

Feasibility of Using Subjective Health Measurement Tool for assessing population health in developing country



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Quality of life : Health

- Spectrum of quality of life is huge and health is one of them.
- Without health we can not even imagine a quality life. Question is how health is related with quality of life?
- A German philosopher said, “Health is nothing, without health everything is nothing”

Quality of life : Health

- To ensure quality life for a entire nation, it is essential to have the health status information.
- If we have the existing health status information of a country then we can plan for further improvement of country's health system .
- Question is how we can get the health status information of a country, particularly a developing country.

Quality of life : Health

- Like the developed countries, developing countries do not have integrated data base for health system.
- Developing countries also can not afford to measure Population health through standard screening or measurement tools.

Developing Country Context: Bangladesh

In Bangladesh:

- Population density is **1,237** per sq. km
- **25% to 31.5%** population live below poverty line
- Health expenditure is only **2.8%** of GDP
- **4.90** physicians per 10,000 population
- **2.90** registered nurses per 10,000 population
- 1 hospital bed for **1,528** population

Status in Rural Areas

Practical condition is much worse in rural areas, because rural people have problems both in availability and accessibility to proper health systems

Need of a responsive health measurement tool

- It is not possible to identify the vulnerable group in the society through a conventional objective health screening tool - different tests.
- So a practical subjective health measurement tool is the only alternative.

Subjective health measurement Tool

- Self rated health (SRH) can be labeled as a convenient subjective health measurement way.
- Participants assess their own health status through different dimensions of health or by a single question.

Subjective health measurement Tool

- SRH can measure general health status without any objective measurement.
- Even though it a subjective status, WHO also endorses SRH measurement for routine use in population studies.

Subjective measurement: Conventional Ways

- *Multiple question tool*
- *A single question tool*

Multiple question tools

Multiple questions were designed to touch different dimensions of health.

- The Short Form Health Survey - SF-36
- EQ-5D-5L questionnaire

Multiple question tools

In SF-36: 8 health concepts have covered

1. Physical functioning
2. Role limitations due to physical health
3. Role limitations due to emotional problems
4. Energy/fatigue
5. Emotional well-being
6. Social functioning
7. Pain
8. General health

Multiple question tools

In EQ-5D-5L : 5 health dimensions have covered

Visual analogue scale Used

1. Mobility
2. Self-Care
3. Usual activities
4. Pain/discomfort
5. Anxiety/depression

Single question tool

What is your current health status”?

Would you say that it is very good, good, moderate,
bad or very bad?

*This single question comprehensively represent the different
dimensions or aspects of general health*

Continuing...

Both of these ways of measuring current health status found useful in different epidemiological study and large scale health surveys and proven as valid and reliable.

Continuing...

In spite of having plenty of recourses, developed countries use these tools in population surveys parallel to other expensive objective tools as this can predict health-disease status .

Subjective Assessment : Predictions

This is a practical and effective predictor of:

- Mortality
- Chronic disease Occurrence
- Coronary heart disease
- Mental health
- As stable as physician's rating

Our Context

- As we cannot afford any expensive or time consuming complex measures, a valid indicator needs to be used which can be easily administered to a large number of individuals with minimal costs and time.
- Considering this, SRH could be an effective subjective health measurement tool for developing countries, like Bangladesh.

Gaps to be considered: Subjective tools

- Exploration of this subjective tool has been largely limited to the developed world.
- Assessment is directly linked to the level of education of the respondent.

Gaps to be considered: Subjective tools

- Often misleading for illiterate people as they fail to consider the depth and dimension of these tools.
- These tools are either too lengthy or too short.
- Need certain expertise to execute

Objective

To gain an in-depth understanding of peoples' perception of assessing their own health status with a view to update a subjective health measurement tool which will be neither too lengthy nor too short and can accommodate even the illiterate group of the rural community.

