The Relationship between Self-Esteem and Attitude of Smartphone Users in Japan

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Introduction

In Japan, 96.3% of cell phone users rely on smartphones as their main internet connection.

Numerous studies have explored the link between internet use, smartphone use, and personality, particularly focusing on self-esteem. Lower self-esteem is associated with a higher likelihood of internet addiction, and problematic smartphone usage is widespread across different locations. However, research on individuals' fundamental awareness of smartphone usage is limited.

This study aims to analyze the correlation between smartphone usage awareness and self-esteem among general users, focusing on variations in self-esteem scores across different age groups.

Methods

In this study, a web-based survey was conducted, targeting 5,652 male and female smartphone users aged 15 to 79. Participants were categorized into three age groups: 15-29 ("young"), 30-59 ("middle age"), and 60-79 ("senior"), and the following analyses were conducted for each group.

Table1 Survey Overview

Survey Method	Web Survey
Subject	Men and women aged 15-79 nationwide
N	5,652
Sampling Method	Quota Sampling, Allocation was conducted in proportion to the percentage of smartphone owners based on the results of preliminary survey.
Period	February 2023

Self-esteem was estimated using the Japanese version of Rosenberg's Self-Esteem Scale (RSES-J). The RSES-J consists of ten questions related to self-esteem, and responses were collected on a four-point scale. Subsequently, the responses to each question were quantified on a scale from 10 to 40, yielding a self-esteem score.

