Development of a Questionnaire to Assess Self-Esteem in the Teaching Profession

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Abstract

Schoolteachers in Japan frequently suffer from mental health problems, resulting in a high rate of leaves of absence from work. Considering the poor condition of Japanese teachers, this study aimed to develop a questionnaire to assess self-esteem in the teaching profession for students in teacher training courses at university. As self-esteem is generally associated with health and adaptation, improving teachers' working conditions and enhancing their self-esteem are expected. First, we created an original version of the questionnaire taking into consideration the content validity. Thereafter, a web-based survey was conducted among registered participants of a survey company in Japan. The final sample for analysis consisted of 422 participants (176 males and 246 females). The results showed factorial validity through exploratory and confirmatory factor analyses, along with internal consistency and an undistorted distribution of scores for the normal distribution. Thus, the "Self-Esteem Questionnaire in the Teaching Profession (SEQ-TP)" that includes twelve items with the score range of 12 to 84 was completed for future study. Finally, the limitations of this study are discussed, along with possibilities for future research.

Keywords: self-esteem, teaching profession, questionnaire development, university students

1. Introduction

1.1 Teachers' Poor Mental Health and Low Self-Esteem

In recent years, poor working conditions and environments for schoolteachers have been reported in Japan. According to the results of the Teaching and Learning International Survey (TALIS) 2018 conducted by the OECD, the working hours of schoolteachers in Japan were the longest among the countries participating in the survey (OECD, 2019). They also showed that the hours spent in classes for Japanese schoolteachers were almost the same as those in other countries, which means that work other than teaching is the main factor leading to longer hours.

The same survey showed that regarding important reasons to become a teacher, the positive answers to "Teaching allowed me to influence the development of children and young people" and "Teaching allowed me to provide a contribution to society" were in total over 80 % in the teachers of lower secondary education of the participating countries. However, especially among Japanese teachers in the lower secondary education, answers to the following items were worse than the average of the participating countries: "If I could decide again, I would still choose to work as a teacher" (58.7 % in Japan vs. 75.8 % on average), "I would like to change to another school if that were possible" (31.0 % vs. 21.3 %), and "I would recommend this school as a good place to work" (61.5 % vs. 83.3 %). Consistent with the above statistics, Japanese teachers showed that the answer rate to "All in all, I am satisfied with my job was much lower (49.0 %) than the average (92.7 %). Owing to these poor working and low motivation conditions, the rate of mental health problems has been increasing in Japanese teachers. This rate is higher than the total increase in mental health problems in Japan (Ministry of Education, Culture, Sports, Science, and Technology [MEXT], 2013).

The poor mental conditions of Japanese teachers may be strongly associated with lower self-esteem. TALIS 2018 revealed that the self-efficacy of Japanese teachers was the lowest among various behaviors needed for teaching, class management, and student guidance. Although the TALIS 2018 data did not show any self-esteem results, self-esteem is also predicted to be low because higher self-efficacy is associated with higher self-esteem (Bayani & Baghery, 2020; Bayani, Bagheri, & Bayani, 2013). Self-efficacy is an individual's judgment or belief in their capability to engage in certain behaviors (Bandura, 1997). Although self-esteem is usually understood as one's confidence or worth, several

different notions of self-esteem are explained in detail later in this paper. Additionally, regarding the relationship between self-efficacy and self-esteem, Bandura (1997) suggested that self-efficacy in important domains can enhance self-esteem.

Teachers' mental health has become a serious issue in Japan, and various attempts have been made to improve it. The most important issue is to reduce working hours. However, judging from the fact that the teaching profession produces considerable stress, students' self-esteem and self-efficacy must be enhanced before they become teachers. This is a crucial issue that needs to be addressed. Problems concerning health and adaptation are negatively associated with self-efficacy and self-esteem (e.g., Crocker & Park, 2004; Drapeaus, Saint-Jacques, Lé pinea, Bégin, & Bernard, 2007). In line with this consideration, we need to enhance self-esteem and self-efficacy regarding the teaching profession for students in teacher training courses at universities as well as for active teachers. If students have high self-esteem and self-efficacy in the teaching profession, they will not easily develop mental health problems even when encountering various stresses in school, and they are unlikely to experience any substantial stress.

1.2 Importance of Developing a Questionnaire for Desirable Self-Esteem in the Teaching Profession

In our study of students in university teacher training courses, we first need to assess their self-esteem and self-efficacy. A few questionnaires are available regarding this kind of assessment (e.g., Aricak, 1999; Nie, Lau, & Liau, 2012), but no measures to assess self-esteem and self-efficacy in school teaching can be found for Japanese students who aim to become schoolteachers. As the first step toward resolving this problem, the current study aimed to develop a questionnaire for self-esteem in the teaching profession, targeting university students.