Methodology:

Live in Field Experience (LFE)
Platform
Independent University BD

FGD
Cross-sectional Design

FGDs - November 2016
Survey - January 2017

Informed written Consent
IRB (LFE) approved

**Mixed
Method
Study**

Methodology Con:

Data analysis:

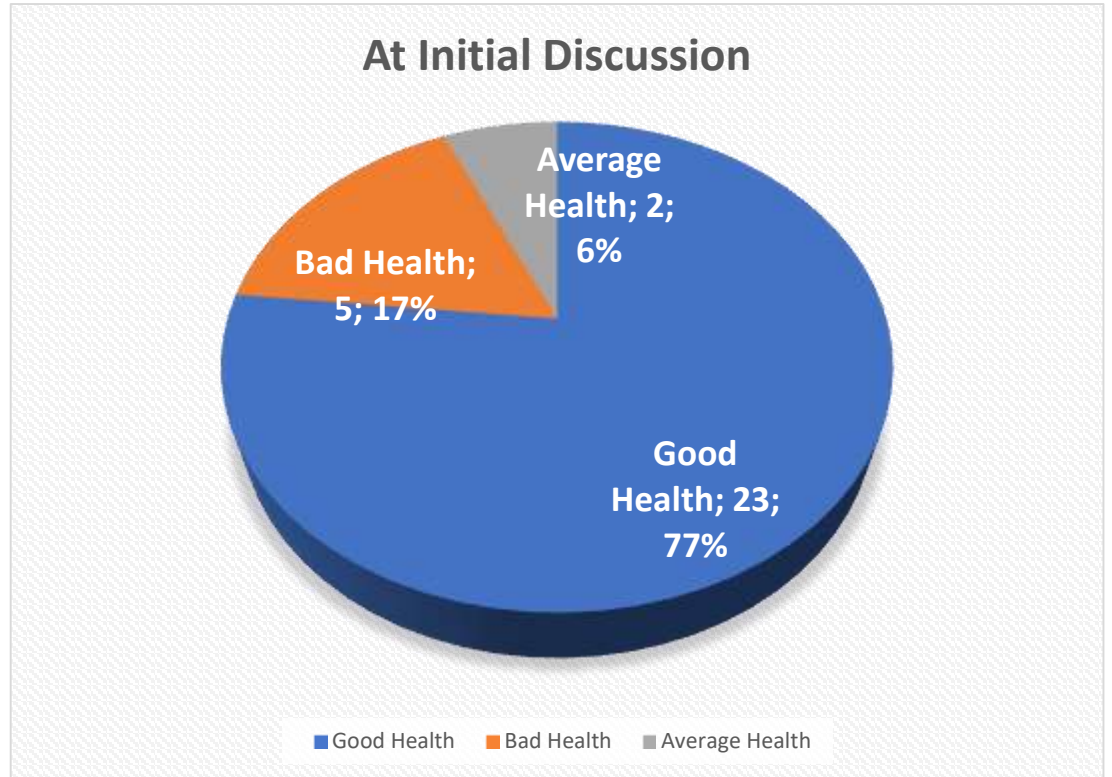
- Audiotapes transformed to transcript, crosschecked with notes & analyzed
- Frequency distribution
- Cronbach's Alpha test

- 3 Vill, Manikganj Dist. Dhaka Div.
- Age \geq 18 Years
- 4 FGDs, 30 Participants
- 2 Male & 2 Female group,
- Survey: 908 Participants
- *A Series of Prompts & Pretested Questionnaire*