Table2 Rosenberg Self-Esteem Scale (RSES)

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. On the whole, I am satisfied with myself.	4	3	2	1
2. At times, I think I am no good at all.	1	2	3	4
3. I feel that I have a number of good qualities.	4	3	2	1
4. I am able to do things as well as most other people.	4	3	2	1
5. I feel I do not have much to be proud of.	1	2	3	4
6. I certainly feel useless at times.	1	2	3	4
7. I feel that I'm a person of worth, at least on an equal plane with others.	4	3	2	1
8. I wish I could have more respect for myself.	1	2	3	4
9. All in all, I am inclined to feel that I am a failure.	1	2	3	4
10. I take a positive attitude toward myself.	4	3	2	1

As a component of the smartphone usage patterns analysis, data pertaining to the daily time spent on smartphones was collected. Subsequent analysis sought to determine whether a correlation existed between the duration of smartphone usage and self-esteem.

Furthermore, participants' awareness of smartphone usage was assessed through questions based on previous studies that measured product involvement.

Result1

The mean and median self-esteem score for the entire sample was 25, and the distribution of scores resembled a normal distribution. The distribution of self-esteem scores for each age group showed that younger age groups have lower self-esteem scores, with a mean score of 23.4 points for the young group, 24.1 points for the middle-aged group, and 27.3 points for the senior group.
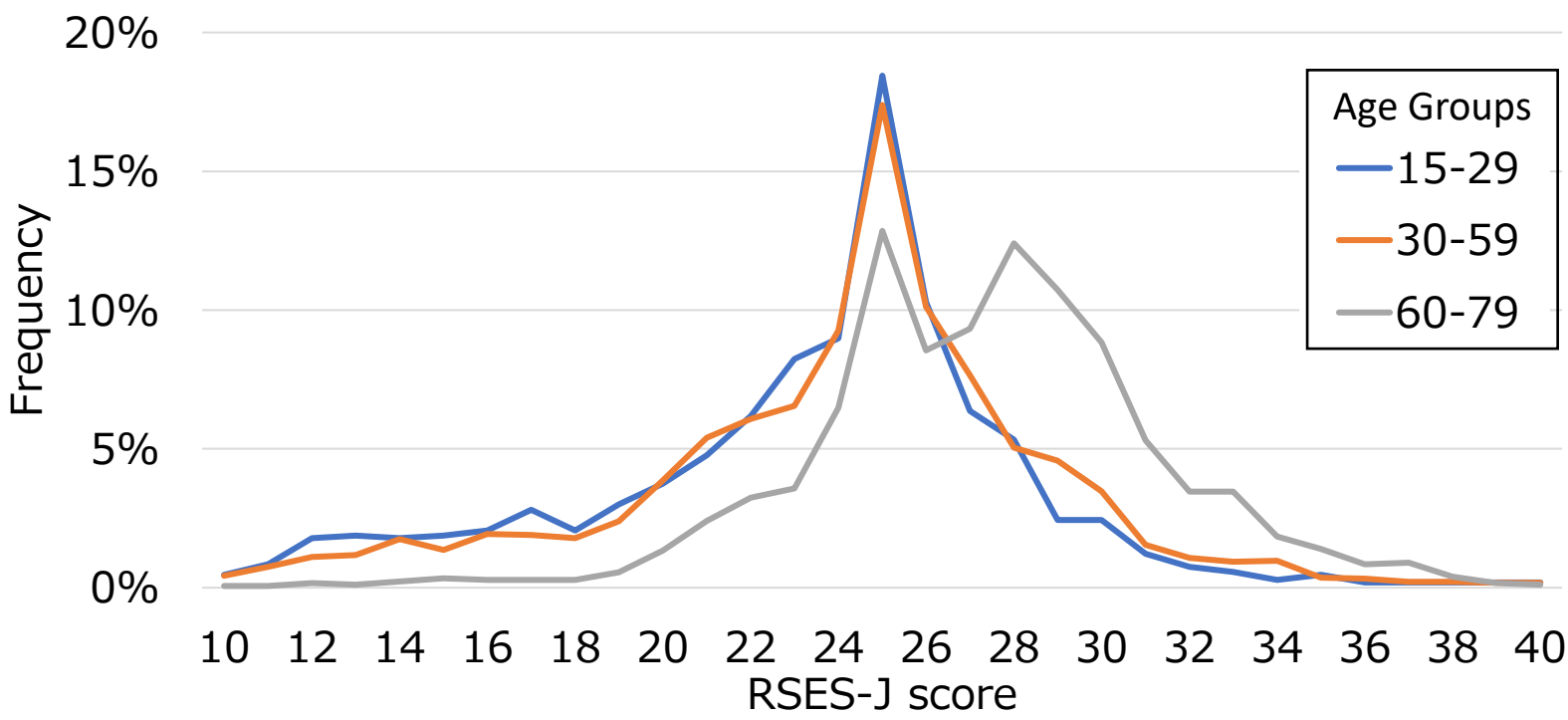

