



Psychological Changes Toward the Value of Learning Judo and Impressions of Judo Lessons in Junior High School Students Experiencing Judo for the First Time

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Abstract: This study was conducted in Japan, where Judo has become a part of compulsory education in junior high school. The studied the experiences of 254 junior high students learning Judo for the first time were examined with respect to the value of learning traditional behavior, including respectful attitudes and manners toward the fighting opponent; their impression of the sport, such as whether it is fun or scary; and how these change through the learning process. The classes were planned to include five sessions. The main learning contents were structured with an emphasis on teaching "knowledge," "skills," and "attitudes." The students were asked to participate in a pre-class and post-class survey consisting of 26 items created by the authors to examine their psychological change. The results demonstrated that there were significant changes in the students' responses to items such as "It is necessary to conduct Judo classes in Physical Education given how the sport is a unique culture of Japan" and "My impression of Physical Education classes is that they are 'fun'." In addition, their fear of Judo, such as having an impression that Judo lessons were "painful" and "scary," also reduced. This study identified psychological changes in junior high school students' perspectives toward the value of learning Judo and their impression of Judo lessons for those experiencing Judo for the first time. Its findings will contribute to enriching Judo instruction in junior high school and at Judo clubs with students around the same age.

Keywords: Judo, Judo Class, Value of Learning Judo, Psychological Changes

1. Introduction

In Japan, the Ministry of Education, Culture, Sports, Science, and Technology stipulates a standard for creating curricula for each school based on the School Education Law to ensure that a student is assured of a certain level of education regardless of the region in which he receives his education. This stipulation is known as the Curriculum Guidelines, which are reviewed and revised approximately

every 10 years to align with the social situations and actual conditions of students. The Curriculum Guidelines set goals and contents for each subject at the elementary, junior high, and high school levels.

From 2012 onward, martial arts including Judo (as well as Kendo and Sumo) were stipulated as required subjects in Physical Education in junior high schools. Prior to that,

martial arts and dance were elective courses in which male students customarily chose martial arts and female students chose dance [1]. Sato [2] discusses the background for making martial arts a requirement in relation to the revision of the School Education Law [3]. In response to the globalization of the international society, the revision seeks to encourage Japanese citizens to accept their own culture and traditions, thereby giving birth to the need for enriching education to sustain and develop such culture and traditions. In Physical Education, this resulted in enhancing instructions in martial arts. The new requirement aims to teach all students the unique value of martial arts including Judo through Physical Education classes.

The following research has been conducted in Japan to study the value of Judo from a school education perspective. Jikihara [4] reports that martial arts are expected to provide students not only with physical training but also the opportunity to imbibe unique traditional culture, including politeness and integrity. Motomura [5] point out the importance of expressing one's mind as a result of having a respectful attitude and self-control that stems from self-restraint. Moreover, Judo classes reportedly not only teach students to fight a match to win but also seek to inculcate in them unique Japanese culture through creating an understanding of traditional ways of thinking in them, such as by teaching them manners that value character development. Regarding the value of Judo in Physical Education, Yamamoto & Nakai [6] discuss the importance of applying the unique culture to our daily lives, beginning with manners acquired through such learning. Yogi & Kyan [1] report positive changes in perceptions of enjoyment and anxiety after the classes in students learning Judo for the first time. Additionally, Ishikawa et al. [7, 8] and Kimura et al. [9] have conducted studies on how students' impressions of the sport change through attending Judo classes. Ogata et al. [10], Nagaki & Yamazaki [11], and Takeuchi [12] have conducted studies on the educational value of Judo. Furthermore, it is noteworthy that Judo classes have become a more frequently researched subject after being made mandatory [13–15].

However, it is important to identify the actual voices of junior high students experiencing Judo for the first time on how they feel about the value of learning about their own culture and traditions as well as the psychological changes in their impression about the sport, such as enjoyment and anxiety toward Judo, through a multifaceted investigation based on findings from previous studies and the Curriculum Guidelines. Therefore, this study aims to examine how, in students experiencing Judo for the first time, the value of learning traditional ways of action, including respectful attitudes and manners, aside from Judo skills and their impression toward the sport, such as whether it is fun or scary, change through learning.