Regarding self-esteem, two types of self-esteem have been proposed in recent years (e.g., Deci & Ryan, 1995; Kernis, 2003; Yamasaki, Uchida, & Yokoshima, & Kaya, 2017). According to Yamasaki et al. (2017), one type is undesirable, such as heteronomous self-esteem, which is detrimental to health and adaptation, while the other is desirable, such as autonomous self-esteem, which enhances health and adaptation. When considering this division, we must assess desirable self-esteem to discriminate between the two types.

Desirable self-esteem is characterized by an insensitivity to comparison and lack of competitiveness with others (Yamasaki, 2019). That is, those with high desirable self-esteem have authentic and stable self-confidence with regard to themselves. Therefore, when developing a measure of desirable self-esteem, we need not include comparative or competitive items. If we use such items, the scores obtained would partially include heteronomous self-esteem. One of the most frequently used questionnaires, the Rosenberg Self-Esteem Scale (Rosenberg, 1965), assesses both types of self-esteem without distinguishing between the two (Yamasaki, 2019).

1.3 Study Objectives

The purpose of the current study was to develop a questionnaire to assess self-esteem in the teaching profession for students studying to become schoolteachers in the teacher training course of a university. We aimed to develop it in terms of practical applicability, factorial validity, and reliability.

2. Method

2.1 Participants and Ethics

A web-based survey was conducted with registered participants of a survey company in Japan. Participants aiming to become schoolteachers were included in the survey. We excluded those who answered the dummy questions incorrectly to check participants' right answering attitude or those who did not promise to answer seriously before starting to answer. The deleted data were 137, and the final sample was 422 (176 men and 246 women). Participants were undergraduate and graduate students (mean age = 20.93, *SD* = 1.77, ranging from 18 to 29 years). The participants anonymously responded to the questionnaires with their consent to participate in this survey. No personal information was obtained that may identify individuals.

2.2 Measures

The original version of the Self-Esteem Questionnaire in the Teaching Profession (SEQ-TP) was developed to assess autonomous and desirable self-esteem in the teaching profession for students aiming to become schoolteachers. First, two psychologists familiar with desirable self-esteem and Japanese schools created 13 questions that provided content validity. An example item is "I feel no anxiety about continuing to be a teacher." and "I can extend children's possibilities." All items are shown in Table 1. The items were rated using a 7-point Likert format (1 = "not true at all" to 7 = "very true"). In the instructions to answer, participants were asked to think about themselves, imagining that they currently work in schools.

In the internet questionnaire survey, several items were included to check participants' serious answering attitudes and improve the quality of survey responses. At the beginning of the survey, we asked participants to take an oath that they

would be serious about answering. Then, immediately after the instructions, an item was included as an instructional manipulation check to check whether they read the instructions. The item asked the participants not to check any responses as its answer. Moreover, two directed question items requiring a specific answer in a 7-point Likert format were inserted among the items of the questionnaire. If the participants did not respond correctly to these items, their data were deleted as it were considered unreliable.

Table 1. Items in the SEQ-TP

1. If I encounter things that go wrong in schools, I can overcome them.
2. I have many things I want to do to educate children.
3. I can enjoy life in schools.
4. I feel no anxiety about continuing to be a teacher.
5. My days in school are meaningful.
6. I spend meaningful days in schools.
7. I can draw an ideal of a teacher I finally want to be.
8. I can cope positively if I encounter a difficult situation.
9.* I may take a leave of absence from work because of stress in school.
10. I think that I can continue teaching with no loss of enthusiasm.
11. I feel I am suitable as a teacher.
12. I can extend children's possibilities.
13. I can continue to make an effort to enhance my ability to educate children.
* deleted item

2.3 Procedure and Data Analyses

The survey company began using pooled participants. After reliable data were obtained for the required number (400 participants), the survey was concluded. The data were analyzed using IBM SPSS Statistics ver. 25 and Amos ver. 25. In analyzing the data, we first confirmed that the items showed neither ceiling (or floor) effects nor high correlations with each other. After exploratory and confirmatory factor analyses were conducted, the internal consistency and score distributions were examined.

3. Results

3.1 Examination of Ceiling and Floor Effects and Extremely High Correlations

First, by examining the distribution of each item from 1 to 7, we confirmed that each item showed neither a ceiling nor a floor effect. We then examined the existence of overly high correlations between the items and found that there were no items showing correlations over .70 with the other items. Therefore, we did not exclude any items from the analyses.