Findings: Qualitative Part

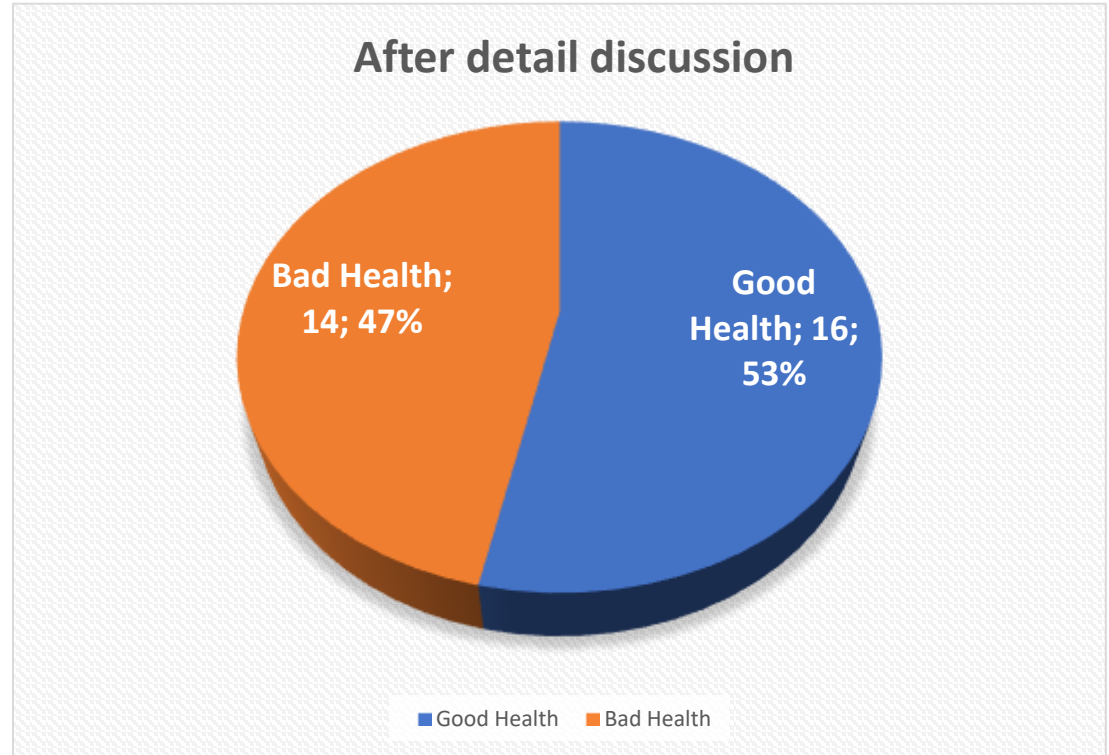
Health Status Responses:

What is your current health status?



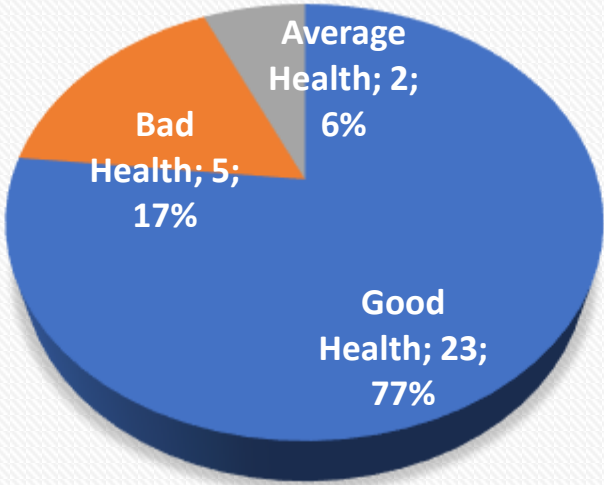
Health Status Responses:

Multiple question of
different angle



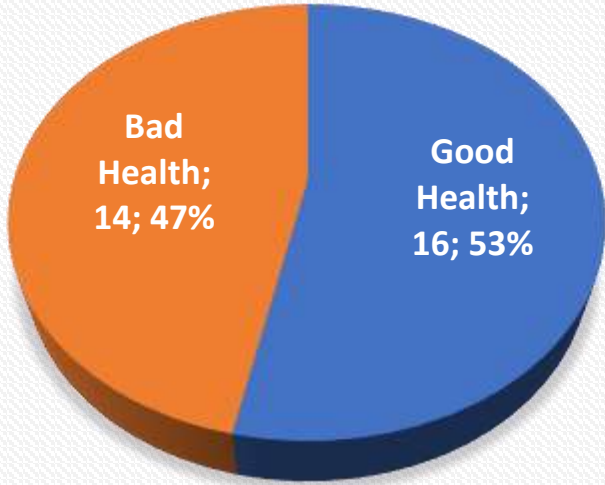
Health Status Responses:

At Initial Discussion



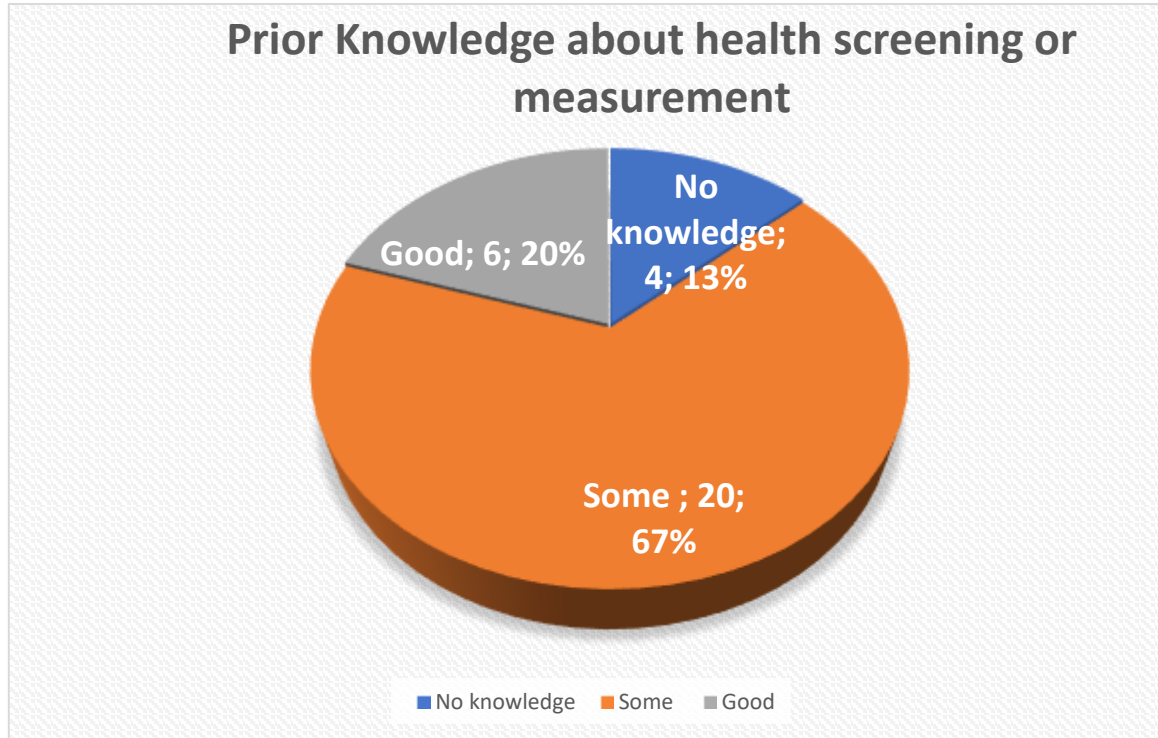
■ Good Health ■ Bad Health ■ Average Health