2. Material & Methods

2.1. Subjects and Period of Study

A public junior high school in Osaka city was asked to participate in this study. The participants were 254 first-year junior high students who had never experienced Judo before (130 males and 124 females). Five Judo classes (of 50 minutes each) were planned to be held in October 2022. A pre-class survey was held in September and a post-class survey was held in November of the same year.

For ethical considerations, we obtained informed consent from the school principal and teachers in charge of the classes. The participants were informed explicitly on the questionnaire that they will not suffer any disadvantage from participation, they could skip questions they would not like to answer, they could ask the survey administrator for detailed explanations about the survey content, the collected data will be used as a representative value of a group so answers will remain anonymous and individuals will not be identifiable, and personal information will remain confidential. In this study, submission of the survey questionnaire was deemed as consent to participation.

2.2. Class Content

In all the 5 classes (of 50 minutes each), the main lesson content was centered on “Knowledge,” “Skills,” and “Attitude” as stipulated in the Commentary on the Curriculum Guidelines for Physical Education [16]. Under “Knowledge,” students learn the characteristics, history, manners, and traditional ways of thinking in Judo. Under “Skills,” students learn basic moves such as break fall (In Japanese, it's called Ukemi.), and playing games with belts etc. Under “Attitude,” students learn behavior based on respect for others and the traditional ways of thinking that they have acquired under “Knowledge.” The contents of Knowledge, Skills, and Attitude are mutually and deeply interrelated; therefore, teachers who lead the classes are expected to be creative and flexible with the curriculum to meet learning goals and student conditions.

2.3. Survey Content

The question items were deliberated upon and recalibrated based on the findings of previous studies, Curriculum Guidelines [17], and the Commentary on the Curriculum Guidelines for Physical Education [16]. After review by the authors specializing in Judo instruction, a survey with 26 questions was created with questions about the participants' impression of the Judo class (whether they found Judo to be fun or scary, etc.) and about the value of learning about traditional movements and behavior (table 1).

Answers were obtained on a five-point scale: 1) I don't agree at all, 2) I don't agree much, 3) Neither, 4) I quite agree, and 5) I agree a lot.

Table 1. 26 Questions Created for this Study.

| Questions | Content |
|-----------|--|
| Q1 | It is important to commit to winning. |
| Q2 | Judo must be learned in Physical Education class as a part of the unique culture of Japan. |
| Q3 | In Judo class, apart from training students to commit to winning a match, it is important to nurture them through the acquisition of skills. |
| Q4 | In Judo class, it is important to understand the ways of courtesy to respect others. |
| Q5 | In Judo class, it is important to throw the opponent in a way that they can easily break fall. |
| Q6 | In Judo class, it is important to control your emotions in consideration of the opponent after the victor has been declared. |
| Q7 | In Judo class, it is important to discuss thoughts on friends' attitudes with teammates (courtesy and respect for others) during practice. |
| Q8 | It is important to mutually help each other improve through learning activities. |
| Q9 | It is important to honor mutually respectful attitudes and behaviors, as said in Judo, "Start with a bow and end with a bow." |
| Q10 | In Judo class, it is important to respect others. |
| Q11 | In Judo class, it is important to honor traditional behavior (courteous and respectful behavior). |
| Q12 | It is important to learn self-control that stems from self-restraint by practicing traditional behavior. |
| Q13 | It is important to be proud of the Japanese culture. |
| Q14 | It is important to understand traditional ways of thinking to live in a global society in the future. |
| Q15 | It is important to reflect on your own activities toward better attitude in practicing traditional behavior, such as respecting others. |
| Q16 | It is important to reflect on teammates' activities toward better attitude in practicing traditional behavior, such as respecting others. |
| Q17 | It is essential to cherish traditional courteous behavior out of your own will. |
| Q18 | To cherish traditional behavior, it is important to learn self-control that stems from self-restraint and to understand that it will lead to practice. |
| Q19 | My impression of Physical Education classes is that they are "enjoyable." |
| Q20 | My impression of Physical Education classes is that they are "painful." |
| Q21 | My impression of Physical Education classes is that they are "scary." |
| Q22 | I am afraid that participating in Physical Education leads to injury. |
| Q23 | My impression of Judo classes is that they are "enjoyable." |
| Q24 | My impression of Judo classes is that they are "painful." |
| Q25 | My impression of Judo classes is that they are "scary." |
| Q26 | I am afraid that participating in Judo leads to injury. |

