Hanganak Non-Governmental Organization

ELDERLY PROJECT:
IMPACT ON GENERAL HEALTH STATUS OF THE ELDERLY LIVING ALONE IN STEPANAKERT

Gohar Hovhanissyan, MD, MPH

Program Manager

Prepared for the Armenian Women's Welfare Association

A.W.W.A.-Inc.

Stepanakert, NKR
December, 2005

Acknowledgement

First and foremost, a special thanks to my professor Dr. Haroutune Armenian and his wife Sona Armenian for their continuous support and numerous valuable advises and comments in developing and conducting the study.

Dr. Carolann Najarian provided insightful comments and suggestions on the project development and implementation as well as on the ways of evaluating its effectiveness, for which I am very grateful. Besides, Dr. Najarian presented the Elderly Project to the AWWA-Inc. for a grant. Without her efforts the Pilot Project would not gain grant and consequently the study would not has been possible.

Special thanks are owed to the AWWA-Inc. for providing funds to enable the Pilot Project. The organization, under the leadership of Mrs. Tana Onanian, is making improvement in health and well-being of the Armenian Community in the US. The AWWA-Inc. extended its mission outside of the United States to assist the elderly community in Stepanakert.

I also owe a debt of gratitude to Mr. Zaven Ken Darian. He was the first person that responded to our request for proposal and trusted in our success. His first donation was used for furnishing the project with a PC and later for conducting the study. Hanganak NGO team and I personally would like to express our deepest gratitude to him.

Eventually, a special thanks to my parents, Maxim Hovhannisyan and Zoya Torosyan, for all of their ongoing inspiration and support.

Gohar Hovhannisyan

Table of Contents

Acronyms

ADM	Armenian Dram
AWWA	Armenian Women's Welfare Association
BP	Bodily Pain
CRS	Catholic Relief Services
GH	General Health
HAL	Health Assessment Laboratory
ICRC	International Committee of the Red Cross
M	Mean
MCS	Mental Cumulative Summary
MD	Medical Doctor
MH	Mental Health
MPH	Master of Public Health
MSF	Medicines Sans Frontier
NGO	Non-Governmental Organization
NK	Nagorno Karabakh
PCS	Physical Cumulative Summary
PF	Physical Functioning
RE	Role Emotional
RP	Role Physical
SD	Standard Deviation
SF	Social Functioning
SF-36	Short Form 36 Items
SPSS	Statistical Software Package
US	United States
VT	Vitality

Executive Summary

Hanganak Non-Governmental Organization sponsored by the Armenian Women's Welfare Association (AWWA-Inc.) has started a Pilot Project from November 29, 2004 to provide medical and social support to the elderly living alone in Stepanakert. The project was conducted to address the basic health and social needs of the elderly through the delivery of comprehensive social and health care services along with provision of pharmaceuticals and food.

In confines of the pilot project pre- and post-testing surveys were conducted. The primary objective of pre-testing survey was to gather baseline database on self-reporting health status, utilization of health care facilities, health expenditures of the targeted population along with key socio-demographic information. Results from the pre-testing survey were compared with the results of the post-testing survey, which was conducted at the end of the project for evaluation of the Pilot in terms of its feasibility and effectiveness.

The cross-sectional study design was utilized in the survey (pre-test survey). The design permitted later expansion to a longitudinal panel design (post-test survey). Considering that retirement age in NK is 63 for women and 65 for men, the age of study population was justified. Thus, women older than 63 years and men older than 65 years of age living alone in Stepanakert were eligible for the study. The study instrument was a questionnaire. It covered the following topics: 1) key socio-demographic data, 2) utilization of health care services, 3) health problems – chronic health conditions, 4) general health status – SF-36, and 5) accomplishment of some specific activities. Regarding the post-testing questionnaire, it included only part 4 – SF-36 and part 5 – accomplishment of some specific activities. Data collection for pre-testing survey started on December 18, 2004 and lasted till December 28, 2004 inclusively, while the post-testing survey lasted from May 10, 2005 to May 27, 2005. Data were reviewed and entered into SPSS 11.0 software package simultaneously with data collection process. From 125 actual interviews 123 were completed appropriately and further analysis was based on 123 completed questionnaires.

The findings of the study along with the comparisons of pre- and post-testing results showed the following; the perception of respondents being "poor" during the pre-testing survey was considerably higher (in 45.5% of cases) than during the post-testing survey (in 32.0%) (P=.000). The positive change of the health of respondents during the last year was mentioned almost three times more often (42.1% of cases) during post-testing survey compared with pre-testing (in 14.8%). The most common chronic health condition in the target population was cardiac diseases and high blood pressure followed by arthritis and visual problems. Diabetes was quite high – in 10.7 percent of respondents. Cancer and epilepsy were reported as at least common chronic condition present in less than 6 percent of respondents, while no case of tuberculosis was mentioned. Specifically analyzing SF-36 Health Status Scales (8 domains) for testing significance of difference between health status of the respondents during pre- and post-testing, it was revealed that Physical Functioning (PF), Role Physical (RP), Bodily Pain (BP), Vitality (VT), and Mental Health (MH) were considerably improved. In both SF-36 summary scales (PCS and MCS) statistically significant positive difference was observed as well. However, the data for SF-36 Health Status Scales and Summary Scales obtained during both tests were significantly lower in favour of US standard population. Overall, the project had positive impact on health status of the elderly. The reason was probably low affordability and accessibility of existing health

