



# **Assessing Cross-Cultural Comparability of Self-Rated Health and Its Conceptualization through Web Probing**

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# INTRODUCTION

# Motivation

- Self-rated health (SRH):
  - “How would you rate your health in general, excellent, very good, good, fair or poor?”
- The mostly widely used health question across various fields due to its simplicity and utility in predicting mortality
- What makes SRH so useful?
  - Unclear; Answers may be in the cognitive process of SRH response
  - Few studies have attempted to understand this process
    - Fewer among diverse populations

# Research Aims

To assess the comparability of cognitive process of SRH across cultural groups by investigating the content and its tone that respondents consider when answering SRH through the following aims:

Aim 1: Investigate what respondents consider when answering SRH

- 1.A. What type of content do respondents consider on SRH?
- 1.B. How many attributes do respondents consider?

Aim 2: Examine the tone associated with the content of SRH process

- How do respondents mix different tones?

# Our Study

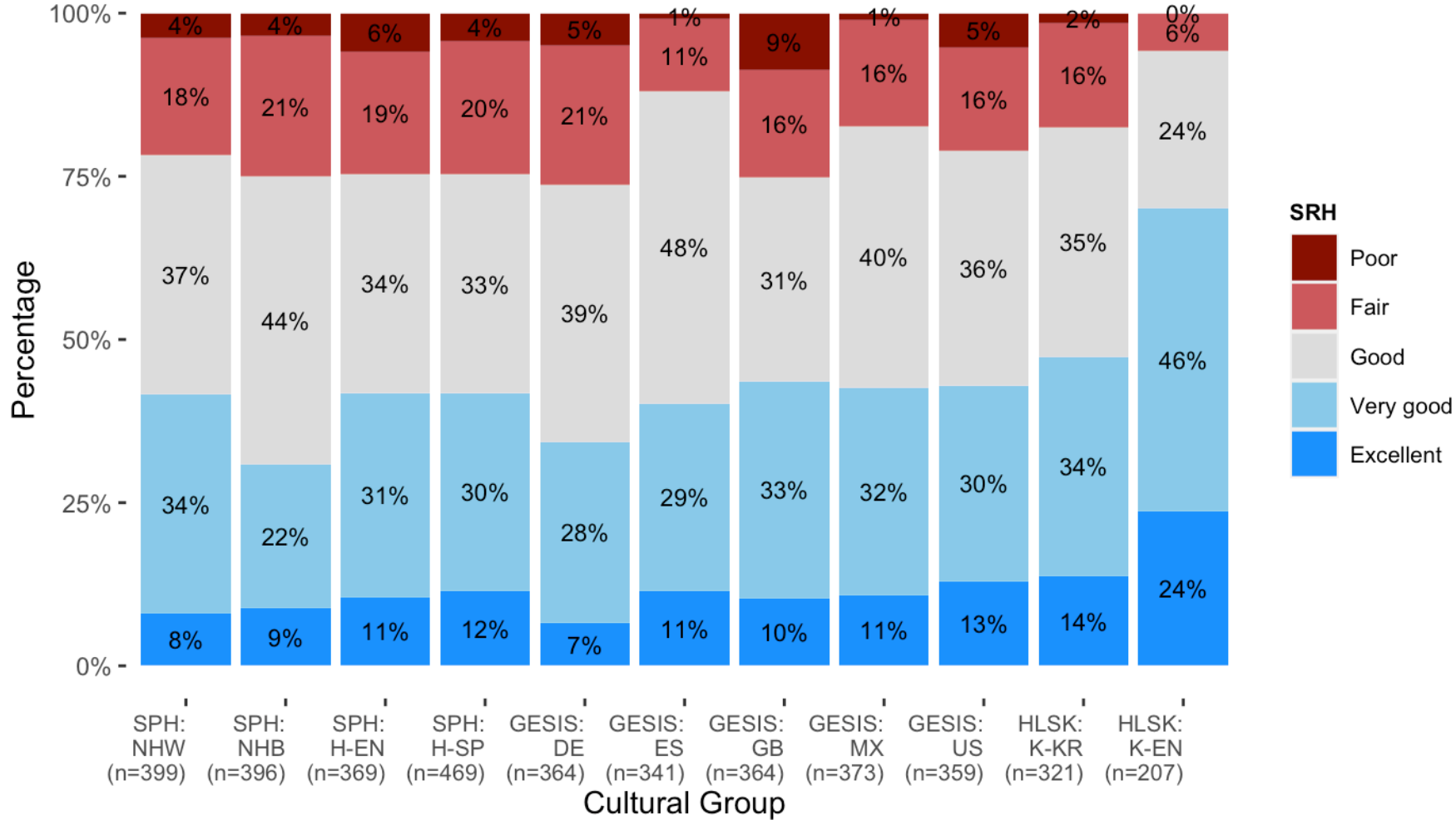
- Probing on SRH answers – “You said your health is {SRH ANSWER}. What are the factors you considered to say your health is {SRH ANSWER}?”
- Implemented in 3 Web surveys targeting diverse groups
- Answers to the probing question are coded for the content and tone