Figure1 RSES-J Score by Age Groups

Result2

The correlation between self-esteem and the duration of smartphone usage was explored. For each of the three age groups, the data was divided into two parts so that the ratio of those who spend more time per day on their smartphones to those who spend less time on their smartphones was close to 50:50. The analysis revealed a consistent pattern across all age groups, with significantly lower self-esteem scores observed in the group that spent a long-time using smartphones.
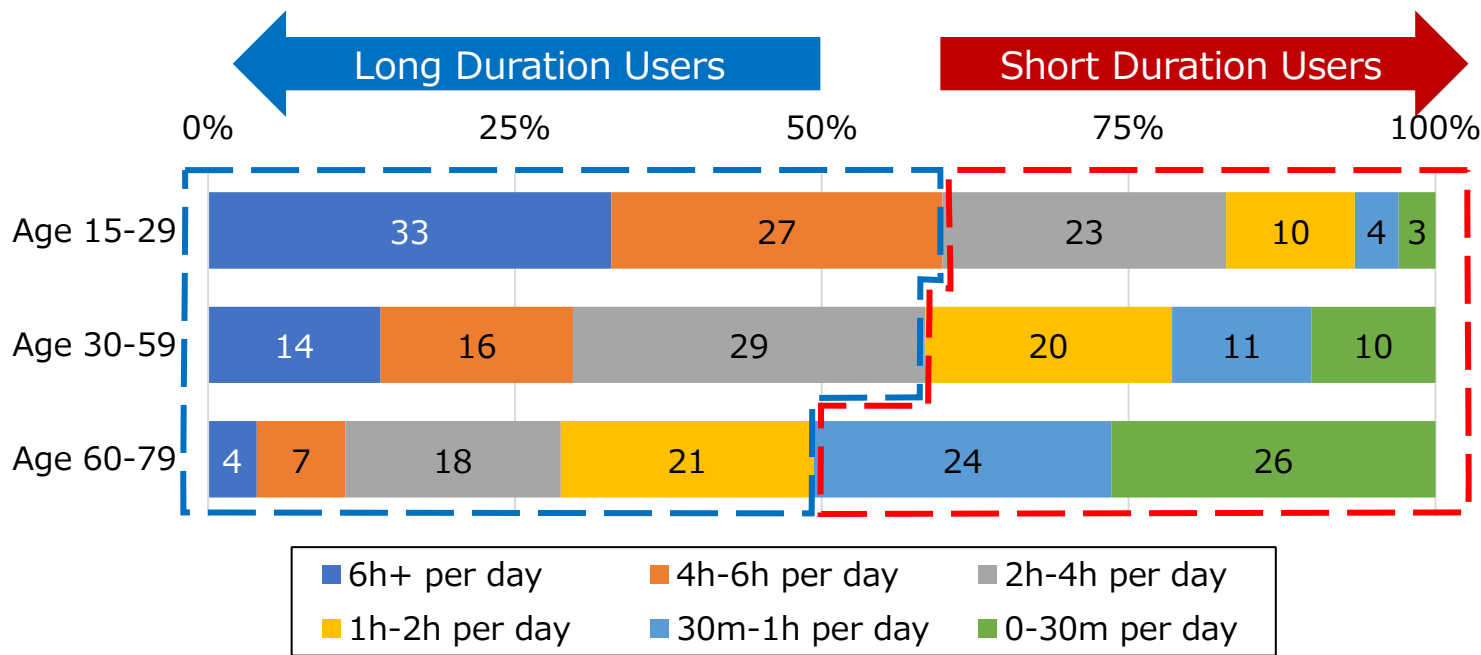