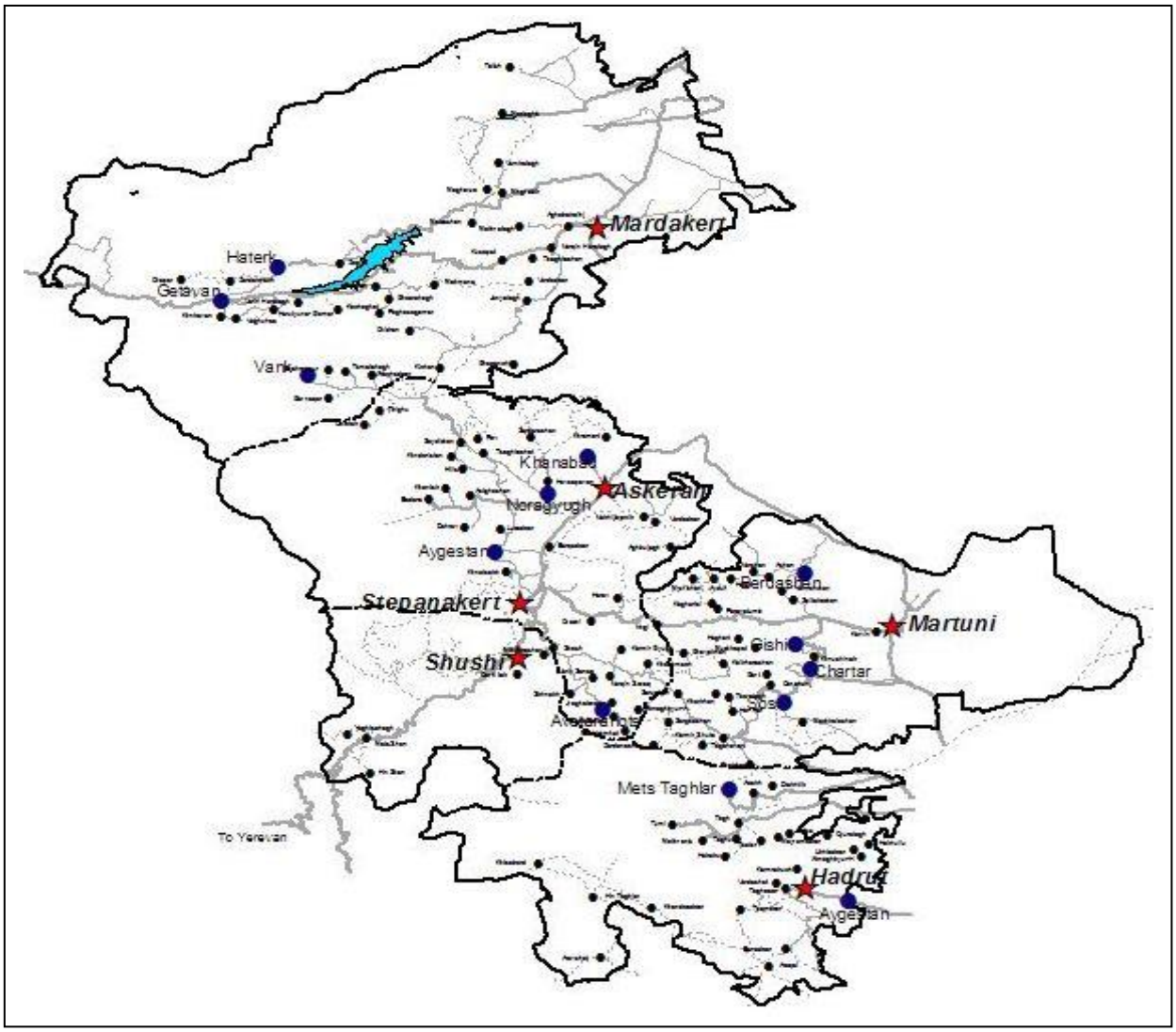
care services. The majority of the patients had not been treated at all or had been treated partially and/or inappropriately. The project allowed them to be examined, diagnosed and treated timely and free of charge. That's why the results were highly positive. Along with medical services, social services provided to the elderly had positive impact in regards to the beneficiaries' social and mental health. Considering that improved physical health in its turn may result improved mental as well as social health, the outcome of overall enhanced physical and mental cumulative summary scores was achieved. Thus, the Pilot Project showed that the services provided to the beneficiaries were highly effective in regards to all aspects of the general health – physical, mental and social. So, it is recommended to continue the project including into the project all the elderly living alone in Stepanakert. Considering high mortality in the study population, it is recommended to investigate the causes of death and consistency with the diagnosis for the future. Unfortunately, the current study was not designed to consider this important issue.

1. Background Information

Nagorno Karabakh (NK) is a region located in the north-eastern part of the Armenian highlands. According to the NK Republican Statistical Service (2004), the total population of the region is estimated up to 145,000 and approximately 57,000 are concentrated around Stepanakert, the capital of the region. Roughly 20% of the population is under 15 years of age and 11% is 60 years of age and older. Over 95% of the population is Armenians, with 5% minorities.

A movement for independence began in NK in 1988 and the armed conflict with Azerbaijan resulted in many thousand deaths and destroyed Nagorno Karabakh's economy. A cease-fire was enacted in 1994. However, despite Nagorno-Karabakh's parliament declared the region independent in 1991, NK has not been politically recognized to date as an independent state, which limits flow of humanitarian aid and credits from international financial institutions.

Map 1. Nagorno Karabakh



The economic and political situation in NK has driven almost the entire health care system as well as social services into collapse. The situation is aggravated by the chronic underutilization of the medical services by the population. The majority of the people either never applies to health care specialists, or applies at the late stages of their illness, mostly because of their inability to cover the costs associated with the treatment. And, socially vulnerable groups such as the elderly, the disabled, families with many children, and single mothers suffer the most.

Humanitarian efforts of the Armenian Diaspora and a few international non-governmental organizations, such as ICRC, Medicines Sans Frontiers, Family Care, CRS, etc., have given some of the health care problems in NK much needed attention. Yet, despite the problems connected with the elderly -- partly due to their minimal pensions and almost non-existent social support -- no welfare programs supporting the elderly have been implemented. This leaves the elderly population living in Stepanakert at a significant disadvantage with regard to their health and welfare.

Hanganak Non-Governmental Organization sponsored by the Armenian Women's Welfare Association (AWWA-Inc.) has started a Pilot Project from November 29, 2004 to provide medical and social support to the elderly living alone in Stepanakert. The project was conducted to address the basic health and social needs of the elderly through the delivery of comprehensive social and health care services along with provision of pharmaceuticals and food.

In confines of the pilot project pre- and post-testing surveys were conducted. The primary objective of pre-testing survey was to gather baseline database on self-reporting health status, utilization of health care facilities, health expenditures of the targeted population along with key socio-demographic information. Results from the pre-testing survey were compared with the results of the post-testing survey, which was conducted at the end of the project for evaluation of the Pilot in terms of its feasibility and effectiveness.

2. Methodology

2.1 Study Concept

The cross-sectional study design was utilized in the survey (pre-test survey). The design permitted later expansion to a longitudinal panel design (post-test survey). The design ensured:

- Generalizability of the study results for the target population
- Feasibility of implementing the study within the limited human and financial recourses and time constrains
- Comparability of the results with those obtained from the same sample at the end of the Pilot Project

The goal was to provide the most robust dataset within the available recourses to provide maximum flexibility in analyzing the data. Although initially it was suggested to involve into the study randomly selected 100 elderly for surveying and the Pilot project, the study included all registered elders in the outpatient care unit of the Nursing Home (N=154).

Considering possible drops out from the study, the sample size was justified. Besides, increased sample size ensured reliability and validity of the study.

Hanganak NGO assumed responsibility for the overall management and implementation of the study including interviewer training, instrument development and pre-testing, quality assurance, data entry and preliminary descriptive analyses.

2.2 Target Population

Considering that retirement age in NK is 63 for women and 65 for men, the age of study population was justified. Thus, women older than 63 years and men older than 65 years of age living alone in Stepanakert were eligible for the study. The only exclusion criterion was severe mental retardation of participants.

2.3 Sampling Strategy

Initially it was decided to include into the study as well as in the Pilot Project randomly selected 100 elderly living alone in Stepanakert (the list of 226 elderly living alone in Stepanakert was available at the NK Ministry of Social Welfare). The initial list of 100 elderly was created by systematic random sampling technique. However, considering that almost all selected elders (with 1-2 exceptions) were included in the list of outpatient care unit of the Nursing Home and the mentioned list consisted of 154 persons, it was decided to include into the study as well as into the project all the registered elders. Studying the list obtained from the Nursing Home, it was discovered that there were some registered patients under the age of 63 (9 persons), so they were not eligible for the study and consequently were excluded from the survey and the Pilot. So, the initial list of 143 elders was developed.

2.4 Study Instruments

The pre-testing survey instrument was a questionnaire (Appendix 1). It covered the following topics:

1. key socio-demographic data
2. utilization of health care services
3. health problems – chronic health conditions
4. general health status – SF-36
5. accomplishment of some specific activities

The post-testing questionnaire included SF-36 (part 4) used for the pre-testing survey, accomplishment of some specific activities (part 5) and some additional questions about beneficiaries' perceptions of the implemented project.

Hanganak NGO staff developed a training manual for interviewers. For pre-testing surveys nurses from the City Polyclinic were trained as interviewers. In December 2004, interviewer training and survey instrument pre-testing were conducted. The training was held in Stepanakert City Adult Polyclinic and included two days of didactic training and two days of field pre-testing. For post-testing survey Hanganak NGO office main staff was trained to serve as interviewers because of budget constraint.