# DATA and METHODS

# Data Sources

	<b>Survey 1. Study on Perceptions of Health (SPH)</b>	<b>Survey 2. GESIS Web Survey</b>	<b>Survey 3. Health and Life Study of Koreans (HLSK)</b>
Recruitment Method	<ul style="list-style-type: none"> <li>• Non-probability web sample</li> </ul>	<ul style="list-style-type: none"> <li>• Non-probability web sample</li> </ul>	<ul style="list-style-type: none"> <li>• Respondent Driven Sampling</li> </ul>
Target cultural group	US only <ul style="list-style-type: none"> <li>• Non-Hispanic White (NHW)</li> <li>• Non-Hispanic Black (NHB)</li> <li>• English-dominant Hispanic (H-EN)</li> <li>• Spanish-dominant Hispanic (H-SP)</li> </ul>	<ul style="list-style-type: none"> <li>• Germany (DE)</li> <li>• Spain (ES)</li> <li>• Great Britain (GB)</li> <li>• Mexico (MX)</li> <li>• United States (US)</li> </ul>	US only <ul style="list-style-type: none"> <li>• Korean-dominant Koreans (K-KR)</li> <li>• English-dominant Koreans (K-EN)</li> </ul>
Sample size	1,633	1,801	633
Avg. age	47 years old	41 years old	38 years old
% Female	50%	49%	59%

# SRH by Survey and Cultural Group





# Examples of Responses to SRH and Probe

*Very Good -- “I generally have really good health and no major health problems. The only thing I have run into is I get kidney stones anywhere from every year to every 3 years. It just depends. I also need work on losing weight.”*

*Excellent -- “I’m in my early twenties, I don’t smoke, I don’t drink excessively, I don’t get ill often, and I have very little history of serious illness within my family.”*

*Buena -- “Intento seguir una dieta equilibrada y a veces no la sigo y eso afecta a mi salud. Y ultimamente hago poco ejercicio.”/Good – “I try to follow a balanced diet but sometimes I don’t do that and that affects my health. And lately I have not been exercising much”*

# Coding of SRH Probe

- Coding scheme developed for English responses and adapted for other languages by 3 PhD-level researchers, all fluent in English and each fluent in one of the non-English languages
- Non-English responses were translated into English and coded on English
- Coded on content, allowing multiple attributes; and tone of each attribute (favorable, unfavorable or neutral to health)
- 5 bilingual coders
  - Trained by the PhD-level researchers
  - All coded English responses; 3 Spanish; 2 German; 1 Korean
  - Inter-coder reliability: 0.77

