DIGNITY AND HEALTH RELATED QUALITY OF LIFE OF ADULT RESIDENTS OF YEREVAN

A COMPARATIVE SURVEY OF REFUGEE AND NON - REFUGEE RESPONDENTS.

Master of Public Health Integrating Experience Project
Utilizing Professional Publication Framework

Maya Simonyan, BSN

MPH Candidate

College of Health Sciences

American University of Armenia

Primary Adviser: Haroutune K. Armenian, MD, DrPH

Secondary Adviser: Kathleen White, RN, PhD

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Table of Contents

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List of Abbreviations

CHSR	Center for Health Services Research and Development
CG	Citizen Group
CI	Confidence Interval
IDP	Internally Displaced Persons
MCS	Mental Component Summary
MLogR	Multivariate Logistic Regression
PCS	Physical Component Summary
RA	Republic of Armenia
RG	Refugee Group
SD	Standard Deviation
SF-36	Short Form-36
SLogR	Simple Logistic Regression
UNHCR	United Nations High Commissioner of Refugees
US	United States

Abstract

Objectives: This study aims to assess the influence of dignity on the health status of adults aged 25 and over in Yerevan; and to determine whether differences exist between the data gathered from refugee and non-refugee respondents.

Methods: A cross-sectional analytical design was conducted to collect the data. The study participants were adults living in Yerevan, 91 with refugee and 91 with citizen status. The desired number of participants in refugee group was identified using systematic random sampling proportionate to the number of refugees in each dormitory. Citizens were chosen by systematic random sampling, number of citizens from each district equal to the number of refugees from same district. "The next birthday" technique was used to determine who should be interviewed in the household. Face to face interviews were conducted, with an average duration of 15-20 minutes. Data was collected between July and August 2007.
The dependent variable - health status was measured by SF-36. The two independent variables are participant's refugee status and human dignity, assessed by a questionnaire on dignity.

Results: A statistically significant association was observed between Physical Component Summary (PCS) and dignity level taking two groups together OR=1.07 (95% CI: 1.03 - 1.1); and separately: citizens group OR=1.09 (95% CI: 1.02–1.14); refugees group OR=1.08 (95% CI: 1.02 – 1.16). There is a statistically significant association between Mental Component Summary (MCS) and dignity level for each group: citizens group OR=1.12 (95% CI:1.04–1.2); refugees group OR = 1.13 (95% CI: 1.05-1.21); and for both groups together OR=1.09 (95% CI: 1.05-1.13). This association between health state and dignity is stronger among refugees compared to citizens of Yerevan. The association between PCS and dignity: in refugees group OR = 4.3 (P-value=0.01); in citizens group OR = 6.91 (P-value=0.001). The association of MCS and dignity level, in refugees group OR=13 (P-value=0.000); and in citizens group OR=6.5 (P-value=0.004) respectively. In terms of demographic characteristics, PCS score was associated with dignity score, age, and working status. MCS score was associated with dignity and age.

Conclusion: The results of this study reveal a positive relationship between dignity and health state (physical and mental). Refugee status made this relationship between dignity and health status stronger. The results of this study will be helpful for further investigations in the field of Public Health and will lead to improvements of health levels in any population. It is recommended to conduct similar studies with citizens and refugees in other regions of Armenia in order to identify potential differences between people living in dormitories and in separate households; and population of urban and rural areas.

"Dignity is not just a health and social care issue.
It is a societal issue and needs to be an integral part of
our education system and the governance of the country."
"Dignity is everyone's business…"(1)

1. BACKGROUND INFORMATION

Description of the problem

We are living in the midst of rapid change both globally, nationally, as well as locally. Change always involves both opportunities and risks. Disaster and wars are happening constantly. One sure result is that some people have to leave their homes and countries and become a refugee.

In the Merriam-Webster's collegiate dictionary *refugee* is one who flees, to a country for refuge, especially from invasion, oppression, or persecution (2). The history of refugees comes from 695 B.C., when 50,000 people left Judaica for Egypt (3). The Bible describes places of asylum for persecuted individuals.

At the end of 2006, there were 13,948,800 refugees and asylum seekers worldwide (4). The report on the "People of concern to UNHCR" states that refugees, asylum-seekers, returned refugees, Internally Displaced Persons (IDPs) currently reside in more than 150 countries. During the last two years, the number of refugees has increased from 11.5 million in 2004 to 13.9 million in 2006 worldwide (4). More than 7 million are living in conditions of long and compulsory maintenance in camps and/or segregated settlements. Refugees live in temporary shelters often for ten or more years. A wealth of evidence has accumulated over the past 25 years on the massive effect of war on public health (5;6). Refugees and IDPs typically experience high mortality and morbidity from communicable diseases and psychological distress(7;8). Refugees face health problems similar to those of other deprived

and ethnic minority communities, as well as physical and mental health related specific problems after effects of displacement and social isolation, war, and sometimes even torture (9). The long-term refugee status not only influences the rights of those individuals, but also often leads to illness, dependence and despair (10).

Banatvala and Zwi mention that the key elements of an ethical approach to refugees and IDPs are maximizing benefit and minimizing harm, which means ensuring confidentiality, and treating individuals with dignity (5).

"Dignity is a highly abstract, vague concept that is difficult to measure…" (11). One dimension of dignity is the sense of being valued as a human being and respected; another is having the desired level of control over decisions concerning personal requirements (12). According to Webster's dictionary, dignity is "the quality or state of being worthy, honored, or esteemed" (2).

The most prominent references to dignity probably appear in international human rights instruments, such as the United Nations' Universal Declaration of Human Rights (13). Kant, a influential eighteenth century philosopher, recognized that respect for other people is a very important ethical issue. Cognition of the inherent dignity for all members of the human race is the foundation of freedom, justice and peace in the world (13; 14). All human beings are born free and equal which also includes dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood (13). The principle of respect for human dignity is at the origin of any national or international text involved with the protection of fundamental rights. It is a conceptual principle, which is present throughout the proclamation of such rights.

Human dignity is inviolable. It has to be respected and protected (15). Human dignity features as a core principle in many modern constitutions. Perhaps the most prominent

occurrence is in Germany's constitution. This is generally seen as a reaction to the Nazi regime's complete disregard of human dignity (15).

Despite the emphasis of dignity promotion in a variety of codes and policies, the literature lacks information on such important topic. Most of studies on dignity appears in the Nursing literature concerning palliative and maternity care (16; 17). Almost all of the available studies are qualitative, explaining the importance of dignity in care (12; 18; 19). Survey of adults living in the US (United States) suggests that being treated with dignity is important to minorities who have had historical or societal experiences of disrespect (18). Qualitative studies, involved with childbearing women and midwives: in Swedish hospitals, revealed that a sense of being valued and respected maintains a sense of dignity; in the western US a study revealed that leaving people uncomfortable, helpless, or dependent can lead to the loss of dignity (20; 16). In the work of Armenian on Health and Dignity, the author mentions that dignity is influenced by social roles and positions (21). It is known that certain social factors, such as social support improve and strengthen health (22). So far only one cross-sectional survey, conducted among Palestinian refugees, examined the relationship between dignity and health, this study illustrated a positive association between these two variables (23).

Situation analysis for Armenia

The word "refugee" is an integral part of the vocabulary of each Armenian (24). The single largest refugee group in Armenia are those refugees from Azerbaijan who fled to Armenia as a result of the conflict over Nagorno-Karabakh from 1988 to 1992 (25; 26).

According to data of the Parliamentary Commission on Disaster Zone and Refugees, Government of Armenia, in 1988-1990 360,000 refugees fled to Armenia from Azerbaijan (24). However, the number of refugees in Armenia increased to reach almost 500,000 in

1994, as stated by the UNHCR (27) of which 360,000 were from Azerbaijan; 75,000 from Nagorno-Karabakh; and 6,000 from Abkhazia (28).

According to UNHCR, by the end of 2004 235,235 refugees were living in Armenia which constitutes 12% of the total population of the Republic of Armenia (28). About 232,000 refugees/IDPs or more than 58,700 families live in temporary shelters without basic facilities. Approximately 150,000 refugees/IDPs 16-60 years of age are jobless and live on resources and benefits provided by the Armenian Government, as well as humanitarian assistance provided by international organizations (28). About 124,000 refugees/IDPs are accommodated in hotels, schools etc (28). Approximately 12.5% of refugees (38,733) are living in Yerevan (29; 30).

