

Regular Article

Study on feelings of school avoidance, depression, and character tendencies among general junior high and high school students

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Abstract

School refusal is a phenomenon that first drew attention in Japan around 1960 and it remains one of the major issues in child psychiatry today. Moreover, it is now said that there exists a large group of latent school refusers currently attending school but harboring feelings of school avoidance. To address this issue, a questionnaire survey was conducted on students enrolled in a junior high and high school affiliated with the Nagoya University School of Education. The questionnaire consisted of the Children's Depression Inventory (CDI), a scale for evaluating feelings of school avoidance (School Avoidance Scale), and a scale for assessment of personality characteristics associated with school refusal (School Refusal Personality Scale). The subjects were 425 first-year junior high to second-year high school students. Factor analysis of each scale revealed the CDI to consist of three factors: 'core depression', 'feelings of interpersonal maladaptation', and 'self-revulsion', and the School Avoidance Scale to consist of two factors: 'school dislike', and 'school avoidance'. The School Refusal Personality Scale consisted of three factors: 'obsessive-compulsive', 'passive/unsocial', and 'socially introverted'. Mean CDI score and standard deviation (SD) was 19.44 ± 7.49 , and that for 'feelings of school avoidance' was 20.18 ± 5.61 . The two subordinate factors of the School Avoidance Scale were intimately associated with both 'feelings of interpersonal maladaptation' and 'core depression' of the CDI, and negatively correlated with the 'obsessive-compulsive' factor of the School Refusal Personality Scale.

Keywords: Children's Depression Inventory, depression, feelings of school avoidance, personality, school refusal.

INTRODUCTION

In Japan, the problem of school refusal, which began drawing attention in the 1960s, remains a phenomenon of as yet rising proportion even today. Despite the fact that guidelines for school refusal have not been incorporated into diagnostic criteria in *Diagnostic Statistical Manual of Mental Disorders* (4th edn; DSMIV),¹ many papers are still published regularly on this topic, including a number of reviews on this subject.^{2,3} Moreover, behind the overt school refusers, it is said that there exists a large group of latent school refusers attending school but harboring feelings of school avoidance.⁴ Generally speaking, it is believed that the probability of those harboring strong feelings of school avoidance or dislike coming to exhibit school refusal is high, as indicated by Morita,⁴ discussing the sociology of school avoidance. However, there have been no studies to date that delve into the association between such latent school refusers and those actually exhibiting school refusal, taking both groups as subjects. In other words it is not necessarily clear whether students with strong feelings of school avoidance or dislike constitute a latent group of school refusers who proceed serially on to school refusal, or whether some other factor is at work delineating the two.

The present study was designed as the first step towards clarifying this issue, through evaluating the association between feelings of school avoidance, depression, and character tendencies among a general population of junior high and high school students. The reason for taking up depression in the present examination is that this is a perspective that has been addressed in several studies on school refusal over many years,⁵⁻⁸ in addition to our own continuing focus on this area.⁹

METHODS

Subjects

The questionnaire survey was carried out on students in the first to third year of a junior high and the first and second year of a high school affiliated with Nagoya University. The two schools offer a 6 year integrated program as a rule. These schools are affiliates of a national university but they operate with an emphasis on comprehensive learning, making them schools of standard level in terms of activity and curriculum among the regular public junior high and high schools in Japan. The survey was conducted in February 1998. The number of subjects were 72 in first year, 77 in second year, 74 in third year for the junior high school students, and 103 in first year and 99 in second year for the high school students, amounting to a total of 425 students (total: 196 boys, 224 girls; five undetermined).

Procedure

Following explanation by the homeroom teacher regarding survey content, including clarification that refusing the survey would have no negative consequences, the questionnaires were distributed, filled out, and retrieved anonymously on the spot. Rate of retrieval was 99.3%.

Analysis of data was performed using statistical analysis software, SAS version 8.2 (SAS Institute, Cary, NC, USA).