## Attribute Codes

**10 – Health Behaviors**

**100 - In/Out of Shape**

**101 - Diet**

**102 - Exercise**

**103 - Weight**

**104 – Activity Level**

**105 – Substance Use**

**106 – Other Health Behavior**

**11 – Affective response**

**12 – Health service usage**

**14 – Physical performance or ability**

**15 – Absence or Presence of Illness**

**150 – General absence or presence of illness**

**151 – Physical absence or presence of illness**

**152 – Mental absence or presence of illness**

**153 – Other absence or presence of illness**

**16 – General health comment**

**17 – Societal/Demographic reasons**

**18 – Family history**

**20 - Desire**

**24 – Life situation**

**98 – Other**

**99 – Non-response**

# Example of SRH Probe Response Coding

*“I generally **have really good health** and **no major health problems**. The only thing I have run into is I **get kidney stones** anywhere from every year to every 3 years. It just depends. I also **need work on losing weight**.”*

Codable text	Coded attribute	Tone
“have really good health”	16: General health comment	1: favorable to health
“no major health problems”	150: General absence or presence of illness	1: favorable to health
“get kidney stones”	151: Physical specific absence or presence of illness	-1: unfavorable to health
“need work on losing weight”	103: Weight	-1: unfavorable to health

# RESULTS

**Aim 1.A.**

**What type of content do respondents consider on SRH?**

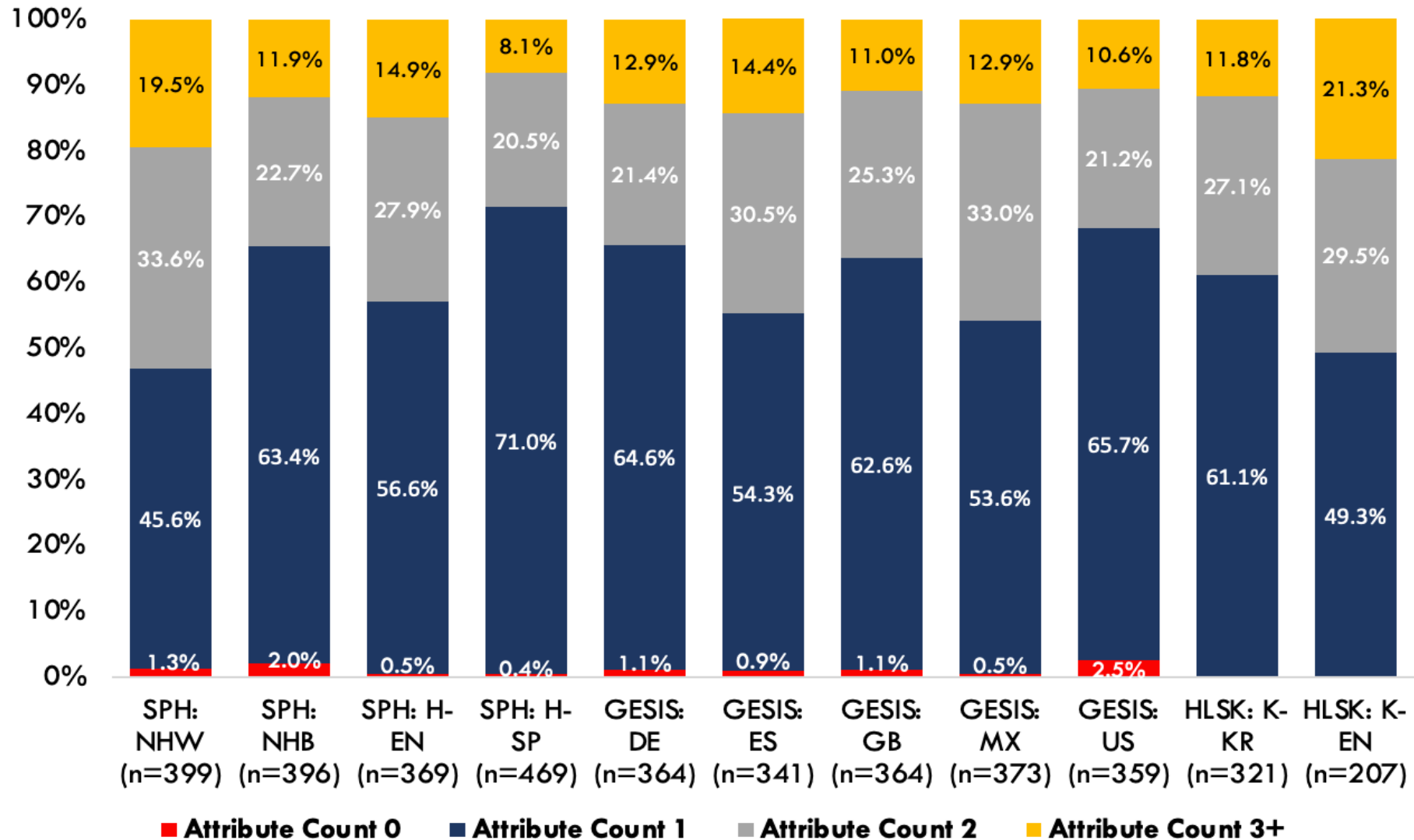
# Top 5 Attributes Considered by Respondents