Adaptation of refugees from Azerbaijan was different from adaptation of refugees who came to Armenia from other countries. Those individuals had been acculturated into the Azeri's culture which is primarily Islamic by depriving them of the opportunity to organize their ethnic communities (24). Moreover, in 1988-1990 Armenia experienced political and economic difficulties: it was a country in collapse. The government had not considered developing a policy to deal with or accommodate refugees (24). According to UNHCR 81% of the refugees from Azerbaijan were citizens of big and middle size cities and only 2.5% from villages, but once they became refugees in Armenia, most of them were placed in villages. The cultural adaptation of these refugees was problematic since most of them are Russian speaking and do not know the Armenian language, this resulted in a negative impact on their adaptation. They received an "enemy image" in everyday life (24). All of these factors aggravated the refugees' already difficult condition making their transition and social adaptation even harder (31).

According to the Department of Refugees and Migration of the Ministry of Territorial Management of RA, 70,000 refugees received citizen status during the period of the

naturalization program between 1999 and 2007 (32). The rest of the refugees kept their refugee status for various reasons, including psychological and socio-economic concerns (33).

Refugees and their children, born in Armenia, enjoy nearly the same legal rights as the citizens of Armenia which includes the right to work, the right to housing, the right to education, the right to health care and the right to social benefits (34). However, in reality, the dire socioeconomic circumstances in which they find themselves prevents them from being employed, enjoying adequate housing, and are caught-up in under funded and poorly managed government services which simply does not meet their needs (28; 29). As a result refugees became one of the most disadvantaged groups in Armenia with extremely limited opportunities to help themselves.

No studies concerning the association between dignity and the health of refugees have been conducted, comparison of such association between refugees and the rest of the Armenian citizen population have not been previously conducted either. The experience of other countries and the relevant literature suggest the need to conduct such study in Armenia in order to assess health related dignity of adult population of Yerevan and identify how refugee status is associated with dignity. Data collected from a survey of refugees living in dormitories and from citizens living in households would be appropriate to compare the data between these two groups.

Research goal and study objectives

The aims of this study are:

1. To assess how dignity influences the health status of adults aged 25 and over.
2. To determine whether differences exist between the data gathered from refugee and non-refugee populations living in Yerevan.

2. METHODOLOGY

Study design

A cross-sectional analytical design was used to conduct this study. In this design, two interviewers interviewed two groups: adults with refugee status living in the refugees dormitory in Yerevan which formed the study group, and non-refugee adults holding an Armenian citizenship and were registered in Yerevan more than 4 years, formed the comparison group (35).

According to Campbell and Stanley's notation, this design appears as follows (36):

X O_1

O_2

where X - in this case is being a refugee and living in a refugee's dormitory, and $O_{1,}$ O_2 (post test) are the interviews administered in two groups.

This study design was considered more appropriate and enabled to assess the association between the human dignity and the health status; as well as to determine a difference in the influence of dignity on the health status between the refugee and non-refugee respondents (37).

Study population

The study participants in both refugee and non-refugee groups included adult men and women aged 25 and over. Interviews were conducted with adults who met the inclusion criteria. Inclusion and exclusion criterias are presented in Table 1.

The study included individuals aged 25 and over since the earliest refugees' arrival was in 1988, and it can be speculated that in 1988 those same refugees were schoolchildren, probably in the first grade starting to learn the language for communication.

Considering the possibility that there could be more than one eligible respondent in the household, the method of "the next birthday" was used to determine who should be interviewed (38).

Sample size

The sample size was calculated taking into consideration the number of groups involved in the study and the dependant variable of the study (38; 39). For calculation of the sample size, the following formula was used (for two groups):

$n= 2\sigma^2 [z_{1-\alpha/2} + z_{1-\beta}]^2 / (\mu_1 - \mu_2)^2$,

where σ – estimated standard deviation (assumed to be equal for each group), μ_1/μ_2 – estimated mean (larger/smaller) (38).

Based on the results of the pretest and previous studies, 5 points gives a clinically meaningful difference in SF-36, and assumes equal variances, where $\sigma1=\sigma2=12$ (40; 41). Assumptions are alpha = 0.05 (two-sided); power = 0.80. Sample size for the first aim, assessing association of dignity and the health status, is estimated as n1 = n2 = 91.

While for the second aim, there is an interest in seeing whether the association between health status and dignity score varies by refugee status (this is really a test of interaction based on subgroups defined by refugee status). A sample size of 182 gives sufficient power to detect only a larger interaction effect size, possibly on the order of 7.5-10 points (42; 43).

It was decided to perform replacement of study participants (in study and comparison groups) until reaching the required sample size.

Sampling methodology

There are 91 dormitories in Yerevan where the refugees live. Six largest dormitories were chosen for the study (Appendix 1). The location and number of refugees in each chosen dormitory in Yerevan was provided by UNHCR and Mission Armenia (29).

The desired number of participants in study group from each dormitory was identified using systematic random sampling proportionate to the number of refugees in each dormitory: Norki Masiv – 19 (250*91/1220=19; where 91 is the needed sample size); Shirak – 22; "Nairi" – 14; "Arabkir"- 12; Artsakh – 12; and Shengavit -12 refugees (38). The starting address was the first door on the first floor. From the starting address, an attempt was made to interview each tenth address moving always to the right/up until the total required number for each dormitory is achieved.

Participants in the comparison group (non-refugees) were selected using systematic random sampling. The number of citizens from the district was equal to the number of selected refugees in each district. The starting address was the first floor of the first house nearest to the dormitory. From the starting address, an attempt was made to interview each third address moving always to the right/up until a total number of required questionnaires was completed for each district. If there was more than one eligible respondent in the household, random selection was used to determine who should be interviewed based on "the next birthday" technique.

The duration of each interview ranged from 15 to 20 minutes, and was conducted through face-to-face interviews between July and August 2007.

Survey variables

Health status (physical and mental), represented the *dependent variable,* and was measured by SF-36. The i*ndependent variables* were human dignity and participant's refugee status. Dignity scores were based on the questionnaire measurement. Human dignity consists of two components: internal ("how I see myself") and the other external ("how others see me") (44). Refugee status, which is considered as nominal data had two levels within the study - refugee or citizen. The i*ntervening variables* are age, gender, marital status, level of

education and occupational status, which are mentioned in the demographic part of the instrument (Appendix 2).

Study instruments

The survey included two questionnaires: SF-36 (Appendix 3), and the questionnaire on dignity, citing both internal and external concepts (Appendix 4), this questionnaire also included collection of demographic characteristics.

The SF-36 was developed in the 1980s-1990s by the US Rand Corporation. This instrument uses a 36 item questionnaire on eight dimensions: physical functioning, bodily pain, role limitation due to poor health, role limitation due to emotional problems, general mental health, social functioning, energy/vitality, and general health perceptions (40). Moreover, one item asks about health change over the last year. Items are scored and aggregated to provide a scale ranging from 0 (poor health) to 100 (excellent health) (40).

The Physical Component Summary (PCS) and Mental Component Summary (MCS) scores, reflecting overall physical and mental health status. Three scales (Physical Functioning, Role-Physical, and Bodily Pain) correlate most highly with the physical component and contribute most to scoring of the PCS measure of that component. The mental component correlates most highly with the Mental Health, Role-Emotional, and Social Functioning scales, which contribute most to the scoring of the MCS measure of that component (45). The scoring for PCS and MCS ranges from 0 to 100 points. The higher the score the better the physical or mental status of a person is. Table 2 presents a description of the health status of an individual scoring very low very high on the PCS as well as the MCS scales (45).

The SF-36 has been translated into the Armenian language and adopted by the Center for Health Services Research and Development (CHSR) (46). In 2000, a validation study of the SF-36 was conducted by the CHSR in Nork Marash Medical Center of Armenia which

was followed by its confirmation in 2001 by the International Quality of Life Assessment Project (46). The SF-36 has also been translated into Russian which is more useful for refugee populations since most of them have had a Russian education; and thus interviewers used the Russian version of the SF-36 for some of the refugees (45).

The questionnaire on dignity was developed by a group of professionals at the Johns Hopkins University in the United States. This questionnaire has been used in a study conducted on a refugee population residing in Palestine and has good reliability, good content and construct validity (23). Dignity was assessed using an instrument consisting of 18 questions developed from 4 themes: autonomy, self-respect, worthiness, and self-esteem. The questionnaire on dignity has been translated into Armenian and Russian in the scope of this study. It was pretested on three refugees and three citizens of Armenia to determine its applicability for use with the Armenian population.

Interviewer training

Face-to-face interviews were conducted by two trained interviewers. Due to the small number of trainees, it was possible to complete the training during one full day (47).