Questionnaire

Children's Depression Inventory

The Children's Depression Inventory (CDI) consists of 27 items, each evaluated along a 3-point ordinal scale, for example for the item 'I am sad once in a while', 'I am sad many times', and 'I am sad all the time', 0, 1, or 2 points are allocated according to a lower to higher depressive tendency for calculation of depression score.¹⁰

School Avoidance Scale

This scale consisting of 11 items calls for 3-point responses of 'yes', 'neither yes or no', or 'no', with 3, 2, or 1 points allocated, respectively, for scoring.¹¹

School Refusal Personality Scale

This is an original scale constructed for assessment of personality tendencies of school refusers based upon previous studies by Honjo.^{12, 13} This scale consists of 22 items and was prepared as a composite of four subordinate scales addressing obsession-compulsion, consideration for others, paucity of interpersonal relationships, and self-centeredness, the four characteristics of school refusers previously extracted by Honjo. The items call for three-step responses of 'yes', 'neither yes or no', or 'no', allocated 3, 2, or 1 points respectively, for scoring. Validity of item-content has been evaluated by one child psychiatrist and two clinical psychologists.

RESULTS

Evaluation of each scale

First, each scale was rendered to factor analysis via principle factor solution and varimax rotation.

As a result, three factors were extracted from the CDI. The composition of these factors were somewhat different from that reported previously by Tsujii et al.,¹⁴ but were called the factors of 'feelings of interpersonal maladaptation', 'core depression', and 'self-revulsion', with respect to Tsujii's naming. The α coefficients indicative of internal consistency within the subscales for each factor were 0.755, 0.734, and 0.613, respectively (Table 1), which were considered fairly satisfactory. Moderately significant correlation ($r = 0.331\sim 0.599$) was noted between factors.

Table 1

Regarding the School Avoidance Scale, two factors, 'school dislike' and 'school avoidance' were extracted in light of a tendency for decrease of eigenvalue and explainable variance (Table 2). The α coefficients were 0.845, and 0.791, respectively, indicating sufficient internal consistency. Correlation between factors was significantly high at $r = 0.677$. Ensuing analysis was carried out employing the two factors thus extracted.

Table 2

Although four subscales were first envisioned for the School Refusal Personality Scale, three factors were extracted instead, from the tendency for decrease of eigenvalue and explainable variance (Table 3). These were named the 'obsessive-compulsive', 'passive-unsocial', and 'socially introverted' factors, for which the α coefficients indicating internal consistency were 0.814, 0.674, and 0.655. Correlation between factors was significant at $r = 0.093 - 0.177$. These results were indicative of sufficient reliability within each of the subscales.

Table 3

Evaluation of the overall α coefficients for each scale to determine reliability revealed values of 0.838 for the CDI, 0.885 for the School Avoidance Scale, and 0.763 for the School Refusal Personality Scale. Additionally, testing for reliability by the split-half method yielded 0.754 for the CDI, 0.794 for the School Avoidance Scale, and

0.731 for the School Refusal Personality Scale ($P < 0.001$ in each case), indicating ample reliability. However, because this survey was conducted anonymously, we have not been able to determine test-retest reliability for the School Refusal Personality Scale.

Mean scores from each scale

Table 4

These results can be found in Table 4. Mean score for the CDI was 19.44 ± 7.49 . School Avoidance Scale scores were the sum of scores from the two subscales, and the mean score came to 20.18 ± 5.61 . Mean scores for each of the subscales of the School Refusal Personality Scale were 22.71 ± 4.76 for the 'obsessive-compulsive' scale, 11.82 ± 2.67 for the 'passive-unsocial' scale, and 10.08 ± 2.43 for the 'socially introverted' scale.

Table 4 shows the sum scores for each scale and each subscale, for all subjects, for boys, and girls. A gender difference was noted in the mean values for the 'core depression' subscale of the CDI, and 'socially introverted' factor of the School Refusal Personality Scale. As such, results from the ensuing analysis are listed by gender where significant, and as the combined results from boys and girls elsewhere. First, a one-way analysis of variance for evaluating difference in School Avoidance Scale scores according to grade revealed significant difference in school avoidance, higher among first- and second-year high school students in comparison to first-year junior high school students (Fig. 1). As a result, a main effect was noted for each grade.

Fig. 1

Next, one-way analysis of variance was performed to evaluate the grade-level difference of CDI sum scores. Here again, significant difference according to grade was noted, with higher CDI sum scores for first- and second-year high school students in comparison to first-year junior high school students (Fig. 2).