SPH: NHW (n=394)	SPH: NHB (n=388)	SPH: H-EN (n=367)	SPH: H-SP (n=467)	GESIS: DE (n = 360)	GESIS: ES (n=338)	GESIS: GB (n=360)	GESIS: MX (n=371)	GESIS: US (n=350)	HLSK: K-KR (n=321)	HLSK: K-EN (n=207)
Illness – physical (43%)	Illness – physical (29%)	Illness – physical (35%)	Gen. health comment (29%)	Illness – general (34%)	Illness – general (47%)	Illness – physical (30%)	Illness – general (44%)	Illness – General (27%)	Illness – general (57%)	Illness - general (45%)
Physical performance / ability (23%)	Gen. health comment (18%)	Illness – general (25%)	Illness – physical (24%)	Gen. health comment (34%)	Gen. health comment (34%)	Illness – general (29%)	Gen. health comment (27%)	Gen. health comment (27%)	Illness – physical (29%)	Exercise (29%)
Gen. health comment (19%)	Illness – general (18%)	Physical performance / ability (11%)	Illness – general (14%)	Illness physical (24%)	Illness physical (20%)	Gen. health comment (22%)	Illness physical (26%)	Illness physical (25%)	Exercise (14%)	Diet (22%)
Illness – general (15%)	Physical performance / ability (16%)	Exercise (11%)	Physical performance / ability (11%)	In/out of shape (7%)	Societal/de m. reasons (9%)	Exercise (8%)	Health service usage (13%)	Exercise (11%)	Diet (9%)	Illness – physical (19%)
Weight (12%)	Diet (10%)	Weight (11%)	Exercise (9%)	Exercise (7%)	Substance use/other health behaviors (8%)	Weight (8%)	Substance use/other health behaviors (8%)	Weight (9%)	Substance use/other health behaviors (8%)	Substance use/other health behaviors (14%)