2.5 Ethical Consideration

The study protocol was reviewed and approved by the Hanganak NGO staff, AWWA and project advisors. No written consent forms were utilized, however the respondents were assured of the anonymity and confidentiality of the collected data. The interviewers orally explained the patients that their participation in the survey was on volunteer basis and that they could refuse to answer any of the proposed questions if they didn't want to and stop participation any time during the interview.

2.6 Survey Administration

Data collection for pre-testing survey started on December 18, 2004 and lasted till December 28, 2004 inclusively. For data collection 12 nurses were selected from the City Polyclinic. The interviewers were trained for 1-2 days. The pre-test of the survey instrument was conducted on December 16, 2004, after which minor changes were made in the questionnaire. The interviewers were observed during first day of the survey. All of them were assessed as capable of conducting the interviews. The main language of the survey was Armenian; only a few respondents were more comfortable with Russian, for those the questions were simultaneously translated.

While training the nurses for the survey, 4 patients have passed away and some moved from Stepanakert, so, overall 128 elders were interviewed.

Out of 128 elders three passed away during the pilot project and only 125 were interviewed during the post-testing survey for longitudinal study, which took place from May 10, 2005 to May 27, 2005 inclusively. For data collection 4 employees of Hanganak NGO were trained for 2 days and appreciated as capable of conducting interviews.

2.7 Data Entry

Data were reviewed and entered into SPSS 11.0 software package simultaneously with data collection process. From 125 actual interviews 123 were completed appropriately and further analysis was based on these 123 completed questionnaires. Range checks and logistic checks were used for data cleaning.

3. Results

3.1. Administrative information

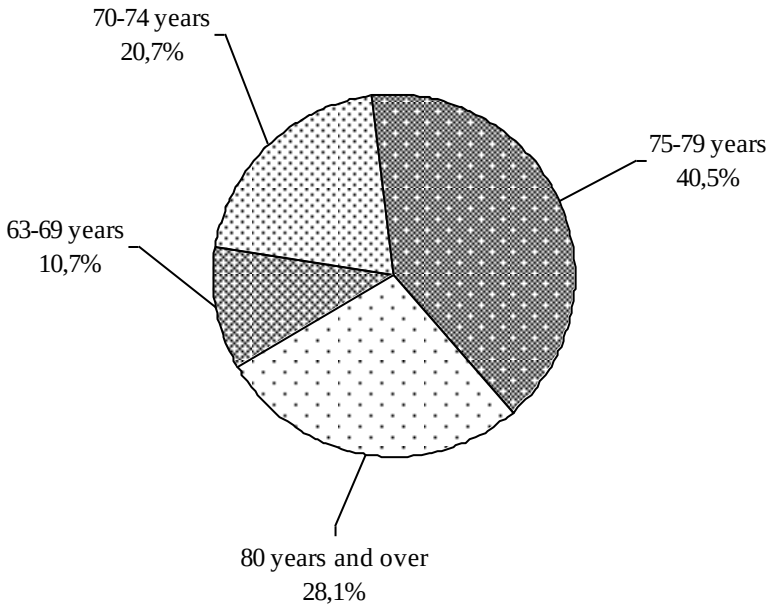
Although initially it was decided to interview 125 patients, 6 more questionnaires were copied considering possible inappropriately filled ones. However all 125 copied questionnaires were filled and only 2 of them were found unsuitable for analysing. Thus, 123 interviews were appreciated as appropriate for the analysis. There were observed no refusals for participation in the survey.

3.2. Socio-demographic data

Age and gender. The mean age of the respondents was 76.3 (SD 5.0) with the age range of 63-89 years. The respondents were divided into 4 age groups: 63-69; 70-74; 75-79; and 80

years and over. Out of all respondents 40.5 percent were in the third group (75-79) and 28.1 percent comprised the fourth group (80 and over). Thus, 68.6 percent of all respondents were over 75 years of age. Age distribution of the respondents is shown in the Figure 1.

Figure 1. Age Distribution of the Respondents, Stepanakert, December, 2004 (N=123)



The vast majority of respondents were women. Out of 123 beneficiaries, 107 (87.0%) were women and 16 (13.0%) men. Stepanakert was place of birth for 12.5 percent and Karabakh was listed for 92.6 percent. The rest were from Azerbaijan and other countries (7.5%). Out of all respondents 98.5 percent were Armenians and 2 (1.7%) were Russians. Refugees from Baku and other regions of Azerbaijan were in 19.8 percent of cases.

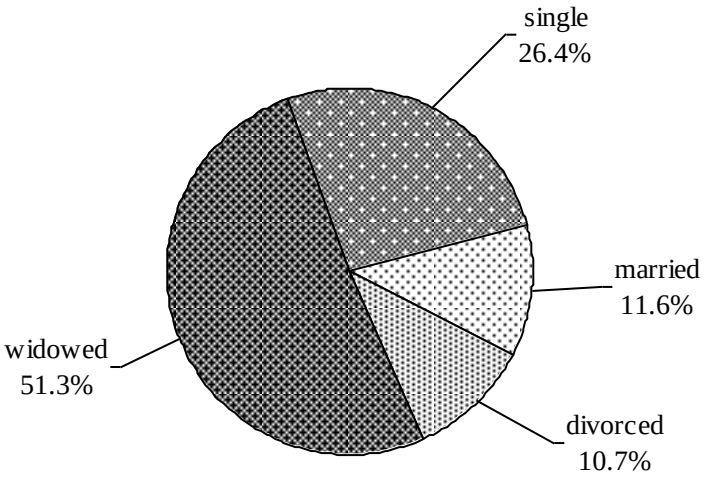
Education. The highest level of education completed by the respondents was less than 10 years of school in 46.3 percent of cases, 10 years of school in 20.7 percent, professional technical education in 21.5 percent, and 11.6 percent completed institute/university. The following table (***Table I***) shows education of the participants.

Table I. Educational status of the respondents/beneficiaries, Stepanakert, December, 2004 (N=121).

Education	Absolute numbers	Percent (%)
8 classes	*56*	*46.3*
10 classes	*25*	*20.7*
College	*26*	*21.5*
Higher	*14*	*11.6*

Marital status. Despite eligibility criterion for the elderly to be included in the project was leaving alone, there were seven couples in the list. They comprised exclusion and were involved in the project as well as in the survey because of extreme poverty and lost of children during the Artsakh War. That's why analysing the marital status of the respondents, we had the following figures. More than half of the respondents were widowed (51.3%) and 26.4 percent were single. ***Figure 2*** shows the respondents marital status.

Figure 2. Marital Status of the Respondents, Stepanakert, December, 2004 (N=123)



The majority of the respondents had no children (64.2%). From those who has ever had children 20 (46.5%) mentioned that they had lost them, mostly during the Artsakh War. The children of the rest of respondents did not and/or could not take care of their parents.

Disability status. Out of all respondents 29 were disabled which comprised 24.0 percent. The next item aims to discover the proportion of disability group of the disabled elderly. Proportions of disability groups in the sample are presented in the ***Table II.***

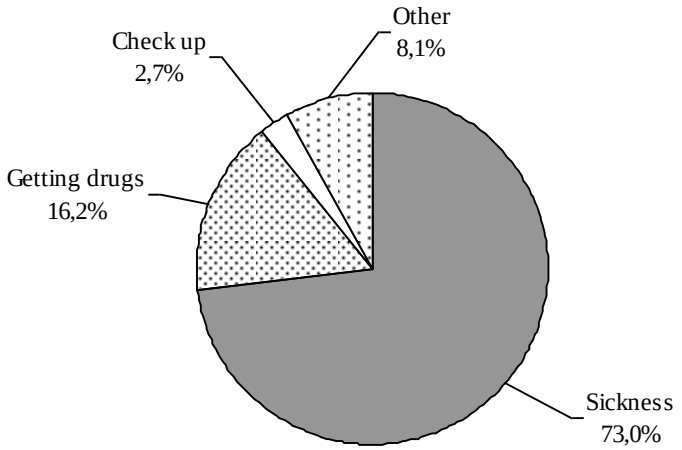
Table II. Disability status and disability groups of the beneficiaries, Stepanakert, December, 2004 (N=121).