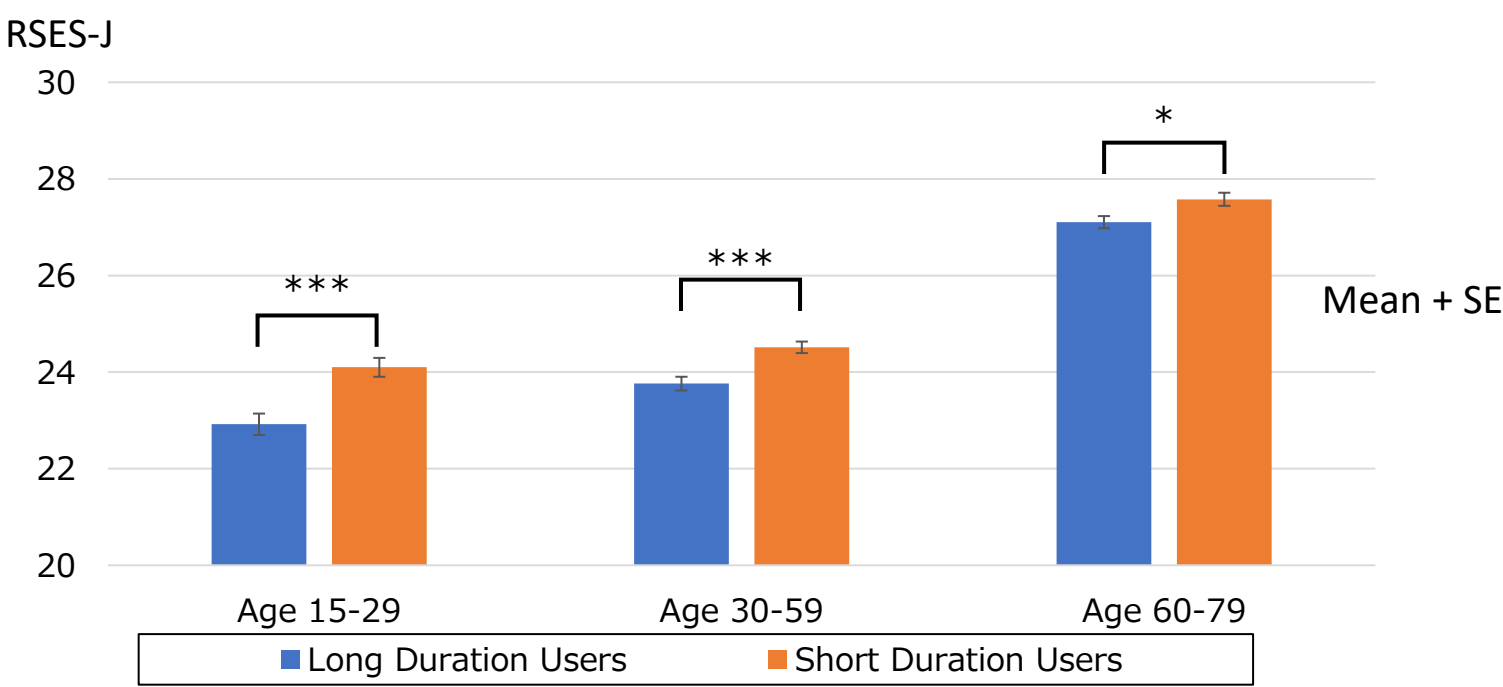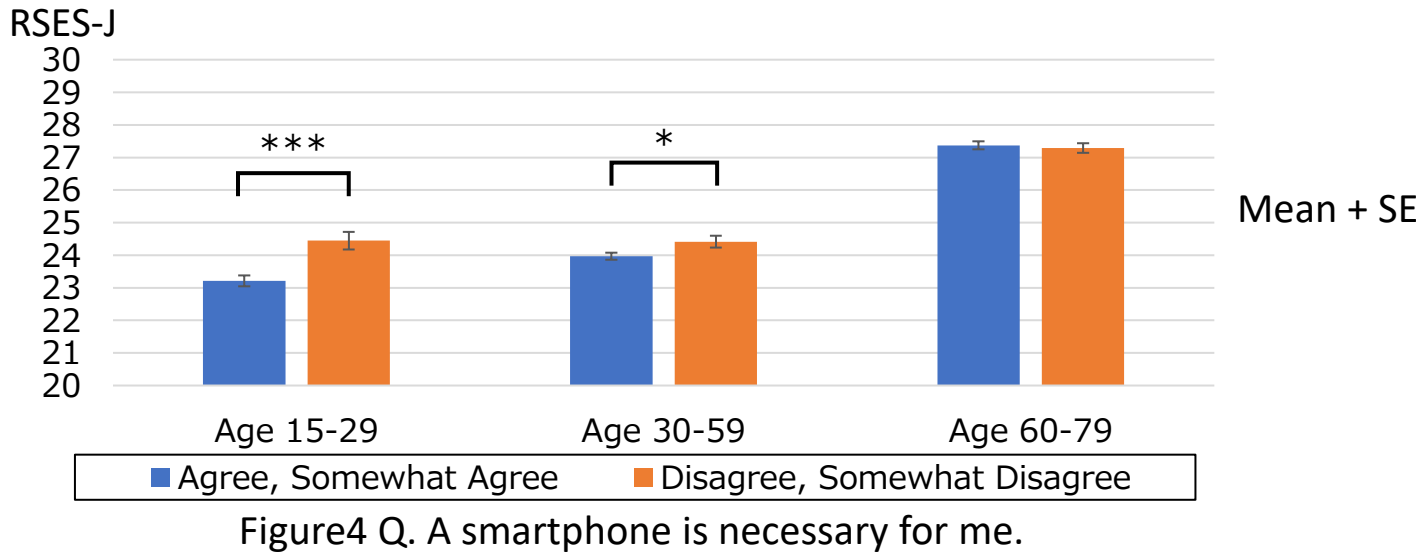Figure2 Duration of Smartphone Usage by Age Groups