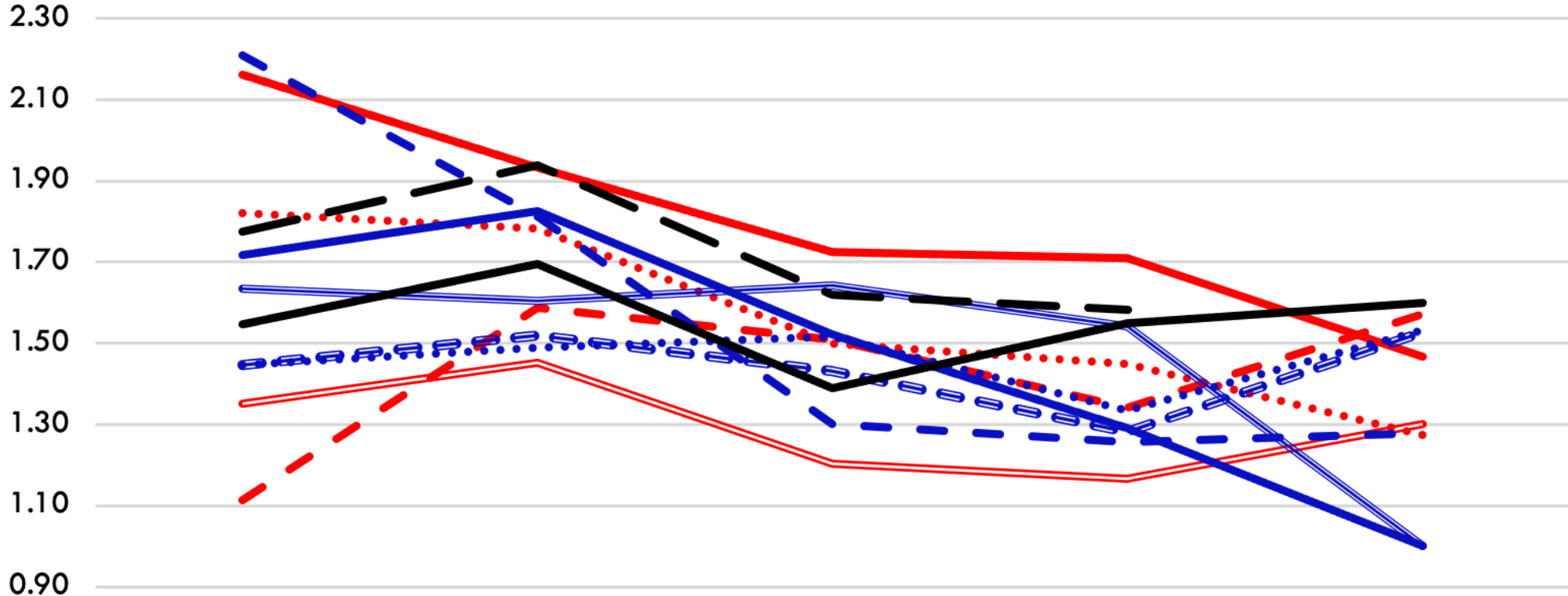
**Aim 1.B. Do respondents consider multiple factors?**