2.4. Analysis

The answers on a scale of 1 to 5 were weighed and used to conduct a Kolmogorov–Smirnov test to check whether all 26 questions followed a normal distribution, and the results showed that the responses do not follow a normal distribution. Next, a Wilcoxon test was conducted to compare scores from before and after the lessons. From this test, the items found to have a positive change after the class were used to conduct a Spearman correlation test. Excel 2016 and SPSS Statistics 25 were used for statistical analysis. The statistical level of

significance was set at $p < 0.05$.

3. Results

The results of the pre-class and post-class surveys are shown in Table 2 below (sample size, mean, standard deviation, and median); 130 male students and 124 female students participated in this study. However, sample sizes differ by items because some students were absent, refused to answer, or provided no response for specific questions.

Table 2. Pre-class and Post-class Results of Each Question.

| Questions | Male | | | | | | | Female | | | | | | |
|-----------|------|------|------|--------|------|------|--------|--------|------|------|--------|------|------|--------|
| | N | Pre | | | Post | | | N | Pre | | | Post | | |
| | | Mean | SD | Median | Mean | SD | Median | | Mean | SD | Median | Mean | SD | Median |
| Q1 | 124 | 3.50 | 1.04 | 4.00 | 3.42 | 1.06 | 4.00 | 110 | 3.60 | 0.86 | 4.00 | 3.56 | 1.02 | 4.00 |
| Q2 | 121 | 3.41 | 0.90 | 3.00 | 3.73 | 0.98 | 4.00 | 110 | 3.30 | 0.89 | 3.00 | 3.85 | 0.82 | 4.00 |
| Q3 | 121 | 4.04 | 0.81 | 4.00 | 4.11 | 0.73 | 4.00 | 108 | 4.04 | 0.74 | 4.00 | 4.12 | 0.70 | 4.00 |
| Q4 | 120 | 4.38 | 0.68 | 4.00 | 4.36 | 0.61 | 4.00 | 111 | 4.36 | 0.64 | 4.00 | 4.45 | 0.53 | 4.00 |
| Q5 | 122 | 3.46 | 0.88 | 3.00 | 3.56 | 0.93 | 4.00 | 110 | 3.59 | 0.97 | 3.50 | 3.79 | 0.88 | 4.00 |
| Q6 | 122 | 4.02 | 0.84 | 4.00 | 4.13 | 0.80 | 4.00 | 110 | 4.11 | 0.82 | 4.00 | 4.15 | 0.75 | 4.00 |
| Q7 | 122 | 4.02 | 0.76 | 4.00 | 3.95 | 0.79 | 4.00 | 111 | 4.14 | 0.72 | 4.00 | 4.03 | 0.61 | 4.00 |
| Q8 | 122 | 4.27 | 0.69 | 4.00 | 4.15 | 0.81 | 4.00 | 111 | 4.40 | 0.66 | 4.00 | 4.27 | 0.66 | 4.00 |
| Q9 | 121 | 4.19 | 0.69 | 4.00 | 4.27 | 0.77 | 4.00 | 110 | 4.32 | 0.65 | 4.00 | 4.39 | 0.58 | 4.00 |
| Q10 | 124 | 4.36 | 0.70 | 4.00 | 4.28 | 0.75 | 4.00 | 110 | 4.32 | 0.68 | 4.00 | 4.38 | 0.59 | 4.00 |
| Q11 | 122 | 4.18 | 0.72 | 4.00 | 4.20 | 0.80 | 4.00 | 111 | 4.29 | 0.59 | 4.00 | 4.28 | 0.65 | 4.00 |
| Q12 | 123 | 3.90 | 0.75 | 4.00 | 3.94 | 0.81 | 4.00 | 110 | 3.95 | 0.59 | 4.00 | 3.89 | 0.67 | 4.00 |
| Q13 | 124 | 3.88 | 0.83 | 4.00 | 3.96 | 0.91 | 4.00 | 111 | 3.94 | 0.75 | 4.00 | 3.97 | 0.73 | 4.00 |
| Q14 | 124 | 3.85 | 0.81 | 4.00 | 3.83 | 0.88 | 4.00 | 107 | 3.89 | 0.83 | 4.00 | 3.78 | 0.78 | 4.00 |
| Q15 | 122 | 3.92 | 0.65 | 4.00 | 3.89 | 0.85 | 4.00 | 111 | 4.06 | 0.69 | 4.00 | 4.03 | 0.68 | 4.00 |