After detail discussion



■ Good Health ■ Bad Health

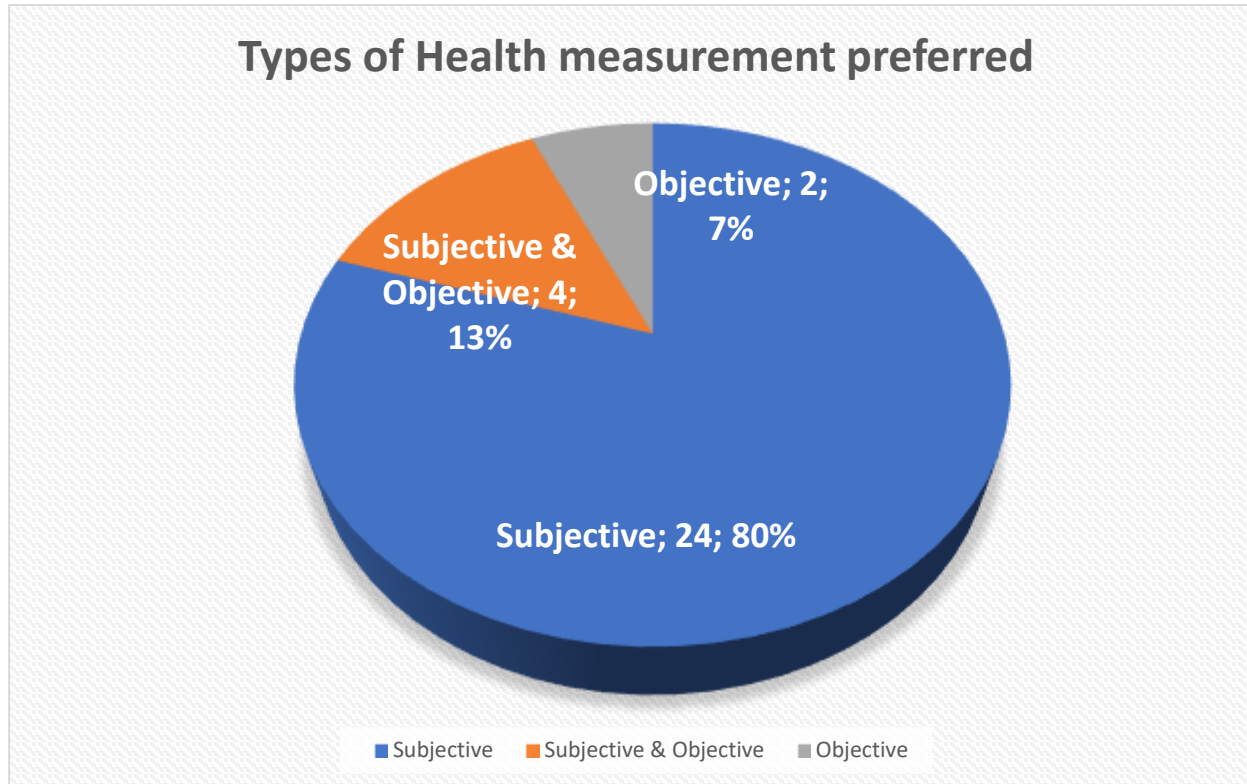
Health measurement: Knowledge



Health Measurement: Objective vs Subjective

- As per majority, objective health measurement tools were expensive and time consuming.
- Participants also concluded that objective measurement should only be done when a person would be in severe ill health

Health Screening: Choices



Subjective Tools: Preferences

Participants,

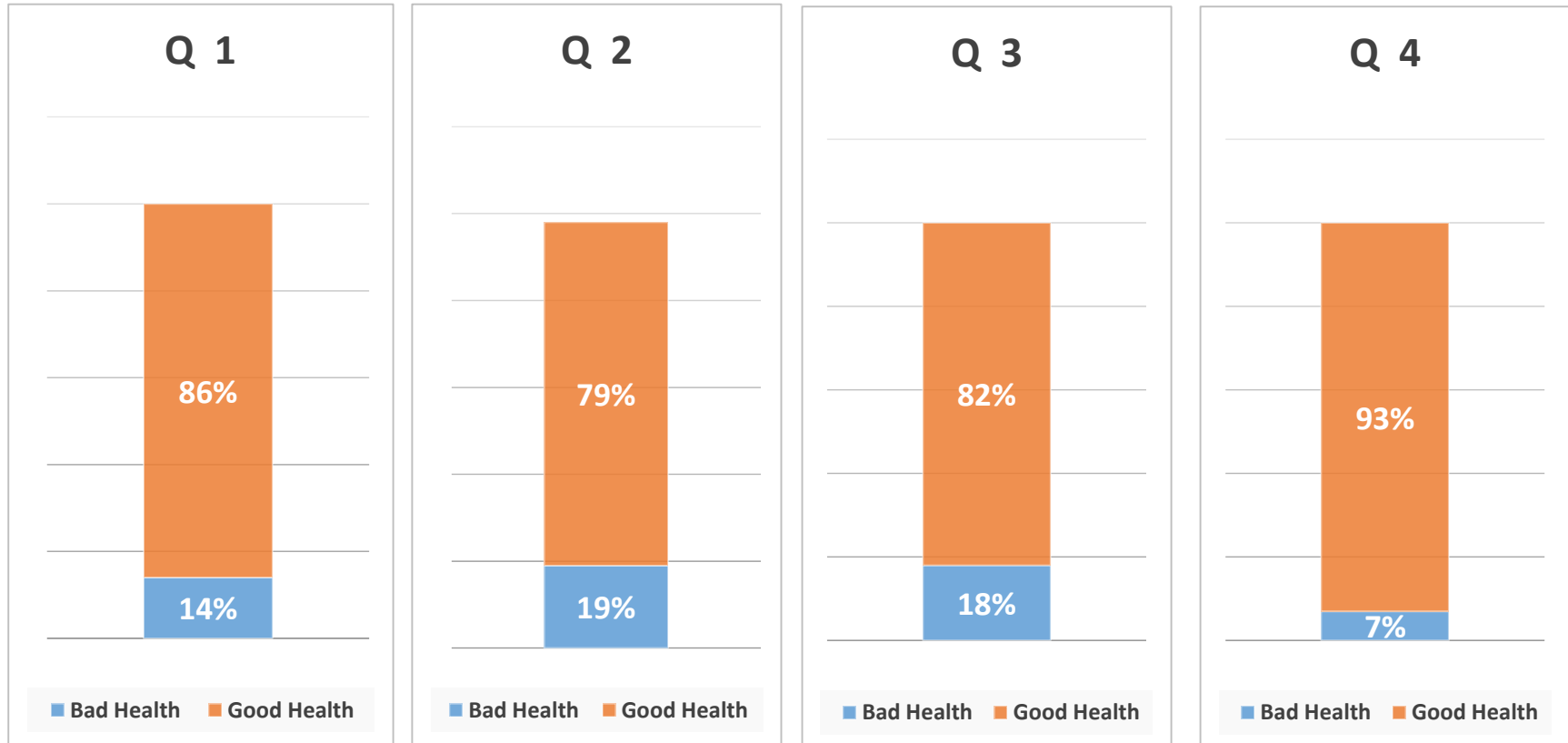
- > Prefer easy and short tools
- > loved to avoid too lengthy tools
- > Appreciate easy comparative questions