# Proportion of Attribute Counts by Cultural Group



# Avg Attribute Counts by SRH Response and Cultural Group



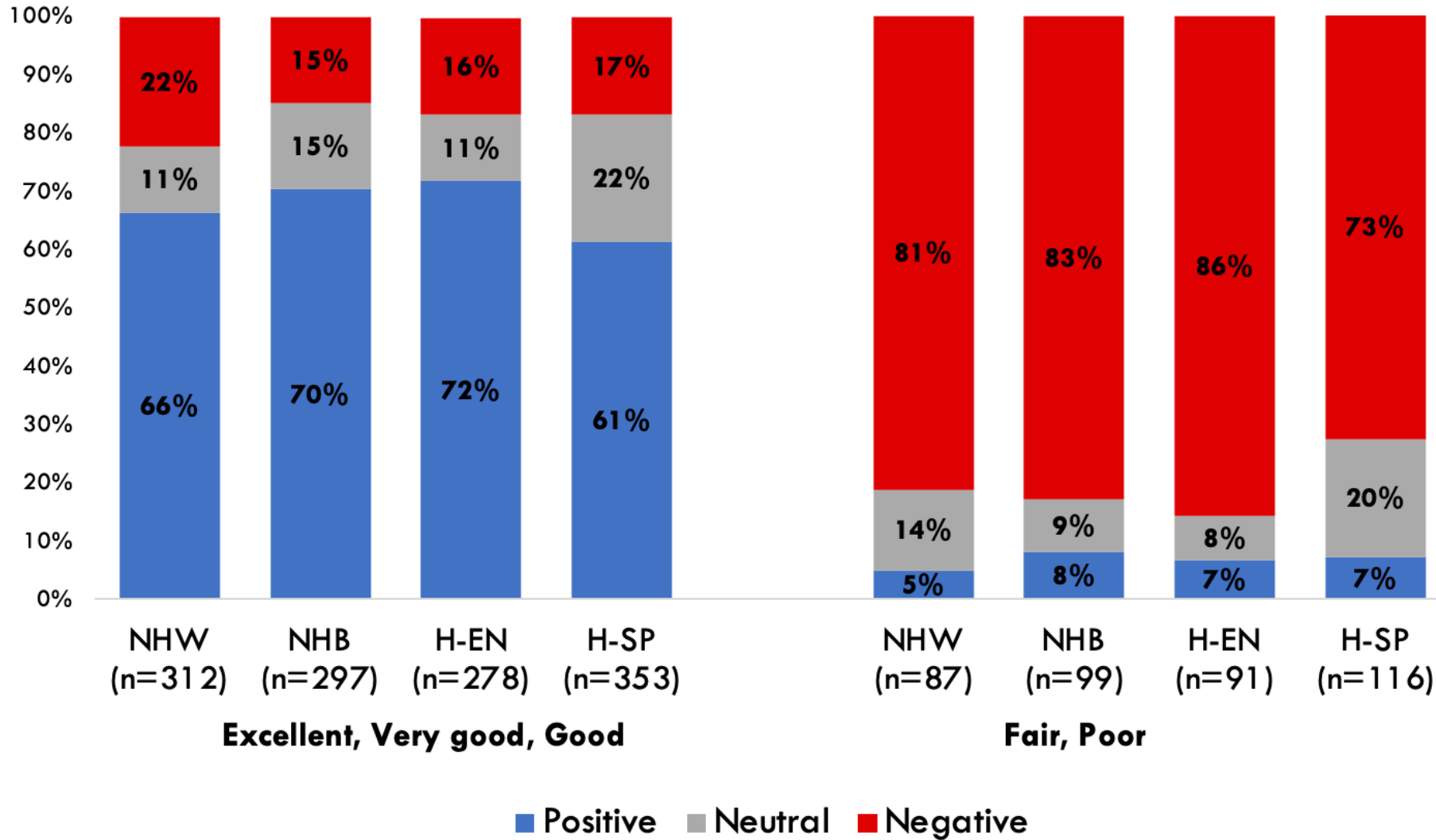
- | Excellent               | Very good            | Good                    | Fair                | Poor                |
|-------------------------|----------------------|-------------------------|---------------------|---------------------|
| — SPH: NHW (n=399)      | — SPH: NHB (n=396)   | ••••• SPH: H-EN (n=369) | — SPH: H-SP (n=469) | — GESIS: ES (n=341) |
| ••••• GESIS: GB (n=364) | — GESIS: DE (n=364)  | — GESIS: MX (n=373)     | — GESIS: US (n=359) |                     |
| — HLSK: K-KR (n=321)    | • HLSK: K-EN (n=207) |                         |                     |                     |