| Questions | Male | | | | | | | Female | | | | | | |
|-----------|------|------|------|--------|------|------|--------|--------|------|------|--------|------|------|--------|
| | N | Pre | | | Post | | | N | Pre | | | Post | | |
| | | Mean | SD | Median | Mean | SD | Median | | Mean | SD | Median | Mean | SD | Median |
| Q16 | 122 | 3.88 | 0.78 | 4.00 | 3.90 | 0.80 | 4.00 | 111 | 4.10 | 0.67 | 4.00 | 4.05 | 0.70 | 4.00 |
| Q17 | 123 | 4.06 | 0.73 | 4.00 | 4.17 | 0.78 | 4.00 | 111 | 4.13 | 0.70 | 4.00 | 4.32 | 0.66 | 4.00 |
| Q18 | 123 | 3.73 | 0.83 | 4.00 | 3.88 | 0.81 | 4.00 | 110 | 3.93 | 0.67 | 4.00 | 3.98 | 0.65 | 4.00 |
| Q19 | 123 | 3.64 | 1.19 | 4.00 | 3.67 | 1.16 | 4.00 | 111 | 3.83 | 0.97 | 4.00 | 3.68 | 1.14 | 4.00 |
| Q20 | 122 | 2.63 | 1.19 | 2.50 | 2.59 | 1.30 | 2.00 | 107 | 2.44 | 1.17 | 2.00 | 2.49 | 1.21 | 2.00 |
| Q21 | 124 | 2.34 | 1.17 | 2.00 | 2.42 | 1.31 | 2.00 | 109 | 2.36 | 1.05 | 2.00 | 2.28 | 1.14 | 2.00 |
| Q22 | 124 | 2.67 | 1.29 | 2.00 | 2.72 | 1.35 | 3.00 | 111 | 2.40 | 1.18 | 2.00 | 2.62 | 1.22 | 3.00 |
| Q23 | 124 | 3.11 | 1.14 | 3.00 | 3.50 | 1.28 | 4.00 | 111 | 2.94 | 1.09 | 3.00 | 3.53 | 1.10 | 4.00 |
| Q24 | 123 | 3.25 | 1.16 | 3.00 | 2.94 | 1.30 | 3.00 | 111 | 3.20 | 1.13 | 4.00 | 2.75 | 1.19 | 3.00 |
| Q25 | 124 | 2.90 | 1.20 | 3.00 | 2.61 | 1.29 | 2.00 | 111 | 2.96 | 1.14 | 3.00 | 2.56 | 1.17 | 3.00 |
| Q26 | 124 | 3.10 | 1.24 | 3.00 | 2.91 | 1.29 | 3.00 | 111 | 3.05 | 1.25 | 3.00 | 2.85 | 1.27 | 3.00 |