Figure3 Relationship of Duration of Smartphone Usage with RSES-J Score

Result3

The relationships between awareness of smartphone use and self-esteem, subsequently, were analyzed by age groups.

1. The relationship between smartphone necessity and self-esteem.

Figure4 Q. A smartphone is necessary for me.

2. The relationship between smartphone disruption and self-esteem.
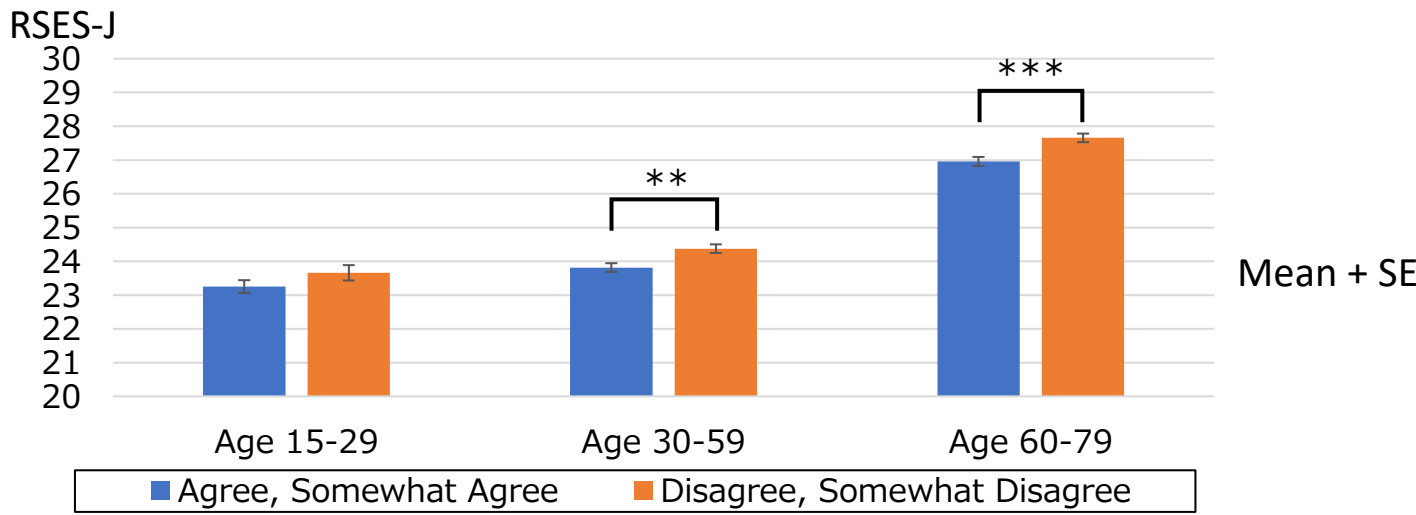

Figure5 Q. It is better for me to reduce the amount of time spending on smartphones.

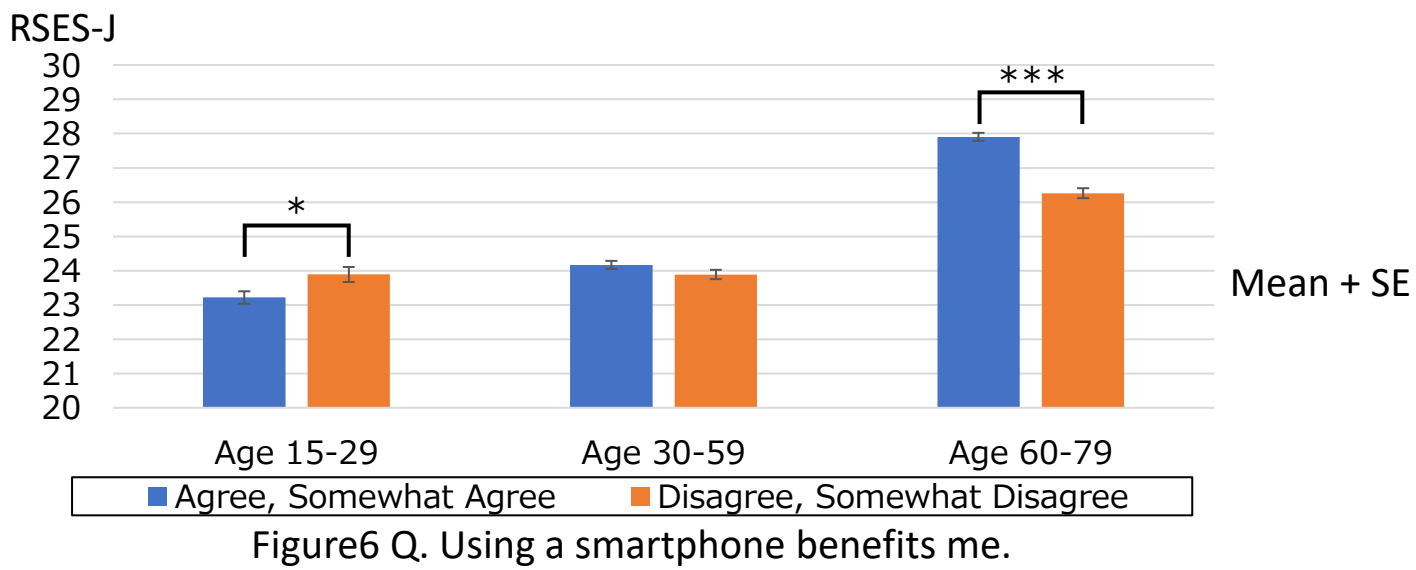3. The relationship between perceiving smartphones as beneficial and self-esteem.

Figure6 Q. Using a smartphone benefits me.

Discussion

Young and middle-aged individuals who perceive smartphones as necessary tend to exhibit lower self-esteem, potentially indicating the risk of smartphone addiction.

It is reasonable to assume that younger respondents who answered that smartphones are not beneficial have a high level of self-control and self-esteem to avoid becoming addicted to smartphones.

Since many seniors have difficulty fully utilizing their smartphones, those who can use them beneficially also seem to have high self-esteem.

References

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