3.2 Exploratory Factor Analyses and Examination of Internal Consistency

Next, we conducted exploratory factor analysis using the 13 items of the SEQ-TP. We conducted analyses using the maximum likelihood method. After checking the changes in eigenvalues, we confirmed that this scale consists of one factor. The first five eigenvalues were 5.785, 1.057, .958, .797, and .627, showing that the first eigenvalue was prominently high. Table 2 shows the factor loadings of the scale along with the communalities and contribution rates. The table reveals that the factor loadings are high (> .400). However, as Item 9 showed the lowest loading and decreased alpha coefficient, this item was deleted. Moreover, Item 9 seemed difficult to answer because of its high negativity. Table 2 also shows the results after Item 9 was deleted. With regard to internal consistency, the alpha coefficient was .891.

3.3 Confirmatory Factor Analyses

Confirmatory factor analysis was conducted to ascertain the fit of the one-factor scale structure. A diagram of the structural equation modeling is shown for the scale in Figure 1. The fit measures showed good fitness (.987, .969, 1.000, and .007 for GFI, AGFI, CFI, and RMSEA, respectively). All the causal coefficients from the latent variable to each observed variable were positively significant (.44 to .71). These results suggested that the one-factor structure of the scale is valid.

Table 2. Factor Loadings, Communalities, and Contribution Ratios of the Factor

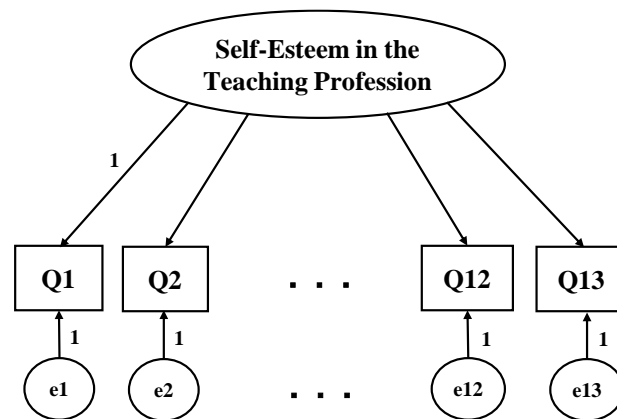| Item No.	Factor loadings	Communalities	Factor loadings	Communalities
1	.629	.396	.621	.386
2	.671	.450	.679	.461
3	.629	.396	.631	.398
4	.491	.241	.484	.235
5	.634	.401	.634	.402
6	.706	.498	.700	.491
7	.618	.382	.627	.393
8	.693	.480	.689	.474
9	.435	.189	---	---
10	.665	.442	.661	.437
11	.640	.410	.640	.410
12	.636	.405	.641	.411
13	.716	.513	.720	.518
Contribution rates	40.031 %		41.791 %	

Figure 1. A standard SEM (Structural Equation modeling) diagram to analyze the structure of the scale

3.4 Score Distribution

A normal distribution of scores is required when conducting parametric statistics. The score distribution of the SEQ-TP in Figure 2 revealed that kurtosis and skewness were .343 and .320, respectively. Although the Kolmogorov-Smirnov test to examine the normal distribution was significant (.054, $p < .01$, suggesting a non-normal distribution) due to the large sample size, it was suggested that the distribution was not considerably different from the normal distribution because the kurtosis and skewness were near zero.
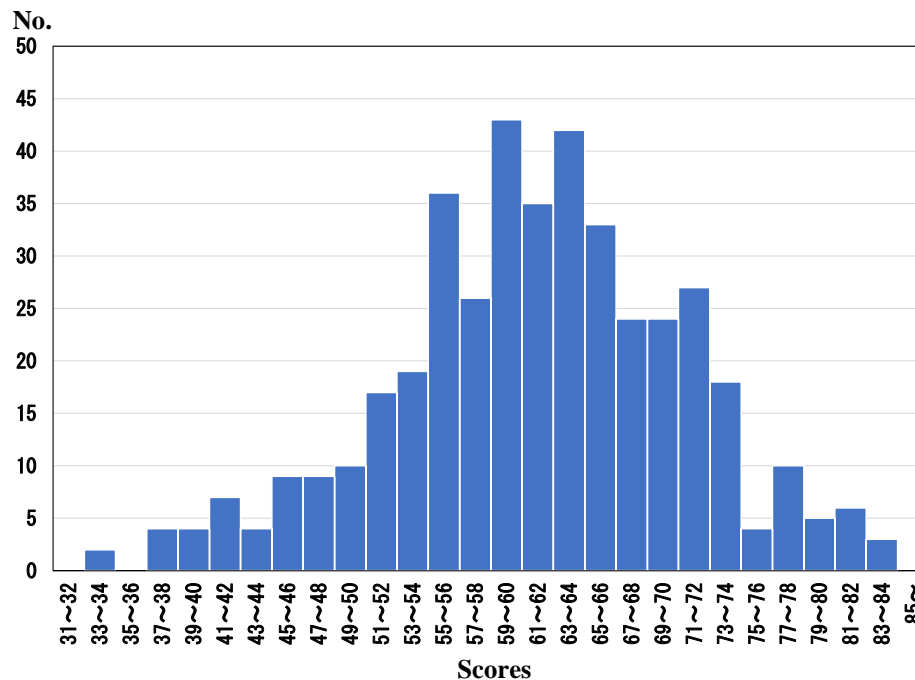
Figure 2. Score distribution of the scale

4. Discussion

In this study, the SEQ-TP was developed to measure self-esteem in the teaching profession. After making the items considering content validity, we confirmed that the scale includes internal consistency, factorial validity, and a score distribution that does not considerably differ from the normal. Through these analyses, the SEQ-TP was completed and consisted of 12 items with a score range of 12 to 84.