| Questions | Male and Female | | | | | | |
|-----------|-----------------|------|------|--------|------|------|--------|
| | N | Pre | | | Post | | |
| | | Mean | SD | Median | Mean | SD | Median |
| Q1 | 234 | 3.55 | 0.96 | 4.00 | 3.49 | 1.04 | 4.00 |
| Q2 | 231 | 3.36 | 0.90 | 3.00 | 3.79 | 0.91 | 4.00 |
| Q3 | 229 | 4.04 | 0.77 | 4.00 | 4.11 | 0.71 | 4.00 |
| Q4 | 231 | 4.37 | 0.66 | 4.00 | 4.41 | 0.57 | 4.00 |
| Q5 | 232 | 3.52 | 0.93 | 3.00 | 3.67 | 0.91 | 4.00 |
| Q6 | 232 | 4.06 | 0.83 | 4.00 | 4.14 | 0.78 | 4.00 |
| Q7 | 233 | 4.07 | 0.74 | 4.00 | 3.99 | 0.71 | 4.00 |
| Q8 | 233 | 4.33 | 0.68 | 4.00 | 4.21 | 0.74 | 4.00 |
| Q9 | 231 | 4.25 | 0.67 | 4.00 | 4.32 | 0.68 | 4.00 |
| Q10 | 234 | 4.34 | 0.69 | 4.00 | 4.33 | 0.68 | 4.00 |
| Q11 | 233 | 4.23 | 0.66 | 4.00 | 4.24 | 0.73 | 4.00 |
| Q12 | 233 | 3.92 | 0.68 | 4.00 | 3.92 | 0.75 | 4.00 |
| Q13 | 235 | 3.91 | 0.80 | 4.00 | 3.97 | 0.83 | 4.00 |
| Q14 | 231 | 3.87 | 0.82 | 4.00 | 3.81 | 0.83 | 4.00 |
| Q15 | 233 | 3.99 | 0.67 | 4.00 | 3.95 | 0.78 | 4.00 |
| Q16 | 233 | 3.98 | 0.74 | 4.00 | 3.97 | 0.76 | 4.00 |
| Q17 | 234 | 4.09 | 0.72 | 4.00 | 4.24 | 0.73 | 4.00 |
| Q18 | 233 | 3.82 | 0.77 | 4.00 | 3.93 | 0.74 | 4.00 |
| Q19 | 234 | 3.73 | 1.09 | 4.00 | 3.68 | 1.15 | 4.00 |
| Q20 | 229 | 2.54 | 1.18 | 2.00 | 2.54 | 1.26 | 2.00 |
| Q21 | 233 | 2.35 | 1.11 | 2.00 | 2.35 | 1.23 | 2.00 |
| Q22 | 235 | 2.54 | 1.24 | 2.00 | 2.67 | 1.29 | 3.00 |
| Q23 | 235 | 3.03 | 1.12 | 3.00 | 3.51 | 1.20 | 4.00 |
| Q24 | 234 | 3.23 | 1.14 | 3.00 | 2.85 | 1.25 | 3.00 |
| Q25 | 235 | 2.93 | 1.17 | 3.00 | 2.59 | 1.23 | 2.00 |
| Q26 | 235 | 3.08 | 1.24 | 3.00 | 2.88 | 1.28 | 3.00 |

The results of the Wilcoxon test used to compare pre-class and post-class scores are shown in Table 3 (sample size, z value, p value, and effect size). Significant positive change was found in seven items for male and female combined scores: Q2 “Judo must be learned in Physical Education class as a part of the unique culture of Japan ($z = -6.042$, $p < 0.001$),” Q5 “In Judo class, it is important to throw the opponent in a way that they can easily break fall ($z = -2.545$, $p < 0.011$),” Q8 “It is important to mutually help each other improve through learning activities ($z = -2.707$, $p < 0.007$),”

Q17 “It is essential to cherish traditional courteous behavior out of your own will ($z = -2.668$, $p < 0.008$),” Q23 “My impression of Judo classes is that they are ‘fun’ ($z = -6.097$, $p < 0.001$),” Q24 “My impression of Judo classes is that they are ‘painful’ ($z = -4.757$, $p < 0.001$),” and Q25 “My impression of Judo classes is that they are ‘scary’ ($z = -4.619$, $p < 0.001$).” This indicates a positive change in the participants’ perception of the value of learning Judo and their impression of Judo classes.

