campaign, information provided have to be fit to the needs of different age-groups, and the different educational level in both communities need to be taken into consideration for being effective. Furthermore, gender specific differences should also taken into account when placing a link. In a study measuring the differences in stroke knowledge, stroke risk perception and the effects of an educational multimedia campaign gender-specific data indicated that educational programs do have gender-specific effects. Women show better stroke knowledge and in some aspects a better chance to gain information from classical broad educational interventions (Marx et al., 2009). It is expected that the intervention program would attract more attention from female young migrants. Some young adults, indicated that the link which will be used to direct to a main page about information on breast cancer screening explicitly for migrant women have shown to attract attention only when a photo of a migrant women is visible or when directed to a story of a migrant women who experienced breast cancer in the past, otherwise it may not taken seriously. And considering that topics about breast cancer attract much attention and empathy towards the topic-starter by the members (Marokko media, 2010) we may suggest that this positive attention may be strengthened by placing pictures, text or story’s of women to attract attention of both female and male migrants. In Hartman and Van den Muijsenbergh (2009), a reason to attend to breast cancer screening programs was the familiarity with cancer in the social environment of the Turkish and Moroccan women. As they were exposed to stories of other women, they got familiar with the subject, which affected their motivation to attend (Hartman and Van den Muijsenbergh 2009). Thus, increasing awareness and familiarity of the subject among their children might lead to speaking about this subject with their mother or other women in the family, eventually leading to conscious or unconscious change in perception or belief about the
value of the screening. In addition, Hartman and Van den Muijsenbergh (2009) and Lale et al. (2003) have suggested that education and other health promotion community activities via local networks, key figures from the community and mosques are required to inform women and other relatives on breast cancer and the necessity of the screening program. These all support to the usefulness of children of migrants as a mean to increase uptake of migrant women in the breast cancer screening program.

8.8 Limitations

In the initial phase and in the course of the study we tried to take most limitations into account, for instance in the recruitment phase of respondents we try to recruit a diverse population as much as possible who consisted of participants with different educational levels, positions at labor market, education levels of mother, socio-demographic and economic characteristics, living situation and marital status. Including students, unemployed men, housewives, or high educated men or women have contributed to a more valid and representative research. Although there are several limitations which are listed below.

- Data analyses of all coded interviews has not been reviewed by a second independent researcher to increase validity of the results, but main findings are discussed with two colleagues at Pharos who had work experience with migrant health for many years. Additionally, transcribed interviews were sent back to several respondents to approve statements and check for errors to strengthen validity of the content. No comments were made on transcribed interviews from respondents side.

- Equal number of interviews of males and females from both migrants groups has not been achieved. Despite high efforts to attract Moroccan males in the study less males replied to participate in the recruitment process. In order to clarify their unwillingness to be interviewed, view of few Moroccan males with regard to the subject (breast cancer) was explored. This explanation contributed to our findings that in the Moroccan community speaking on topics related to breast even when it is a disease other than breast it is not preferred or socially acceptable to speak this with a female.

- In the methodological execution of data collection, the approach of triangulation with other experts on migrant young adults was not used. However, triangulation of data from the interviews with the literature have been performed i.e. data source triangulation (Denzin 1984, 1989, Stake 1995, and Puente-Rodriguez 2010). In addition, the accomplishment of the study was in collaboration with personal supervisors at Pharos who had experiences with migrants in the field of healthcare for many years. This all contributed to the plausibility of the findings. For this reason, no further interviews with experts from both community was find to be necessary.

- Interviews were taken by a bi-lingual researcher with Turkish background who was familiar with the beliefs, certain perceptions, and norms and values within the two communities which was an advantage.
in the assessment of the findings. This also contributed to the validity of the interview content. Although, it occurred that some women of both origin were a bit careful on questions with regard to their relationship with their mother and how strong this was. It was observed that some women hesitated while questioning and words in the negative sense were tried to be not mentioned as much as possible. However, the relevancy or the influence of the misinterpretation on the question in relation to informing is minimal, because these are only a few women and considering the whole model prediction of the correct behavior might be unaffected.

Despite advantages of using a bilingual researcher in a study on migrants, there was also some disadvantages, like the chance of giving social desirable answers, particular by respondents from own personal social network. To avoid or bring it to a minimal, participants were informed that their answers would treated confidentially and social desirable answers were eliminated during data-analyses. Notes were taken during and after each interview, hereby situations who were observed or felt as inconvenient were noted and eliminated during analyses.