Disability Status	Absolute numbers	Percent (%)
Not Disabled	***92***	***76.0***
Disabled	***29***	***24.0***
I Group of Disability	*6*	*20.7*
II Group of Disability	*22*	*75.9*
III Group of Disability	*1*	*3.4*

3.3. Utilization of Health Care Services

Having health problems does not always mean seeking health care. That is why it was tested also accessibility and affordability of medical care. Of the respondents, 27.2 percent mentioned that they visited a physician during the past 4 weeks. Of those who visited a doctor the reason was sickness in great majority of cases (73.0%), 16.2 percent visited for getting drugs/prescriptions, and only 2.7 percent for regular check-ups mostly in patients with chronic health conditions (***Figure 3***). Place of visits in 71.4 percent of cases was City Polyclinic, and 17.1 percent - hospital.

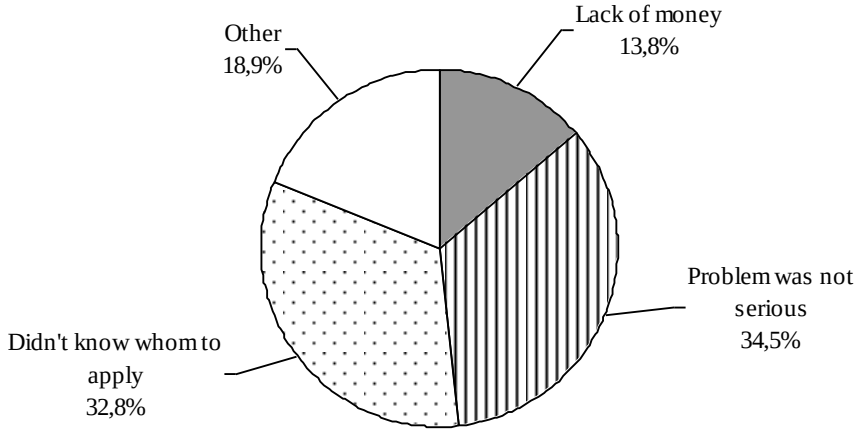
Figure 3. Reason of visiting the doctor, Stepanakert, December, 2004 (N=34)



On the question "how much did you pay to the doctor" the vast majority of the respondents (98.4%) refused to answer. Only two of them mentioned the amount of money paid to the doctor: 10,000 AMD and 70,000 AMD accordingly. Analyzing the cost of medicine, it was revealed that the mean price for medicine was 1,144 AMD with the range of 0 – 43,000 (SD = 4,721). The mean total cost for health services was 1,328 AMD with the range of 0- 70,000 (SD = 6,895).

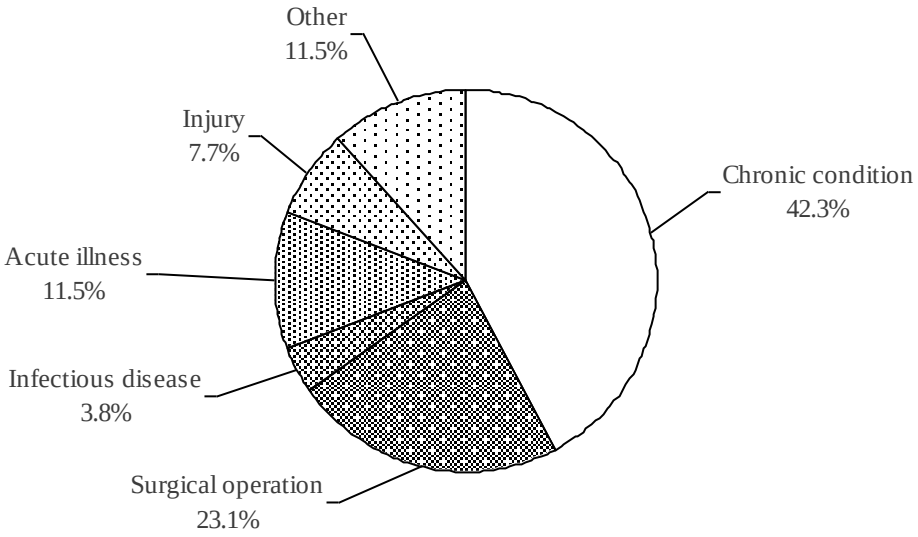
Of the respondents 43.5 percent of cases (N=55) reported that during the last month they needed to visit a doctor but did not. The reason in 13.8 percent was lack of money. Out of those who didn't refer for healthcare 20 (34.5%) reported they thought the problem was not serious, and 32.8 percent did not know whom to apply (***Figure 4***).

Figure 4. Reason of not applying to the doctor, Stepanakert, December, 2004 (N=55)



Hospitalization during the last 12 months in respondents was in 16.0 percent of cases (N=20). Out of all hospitalized respondents, chronic conditions were in 42.3 percent, surgical operation in 23.1 percent, and acute illness was in 11.5 percent of cases (***Figure 5***). The great majority of respondents were admitted to the Republican Hospital in 70.0 percent, and to the Military Hospital in 15.0 percent of cases.

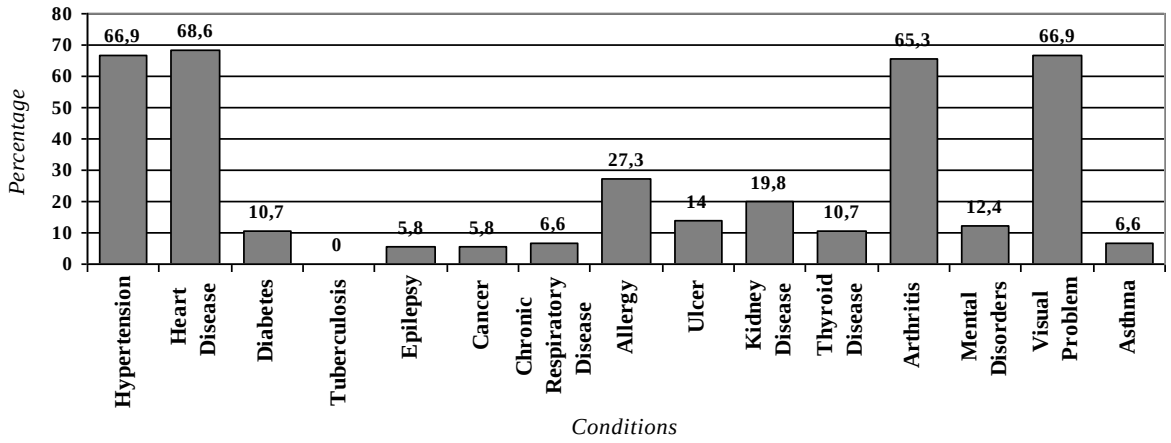
Figure 5. Reasons for Hospitalization, Stepanakert, December, 2004 (N=20)



3.4. Chronic Health Conditions

The respondents were asked to indicate 15 different chronic health conditions. The most common chronic health conditions in the respondents were heart disease (68.6%), hypertension (66.9%), visual problems (66.9%), and arthritis (65.3%). ***Figure 6*** shows frequencies of chronic health conditions in beneficiaries.