Ethical consideration

The Departmental Institutional Review Board (IRB) Committee within the College of Health Sciences at the American University of Armenia (AUA) revised and approved the research plan prior to implementation of the study. All participants were provided with the oral consent in Armenian or Russian, which contained necessary information about the title of the research project, its purpose, procedures, risk and benefits, confidentiality and voluntary nature (Appendix 5). The study was considered as a minimal risk for participants. The probability of anticipated discomfort and inconvenience associated with the study was not greater than encountered in their daily lives. Interviews were conducted anonymously, where no identifying data was collected such as name and address of respondents.

Information collected regarding their place of residence (house or dormitory) and status (refugee or citizen) is not enough for identification. The only identifier was a sequential study number assigned to each participant. All information provided by the participants was kept confidential and used only by CHSR at AUA to perform final analysis.

The participants spent 20-25 minutes of their time answering the questions during the interview. The participants did not receive any specific benefits from this study other than knowing that results will provide the foundation for further research in Public Health and for the improvement of health levels in any population.

Data entry

The data were entered into the SPSS-11 package and all variables were coded. To eliminate the possibility of additional errors double entry with error checking and data cleaning was performed. Results of the exploratory data analysis did not reveal any missing or unusual values. Data analysis was performed in STATA 8.0 software.

3. RESULTS

Administrative information

One hundred and eighty two people participated in the study, including 91 refugees from dormitories and 91 citizens from households. The response rate in dormitories was 95.8% and the response rate of household citizens was 71.1%. The main reasons for refusal were lack of time and unwillingness to complete an interview. Two participants in the study group were excluded because of medical diagnosis of psychiatric disorders.

The dormitories included 29 refugee participants who received the citizenship status during last 4 years (35). Further, analysis indicated statistically insignificant difference

between the refugee groups with and without citizenship (Appendix 6). Therefore, these two groups were combined into one study group (refugees group) throughout the study.

Table 3 presents information on the demographic characteristics of the refugees and citizens groups. The mean age of the participants in the refugees group was 56.11 years old (SD 16.7), the citizens group had a similar mean of 56.16 years old (SD 14.7). Male participants comprised 36% of refugees group and 25% of citizens group. Marital status, social economic status and number of people living in the same household were statistically significantly different in the two groups. In the refugees group, most of the participants (55.6%) were widowed or single, where in citizens group this proportion comprised 36.3% of the population.

Domains

The t-test analysis was performed to detect any significant difference in mean transformed scores related to the eight domains of SF-36 between the two groups. Table 4 presents the data on the eight health domains of participants in both refugees and citizens groups.

The mean scores for vitality; social functioning and mental health were statistically significantly higher for the citizens group compared with the refugees group.

To reduce the SF-36 summary measures from the eight-scale profile to two summary measures without substantial loss of information, the PCS and MCS measures were calculated for both groups based on the Health Assessment Lab guidelines (45). The PCS and MCS scores of the two groups were compared by t-test and are presented in Table 5.

Assessment of health status by groups indicated that the MCS score for the citizens group (41.01)was statistically significantly higher than that for the refugees group (33.38). Assessment of the PCS score by groups did not reveal any significant difference between these two groups (44.58; 44.00 respectively).

In the refugees group, 45.05% of participants had high PCS scores, compared to 54.95% of participants in the citizens group, the median score for the total group (45.76) was used as the cutoff score to determine what a high PCS score is. For MCS, 64.84% and 70.33% of participants in refugees' and citizens' group, respectively had a high level of MCS, similarly high levels of MCS are defined as those higher than the median score for the total group, at 38.12. (Table 6)

Prevalence of Dignity

Table 5 represents the mean difference of dignity scores between the refugees and citizens group, which was statistically significant. The prevalence of dignity status in each group is presented in Table 6. Again the median score, 62 of dignity scores is used to determine the cutoff level of dignity scores. In the refugees group, 78% of participants had low dignity scores compared to only 25% of participants in the citizens group.

Simple Logistic Regression

The Simple Logistic Regression (SLogR) was used to examine the relationship of PCS and MCS with dignity (independent variable). A statistically significant association was found between PCS and dignity level (continuous variable) taking the two groups together OR=1.07 (95% CI: 1.03 - 1.1); while if the groups are taken separately: citizens group OR = 1.09 (95% CI: 1.02–1.14); refugees group OR = 1.08 (95% CI: 1.02 – 1.16), Table 7.

Table 7 presents the association between MCS and dignity levels in each group separately: in the citizens group OR = 1.12 (95% CI: 1.04–1.2); in the refugees group OR = 1.13 (95% CI: 1.05-1.21); and both groups together OR = 1.09 (95% CI: 1.05-1.13).

The SLogR was conducted to asses the relationship between PCS/MCS and demographic variables, such as gender, age, working status, education, SES, marital status, and number of people in household. Statistically significant associations between PCS/MCS and work, age, SES, marital status and number of people in household were observed.

A stratified analysis was conducted to reveal potential confounders and effect modifiers (Appendix 7).

A two by two table, comparing 30 participants of highest dignity score with 30 participants of lowest dignity scores in each group (citizens and refugees) showed a statistically significant association between PCS and dignity level, OR = 4.3 (95% CI: 1.41-13.07, P-value=0.01) and OR = 6.91 (95% CI: 2.16-22.1, P-value=0.001) respectively (Table 8). The association of MCS and dignity level, comparing 30 participants of highest dignity score with 30 participants of lowest dignity scores in both groups (citizens and refugees), is presented in Table 9, OR=6.5 (95% CI: 1.82-23.21, P-value=0.004) and OR=13 (95% CI: 3.55- 47.6, P-value=0.000) respectively.

Multivariate Logistic Regression (MLogR)

A MLogR modeling was performed to explore the association between health status (physical and mental) as a dichotomous variable and dignity status after adjusting for other variables, including age, working status, gender, education, marital status, number of people in household, and SES. MLogR models were used to identify the factors associated with the physical component summary scores and with the mental component summary scores. The unadjusted and adjusted analyses and the likelihood-ratio test were performed in order to identify parsimonious models. Results are presented in Table 10 and Table 11. Interaction variables were created and regression analysis with these variables was conducted. However, the results demonstrated no interaction between variables. The forward selection technique was used to determine which independent variables would be included in the model. The «best» models were chosen based on the likelihood-ratio test. Collinearity diagnosis was conducted for all the variables in the study, and no evidence of collinearity was observed in either models.

Based on the likelihood-ratio test results, the following models were recognized as the best: the regression of PCS on «dignity», «age», and «work», and the regression of MCS on «dignity» and «age».

Table 10 shows that the risk of having a low physical component summary score was associated with a low dignity score, older age, and unemployment status. After adjusting for age and working/employment status, for every unit increase in dignity score, the likelihood of having high PCS increased by a factor of 1.05, keeping all other factors constant. P-value for the chi-square test statistic, comparing the model adjusted for age and working status with the simple model adjusted only for age provides strong evidence against the null hypothesis (p-value less than 0.005).

Table 11 presents the results of "best" model of MLogR with MCS scores for the total study population significantly associated with dignity and age. The best model indicated that having low dignity scores and being old were statistically significantly associated with a higher risk of having low MCS scores. According to this model, the risk of having high MSC scores increases by a factor 1.07 (95% CI: 1.02–1.13) with every unit increase of dignity scores, after adjustment for age and number of people living in the household. P-value for the chi-square test statistic, comparing extended model with the simple one provides strong evidence against the null hypothesis (p-value 0.000).

4. DISCUSSION

At the beginning of the study, it was hypothesized that dignity could be associated with health state (physical and mental) of people. The results of this study support this hypothesis revealing a positive relationship between dignity and health state (PCS and MCS). These findings are consistent with the results of previous quantitative as well as qualitative

studies, where Mann points out that violation of dignity will have negative effects on physical, mental and social well-being (23; 44).

Age and working status were detected as confounders. It is interesting that working status and age confounded the association of dignity and PCS, whereas only age confounded the relationship of dignity and MCS.

One of the study objectives was to compare the association between dignity and health state in refugees and citizens groups. There was no statistically significant difference between mean of PCS in refugees and citizens groups. Comparison of means of MCS and dignity scores revealed statistically significant lower scores in refugees compared to citizens group. The mean of dignity scores in citizens group is statistically significantly higher than the mean of dignity scores in refugees group (Table 5). In both groups association of dignity and health state (PCS and MCS) were significant (Table 7). There were minimal differences in the Odds Ratio between refugees and citizens groups. Since these refugees have been living in Armenia for about 19 years and thus the potential confounders are similar in the refugee and citizen populations. Participants of both groups were chosen from the same districts of Yerevan. However, refugee status increased influence of dignity on health status (PCS and MCS).

The design of the study brings to certain limitations, as in most cross-sectional studies, it is possible to detect only an association but not a causal relationship between dignity and health state (physical and mental).