The behavioral beliefs of the age group 25-40 with regard to informing on breast cancer might not count for the younger population below the age of 25. Migrant youth might or might not have a different attitude towards informing or brokering role and this might be less common compared to older migrants.
9. Recommendations for the online educational campaign

Unfavorable attitude change towards informing and stimulating/motivating mothers and other family members could be influenced by many ways. Research have shown that message memory is most important in predicting attitudes when at the time of exposure the elaboration of message arguments is unlikely, then an unexpected judgment is requested sometime after message exposure, and simple cues to message validity are relatively unavailable at the time of judgment (Frey & Eagly 1993, Haugtvedt & Petty 1992, Haugtvedt & Wegener 1994, Mackie & Asuncion 1990; for a discussion, see Petty et al 1994). In such circumstances, people apparently judge the advocacy by retrieving whatever message sub- stance they can, and then either evaluating these recalled arguments or making an inference of validity based on the number of arguments remembered.

Considering the positive attitude towards informing and stimulating/motivating their mother about breast cancer screening programs, the campaign might be highly effective in increasing the attendance of older migrant women to screening. Although, their less favorable attitude, perceived behavioral control and subjective norm towards informing other members of the family, and particularly male young adults which is mainly visible among Moroccan males, the campaign might reach merely own mothers. For this reason, to reach a larger group of migrant women above the age of 50 it is of high importance that the link should be placed and visible on as much as possible social community webpages. Below are the main recommendations for the implementation of the intervention listed.

*Topic list of most important recommendations for the online educational intervention:*

The purpose of the screening program should be enlightened and described carefully by considering the following recommendations:

1. A brief description of the aim of the program, namely the (early) detection of breast cancer by using the technique mammography should be written carefully. Thus, the actual purpose and methodological execution of the screening should be explained properly to prevent misconceptions like knowledge or advice center, a program on television, curative or healing center etc.

2. An explicit indication of the age group (women between the age of 50 and 75 years old) for who it is intended for should be stated. This is mainly important for avoiding confusions with cervical cancer screening which is directed to women between 30 and 60 years invited each 5 year for a Pap smear of the cervix.

3. The participation interval of 2 year should be mentioned together with the invitation letter which is send several weeks before the screening. The letter was of high importance for migrant children, as they read
and translate post for their parent. And the language in which the letter was written should be taken into consideration when directed to migrants.

Participants reported that they only talked with own sexes (mother, girl-/boyfriend, sister,-(in-law)) and/or husband or wife about cancer and particular breast cancer. For this reason, the link should be placed also on places visited by only male or female migrants under e.g. sport headings (male) and beauty or wellness to reach both groups.

Furthermore, to encourage particularly female migrant youngster, their important role to act as intermediary within the promotion of breast cancer screening uptake among migrant women should be enlightened. This might create social sensitivity and persuade to inform and stimulate more often.

The campaign should also put emphasis on the fact that some older migrant women are less willing to participate to breast cancer screening and that encouraging particular these women need to be stimulated. Hereby showing statistical numbers of the low participation rate of migrant women for screening might be effective.

For diminishing barriers which is perceived when informing mother, the message should also contain the high illiteracy rate, and the dependency on their children of first generation migrant women, aiming to evoke emotional or psychological commitment with these women. In addition, their important and effective role as broker in medical health care decisions of mother who contributed considerable in creating equal and effective health care for migrants could also be enlightened, this might increase motivational comply as an award for their help.

The educational campaign about breast cancer screening has to take into account the differences in utilization of social media among the two communities and the age group. Forums are far more less popular, especially among Turkish participants being even unfamiliar. Turkish participants preferred rather to be informed via Facebook, which is a highly common and daily visited platform by Turks.

Moroccan participants were familiar with forums visited by Moroccans more often. However, to be effective on these forums the content of the information should be adapted to the level of the visitors of this community. Mainly young and low-skilled migrants were active on forums.

Furthermore, to reach the higher educated young adult migrants the webpage LinkedIn could be more useful and effective in reaching this particular group. The LinkedIn webpage is a business-related social networking site and is mainly used for professional networking. For the older and lower skilled young adults, social media could be less effective.
Another important recommendation is that the link should be noticeable and attract attention of younger migrants, for this reason photos or texts indicating migrant women might be effective. The information that will be provided need to be enlightened and a clear description of the purpose of breast cancer screening must be provided, and more emphasis have to be put on older women being at higher risk as described previously.

Moreover, the age group of 50-70 years should be enlightened more precisely and explicitly by making distinction with the cervical cancer screening offered for women between 30 and 50 years of age. This might induce precautions or cognitive remembrance of their mother to correspond to the given age category. In addition, the source of information provision under which official institution or project this campaign has established should be explained in short for gaining trust and to increase reliability.
10. References


Young adult migrants role in stimulating participation in breast cancer screening of older female family members


73. Marokko media (2010).


APPENDIX I - Interview

Namens stichting Pharos doe ik onderzoek naar de huidige kennis en de houding van jong volwassen kinderen van Turkse en Marokkaanse migranten over borstkanker (screening). Hiernaast willen we kijken welke mogelijkheden en barrières deze groep ziet en ondervindt in het informeren en stimuleren/motiveren van hun moeders en/of andere vrouwelijke familieleden (bijv. tante(s)) om deel te nemen aan borstkanker screening. Dit onderzoek vormt een onderdeel van een groter project. Daarin zullen jonge mensen via sociale media geïnformeerd worden over borstkankerscreening. Zo hopen we jonge mensen te stimuleren om met hun moeders over de screening te praten en hen te stimuleren deel te nemen aan de borstkankerscreening.