The questionnaire was developed to assess autonomous self-esteem in teaching. We did not include any items that involved comparisons with others. Self-esteem measured using these comparative items is often heteronomous. As stated in the introduction, Rosenberg's (1965) Self-Esteem Scale includes a mix of autonomous and heteronomous self-esteem items, which means that the total scores of the scale cannot discriminate between them. Frequently used self-esteem measures such as the Self-Perception Profiles by Harter (e.g., Harter, 2012) and the Self Description Questionnaire (e.g., Marsh, Parada, & Ayotte, 2004) also partly measure heteronomous self-esteem. However, when these measures are used, it is unclear what the results assess.

In recent years, some of the most controversial topics of self-esteem have been the bottom-up and top-down models. The top level of self-esteem is global, whereas the bottom level is domain-specific. Since James (1980), many researchers (e.g., Harter, 2006; Shavelson, Hubner, & Stanton, 1976) have proposed the bottom-up model in which domain-specific self-esteem influences global self-esteem. In contrast, the top-down model, in which global self-esteem influences domain-specific self-esteem, has also been proposed by many researchers (e.g., Brown & Dutton, 1995; Brown, Dutton, & Cook, 2001). Thus far, the results are inconsistent, with research showing reciprocal effects (Dapp, Krauss, & Orth, 2023). One of the many limitations of previous research concerns the setting of specific domains. James (1890) suggests that global self-esteem is influenced by domain-specific self-esteem only when the domain is crucial. Previous research has not uniformly identified this domain of self-esteem. However, it is difficult to identify a domain-specific self-esteem that most people consider crucial. Thus, there are many individual differences regarding these domains.

One candidate for such a domain is professional self-esteem (Iqbal, Bibi, & Gul, 2016; Khezerlou, 2017). Most adult workers in all professions are highly motivated to perform well. In other words, they work to achieve work performance goals as well as to live. The teaching profession is a typical example. In this regard, the importance of this domain for students aiming to become teachers would be the same as that for active teachers in schools. Thus, when this type of self-esteem is used as domain-specific, a clear bottom-up effect between domain-specific and global self-esteem can be observed.

Finally, limitations for future research are indicated. The scale developed in this paper included content validity but construct validity needs to be confirmed. Concurrent validity is often used to examine construct validity. However, to the best of our knowledge, no appropriate measures to conduct concurrent validity exist for the SEQ-TP. Therefore, other methods such as experiments and peer evaluations need to be considered. Moreover, criterion-related validity is possible because high self-esteem is associated with good health and adaptation. As an increasing number of active teachers in Japan are suffering from mental health difficulties, low self-esteem in the teaching profession may be associated with such health problems.

Despite these limitations, the questionnaire developed in this study can be utilized by university and graduate students aiming to become schoolteachers. Moreover, by changing instructions, it may also be utilized for active schoolteachers. As stated in this paper, an increasing number of schoolteachers tend to struggle with their mental health problems in Japan; they thus leave school and have lower motivation to teach. Such problems can decrease self-esteem in the global and professional domains. In particular, professional-domain self-esteem is more influential than global self-esteem, because the profession is important for those working there. Therefore, by clarifying how professional self-esteem deteriorates, we will go forward with interventions to improve teachers' health and motivation to teach by enhancing their self-esteem in the teaching profession.

5. Conclusion

The current study developed a questionnaire to measure self-esteem in the teaching profession, the Self-Esteem Questionnaire in the Teaching Profession (SEQ-TP). The questionnaire was administered to university students aiming to become schoolteachers. It was standardized as follows: (1) the items included showed neither ceiling nor floor effects and did not have extremely high correlations with each other; (2) this scale consisted of one factor, which was confirmed using exploratory and confirmatory factor analyses; (3) it included the high internal consistency shown using an alpha coefficient; and (4) the distribution of the scores was not considerably different from the normal distribution. The final scale included 12 items with scores ranging from 12 to 84. The scale can be applied to active schoolteachers by changing the instructions. Since many teachers leave school due to poor mental health, this scale will help examine their mental health and develop intervention or prevention programs to enhance health and adaptation in terms of professional self-esteem.

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