The low response rate in the citizens group created some limitation. However, the number of participants in citizens group was 91 as in refugees group, and thus this limitation should not affect power. Yet this number of non-response might affect the generalizibility of the study results

Around one third of the participants in the refugee group already had citizen status which is considered a limitation to such study. However, these two groups (refugees with citizen status and refugees with no citizen status) were checked for internal consistency and no statistically significant differences were identified (Appendix 6).

Almost all of the refugees completed the Russian version of the questionnaires, whereas the citizens completed the Armenian version, which could create a limitation to the study, due to information bias. However, an additional 20 citizens were asked to complete the Russian version of the questionnaires instead of the Armenian language. Yet no statistically significant differences were identified between the two groups (Appendix 8).

Even though the dignity questionnaire was used in a previous study and showed good reliability and validity, the translated versions to Armenian and Russian of this questionnaire was used the first time (23). Both translated versions were pre-tested.

In this study, dignity was positively associated with health state (physical and mental). And refugee status increased the associations of dignity with physical health; and dignity with mental health. The results of this study will be helpful for further investigations in the field of Public Health and will lead to improvement of health level in any population.

However, conducting an additional survey could be useful in order to identify the potential causes of low dignity level. It is recommended to conduct similar study with citizens and refugees in the regions of Armenia in order to identify potential differences between people living in dormitories and in separate households; and differences between population of urban and rural areas.

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TABLES

Table 1: ***Eligibility Criteria for Participants***

	Inclusion criteria	***Exclusion criteria***
Study group:	1. Males/females aged 25 and over 2. Adults who have refugee status 3. Residents in refugee's dormitory in Yerevan 3.Adults who agreed to participate in the study	1. Adults with psychiatric disorders
Control group	1. Males/females aged 25 and over 2. Citizens of Armenia registered in Yerevan more than 4 years 3. Adults who agreed to participate in the study	1. Adults with psychiatric disorders

Table 2: ***Description of Very High and Very Low PCS and MSC Health Status Levels***

Scale	Very Low	Very High
PCS	Substantial limitations in self care, physical, social, and role activities; severe bodily pain; frequent tiredness; health rated "poor"	No physical limitations, disabilities, or decrements in well-being; high energy level; health rated "excellent"
MCS	Frequent psychological distress, substantial social and role disability due to emotional problems; health in general rated "poor"	Frequent positive affect; absence of psychological distress and limitations in usual social/role activities due to emotional problems; health rated "excellent"

Note: PCS- Physical Component Summary, MCS - Mental Component Summary

Table 3: ***Baseline characteristics of the Participants***

Characteristic	RG	CG	P-value
Gender: *Male sex, No. (%)*	33 (36%)	23 (25%)	0.11
Median Age*, y (SD)*	56.11 (16.7)	56.16 (14.7)	0.98
Marital Status*, No. (%):*			
➢ *Married*	34 (37.8%)	58 (63.7%)	0.0001*
➢ *Divorced*	6 (6.7%)	9 (9.9%)	
➢ *Widowed*	24 (26.7%)	11 (12.1%)	
➢ *Single*	26 (28.9%)	13 (14.3%)	
Highest Level of Education*, No.(%):*			
➢ *Graduate*	3 (3.3%)	2 (2.2%)	0.39
➢ *Undergraduate*	46 (50.5%)	52 (57.1%)	
➢ *Secondary special*	28 (30.8%)	23 (25.3%)	
➢ *School*	14 (15.4%)	14 (15.4%)	
Currently employment, No. (%)	49[1] (54.4%)	52 (57.1%)	0.72
SES[2]*, mean (SD)*	3.8 (1.99)	7.9 (2.52)	0.0000*
People living in the same household*, No. (%):*			
➢ *1*	26 (28.9%)	10 (11.1%)	0.0000*
➢ *2-3*	48 (53.3%)	31 (34.4%)	
➢ *>=4*	16 (17.7%)	49 (54.4%)	

Note: RG – Refugee Group, CG – Citizen Group, No.- Number, SD – Standard Deviation
* - statistically significant

[1]Number of participants is 90.
[2] SES - Social Economic Status was calculated based on the data on whether the participant or any member of his/her family has several working items, such as indoor toilet, hot water, color television, VCR, telephone, automobile, auto washing machine, cellular phone, dish-washing machine, personal computer, vacation home/ villa, and refrigerator

Table 4: ***Mean Difference of Scores for Domains between Refugee and Citizen Groups, Yerevan, 2007***

Scale	RG	CG	Mean dif.	SD	95% CI	P-value
Physical functioning	62.58	68.79	-6.21	35.08	(-16.46; 4.04)	0.23
Role-physical	47.8	58.79	-10.99	42.24	(-23.27; 1.3)	0.08
Bodily pain	65.56	68.67	-3.11	27.65	(-11.21; 4.99)	0.45
General health	43.76	48.54	-4.78	23.96	(-11.77; 2.21)	0.18
Vitality	39.61	50.44*	-10.82	24.32	(-17.78; -3.87)	0.002
Social functioning	53.3	64.15*	-10.85	32.7	(-20.31; - 1.39)	0.02
Role-emotional	49.82	59.71	-9.89	42.32	(-22.22; 2.44)	0.11
Mental health	36	54.5*	-18.5	24.25	(-25.08; -11.93)	0.0000

Note: RG – Refugee Group, CG – Citizen Group, CI – Confidence interval, SD-Standard deviation, P-value (2-tailed)
* - Significantly higher

Table 5: ***Mean Difference of Scores for PCS, MCS and Dignity between Refugee and Citizen Groups, Yerevan, 2007***

	Mean RG	Mean CG	Mean dif.	SD	95% CI	P-value
PCS	44	44.58	-0.57	12.55	(-4.25; 3.11)	0.76
MCS	33.38	41.01*	-7.62	12.41	(-11.09; -4.16)	0.0000
Dignity Scores	56.22	67*	-10.78	10.05	(-13.26; -8.29)	0.0000

Note: PCS- Physical Component Summary, MCS - Mental Component Summary,
RG – Refugee Group, CG – Citizen Group, CI – Confidence interval, SD-Standard deviation,
P-value (2-tailed), * - Significantly higher

Table 6*: Distribution of Refugee and Citizen Participants by PCS, MCS and Dignity Level, Yerevan, 2007*

Level	RG No. (%)			CG No. (%)		
	PCS	**MCS**	**Dignity***	**MCS**	**PCS**	**Dignity***
High Level	**41 (45.05%)**	**59 (64.84%)**	**20 (21.9%)**	**64 (70.33%)**	**50 (54.95%)**	**68 (74.7%)**
Low Level	**50 (54.95%)**	**32 (35.16%)**	**71 (78.1%)**	**27 (29.67%)**	**41 (45.05%)**	**23 (25.3%)**

Note: PCS- Physical Component Summary, MCS - Mental Component Summary,
RG – Refugee Group, CG – Citizen Group, * - Cut point 62

Table 7: ***Odds Ratios of PCS and MCS per unit increase in Dignity scores, Yerevan, 2007***

	PCS				MCS			
	OR	**SE**	**95% CI**	**P-value**	**OR**	**SE**	**95% CI**	**P-value**
Both Group Together	1.07	0.03	1.03-1.1	0.000*	1.09	0.02	1.05-1.13	0.000*
Citizens Group	1.09	0.04	1.02–1.14	0.007*	1.12	0.04	1.04–1.2	0.002*
Refugees Group	1.08	0.04	1.02–1.16	0.004*	1.13	0.04	1.05–1.21	0.000*

Note: PCS- Physical Component Summary, MCS - Mental Component Summary
OR – Odds Ratio, SE – Standard Error, CI – Confidence Interval, * - statistically significant

Table 8: ***Two by Two table PCS for 30 Highest Dignity Scores versus 30 Lowest Dignity Score***

PCS	Dignity scores			
	Citizen Group		Refugee Group	
	Low	High	Low	High
Low	17	7	24	11
High	13	23	6	19
	30	30	30	30

	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Citizen Group	4.296703	2.438476	2.57	0.010	1.41273	13.06807
Refugee Group	6.91	4.098391	3.26	0.001	2.160221	22.09752

Table 9: ***Two by Two table MCS for 30 Highest Dignity Scores versus 30 Lowest Dignity Score***

MCS	Dignity scores			
	Citizen Group		Refugee Group	
	Low	High	Low	High
Low	15	4	20	4
High	15	26	10	26
	30	30	30	30

	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Citizen Group	6.5	4.221299	2.88	0.004	1.820191	23.21185
Refugee Group	13	8.608135	3.87	0.000	3.550652	47.59689