Table 3. Results of Pre-class and Post-class Score Comparison of a Wilcoxon test.

| Questions | Male | | | | Female | | | | Male and Female | | | |
|-----------|------|---------|---------|------|--------|---------|---------|------|-----------------|---------|---------|------|
| | N | z-value | p-value | r | N | z-value | p-value | r | N | z-value | p-value | r |
| Q1 | 124 | -0.908 | 0.364 | -.08 | 110 | -0.758 | 0.448 | -.07 | 234 | -1.186 | 0.236 | -.08 |
| Q2 | 121 | -3.353 | 0.001** | -.31 | 110 | -5.220 | 0.001** | -.50 | 231 | -6.042 | 0.001** | -.40 |
| Q3 | 121 | -0.865 | 0.387 | -.08 | 108 | -1.267 | 0.205 | -.12 | 229 | -1.487 | 0.137 | -.10 |
| Q4 | 120 | -0.719 | 0.472 | -.07 | 111 | -1.427 | 0.154 | -.14 | 231 | -0.397 | 0.691 | -.03 |
| Q5 | 122 | -1.364 | 0.172 | -.12 | 110 | -2.291 | 0.022* | -.22 | 232 | -2.545 | 0.011* | -.17 |

| Questions | Male | | | | Female | | | | Male and Female | | | |
|-----------|------|---------|---------|------|--------|---------|---------|------|-----------------|---------|---------|------|
| | N | z-value | p-value | r | N | z-value | p-value | r | N | z-value | p-value | r |
| Q6 | 122 | -0.975 | 0.329 | -.09 | 110 | -0.473 | 0.636 | -.05 | 232 | -1.015 | 0.310 | -.07 |
| Q7 | 122 | -1.131 | 0.258 | -.10 | 111 | -1.355 | 0.175 | -.13 | 233 | -1.737 | 0.082 | -.11 |
| Q8 | 122 | -1.814 | 0.070 | -.16 | 111 | -2.064 | 0.039* | -.20 | 233 | -2.707 | 0.007** | -.18 |
| Q9 | 121 | -1.299 | 0.194 | -.12 | 110 | -1.123 | 0.261 | -.11 | 231 | -1.736 | 0.083 | -.11 |
| Q10 | 124 | -1.263 | 0.207 | -.11 | 110 | -0.981 | 0.326 | -.09 | 234 | -0.279 | 0.780 | -.02 |
| Q11 | 122 | -0.353 | 0.724 | -.03 | 111 | -0.140 | 0.889 | -.01 | 233 | -0.217 | 0.828 | -.01 |
| Q12 | 123 | -0.463 | 0.643 | -.04 | 110 | -0.624 | 0.533 | -.06 | 233 | -0.073 | 0.942 | -.01 |
| Q13 | 124 | -1.246 | 0.213 | -.11 | 111 | -0.381 | 0.703 | -.04 | 235 | -1.202 | 0.229 | -.08 |
| Q14 | 124 | -0.159 | 0.874 | -.01 | 107 | -1.550 | 0.121 | -.15 | 231 | -1.097 | 0.273 | -.07 |
| Q15 | 122 | -0.271 | 0.786 | -.02 | 111 | -0.512 | 0.609 | -.05 | 233 | -0.541 | 0.588 | -.04 |
| Q16 | 122 | -0.201 | 0.841 | -.02 | 111 | -0.729 | 0.466 | -.07 | 233 | -0.352 | 0.725 | -.02 |
| Q17 | 123 | -1.344 | 0.179 | -.12 | 111 | -2.451 | 0.014* | -.23 | 234 | -2.668 | 0.008** | -.17 |
| Q18 | 123 | -1.578 | 0.114 | -.14 | 110 | -0.843 | 0.399 | -.08 | 233 | -1.703 | 0.089 | -.11 |
| Q19 | 123 | -0.506 | 0.613 | -.05 | 111 | -2.224 | 0.026* | -.21 | 234 | -1.014 | 0.310 | -.07 |
| Q20 | 122 | -0.360 | 0.719 | -.03 | 107 | -0.885 | 0.376 | -.09 | 229 | -0.187 | 0.852 | -.01 |
| Q21 | 124 | -0.889 | 0.374 | -.08 | 109 | -1.240 | 0.215 | -.12 | 233 | -0.063 | 0.950 | .00 |
| Q22 | 124 | -0.390 | 0.697 | -.04 | 111 | -2.718 | 0.007** | -.26 | 235 | -1.844 | 0.065 | -.12 |
| Q23 | 124 | -3.266 | 0.001** | -.29 | 111 | -5.660 | 0.001** | -.54 | 235 | -6.097 | 0.001** | -.40 |
| Q24 | 123 | -2.784 | 0.005** | -.25 | 111 | -4.091 | 0.001** | -.39 | 234 | -4.757 | 0.001** | -.31 |
| Q25 | 124 | -3.019 | 0.003** | -.27 | 111 | -3.514 | 0.001** | -.33 | 235 | -4.619 | 0.001** | -.30 |
| Q26 | 124 | -1.716 | 0.086 | -.15 | 111 | -1.626 | 0.104 | -.15 | 235 | -2.393 | 0.017 | -.16 |