# Aim 1 Summary

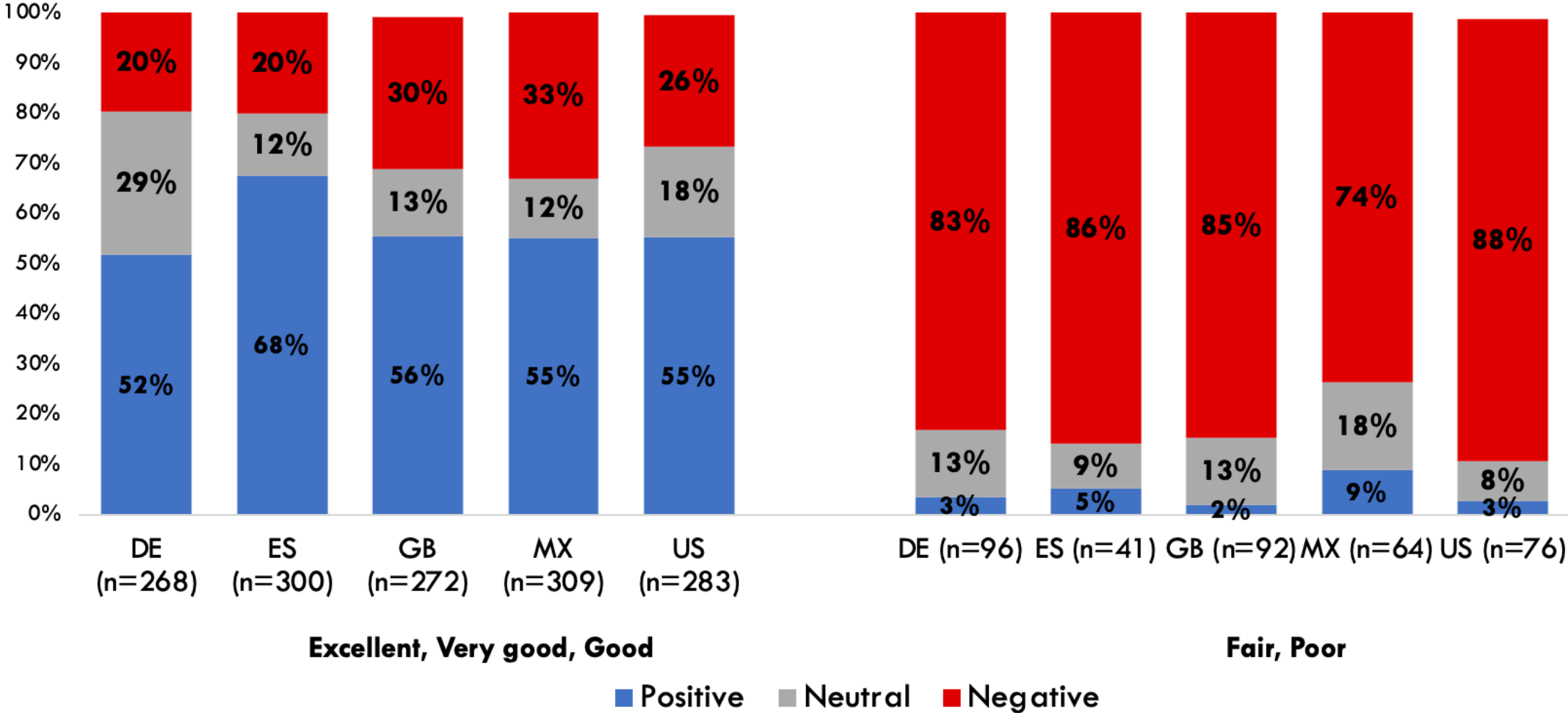
- Aim 1.A. What type of content do respondents consider on SRH?
  - Similarities across groups: Absence or presence of illness and general health comments
  - Differences across groups: Exercise, diet, health service usage, societal demographic reasons
- Aim 1.B. Do respondents consider multiple factors?
  - Some groups reported fewer attributes (i.e., H-SP) while others reported more attributes (i.e., K-EN & NHW)
  - Respondents with better health reported more attributes than respondents with poorer health