Table 10: ***Summary Statistics of Associations between PCS and Independent Predictor Variables, Yerevan, 2007***

(Logistic regression model estimates)

Model	Log Likelihood	Dignity OR (CI)	Age OR (CI)	Work OR (CI)	DigA[1] OR (CI)	DigW[2] OR (CI)	AW[3] OR (CI)	DAW[4] OR (CI)
1. Dignity (A)	-116.29	1.07*** (1.04–1.11)						
2. Age (B)	- 89.08		0.9*** (0.87–0.93)					
3. Work (C)	-104.68			8.1 *** (4.14–15.84)				
4. Dignity + Age (D)	- 83.45	1.07*** (1.03–1.12)	0.9*** (0.87–0.93)					
5. Dignity + Work (E)	-102.21	1.04* (1.00–1.08)		6.21*** (3.07–12.54)				
6. Age+ Work (F)	-81.25		0.91*** (0.88–0.94)	4.81*** (2.17–10.63)				
7. Dignity + Age + Work (G) ‡	-78.63	1.05* (1.02–1.1)	0.91*** (0.88–0.94)	3.66** (1.6–8.37)				
8. Dignity + Age + DigA[1] (H)	-82.38	0.94 (0.78–1.12)	0.78** (0.63–0.95)		1.00 (0.999–1.005)			
9. Dignity + Work + DigW[2] (I)	-102.09	1.05 (0.99-1.12)		19.94 (0.18–2222.2)		0.98 (0.91–1.06)		
10. Age + Work + AW[3] (J)	-79.45		0.88*** (0.83–0.93)	0.14 (0.003–6.94)			1.06 (0.99–1.14)	
11. Dignity + Age + Work + DAW[4](K)	-77.58	1.03 (0.97–1.09)	0.89*** (0.85–0.93)	0.49 (0.03–8.86)				1.00 (0.9998-1.001)

Note: Interactions: [1] DigA = Dignity*Age

[2]DigW = Dignity*Work

[3]AW = Age*Work

[4]DAW = Dignity*Age*Work

*P-value < 0.05; ** - P-value< 0.005; *** - P-value 0.0000

OR (CI) - Odds Ratio (95% Confidence Interval)

‡ **- "Best"** Model

Null Model	Extended Model	Change in df	χ^2	P-value
A	D	1	65.68	0.0000
B	D	1	11.26	0.0008
C	E	1	4.94	0.0263
A	E	1	28.16	0.0000
B	F	1	15.66	0.0001
C	F	1	46.85	0.0000
D	G	1	9.64	0.0019
D	H	1	2.13	2.13
E	I	1	0.24	0.62
F	J	1	3.61	0.06
G	K	1	2.10	0.15

* - $-2\Delta LL = -2 (LL_N - LL_E)$

Table 11: ***Summary Statistics of Associations between MCS and Independent Predictor Variables, Yerevan, 2007***

(Logistic regression model estimates)

Model	**Log Likelihood**	**Dignity** OR (CI)	**Age** OR (CI)	**DigA[1]** OR (CI)
1. Dignity (A)	-103.03	1.09*** (1.05–1.13)		
2. Age (B)	- 58.16		0.82*** (0.78–0.87)	
4. Dignity + Age (C)	- 54.51	1.07** (1.02–1.13)	0.83*** (0.79–0.88)	
8. Dignity + Age + DigA[1] (D)	-54.21	1.14 (0.85–1.81)	0.95 (0.68–1.33)	0.998 (0.99–1.0004)

Note: Interactions: [1] DigA = Dignity*Age

*P-value < 0.05; ** - P-value< 0.005; *** - P-value 0.0000

OR (CI) - Odds Ratio (95% Confidence Interval)

‡ **- "Best"** Model

Null Model	Extended Model	Change in df	χ^2	P-value
A	C	1	97.02	0.0000
B	C	1	7.29	0.0069
C	D	1	0.60	0.4377

* - $-2\Delta LL = -2 (LL_N - LL_E)$

APPENDICES

Appendix 1: ***Number of Refugees and Refugees' Families in Each Dormitory***

Dormitories	Number of Refugees	Number of Refugees' Families
Norki 2 Masiv	250	149
Shirak str.	293	131
"Nairi" Hotel	187	85
"Arabkir" Hotel	166	72
Artsakh str	161	94
Shengavit	163	69
Total	**1,220**	

Appendix 2: ***Intervening Variables Used in the Model***

Variable	Mode of Measurement	Scale
Gender		**Dichotomous** 1=Female, 0=Male
Age	*What was your age on your last birthday?*	**Continuous ----**
Educational level	*What is your level of education?*	**Ordinal** 1= Incomplete / Complete secondary 2= College (2 years) 3= Incomplete/Complete institute/ university 4= Postgraduate
Occupational status	*Are you occupied?*	**Dichotomous** 1=Yes, 0=No
Marital status	*What is your marital status?*	**Nominal** 1= Single 2= Married 3= Divorced 4=Widowed
SES	*Mention whether this household or any member of it has the following working items: indoor toilet; hot water; color TV and etc.*	**Dichotomous** 1=Yes, 0=No
Medical diagnosis	*Do you have medical diagnosis confirmed by doctor?*	**Dichotomous** 1=Yes, 0=No
Family	*How many people live in your household including yourself?*	**Continuous ----**

Appendix 3*: SF- 36 Health Survey*

SF-36 HEALTH SURVEY

INSTRUCTIONS: This survey asks for your views about your health. This information will help keep track of how you feel and how well you are able to do your usual activities.

Answer every question by marking the answer as indicated. If you are unsure about how to answer a question, please give the best answer you can.

1. In general, would you say your health is:

(circle one)

Excellent.....1
Very good.....2
Good.....3
Fair.....4
Poor.....5

2. Compared to one year ago, how would you rate your health in general now?

(circle one)

Much better now than one year ago.....1
Somewhat better now than one year ago.....2
About the same as one year ago.....3
Somewhat worse now than one year ago.....4
Much worse now than one year ago.....5

3. The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

	(circle one number on each line)		
ACTIVITIES	Yes, Limited A Lot	Yes, Limited A Little	No, Not Limited At All
a. Vigorous activities, such as running, lifting heavy objects,	1	2	3

participating in strenuous sports			
b. Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	1	2	3
c. Lifting or carrying groceries	1	2	3
d. Climbing several flights of stairs	1	2	3
e. Climbing one flight of stairs	1	2	3
f. Bending, kneeling, or stooping	1	2	3
g. Walking more than a mile	1	2	3
h. Walking several blocks	1	2	3
i. Walking one block	1	2	3
j. Bathing or dressing yourself	1	2	3

4. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

(circle one number on each line)

	YES	**NO**
a. Cut down on the **amount of time** you spent on work or other activities	1	2
b. **Accomplished less** than you would like	1	2
c. Were limited in the **kind** of work or other activities	1	2
d. Had **difficulty** performing the work or other activities (for example, it took extra effort)	1	2

5. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

(circle one number on each line)

	YES	**NO**
a. Cut down the **amount of time** you spent on work or other activities	1	2
b. **Accomplished less** than you would like	1	2
c. Didn't do work or other activities as **carefully** as usual	1	2

6. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?

(circle one)

Not at all.....1

Slightly.....2
Moderately.....3
Quite a bit.....4
Extremely.....5

7. How much bodily pain have you had during the past 4 weeks?

(circle one)

None.....1
Very mild.....2
Mild.....3
Moderate.....4
Severe.....5
Very severe.....6

8. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

(circle one)

Not at all.....1
A little bit.....2
Moderately.....3
Quite a bit.....4
Extremely.....5

9. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks -

(circle one number on each line)

	All of the Time	**Most of the Time**	**A Good Bit of the Time**	**Some of the Time**	**A Little of the Time**	**None of the Time**
a. Did you feel full of pep?	1	2	3	4	5	6
b. Have you been a very nervous person?	1	2	3	4	5	6

c. Have you felt so down in the dumps that nothing could cheer you up?	1	2	3	4	5	6
d. Have you felt calm and peaceful?	1	2	3	4	5	6
e. Did you have a lot of energy?	1	2	3	4	5	6
f. Have you felt downhearted and blue?	1	2	3	4	5	6
g. Did you feel worn out?	1	2	3	4	5	6
h. Have you been a happy person?	1	2	3	4	5	6
i. Did you feel tired?	1	2	3	4	5	6

10. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?