P < 0.01**, P < 0.05*

Table 4 shows the results of a Spearman correlation test using items that were found to have positive change after class as per a Wilcoxon test (Table 3). In this study, a rank correlation coefficient of 0.7–1.0 is defined as a very strong correlation, 0.4–0.69 is defined as a strong correlation, 0.3–0.39 is defined as a somewhat strong correlation, and 0.0–0.29 is defined as almost no correlation. The correlation analysis revealed that Q2 “Judo must be learned in Physical Education class as a part of the unique culture of Japan” had a strong correlation with Q8 “It is important to mutually help each other improve through learning activities ($r = 0.456$, $p < 0.001$),” Q17 “It is essential to cherish traditional courteous behavior out of your own will ($r = 0.400$, $p < 0.001$),” and Q23 “My impression of Judo classes is that they are ‘fun’ ($r = 0.440$, $p < 0.001$).” In addition, Q2 and Q5 “In Judo class, it is important to throw the opponent in a way that they can easily break fall ($r = 0.329$, $p < 0.001$)” were found to have a somewhat strong correlation. Meanwhile, Q24 “My impression of Judo classes is that they are ‘painful’” and Q25 “My impression of Judo classes is that they are ‘scary’ ($r = 0.785$, $p < 0.001$)” were found to have a very strong correlation.

Table 4. Results of a Spearman Correlation Test (r).

| | Q2 | Q5 | Q8 | Q17 | Q23 | Q24 | Q25 |
|-----|----|--------|--------|--------|--------|--------|---------|
| Q2 | — | .329** | .456** | .400** | .440** | -.052 | -.154* |
| Q5 | | — | .312** | .276** | .201** | -.058 | -.066 |
| Q8 | | | — | .459** | .311** | -.090 | -.181** |
| Q17 | | | | — | .406** | -.108 | -.224** |
| Q23 | | | | | — | -.145* | -.235** |
| Q24 | | | | | | — | .785** |
| Q25 | | | | | | | — |

P < 0.001**, P < 0.05*

4. Discussion

This study conducted a survey before and after participants went through a series of Judo classes to understand the perception of junior high school students experiencing Judo for the first time toward the value of learning traditional behavior, such as having respectful attitudes and manners, and how their impressions, such as whether they found Judo classes fun or scary, changed over the duration of the learning process.

Through a Wilcoxon test, seven items were found to have significant differences in scores during the post-test (Table 3). These seven items showing significant changes were used to perform a correlation test (Spearman) (Table 4). As a result, Q2 “Judo must be learned in Physical Education class as a part of the unique culture of Japan” was found to have a strong correlation with three other items: Q8 “It is important to mutually help each other improve through learning activities,” Q17 “It is essential to cherish traditional courteous behavior out of your own will,” and Q23 “My impression of Judo classes is that they are ‘fun’.” In addition, Q2 also had a somewhat strong correlation with Q5 “In Judo class, it is important to throw the opponent in a way that they can easily break fall.”

The scores for Q2 “Judo must be learned in Physical Education class as a part of the unique culture of Japan” were significantly higher after completing the classes for both male and female students. One of the reasons for requiring Judo in Physical Education is the nation’s goal to nurture citizens to understand the Japanese tradition and culture as well as expose them to the world [5]. Aside from its history and physical skills, Judo emphasizes manners and respectful

attitude [18]. As a part of the skill-learning process, students are taught to fight a match in an offensive and defensive battle; however, the goal of such exercises is not to defeat your opponent but rather to learn with one another. In Judo class, students can learn because they have an opponent, allowing them to learn to respect and understand the mindset related to this cooperative learning experience. It can be said that the students learnt the values of this unique culture as well as the traditional mindset and attitude, which are not acquired while learning other sports. Therefore, it can be deduced that the increase in score in Q2 influenced other items such as Q8 “It is important to mutually help each other improve through learning activities,” Q17 “It is essential to cherish traditional courteous behavior out of your own will,” and Q5 “In Judo class, it is important to throw the opponent in a way that they can easily break fall” to significantly increase as well.