Figure 6. Frequencies of Chronic Conditions in Beneficiaries, Stepanakert, December, 2004 (N=123)

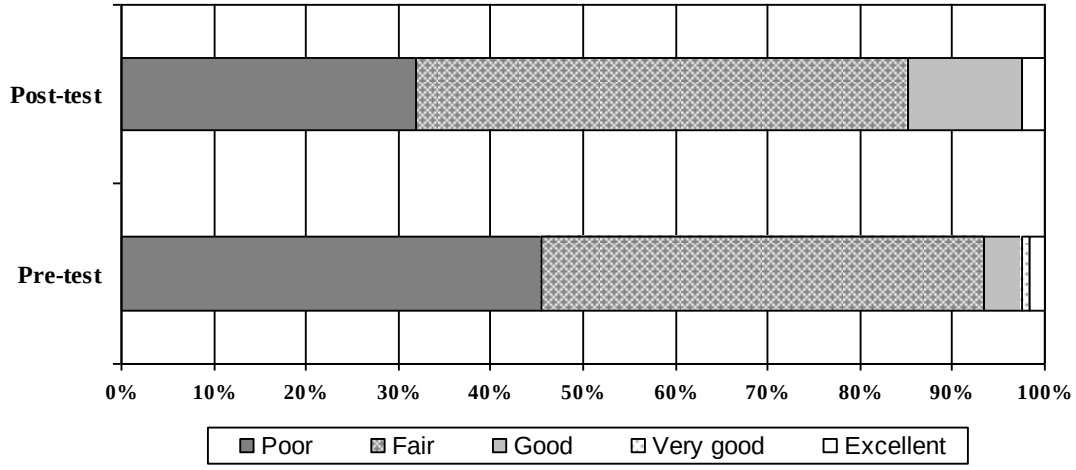


3.5. Quality of life

Health Status

During the pre-testing survey the majority of respondents rated their health as 'fair' (47.9%) or 'poor' (45.5%), while during post-testing they evaluated their health as 'fair' in 53.3% and 'poor' in 32.0%. Meanwhile, only 1.7% rated it as 'excellent' for pre-testing and 2.5% in post-testing. Overall, the cumulative percent of 'excellent', 'very good' and 'good' responses was 6.6 during pre-testing, and 14.8 during post-testing ***(Figure 7)*.**

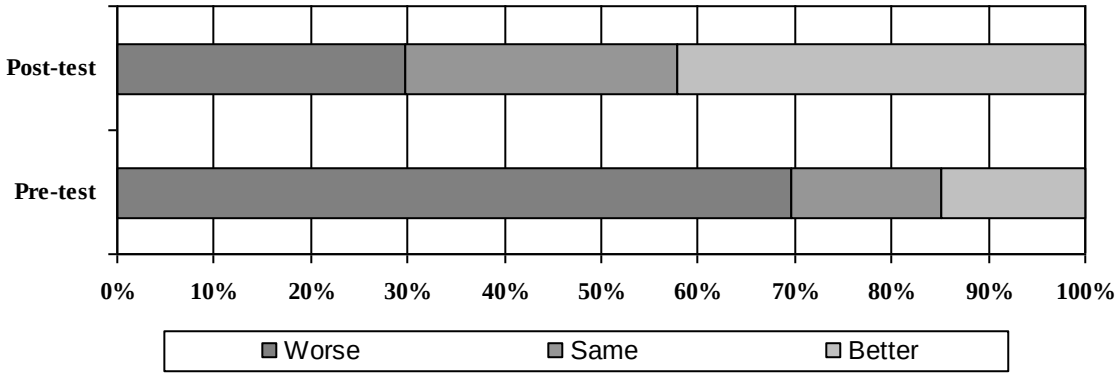
Figure 7. Health of the elderly during past months before (pre-test) and after (post-test) implementation of the project, Stepanakert, 2004-2005 (N=123)



Health Dynamics

During pre-testing when asked about the dynamic of the overall health compared to one year ago, respondents rated their health as somewhat declining: 'about the same' 15.6%, 'better' 14.8%, and 'worse' 69.6%. Surprisingly during post-testing the figure was positively shifted, thus, 'about the same' in 28.1%, 'better' in 42.1%, and 'worse' in 29.7% ***(Figure 8)***.

Figure 8. Comparative health dynamics of respondents during pre- and post-testing, Stepanakert, 2004-2005 (N=123)



Everyday Activities

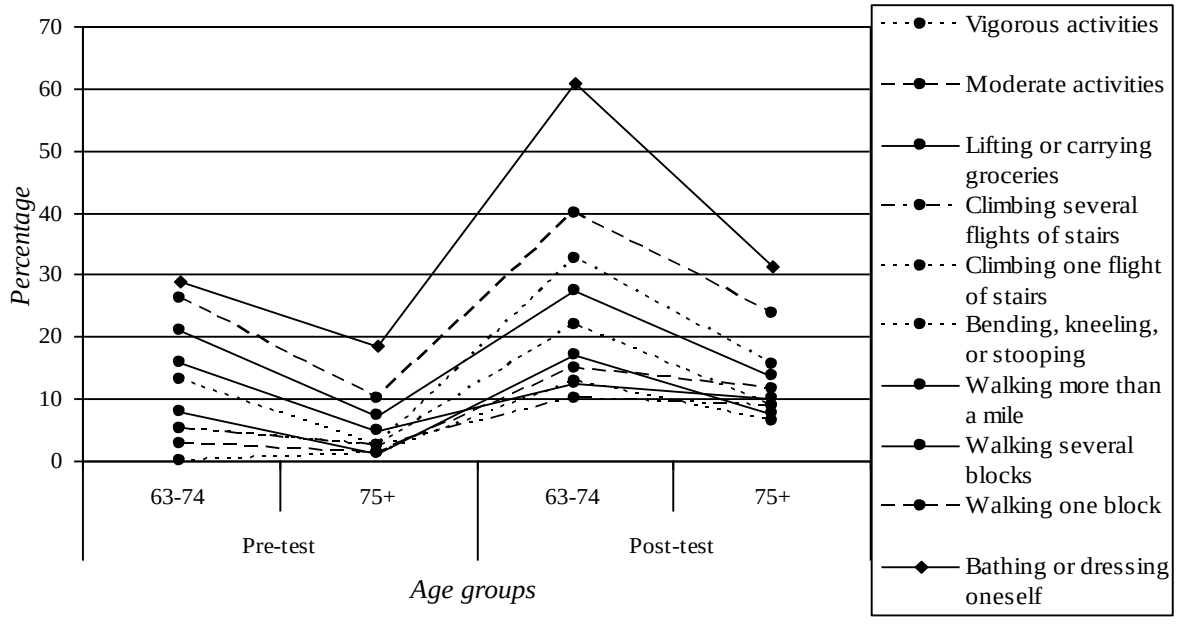
During pre- and post- testing (SF-36) the respondents were asked also to assess the extent to which their health limits them in everyday activities. In pre-testing a large proportion of respondents felt limited in their everyday activities: 99.2% (95.0% limited a lot and 4.2% limited a little) in vigorous activities such as running, lifting heavy objects, participating in the strenuous sports; more than 90% in less vigorous activities such as climbing several flights of stairs, lifting or carrying groceries, and bending/kneeling/stooping. In post-testing a positive shift was observed. (Table III).

Table III. Proportion of respondents with limited activities because of health condition during pre- and post-testing, Stepanakert, 2004-2005 (N=123).