Fig. 2

Association between scales

Next, we evaluated the association between the School Avoidance Scale, the CDI, and the School Refusal Personality Scale. Significant correlation was found between the

School Avoidance Scale and the CDI, particularly regarding association with the factors of 'feelings of interpersonal maladaptation' and 'core depression' ($r = 0.561, P < 0.001$; $r = 0.587, P < 0.001$; $r = 0.474, P < 0.001$). Looking at the subscale factors, higher correlation was seen between the CDI and the 'school dislike' factor than the 'school avoidance' factor ($r = 0.575, P < 0.001$; $r = 0.451, P < 0.001$).

In contrast, regarding association between the School Avoidance and School Refusal Personality scales, both the 'school dislike' and 'school avoidance' factors were positively correlated with the 'passive-unsocial' factor ($r = 0.140, P < 0.01$; $r = 0.169, P < 0.001$), and the 'socially introverted' factor ($r = 0.142, P < 0.01$; $r = 0.144, P < 0.01$), and negatively correlated with the 'obsessive-compulsive' factor ($r = -0.100, P < 0.05$; $r = -0.153, P < 0.01$). However, correlation coefficients were both low at levels of 0.1.

Furthermore, multiple regression analysis was performed by the stepwise method taking the two factors of the School Avoidance Scale as the dependent variables, and the three factors of the CDI and the three factors of the School Refusal Personality Scale as independent variables. As a result, the proportion to which the 'school dislike' factor could be explained by independent variables was highest for 'feelings of interpersonal maladaptation' ($\beta = 0.457$) and 'core depression' ($\beta = 0.252$) of the CDI, followed by the 'obsessive-compulsive' factor ($\beta = -0.102$) of the School Refusal Personality Scale, with these three factors explaining 41.3% of the 'school dislike' factor. In contrast, regarding the 'school avoidance' factor, standardized partial regression coefficients were highest for 'feelings of interpersonal maladaptation' ($\beta = 0.319$) followed by 'core depression' ($\beta = 0.206$) of the CDI, 'obsessive-compulsive' ($\beta = -0.198$), and 'passive-unsocial' ($\beta = 0.082$) factors of the School Refusal Personality Scale, with these four factors explaining 26.1% of the 'school avoidance' factor. Furthermore, multiple regression analysis by gender revealed that while the 'obsessive-compulsive' variable had inhibitory effect on both the 'school dislike' and 'school avoidance' factors ($\beta = -0.169, -0.211$, respectively) among boys, the inhibitory

effect was present only for the 'school avoidance' factor among girls ($\beta = -0.208$). In contrast, among girls the 'socially introverted' variable was found to possess a promoting influence on the 'school avoidance' factor ($\beta = 0.144$).

From these findings it was clarified that both the 'school dislike' and 'school avoidance' factors could be explained to a high degree by the 'feelings of interpersonal maladaptation' and 'core depression' factors of the CDI. In addition, it was seen that the 'obsessive-compulsive' personality was exerting an inhibitory effect, although weak, upon the 'school avoidance' factor for all subjects, as well as the 'school dislike' factor among boys.

DISCUSSION

Scores from each scale

Children Depression Inventory scores

A number of studies have been published in Japan regarding the CDI. In 1990 Murata *et al.* reported a mean CDI score of 16.5 ± 7.6 from a survey on 543 normal junior high school students,¹⁵ while (also in 1990) Tsujii *et al.* reported a mean score of 16.6 ± 6.74 for 551 students from second-year elementary school to second-year junior high, and first year of high school.¹⁶ Compared to these figures, our current result of 19.44 ± 7.49 is somewhat high, closer to the mean CDI score of 19.94 ± 8.28 obtained by Tsujii *et al.* in a group of 138 clinical cases receiving treatment in psychiatry clinics or mental health guidance facilities.¹⁴ However, if just the second-year junior high and first-year high school students are selected as an adolescent group from the study by Tsujii *et al.* on normal children,¹⁶ their mean CDI score would be considerably higher at 18.32 ± 7.18 , close to the findings from the present study. Similarly, mean CDI scores for an adolescent group aged 14-18 from Tsujii *et al.* on clinical cases would be 23.25 ± 9.56 ,¹⁴ considerably higher than either the normal student group or pre-adolescent group.