The scores for Q23 “My impression of Judo classes is that they are ‘fun’” also increased significantly after completing the classes. This result supports studies by Yogi & Kyan [1] and Yogi et al. [19]. One reason is the emotional change as a result of physical contact. Tsutsui et al. [20] discuss the positive emotional effects of activities with physical contact in an experimental study on elementary school students doing Sumo. In Japanese elementary schools, Physical Education does not usually offer activities that involve skin-to-skin physical contact, such as Judo or Sumo. The new experience with physical contact must have been unexpectedly refreshing for junior high students and led to a change in their impression of the sport. As a result of this, learning the unique Japanese culture must also have influenced the strong correlation with Q2.

Scores for Q24 “My impression of Judo classes is that they are ‘painful’” and Q25 “My impression of Judo classes is that they are ‘scary’” changed for the better for both male and female students after completing the classes. When Judo became mandatory in 2012, the issue of safety was highlighted because of its higher death rate compared with other sports [21]. In a study on the impression of Judo held by 1,115 parents of junior high students, Yogi [22] reported that approximately 80% of parents had concerns about safety issues, such as major accidents and injuries, in Judo classes in Physical Education. Parents of first-year students tend to have more concerns than parents of second- and third-year students. In addition, in a study on 946 junior high students experiencing Judo for the first time, Yogi & Kyan [1] found that approximately 50% of male and more than 65% of female students had concerns before class. Why did the negative impression of Judo held by students and parents change as the students participated in the learning process? One reason could be the nature of the sport, namely, having students fight one-on-one offensively and defensively against each other. In an actual Physical Education class, teachers are instructed by the Ministry of Education, Culture, Sports, Science, and Technology to be mindful of safety and implement learning activities in progressive stages according to the actual state of the students [18]. This approach has contributed to dissolving impressions such as “painful” or “scary” before class and

changing them into positive psychological impressions. “Painful” and “scary” impressions are related to fear, thereby affecting Q24 and Q25 to have strong correlations.

Significant changes were found in 7 of the 26 question items. Tendencies toward positive change were noted for some other questions, although they were not significant. A follow-up study on changes in the same students in their second and third years of taking the Judo class is expected.

5. Limitations of This Study

This study was conducted under limited conditions (in terms of sample size, plan, duration of study, etc.) at the target school. Regarding the survey, overrating or underrating by students due to effects of social desirability cannot be denied. This study, however, examined psychological changes in students in various aspects using a survey created by authors who specialize in teaching Judo. Therefore, the representativeness of the result is assured to a certain degree.

6. Conclusion

This study aimed to examine how students’ perception of the value of learning traditional behaviors, including respectful attitudes and manners, and their impressions of Judo, such as whether the sport is fun or scary, changed during the learning process. The selected participants were junior high school students experiencing Judo for the first time.

A total of 5 classes (of 50 minutes each) were conducted. The main contents of the class were structured under the categories of “Knowledge,” “Skills,” and “Attitude,” as stipulated in the Commentary on the Curriculum Guidelines for Physical Education [16]. The students were asked to participate in a pre-class and post-class survey consisting of 26 items created by the authors as a method of examining their psychological change.

The results show that the scores of seven question items including Q2 “Judo must be learned in Physical Education class as a part of the unique culture of Japan” and Q23 “My impression of Judo classes is that they are ‘fun’” changed for the better. Items about Judo being “painful” or “scary” were among the seven that changed for the positive.

In conclusion, the results of this study identified psychological changes in students’ perception about the value of learning Judo and their impressions of the sport, such as whether it is fun or scary, in junior high students experiencing Judo for the first time. Its findings shall contribute to enriching instruction in Judo classes in junior high school and lessons at Judo clubs with students of around the same age.

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