Activity	Limited a lot (%)		Limited a little (%)	
	pre	***post***	***pre***	***post***
Bathing or dressing oneself	46.2	26.4	31.9	32.2
Walking one hundred yards	37.8	30.8	47.1	40.0
Walking several hundred yards	54.2	50.4	34.0	31.3
Walking more than a mile	68.1	66.9	23.5	23.1
Bending, kneeling, or stooping	72.7	57.0	22.4	29.8
Climbing one flight of stairs	41.0	38.8	37.6	35.5
Climbing several flights of stairs	68.1	58.8	28.5	32.0
Lifting or carrying groceries	56.3	55.4	40.3	39.7
Moderate activities (moving a table, pushing a vacuum cleaner)	83.2	60.2	15.1	27.1
Vigorous activities (running, lifting heavy objects, participating in the strenuous sports)	95.0	75.2	4.2	16.2

With the increasing age, the proportion of those reported not being limited in their everyday activities decreased considerably. The sample was divided into two age groups: 63-74 and 75 and over. Besides in two age groups pre- and post-testing results were also compared (Figure 7).

Figure 9. Proportion of respondents without limitation in their activities because of health during pre- and post-testing, Stepanakert, 2004-2005



Besides the mentioned everyday activities that are part of SF-36 standard questionnaire, the respondents were also asked about other activities that are more relevant to their lifestyle, such as: dusting, sweeping out, mopping the floor, shopping, cooking, washing up windows, and field work. The level of difficulty was assumed to have increasing tendency from dusting to field work. While comparing the results of pre-and post-testing, positive changes were observed in these activities as well (Table IV). McNemar's matched pairs test was used for defining the P-values.

Table IV. Proportion of respondents able to perform different tasks during pre- and post-testing, Stepanakert, 2004-2005 (N=115).

Everyday tasks	*Pre-test (%)*	*Post-test (%)*	*P-value*
Dusting	68.7	80.2	0.072
Sweeping out the house	68.7	77.7	0.117
Mopping the floor	62.6	69.4	0.369
Cooking	55.3	81.0	0.622
Shopping	52.2	69.4	0.034
Washing up windows	36.5	43.0	0.000
Filed work	11.4	12.4	0.405

SF-36 Health Status Scales

The further analysis of SF-36 was performed based on guidelines developed by the Health Assessment Lab (HAL) [1;2]. In accordance with the guidelines there were scaled eight domains (Appendix 2) – physical functioning (PF), role physical (RP), bodily pain (BP), general health (GH), vitality (VT), social functioning (SF), role emotional (RE), and mental health (MH) – which are indicators of the general health. For testing the quality of life of the target population, the data obtained from the study during pre- and post-testing were compared with established norms for the general US population as estimated standards. Prior to that, the population was divided into 2 age groups for more precise comparison. Figures presenting the data of the 8 domains for different age groups vs. US norms by the same age groups are shown below.

Figure 10. Results of SF-36 for pre- and post-testing compared with US national norms for ages 63-74, Stepanakert, 2004-2005 (N=34)

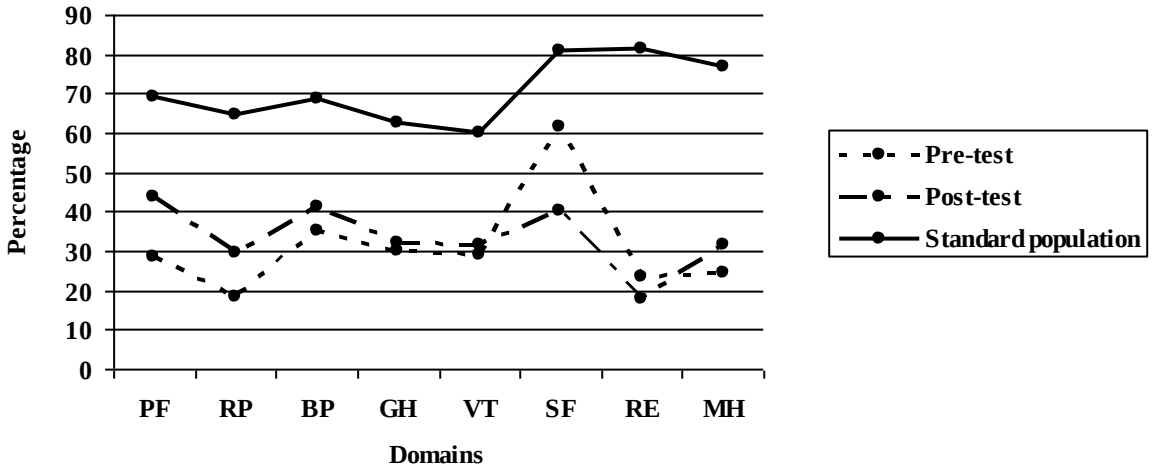
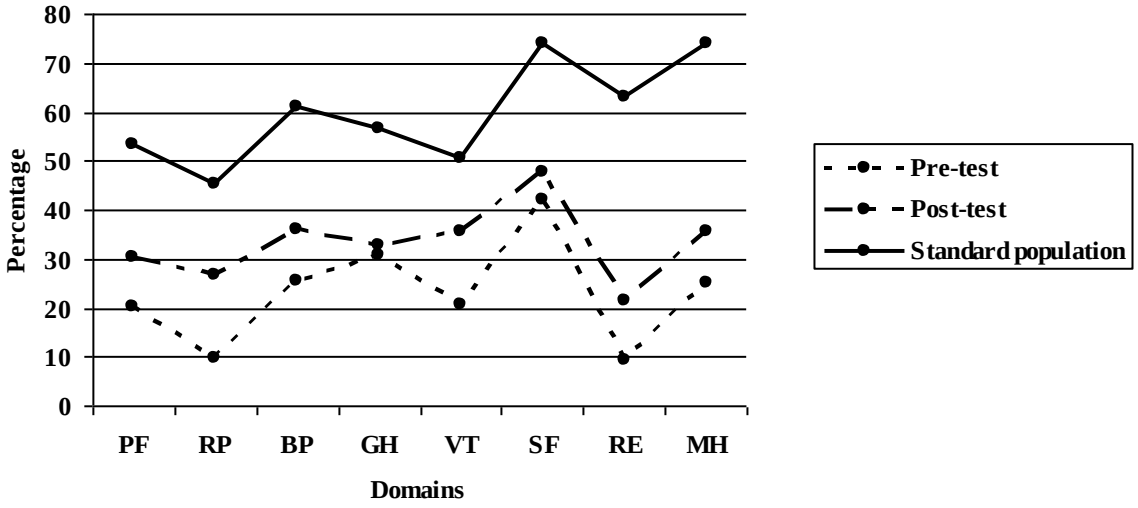


Figure 11. Results of SF-36 for pre- and post-testing compared with US national norms for ages 75 and over, Stepanakert, 2004-2005 (N=81)



Paired- Sample T Test was used for analyzing significance of difference between health status of the respondents during pre- and post-testing. Eight domains were considered for comparing pre- and post-test results. The following figures were revealed *(Table V).*

Table V. Eight domains of general health status of respondents before (pre-test) and after (post-test) the pilot project (N=115).

Domains	Pre-Test – M (SD)[1]	Post-Test – M (SD)	Difference	P-value
PF	22.61 (21.351)	34.09 (26.865)	11.478	0.000
RP	12.39 (29.127)	27.61 (34.789)	15.217	0.000
BP	28.43 (28.295)	37.65 (23.770)	9.226	0.006
GH	30.58 (18.226)	32.52 (18.991)	1.939	0.291
VT	23.13 (24.292)	34.39 (22.722)	11.261	0.000
SF	47.83 (34.183)	45.33 (26.823)	- 2.500	0.502
RE	13.62 (32.413)	20.29 (31.745)	6.667	0.124
MH	24.77 (20.851)	34.26 (21.417)	9.496	0.000

SF-36 Physical and Mental Health Summary Scales

The same Paired-Sample T Test was utilized in investigating the difference between Physical Cumulative Summary (PCS) and Mental Cumulative Summary (MCS) scores during pre- and post-testing. In both scores statistically significant positive difference between pre- and post-testing results was observed *(Table VI*).