Indien u het goed vindt wordt dit gesprek opgenomen op band. Uw gegevens zullen vertrouwelijk en anoniem worden verwerkt. Eerst volgen nu enkele algemene vragen.

<table>
<thead>
<tr>
<th>ACHTERGROND INFORMATIE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Datum:</td>
</tr>
<tr>
<td>Naam:</td>
</tr>
<tr>
<td>Adres:</td>
</tr>
<tr>
<td>Leeftijd:</td>
</tr>
<tr>
<td>Opleiding:</td>
</tr>
<tr>
<td>Dagelijkse bezigheid:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Burgerlijke staat:</td>
</tr>
<tr>
<td>Woonsituatie:</td>
</tr>
<tr>
<td>Afstand tot ouderlijke huis:</td>
</tr>
<tr>
<td>Geboorteland:</td>
</tr>
<tr>
<td>Geboorteland vader:</td>
</tr>
<tr>
<td>Geboorteland moeder:</td>
</tr>
<tr>
<td>Leeftijd moeder:</td>
</tr>
<tr>
<td>Kan moeder Nederlands lezen?:</td>
</tr>
<tr>
<td>Nederlands spreken: goed/ voldoende om alles zelf te kunnen regelen / beetje</td>
</tr>
<tr>
<td>Andere taal lezen?:</td>
</tr>
<tr>
<td>Heeft moeder hulp nodig om officiële brieven te begrijpen?:</td>
</tr>
<tr>
<td>Zo ja, wie helpt daarbij meestal?:</td>
</tr>
<tr>
<td>Bent u religieus?: O Ja, namelijk: ............................................................</td>
</tr>
<tr>
<td>Zijn uw ouders religieus?: O Ja, namelijk: ............................................................</td>
</tr>
<tr>
<td>Opmerkingen:</td>
</tr>
</tbody>
</table>
**A. KENNIS**

A1. Wat weet je over (borst) kanker?

1.1 Hoe weet je of je het hebt? Wat is een aanwijzing?

1.2 Wie krijgen vooral borstkanker (risicofactoren, etnische verschillen)

1.3 Hoe denk je dat je borstkanker krijgt?

1.4 Wat is er aan te doen? (Waaruit bestaat behandeling?)

1.5 Hoe vaak komt het voor?

1.6 Als je het hebt, kun je dan nog beter worden

A2. Ben je bekend met het bevolkingsonderzoek naar borstkanker / borstkanker screening?

2.2 Voor wie is het bedoeld en vanaf welke leeftijd?

2.3 Waarom denk je dat dit bestaat? / wat is het nut van deze screening? (concept preventie)

A3. Denk je dat je moeder en vader iets weten over BK(S)? Zo ja, wat denk je dat ze weten? (kennis van ouders over BKS)

B. 1E HOUDING TEN AANZIEN VAN KANKER:

B1. Heb je ervaring met kanker in de familie?
B2. Vind je het een enge ziekte?
B3. Wat vind je eng/ niet eng aan kanker?
B4. Denk je wel eens hoe het zou zijn als jij of een familielid kanker zou krijgen?
B5. Denk je dat mensen zelf iets kunnen doen om kanker te voorkomen?
B6. Praat je wel eens over kanker
  6.1 Met wie?

C. 2E HOUDING TOV PREVENTIE

C1. Denk je dat mensen veel kunnen doen om gezond te blijven?
C2. Wat voor dingen?
C3. Doe jij zelf iets speciaal voor je gezondheid?
C4. Als er een gezondheidstest zou zijn voor jou, zou je daar dan aan mee doen?
C5. Hoe vaak ga je naar je huisarts?
C6. Vraag je daar veel aan over gezondheid?
C7. Zou je willen dat hij/zij je meer uitlegt daarover?

D. 3E HOUDING TOV SPREKEN OVER KANKER

D2. Hoe zou je reageren als je hoort dat iemand kanker heeft? Er minder naar toe gaan? Het doorvertellen aan anderen?
E. 4e Houding tov spreken over borstkanker met ouders/familie

E1. Heb je in je familie vrouwelijke familieleden (tantes) of andere kennissen boven de 50 jaar?