Screening Questions Identified from FGDs

1. What is your current health status? **Global Question**
2. How would you assess your current health status in comparison to others of your own age (peers)?” **which is age comparative.**
3. “How would you assess your current health status compared to last year?” **which is time comparative.**
4. “What is your health expectation in the upcoming years?” **which is predictive and certainly reflect respondent’s mental health status.**

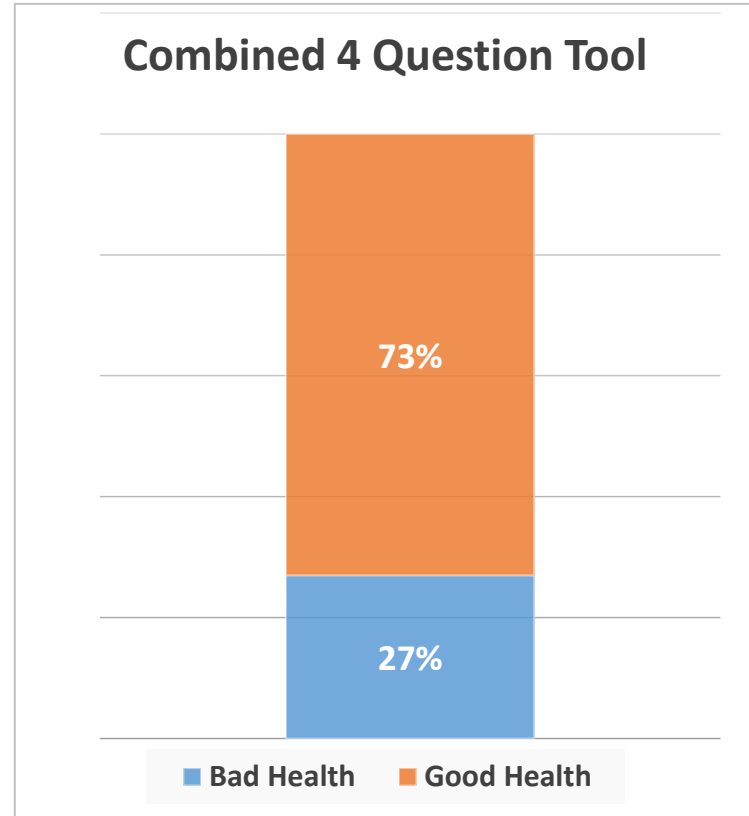
Findings: Quantitative Part

Health Responses by individual Questions



Health Responses by Combined Tools

Approximately additional **12%** people with perceived bad health were identified using the modified subjective tool.



Reliability Statistics of the proposed Subjective tool

Reliability Statistics of the proposed Health Screening tool		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.832	.828	4

Reliability Statistics of the proposed tool if each item deleted

Questions:	Cronbach's Alpha
1. What is your current health status?	0.706
2. How would you assess your current health status in comparison to others of your own age (peers)?	0.810
3. How would you assess your current health status compared to last year?	0.717
4. What is your health expectation in the upcoming years?	0.874

Discussion:

- As a Subjective tool, instead of a single question or a lengthy 30 or 40 question tool, combined approach of four different questions on general health were suggested by most of the respondents.
- This simple subjective measure also found reliable and easily implementable.

Discussion:

- We can identify the vulnerable group in a community with a very minimal resources.
- We can introduce this quick tool in our national health surveys to get a practical scenario of population health.



Thank You.