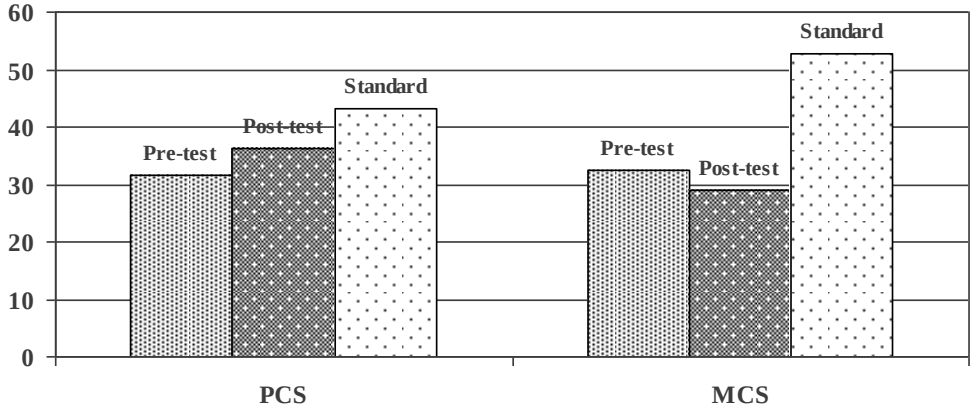
Table VI. PCS and MCS scores in respondents before (pre-teat) and after (post-test) the pilot project (N=115).

[1] 'M' indicates the mean of corresponding domain and 'SD' in parenthesis – standard deviation.

Summary Scores	Pre-Test – M (SD)[2]	Post-Test – M (SD)	Difference	P-value
PCS	29.56 (7.67)	33.36 (9.03)	3.80	0.000
MCS	30.02 (10.95)	32.33 (9.84)	2.30	0.051

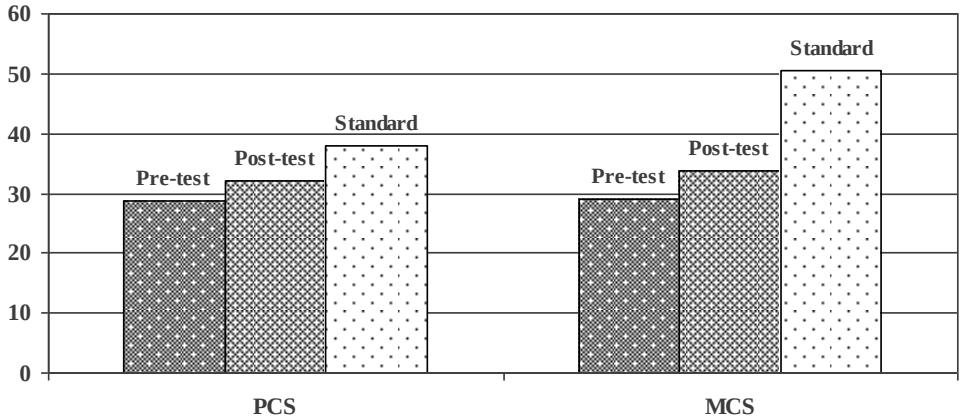
Comparing the study results for PCS and MCS scores with US standard population in two age groups (65-74 and 75 and over) it was discovered statistically significant difference (P=.0000) between the study results for both test and US norms *(Figure 12, 13)*.

Figure 12. PCS and MCS scores of the study population during pre- and post-test comparing with the US standards in 65-74 age group (N=34), Stepanakert, 2005



As it can be seen, the US standards are higher compared with both pre- and post-test study results. The same scores were analysed for the sample of the elderly aged 75 years and over. The following figure presents the results.

Figure 13. PCS and MCS scores of the study population during pre- and post-test comparing with the US standards in 75+ age group (N=81), Stepanakert, 2005



[2] 'M' indicates the mean of corresponding domain and 'SD' in parenthesis – standard deviation.

4. Main Findings

The main/interesting findings of the study along with the comparisons of pre- and post-testing results are grouped in the following subtitles.

Socio-demographic data

More than two third of the elders included in the Project were aged 75 and over (68.6%). And the vast majority were women (87.0%). About 20 percent of respondents were refugees from Baku and other regions of Azerbaijan.

More than half of respondents were widowed (51.3%) and 37.1% single or divorced. The majority of the beneficiaries had ever had children (64.2%). From those who had ever had children 20 (46.5%) mentioned that they had lost them during the Artsakh War. One woman – Sonya Avanesyan – mentioned that her three sons were killed, and two other women – Tsovik Khachatryan and Astghik Baghdasaryan – lost two sons each during the war.

Out of all respondents 29 were disabled which comprised 24.0 percent. However this is not a real figure. The problem was in defining the disability status in the elderly. There was a policy accepted by the NK government starting from 2003 to not approve disability status after age of retirement (because of almost no difference between disability and retirement pensions). So, the actual number of disabled elders is much higher.

Utilization of Health Care Services

Testing accessibility and affordability of medical care it was revealed that the proportion of respondents visiting a clinic during a one month period was rather low (27.2%), while 43.5 percent of cases reported that during the last month they needed to visit a doctor but did not. Out of those who didn't refer for healthcare 32.8 percent did not know whom to apply and for 13.8 percent the reason was lack of money. Hospitalization of respondents during the last 12 months was in 16.0 percent of cases (N=20).

Health Status

The perception of respondents being "poor" during the pre-testing survey was considerably higher (in 45.5% of cases) than during the post-testing survey (in 32.0%) (P=.000). The positive change of the health of respondents during the last year was mentioned almost three times more often (42.1% of cases) during post-testing survey compared with pre-testing (in 14.8%). The most common chronic health condition in the target population was cardiac diseases and high blood pressure followed by arthritis and visual problems. Diabetes was quite high – in 10.7 percent of respondents. Cancer and epilepsy were reported as at least common chronic condition present in less than 6 percent of respondents, while no case of tuberculosis was mentioned. The situation was really alarming with the degree of limitations in everyday activities that the elderly experienced because of their health condition. More than 85 percent of them felt limited in activities such as walking several hundred yards, in 95 percent respondents felt limited in activities such as bending/kneeling/stooping or lifting/carrying groceries, and 78 percent of them felt limited in even bathing or dressing themselves. However, during post-testing survey statistically significant positive shift was observed. While asking about accomplishing activities not included in SF-36 but relevant to their lifestyle, approximately one third of the respondents reported limitation in dusting,

sweeping out the house and mopping the floor, while two third could not wash up the windows and more than 88 percent field work. Statistically significant positive changes were observed in dusting, shopping and washing the windows after implementation of the Pilot Project. Specifically analyzing SF-36 Health Status Scales (8 domains) for testing significance of difference between health status of the respondents during pre- and post-testing, it was revealed that Physical Functioning (PF), Role Physical (RP), Bodily Pain (BP), Vitality (VT), and Mental Health (MH) were considerably improved. In both SF-36 summary scales (PCS and MCS) statistically significant positive difference was observed as well. However, the data for SF-36 Health Status Scales and Summary Scales obtained during both tests were significantly lower in favour of US standard population.