E2. Heb je met je moeder/vader of familieleden wel eens over BK gesproken?
   E2.1 Zo niet, hoe zou je het vinden om met je ouders over BKS te spreken? (moeilijk/makkelijk)

E3. Ken je iemand in je familie of nabije omgeving die te maken heeft gehad met borstkanker?
   E3.1 Zo ja, Hoe was dat voor jou? Hoe voelde je je?
   E3.2 Zo nee, Stel dat je hebt en het is je moeder of een goeie familieled, hoe zou je je voelen?

E4. Hoe ging je of zou je hiermee omgaan? Wat zou je doen/deed je? (op wat voor manier?)

E5. Zo je je schamen voor je moeder wanneer zij BK heeft? bijv. wanneer je met haar naar de huisarts/specialist/chemo gaat? Of tegenover vrienden en of andere familieleden?

F. Achtergrond informatie omgang met ouders en zorg

F1. Heb je wel eens met je moeder gepraat over haar gezondheid? Zo ja wanneer doe je dit?

F2. Heb je wel eens met je moeder gepraat over haar bezoek aan een arts? Zo ja gebeurt dit bij ieder bezoek van haar?

F3. Ben je wel eens mee geweest met je moeder naar de huisarts/specialist?
   3.1 Hoe heb je dat ervaren? wat vond je lastigst/moeilijkst? (barrières)

F4. Wat regel je allemaal om te zorgen dat ze bij de huisarts/specialist komt?

F5. Is dit voor jou makkelij of moeilijk om te regelen?
**G. 5E HOUDING T.A.V. SCREENING EN HET INFORMEREN VAN OUDERS**

G1. Wat vind je zelf van borstkanker screening programma’s?

*In het kort vertellen over screening programma’s wanneer hij/zij dit niet weet en de volgende vragen stellen:*

G2. Wat denk je dat je moeder of andere vrouwelijke familieleden ervan vinden wanneer je hen zou informeren over BKS? (Subjective norms)

G3. Wat voor rol speelt jouw religie om je moeder te informeren/stimuleren om mee te doen aan BKS?

G4. Hoe denk je over BKS vanuit religieuze en culturele kant gezien?

G5. Verwacht je dat of vind je dat het jou taak is om je moeder of a.v.f.l. te informeren en te stimuleren om mee te doen aan BKS? Zo ja/nee, waarom? (perceived behavioural control)

5.1 Vind je dat je zelf ook in staat bent om dat te doen?

5.2 Hoe belangrijk vind je deze taak?

G6. Wat verwacht je moeder of a.v.f.l. van jou als het gaat om steun bij gezondheidsproblemen en in het specifiek over borst kanker?

G7. Kan je de band met je moeder beschrijven?

7.1 Hoe hecht zijn jullie? (cultural)

G8. Besteed je aandacht aan de wensen en behoeftes van je moeder?

8.1 Zo ja, op wat voor manier?

G9. Hoe kijkt je of denk je dat je vader kijkt tegen het bespreken van gezondheid gerelateerde problemen met je moeder? Vnl. kwesties die zij eerder met een dochter kan bespreken? (deze vraag stellen aan mannelijke deelnemers)

G10. Heb je behoefte aan meer informatie of heb je meer informatie nodig om je ouders te informeren?
SOCIALE MEDIA

G11. Hoe zou je het vinden om via sociale media geïnformeerd te worden over gezondheidsproblemen?

G12. Heb je al eens eerder gezondheidsproblemen besproken via forums of andere sociale media?

G13. Vond je dit prettig of juist niet prettig? en waarom?

G14. Hoe zou je houding veranderen ten opzicht van borstkanker screening door de kennis die je op zal doen over BKS?

G15. Wat zou voor jou een reden zijn om je moeder te stimuleren zichzelf te laten screenen op borstkanker?

15.1 Wat motiveert je om dit te doen?

G16. Wat denk jij dat vrouwen kan helpen om mee te doen aan BKS?

16.1 Welke adviezen kan je mee geven, op wat voor manieren kan dit volgens jou?

H. MOGELIJKHEDEN & BARRIERES:

H1. Denk je dat je in staat bent je moeder te overtuigen dat het belangrijk is? Hoe zou je dat doen? (het overtuigen). (Self Efficacy)

H2. Hoe zou je het aanpakken, hoe help je je moeder te herinneren?

H3. Hoe denk je er over om met je moeder mee te gaan naar BKS?

H4. Ervaar je moeilijkheden in het informeren en/of begeleiden van je moeder bij gezondheidsproblemen? Zo ja wat?

4.1 Denk je dat het lukt om ieder 2 jaar je moeder hierop te attenderen/te herinneren?

Zou je nog iets willen toevoegen aan deze interview of iets wat niet benoemd is?

Hartelijk dank voor je deelname!