# **Aim 2. How do respondents mix different tones?**

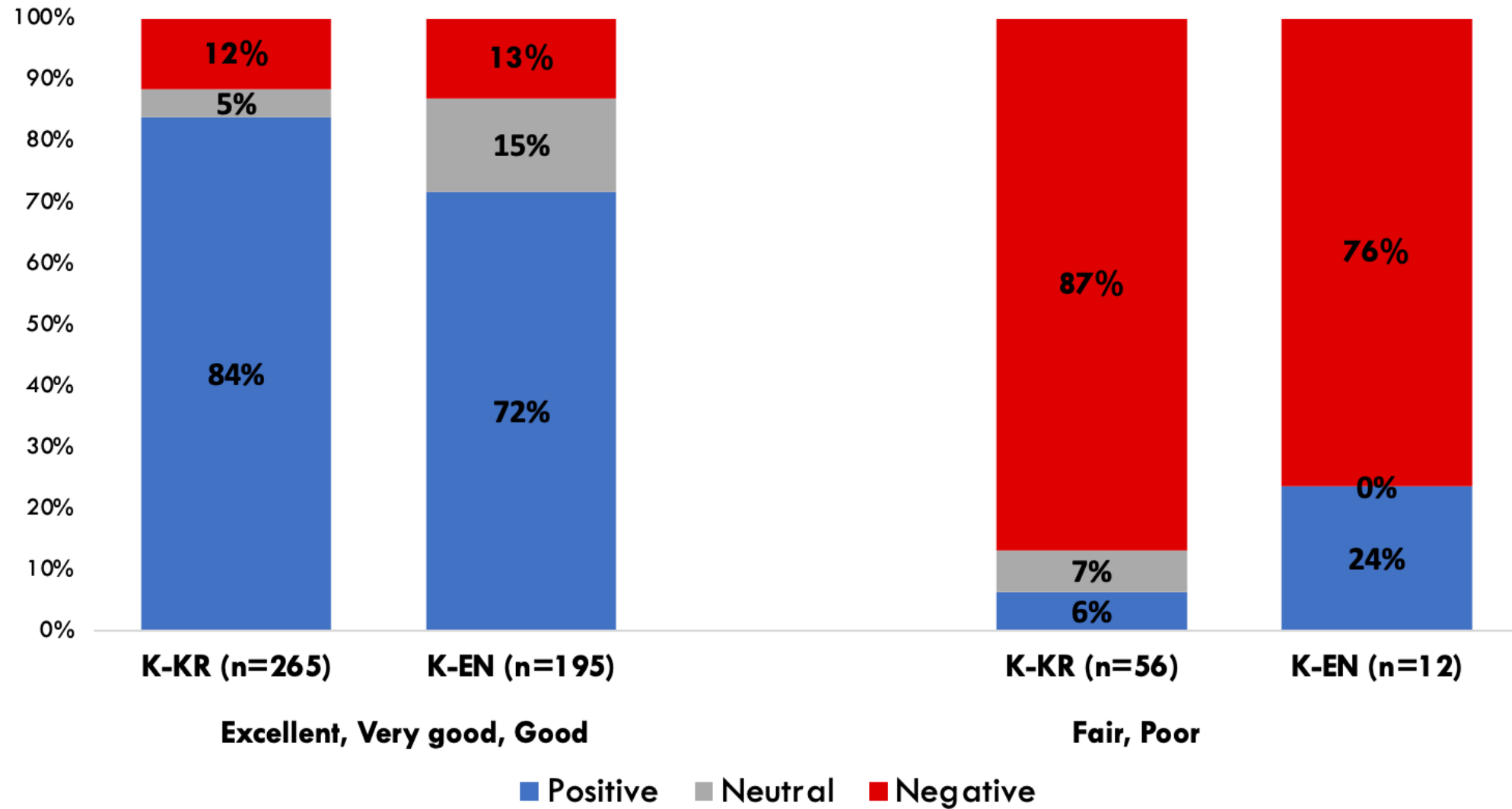
# SPH: By SRH Response and Cultural Group



# GESIS: By SRH Response and Cultural Group



## HLSK: By SRH Response and Cultural Group



# Summary Aim 2

- Aim 2. How do respondents mix different tones?
  - Differences between cultural groups
    - Some groups mixed tone more than others (i.e., GB, MX, US)
    - Other groups mixed tones less and were either more positive or negative (i.e., K-KR, K-EN)



# Conclusion

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- Exploratory analysis reveals some similarities and differences between cultural groups
- Future Directions
  - Control for age, sex and other demographics
  - Analyze by adjacent categories (i.e., SRH=Good vs. SRH=Fair)
  - Address non-probability aspect of study

**Thank you**  
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