5. Conclusion and Recommendations

The study was informative enough to do some general conclusions and to have an idea of the effectiveness of services provided by the Elderly Project.

Overall, the project had positive impact on health status of the elderly. Moreover, it exceeded all expectations. The reason of such results was probably low affordability and accessibility of existing health care services. The majority of the patients had not been treated at all or had been treated partially and/or inappropriately. The project allowed them to be examined, diagnosed and treated timely and free of charge. That's why the results were highly positive.

Considering that in the study population prevalence of such chronic health conditions as hypertension, cardiac diseases, arthritis and visual problems was very high, the necessity of treating the mentioned conditions as well as preventing their complications was crucial. The well trained and qualified medical personnel occupied in the project organized medical care for chronic patients very effectively, which resulted in improved physical health of patients.

Along with medical services, social services provided to the elderly had positive impact in regards to the beneficiaries' social and mental health. Considering that improved physical health in its turn may result improved mental as well as social health, the outcome of overall enhanced physical and mental cumulative summary scores was achieved.

Thus, the Pilot Project showed that the services provided to the beneficiaries are highly effective in regards to all aspects of the general health – physical, mental and social.

It is recommended to continue the project including all the elderly living alone in Stepanakert.

Considering high mortality in the study population, it is recommended to investigate the causes of death and consistency with the diagnosis for the future. Unfortunately, the current study was not designed to consider this important issue.

References

1. John E and Ware JE. SF-36 Health Survey. Manual and Interpretation Guide. Health Assessment Lab, New England Medical Center, Boston, 1993
2. Ware JE. SF-36 Physical and Mental Health Summary Scales: A user's manual. Health Assessment Lab, New England Medical Center, Boston, 1994

Appendices

Appendix 1

HANGANAK/AWWA PROJECT
PRETESTING SURVEY

Health Survey for the Elderly Living Alone in Stepanakert

Elderly Code__ __ __ __ __

Name: _____

Address: _____

Telephone: _____

Interviewer name: _____

Date: _____/_____/_____
day month year

Elderly coding

Digit 1	**Code of Stepanakert (1)**
Digit 2-3	**Interviewer code (01-14)**
Digit 4-5	**Visit Number (01-12)**

The Elderly Health Survey

Elderly Code__ __ __ __ __
Date: ____/_____/_____
day month year

INTRODUCTION ***(Please present the following introduction verbatim)***

Hello, I am....., from the Hanganak NGO and a district nurse from the Stepanakert City Polyclinic. We are investigating health status of the elderly living alone in Stepanakert which would allow us assessing the health services needs to be provided to them. Can you spare me a few minutes?

Everything you tell me will be kept confidential and your name will not be attached to any written information/report. In addition, you do not have to respond to any question you do not wish to. May I continue?

I. Demographics

1. Gender:

1. Male
2. Female

2. 2a. How old are you? _____ 2b. Birthday _____/_____/_____
day month year

3. Where were you born?

1. Place of birth _____
2. Country _____

4. How long have you lived in Stepanakert? _____ years.

5. What is yours nationality?

1. Armenian 2. Russian
3. Other, (describe) _____

6. Martial status?

1. Single 2. Married 3. Divorced 4. Widow

7. Do you have children?

1. Yes. How many? _____ 2. No → ***Go to Q.9***

8. Several words about your children:

_____
_____
_____
_____

9. Where do they live?

1. in Stepanakert
2. in Karabakh
3. in Armenia
4. outside of Armenia

10. Indicate the highest level of education that you completed?

1. School (less that 10 years)
2. School (10 years)
3. Professional technical education
4. Institute/University
5. Postgraduate
6. Don't know

11. Do you have a disability group?

1. Yes, indicate I II III
2. No

II. Health Services Utilization

12. Did you visit a physician during the past 4 weeks?

1. Yes
2. No → ***Go to Q.15***

13. What was the reason of your visit?

1. Sickness, illness, injury
2. Regular check up
3. To get drugs/prescription
4. Other, (describe) _____

14. Indicate the place of visit:

1. City Polyclinic
2. Hospital
3. Emergency call
4. Other, (describe) _____

15. Could you remember how much did you pay for the health services?

1. to the doctor _____ drams
2. for medicines _____ drams
3. for diagnosis _____ drams
4. total cost _____ drams
5. Don't know.

16. Within the past 4 weeks, did you want to visit a doctor because you were not feeling well but did not?

1. Yes
2. No → ***Go to Q.17***

17. What was the reason?

1. Did not have time to go
2. Did not have money to go
3. Did not know whom to apply
4. I thought it was not serious problem

5. Other, specify _____

18. Have you been admitted to a hospital during the last 12 months?

1. Yes 2. No → ***Go to Q.22***

19. What was the reason?

1. Chronic health condition
2. Surgical operation
3. Infectious disease
4. Acute illness
5. Injury
6. Other, specify _____

20. Name of hospital admitted to:

1. Republican Hospital
2. Oncological dispensary
3. Maternity hospital (gynecological)
4. Military hospital
5. Infectious diseases hospital
6. Other, specify _____

21. Could you remember the number of hospital days? _____ days

22. Approximately how much did you pay from own budget for the treatment?

1. to the hospital _____ drams
2. to the health providers _____drams
3. for medicines _____ drams
4. for diagnosis _____ drams
5. total cost _____ drams
6. Don't know.

23. Could you remember how much did you spend for health during the past 4 weeks?

1. 0-1,000 drams
2. 1,000-3,000 drams
3. 3,000-5,000 drams
4. 5.000 and over
5. Don't know.

24. And how much did you spend on drugs during the past 4 weeks?

1. 0-1,000 drams
2. 1,000-3,000 drams
3. 3,000-5,000 drams
4. 5,000 and over
5. Don't know.

III. Chronic Health Conditions

25. Have you ever had any of the following conditions?

№	Health Problems	Yes	No
1	Hypertension		
2	Heart disease		
3	Diabetes		
4	Tuberculosis		
5	Epilepsy		
6	Cancer		
7	Chronic Respiratory disease		
8	Allergy		
9	Ulcer		
10	Kidney disease		
11	Thyroid disease		
12	Arthritis		
13	Mental disorders		
14	Visual problem		
15	Asthma		
16	None		
17	Others, specify		

IV. General Health Status
SF –36

General Health

26. In general, would you say health is: *(select one option)*

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

27. Compared to one year ago, how would you rate your health in general now? *(Select one option)*

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

Limitation of Activities

28. 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? *(Select one circle on each line)*

	Yes, Limited a Lot	**Yes, Limited a Little**	**No, Not Limited at All**
a. Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	1	2	3
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

Physical Health Problems

29. 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? *(Select one circle 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. 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

Emotional Health Problems

30. 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)? *(Select one circle 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

Social Activities

31. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours, or groups? *(Select one option)*

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

Pain

32. How much bodily pain have you had during the past 4 weeks? *(Select one option)*

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

33. During the past 4 weeks, how much pain did interfere your normal work (including both work outside the home and homework)? *(Select one option)*

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

Energy and Emotions

34. 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. *(Select one circle on each line)*

How much of the time during the past 4 weeks…	**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

Social Activities

35. 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.)? *(Select one option)*

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

General Health

36. How true or false is each of the following statements for you? *(Select one circle 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

V. Accomplishment of some specific activities

37. Could you describe your everyday activities (which of the following activities can you perform)

1. Cleaning the house
    a. dusting
    b. sweeping out
    c. mopping a floor
    d. washing up windows
2. Shopping
3. Cooking
4. Field work

THANK YOU VERY MUCH!

Appendix 2.

SF-36 MEASUREMENT MODEL