(circle one)

All of the time.....1
Most of the time.....2
Some of the time.....3
A little of the time.....4
None of the time.....5

11. How TRUE or FALSE is each of the following statements for you?

(circle one number on each line)

	Definitely True	**Mostly True**	**Don't Know**	**Mostly False**	**Definitely False**
a. I seem to get sick a little easier than other people	1	2	3	4	5
b. I am as healthy as anybody I know	1	2	3	4	5
c. I expect my health to get worse	1	2	3	4	5
d. My health is excellent	1	2	3	4	5

Appendix 4: *Dignity Questionnaire*

Statement	Response					Code
I have control over life decisions and choices, such as where to work or when I can leave home	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A1
I am free to act on my beliefs	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A2
I feel that others look up to me	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A3
I make an important contribution to my community	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A4
Till now, I am pleased with what I have accomplished so far	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A5
I try to overcome adversity	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A6
When I am suffering physically people (other than my family) around me usually do not know it	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A7
When I make a mistake I take responsibility for it	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A8
When things go wrong around me (loss of job, broken relationship…) I usually do not blame others.	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A9
Other people treat me with respect	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A10
I have a high sense of self-respect	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A11
I have the freedom to exercise my rights as a human being	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A12
I feel that I am not a burden on my friends/ family members	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A13
I do mot feel I need to depend on other people around me to get things done	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A14
I treat people the same way I like to be treated by them	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A15
I respect other people	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A16
People around me (family, friends, coworkers) appreciate what I do for them	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A17
People come to me for advice or for counsel when making decisions	Strongly agree	Agree	Neither agree nor neither disagree	Disagree	Strongly disagree	A18

Appendix 5: *Consent Form Template*

American University Of Armenia
Institutional Review Board # 1/Committee On Human Research
College Of Health Sciences Subcommittee For Student Theses

Title of Research Project: Influence of dignity on the health status of people aged 25 and over of Yerevan.

Explanation of Research Project: My name is Maya Simonyan and I am a graduate student of Master of Public Health Program at American University of Armenia. As part of my course requirement, I am conducting a research project. The purpose of the research project is to identify factors that influence on the health status of adults. You have been selected randomly for the study as your age is over 25 and you live in Yerevan.
Procedures: People aged 25 and over of Yerevan are eligible to participate in this study. In case you agree to participate in the study, I will ask you to answer the questions from the questionnaire. The interview will take place only once and will last no more than 20-25 minutes. Questions will be asked on general physical functioning, and current health perceptions. You have the right to ask questions and stop the interview any time you want. We appreciate your participation in this study. The information given by you will be very useful and valuable for this research.
Risks/ Discomforts: There is no special risk involved in being a participant. The discomfort and inconveniences of the research are the same as encountered in your daily life. As a participant, you need to devote 20-25 minutes of your time to answer the question during an interview.
Benefits: You will not get any specific benefits from this study. However, information provided by you will help to explore the association between factors and the health status of people. The results of this study will contribute to further research in this field and to the improvement of health levels in the population.
Confidentiality: There is no need for your personal data as names and surnames, telephone numbers and addresses. We need only the information about the place of living (house or dormitory) and your citizenship status. The information obtained from the interview will be used only for this program and will not be shared with anybody outside of the research team. The data will be transferred after words to the computer files and the original papers will be kept in a secure area and stored for 3-years. After that time, they will be destroyed. Only non-identifiable group or aggregate statistical information will be submitted to the College of Health Science of the American University of Armenia and can be published, possibly, in professional journals.
Voluntariness: Your participation in this study is completely voluntary. You have the right to skip any question you consider inappropriate. You can stop the interview at any time and withdraw from this study without any negative effect.

Whom to contact: If you have any questions or want to talk to anyone about this research study you may call the person in charge of the study. *You* should ask him/her questions in the future if you do not understand something about the study. Contact persons: Haroutune K. Armenian at phone number: (+374 10) 512592, Kathleen White at e-mail: KWhite@son.jhmi.edu. The person in charge of the study will answer your questions.

If you want to talk to anyone about this research study because you feel you have not been treated fairly or think you have been hurt by joining the study you should contact the American University of Armenia: **Yelena Amirkhanyan at phone number: (+374 10) 512568.**

If you agree to participate in the study, let us start.

Ð³Û³ëï³ÝÇ ²Ù»ñÇÏÛ³Ý Ð³Ù³Éë³ñ³Ý

´ÅßÏ³Ï³Ý ¶Ç ïáõÃÛáõÝÝ»ñÇ øáÉ»ç

Ð³ë³ñ³Ï³Ï³Ý ²éáÕçáõÃÛ³Ý Ø³·Çë ïñáëÇ Ìñ³·Çñ

Ð»ï³½áïáõÃÛ³Ý Í»ñÝ³·ÇñÁ` ºñ»¨³ÝáõÙ µÝ³ÏíáÕ 25 ¨ ³í»ÉÇ ï³ñ»Ï³Ý ã³÷³Ñ³ëÝ»ñÇ ³éáÕçáõÃÛ³Ý íñ³ ÇÝùÝ³·Ý³Ñ³ïÙ³Ý ³½¹»óáõÃÛáõÝÁ:

ÆÙ³ÝáõÝÝ ¿ êÇÙáÝÛ³Ý Ø³Û³, »ë áõë³ÝáõÙ »Ù Ð³Û³ëï³ÝÇ ³Ù»ñÇÏÛ³Ý Ñ³Ù³Éë³ñ³ÝÇ Ð³Ýñ³ÛÇÝ ³éáÕç³å³ÑáõÃÛ³Ý Ø³·Çë ïñáëÇ Íñ³·ñáõÙ: ²Ûë áõëáõÙÝ³ëÇñáõÃÛáõÝÁ Ñ³Ý¹Çë³ÝáõÙ ¿ ÇÙ ¹Çå¼áÙ³ÛÇÝ ³ßË³ï³ÝùÇ ÑÇÙùÁ: ²Ûë Ñ»ï³½áïáõÃÛ³Ý Ýå³ï³ÏÝ ¿ µ³ó³Ñ³Ûï»É ·áñÍáÝÝ»ñÁ, áñáÝù ³½¹áõÙ »Ý ã³÷³Ñ³ëÝ»ñÇ ³éáÕçáõÃÛ³Ý íñ³: ¸áõù ÁÝïñí»É »ù å³ï³Ñ³Ï³ÝáõÃÛ³Ý ëÏ½µáõÝùáí, ù³ÝÇ áñ 25 ï³ñ»Ï³Ý ³Ýó »ù ¨ µÝ³ÏíáõÙ »ù ºñ¨³ÝáõÙ:

Ð»ï³½áï³Ï³Ý ³ßË³ï³ÝùÇ å³ñ½³µ³ÝáõÙÁ. Ð»ï³½áïáõÃÛ³Ý ßñç³Ý³ÏÝ»ñáõÙ Ï³ñáÕ »Ý ÁÝ¹·ñÏí»É 25 ï³ñ»Ï³ÝÇó µ³ñÓñ ïÕ³Ù³ñ¹ÇÏ ¨ Ï³Ý³Ûù, áíù»ñ µÝ³ÏíáõÙ »Ý ºñ¨³ÝáõÙ: ºÃ» ¸áõù Ñ³Ù³Ó³ÛÝí»ù Ù³ëÝ³Ïó»É ³Ûë Ñ»ï³½áïáõÃÛ³ÝÁ, »ë ÏËÝ¹ñ»Ù Ò»½ å³ï³ëË³Ý»É ÙÇ ß³ñù Ñ³ñó»ñÇ: Ð³ñó³½ñáõÛóÁ Ï³ÝóÏ³óíÇ ÙÇ³ÛÝ Ù»Ï ³Ý·³Ù ¨ Ïï¨Ç 20-25 ñáå»: Ð³ñó»ñÁ í»ñ³µ»ñíáõÙ »Ý ÁÝ¹Ñ³Ýáõñ ýÇ½ÇÏ³Ï³Ý ³éáÕçáõÃÛ³ÝÁ ¨ Ò»ñ ·Ý³Ñ³ï³Ï³ÝÇÝ` ³éáÕçáõÃÛ³Ý Ï³ñ·³íÇ×³ÏÇ Ù³ëÇÝ: ¸áõù Çñ³íáõÝù áõÝ»ù Ñ³ñó»ñ ï³É ¨ ¹³¹³ñ»óÝ»É Ñ³ñóáõÙÁ ó³ÝÏ³ó³Í å³ÑÇÝ: Ø»Ýù »ñ³Ë³ï³å³ñï ÏÉÇÝ»Ýù Ò»ñ Ù³ëÝ³ÏóáõÃÛ³Ý Ñ³Ù³ñ: Ò»ñ ÏáÕÙÇó ïñ³Ù³¹ñí³Í ï»Õ»ÏáõÃÛáõÝÝ»ñÁ ß³ï û·ï³Ï³ñ ¨ ³ñÅ»ù³íáñ »Ý ³Ûë Ñ»ï³½áïáõÃÛ³Ý Ñ³Ù³ñ:

Ìï³Ý·/²ÝÑ³ñÙ³ñáõÃÛáõÝ. Ð»ï³½áïáõÃÛ³Ý ÁÝÃ³óùáõÙ Ù³ëÝ³ÏóÇ Ñ³Ù³ñ ãÏ³ áñ¨¿ íï³Ý·£ àñå»ë Ù³ëÝ³ÏÇó ¸áõù å»ïù ¿ ïñ³Ù³¹ñ»ù 20-25 ñáå» Ñ³ñó»ñÇÝ å³ï³ëË³Ý»Éáõ Ñ³Ù³ñ:

Þ³Ñ. Ð»ï³½áïáõÃÛ³Ý ÁÝÃ³óùáõÙ ¸áõù áõÕÕ³ÏÇ ß³Ñ ã»ù áõÝ»Ý³Éáõ£ ê³Ï³ÛÝ Ò»ñ ïñ³Ù³¹ñ³Í ï»Õ»Ï³ïíáõÃÛáõÝÁ Ïû·ÝÇ µ³ó³Ñ³Ûï»É ·áñÍáÝÝ»ñÇ ³½¹»óáõÃÛáõÝÁ ³éáÕçáõÃÛ³Ý íñ³: Ð»ï³½áïáõÃÛ³Ý ³ñ¹ÛáõÝùÝ»ñÁ ÏÝå³ëï»Ý µÝ³ÏãáõÃÛ³Ý ³éáÕçáõÃÛ³Ý Ù³Ï³ñ¹³ÏÇ µ³ñ»É³íÙ³ÝÁ ¨ Ñ»ï³·³ ³ßË³ï³ÝùÝ»ñÇÝ ³Ûë µÝ³·³í³éáõÙ:

¶³Õïáõ°ÃÛáõÝ. Ò»ñ ³ÝÓÝ³Ï³Ý ï»Õ»ÏáõÃÛáõÝÝ»ñÁ, ÇÝãå»ëÇù »Ý ³ÝáõÝÁ, ³½·³ÝáõÝÁ, Ñ³ëó»Ý ¨ Ñ»é³ËáëÇ Ñ³Ù³ñÁ ã»Ý ·ñ³Ýóí»Éáõ: Ø»½ ³ÝÑ³Å»ßï »Ý ÙÇ³ÛÝ Ò»ñ µÝ³ÏáõÃÛ³Ý í³ÛñÇ (ïáõÝ Ï³Ù Ñ³Ýñ³Ï³ó³ñ³Ý) ¨ Ï³ñ·³íÇ×³ÏÇ (ù³Õ³ù³óÇ Ï³Ù áã) Ù³ëÇÝ ï»Õ»ÏáõÃÛáõÝÝ»ñ: ê³óí³Í ï»Õ»Ï³ïíáõÃÛáõÝÁ û·ï³·áñÍí»Éáõ ¿ ÙÇ³ÛÝ ³Ûë Ý³Ë³·ÍÇ Ñ³Ù³ñ ¨ ÏÇñ³éí»Éáõ ¿ µ³ó³é³å»ë Ñ»ï³½áïáõÃÛ³Ý ËÙµÇ ³Ý¹³ÙÝ»ñÇ ÏáÕÙÇó: î»í³ÉÝ»ñÁ Ñ³Ù³Ï³ñ·Ç ÙáõïùÇ ·ñ»Éáõó Ñ»ïá Ñ³ñó³Ã»ñÃ»ñÁ Ïå³Ñí»Ý ³ÝÓ»éÝÙË»ÉÇ 3 ï³ñí³ ÁÝÃ³óùáõÙ: ²Û¹ Å³Ù³Ý³Ï³ÙÇçáóÇó Ñ»ïá Ýñ³Ýù ÏáãÝ³óí»Ý: ØÇ³ÛÝ ³Ù÷á÷ íÇ×³Ï³·ñ³Ï³Ý ³ñ¹ÛáõÝùÝ»ñÁ ÏÝ»ñÏ³Û³óí»Ý Ð³Û³ëï³ÝÇ ²Ù»ñÇÏÛ³Ý Ð³Ù³Éë³ñ³Ý ¨ Ï³ñáÕ »Ý ïå³·ñí»É Ù³ëÝ³·Çï³Ï³Ý ³Ùë³·ñ»ñáõÙ:

Î³Ù³íáñáõÃÛáõÝ. Ò»ñ Ù³ëÝ³ÏóáõÃÛáõÝÁ ³Ûë Ñ»ï³½áïáõÃÛ³ÝÁ ÉÇáíÇÝ Ï³Ù³íáñ ¿: ¸áõù Ï³ñáÕ »ù Ëáõë³÷»É ó³ÝÏ³ó³Í Ñ³ñóÇ å³ï³ëË³Ý»Éáõó: ¸áõù ó³ÝÏ³ó³Í å³ÑÇÝ Ï³ñáÕ »ù ÁÝ¹Ñ³ï»É Ñ³ñó³½ñáõÛóÁ ¨ ¹áõñë ·³É ³Ûë Ý³Ë³·ÍÇóª ³é³Ýó áñ¨¿ µ³ó³ë³Ï³Ý Ñ»ï¨³ÝùÇ:

àõÙ ¹ÇÙ»É. ºÃ» ¸áõù ÇÝã-áñ Ñ³ñó»ñ áõÝ»ù Ï³Ù ó³ÝÏ³ÝáõÙ »ù Ñ»ï³½áïáõÃÛ³Ý í»ñ³µ»ñÛ³É Ëáë»É áñ¨¿ Ù»ÏÇ Ñ»ï, Ï³ñáÕ »ù ¹ÇÙ»É Ñ»ï³½áïáõÃÛ³Ý å³ï³ëË³Ý³ïáõ ³Ýó³Ýó Ð³ñáõÃÛáõÝ ²ñÙ»ÝÛ³ÝÇÝ` Ñ»ï¨Û³É Ñ»é³Ëáë³Ñ³Ù³ñáí 512592; ¨ ø»ÃÉÇÝ àõ³ÛÃÇÝ` Ñ»ï¨Û³É Ñ³ëó»Ûáí KWhite@son.jhmi.edu£

ºÃ» ¸áõù Ñ³Ù³ñ»ù, áñ Ò»ñ Ñ³ñó»ñÇÝ µ³í³ñ³ñ å³ï³ëË³Ý ãÇ ïñí»É Ï³Ù Ò»ñ ÝÏ³ï³Ùµ ³Ý³ñ¹³ñ íñ³µ»ñÙáõÝù ¿ óáõó³µ»ñí»É, ¸áõù Ï³ñáÕ »ù ½³Ýù³Ñ³ñ»É Ð²Ð **ºÉ»Ý³ ²ÙÇñË³ÝÛ³ÝÇÝ` Ñ»ï¨Û³É Ñ»é³Ëáë³Ñ³Ù³ñáí 512568:**

ºÃ» ¸áõù Ñ³Ù³Ó³ÛÝ »ù Ù³ëÝ³Ïó»É, ³å³ Ï³ñ³Õ »Ýù ëÏë»É:

Американский Университет Армении
Колледж Медицинских Наук

Образец разрешения на участие в исследовании

Название Научно-исследовательской работы: Влияние чувства достоинства на состояние здоровья людей в возрасте от 25 лет и старше проживающих в Ереване.

Объяснение Научно-исследовательской работы: Я, Симонян Майя, студентка отделения Магистратуры Общественного Здравоохранения в Американском Университете Армении. Необходимым требованием моего образования является проведение научно-исследовательской работы. Цель этой работы состоит в том, чтобы распознать факторы влияющие на здоровье взрослых людей. Вы были отобраны для участия в этом исследовании по принципу вероятности, поскольку вы старше 25 лет и проживаете в городе Ереване.

Порядок осуществления действий: Женщины и мужчины в возрасте старше 25 лет, проживающие в Ереване имеют право участвовать в этом исследовании. Если Вы согласитесь участвовать в исследовании, я попрошу Вас ответить на вопросы опросника. Интервью будет проведено только один раз продолжительностью 20-25 минут. Вопросы будут об общем физическом состоянии, и о том как Вы оцениваете Ваше здоровье на данный момент. Вы имеете право задавать вопросы и прервать интервью в любое время. Мы высоко ценим ваше участие. Информация, предоставленная Вами будет очень полезна и ценна для данного исследования.

Риск/ Дискомфорт: Участие в исследовании не представляет особого риска его участникам. Неудобство и беспокойство, причиненные исследованием не превышают беспокойства с которым Вы сталкиваетесь в ежедневной жизни. Как участник исследования, Вы должны посвятить 20-25 минут вашего времени, чтобы ответить на вопросы опросника.

Выгоды: Вы не получите никакой определенной выгоды от участия в этом исследовании. Однако, информация, предоставленая Вами поможет определить связь между разными факторами и состоянием здоровья людей. Результаты этого исследования внесут свой вклад в дальнейшие исследования в этой области и могут способствовать улучшению состояния здоровья населения.

Конфиденциальность: Нет никакой потребности в ваших анкетных данных, таких как имя и фамилия, номер телефона и адрес. Нам необходима только информация о месте проживания (квартира или общежитие) и ваш статус (гражданин/ка Армении или нет). Информация, полученная во время интервью будет использована только для данной программы и будет предоставлена только участникам команды исследования. После того, как данные будут введены в компьютер, подлинники будут сохранены в безопасном месте в течении 3-х лет. По истечении этого времени, они будут уничтожены. Только общие статистические данные будут представлены в Американском Университете Армении и, возможно, могут быть напечатаны в профессиональных журналах.

Добровольность: Ваше участие в этом исследовании полностью добровольно. Вы имеете право пропустить любой вопрос, который Вы считаете несоответствующим. Вы в любое время можете прервать интервью и отказаться от участия в исследовании без какого-либо отрицательного последствия.

С кем связаться: Если у Вас есть какие-нибудь вопросы или Вы хотите поговорить об этом исследовании, Вы можете позвонить лицу, ответственному за его проведение. *Вы* должны задать ему/ей вопросы, если Вы не понимаете чего-то относительно данного исследования. Посредники: Арутюн Арменян, телефонный номер: (+374 10) 512592, и Кетлин Уайт, электронная почта: KWhite@son.jhmi.edu. Лицо, ответственное за исследование ответит на интересующие Вас вопросы.

Если Вы хотите поговорить с кем-то о данном исследовании, потому что Вы чувствуете, что с Вами обошлись несправедлово или думаете, что Вы были травмированы, участвуя в даном исследовании, Вы должны связаться с Американским Университетом Армении: **с Еленой Амирханян, телефонный номер: (+374 10) 512568.**

Если Вы согласны участвовать в данном исследовании, давайте начнем.

Appendix 6: *Internal Consistency between the Two Subgroups in Refugees Group*

	Mean (refugee)	Mean (refugee-citizens)	Mean difference	t	Sig.	Standard error dif.	95% CI (Lower)	95% CI (Upper)
SF-36:								
1. physical functioning	58.87	70.52	-11.65	-1.4	0.16	8.32	-28.17	4.88
2. role-physical	42.74	58.62	-15.88	-1.63	0.11	9.71	-35.17	3.42
3. bodily pain	63.07	70.9	-7.82	-1.29	0.19	6.04	-19.83	4.18
4. general health	41.47	48.65	-7.19	-1.27	0.21	5.65	-18.42	4.05
5. vitality	38.14	42.76	-4.61	-0.83	0.41	5.55	-15.64	6.42
6. social functioning	51.41	57.33	-5.92	-0.77	0.45	7.72	-21.26	9.43
7. role-emotional	46.24	57.47	-11.23	-1.15	0.25	9.75	-30.61	8.14
8. mental health	34.71	38.76	-4.05	-0.77	0.44	5.26	-14.5	6.4
PCS	44.72	47.16	-2.44	-0.84	0.69	2.89	-8.19	3.3
MCS	37.34	36.92	0.42	0.15	0.47	2.82	-5.18	6.02
Dignity score	55.27	58.24	-2.97	-1.43	0.16	2.07	-7.08	1.15

Note: PCS – Physical Component Summary
MCS – Mental Component Summary

Appendix 7:

Relationship between Dignity and PCS in different strata

(Checking for confounding and effect modification)

Strata	OR	95% CI	P-value
Gender:			
➢ Female	1.06	1.02 – 1.1	0.003**
➢ Male	1.09	1.02 – 1.17	0.007*
Age:			
➢ 25 -59 age old	1.02	0.97 – 1.08	0.36
➢ 60 and over	1.1	1.03 – 1.16	0.002**
Marital Status:			
➢ Married	1.07	1.01 – 1.12	0.01*
➢ Single/widow/divorced	1.06	1.01 – 1.11	0.009*
Educational Level:			
➢ Secondary school/college	1.09	1.03 – 1.15	0.003**
➢ University/post-graduate	1.06	1.02 – 1.1	0.006*
Occupational status:			
➢ Yes	1.02	0.98 – 1.07	0.32
➢ No	1.05	0.99 – 1.12	0.07
SES[1]:			
➢ 1-6	1.03	0.98 – 1.08	0.21
➢ 6 -<	1.06	0.99 – 1.13	0.05
Number of people living in the household:			
➢ 1-2	1.07	1.02 – 1.12	0.003**
➢ 3 - <	1.03	0.98 – 1.09	0.2
Status:			
➢ Refugee	1.08	1.02 – 1.14	0.004**
➢ Citizen	1.09	1.02 – 1.16	0.007*
Crude	1.07	1.03 – 1.1	0.000**

Note: [1] SES - Social Economic Status was calculated based on the data on whether the participant or any member of his/her family has several working items, such as indoor toilet, hot water, color television, VCR, telephone, automobile, auto washing machine, cellular phone, dish-washing machine, personal computer, vacation home/ villa, and refrigerator.
* - P < 0.05; ** -P<0.005

Relationship between Dignity and MCS in different strata

(Checking for confounding and effect modification)

Strata	OR	95% CI	P-value
Gender:			
➢ Female	1.08	1.04 – 1.13	0.000**
➢ Male	1.10	1.02 – 1.18	0.009*
Age:			
➢ 25 -59 age old	1.05	0.94 – 1.18	0.39
➢ 60 and over	1.09	1.04 – 1.14	0.001**
Marital Status:			
➢ Married	1.09	1.02 – 1.16	0.008*
➢ Single/widow/divorced	1.07	1.02 – 1.12	0.003**
Educational Level:			
➢ Secondary school/college	1.08	1.03 – 1.13	0.001**
➢ University/post-graduate	1.11	1.04 – 1.19	0.003**
Occupational status:			
➢ Yes	0.94	0.86 – 1.02	0.13
➢ No	1.09	1.03 – 1.16	0.002**
SES[1]:			
➢ 1-6	1.05	0.97 – 1.13	0.22
➢ 6 -<	1.07	1.01 – 1.13	0.013*
Number of people living in the household:			
➢ 1-2	1.08	1.03 – 1.13	0.002**
➢ 3 - <	1.04	0.97 – 1.11	0.22
Status:			
➢ Refugee	1.13	1.05 – 1.21	0.000**
➢ Citizen	1.12	1.04 – 1.2	0.002*
Crude	1.09	1.05 – 1.13	0.000**

Note: [1] SES - Social Economic Status was calculated based on the data on whether the participant or any member of his/her family has several working items, such as indoor toilet, hot water, color television, VCR, telephone, automobile, auto washing machine, cellular phone, dish-washing machine, personal computer, vacation home/ villa, and refrigerator.
* - P < 0.05
** -P<0.005

Appendix 8: ***Internal Consistency between the Two Subgroups in Citizens Group***

	Mean (citizens Arm.)	Mean (citizens Rus.)	Mean difference	t	Sig.	Standard error dif.	95% CI (Lower)	95% CI (Upper)
SF-36:								
1. physical functioning	68.79	69.75	-0.96	-0.12	0.25	7.95	-16.71	14.8
2. role-physical	58.79	65.00	-6.2	-.063	0.68	9.92	-25.87	13.46
3. bodily pain	68.67	75.8	-7.12	-1.05	0.04	6.79	-20.58	6.33
4. general health	48.54	55.55	-7.01	-1.24	0.96	5.64	-18.20	4.18
5. vitality	50.44	50.50	-0.06	-0.01	0.22	5.82	-11.6	11.48
6. social functioning	64.15	66.87	-2.73	-0.37	0.58	7.38	-17.35	11.90
7. role-emotional	59.71	71.67	-11.96	-1.21	0.24	9.9	-31.58	7.66
8. mental health	54.50	61.8	-7.29	-1.35	0.64	5.42	-18.04	3.45
Dignity score	67.00	66.2	0.8	0.4	0.056	1.997	-3.16	4.76

Note: citizens Arm. – citizens completed questionnaires on Armenian
citizens Rus. – citizens completed questionnaires on Russian
CI – Confidence Interval