From these reports it is seen that in dealing with both junior high and high school students, our mean CDI score is quite close to adolescent group of normal subjects of Tsujii *et al.* but if speaking about junior high school students in particular, our findings are somewhat higher than the mean score reported by Murata *et al.*¹⁵

Additionally, in the present survey depressive feelings were higher among first- and second-year high school students in comparison to first-year junior high students. Looking at the CDI scores serially through the first year of junior high to the second year of high school, although a lowering in CDI score is noted in the third year of junior high, overall, there is a rise in CDI score accompanying advance in grade level. This tendency for increase paralleling advance in grade-level has also been recognized by Murata *et al.*^{15, 17}.

School Avoidance Scale scores

The School Avoidance Scale was constructed by Fujigaki which, in her analysis, was determined to have a strong single factor.¹¹ However, the two factors of 'school dislike' and 'school avoidance' were extracted in our study, and the School Avoidance Scale score reported in the present paper is the sum of scores for the two factors.

We are unable to provide any definitive reasons why the School Avoidance Scale was split into two subscales in the present study, but we believe this may be because the items were captured in terms of those expressing a more active dislike of school, and items expressing a more passive avoidance of school.

In terms of difference according to grade, significantly higher School Avoidance Scale scores were obtained for first- and second-year high school students in comparison to those in the first year of junior high. This result is the same as that obtained from the CDI, which is believed to indicate that high school students are experiencing school life as a harsher reality than junior high school students.

School Refusal Personality Scale scores

The School Refusal Personality Scale is an independently constructed scale based upon clinical studies on the personality of school refusers.^{12, 13} Initially, the scale was designed upon the assumption of four factors: obsession-compulsion, consideration for others, paucity of interpersonal relations, and self-centeredness, as the principal personality tendencies of children exhibiting school refusal. However, results from factor analysis yielded three factors, 'obsessive-compulsive', 'passive-unsocial', and 'socially introverted'. A sufficient reliability coefficient (α) has been obtained for this scale indicating sufficient reliability, including testing by the split-half method. However, we have been unable to determine test-retest reliability due to the survey having been conducted anonymously, and although validity of content has been determined, neither criterion-related validity nor construct validity has been confirmed. These are limitations requiring evaluation through continued study. However, although such limitations do exist, it is believed that the construction of such scales for assessment of personality

tendencies associated with school refusal is indispensable for undertaking demonstrative study on the personality tendencies of school refusers.

Mean subscale scores from the present study were 22.71 ± 4.76 for the 'obsessive-compulsive' scale, 11.82 ± 2.67 for the 'passive-unsocial' scale, and 10.08 ± 2.43 for 'socially introverted'. Comparison of these figures is not possible in the absence of other studies employing this scale, but further evaluation through comparison of data with those from children actually exhibiting school refusal should yield findings of great interest.

Association between scales

Looking at the association between scales, a significant correlation was found between the School Avoidance Scale and the CDI. This finding is also supported by the results from multiple regression analysis, which indicate that the feelings of school avoidance can be explained in large part by 'interpersonal maladaptation', and 'core depression' of the CDI.

Next, is discussion on the association between feelings of school avoidance and personality associated with school refusal. Although the association between the three factors of the School Refusal Personality Scale and the School Avoidance Scale was significant, correlation coefficients were all low, at levels of 0.1. Nevertheless, the 'obsessive-compulsive' factor of the School Refusal Personality Scale was found to have an inhibitory action on both 'school dislike' and 'school avoidance' factors among all students, and boys; the inhibitory action was seen only in terms of the 'school avoidance' factor among girls. Although this association is not strong as previously noted, it is of interest in considering the question of personality relative to school refusal.

There has been much discussion on the association between obsessive-compulsive personality and school refusal, and Takagi *et al.* advocate capturing school refusal in the category of obsessive-compulsive neurosis.¹⁸ We too have attached great importance to obsession-compulsion as a character tendency

associated with school refusal^{12, 13} and as such, believe the fact that our findings from the present survey run counter to this notion to be of great interest, as possible indication that obsession-compulsion may in fact be working to inhibit the escalation of feelings of school avoidance.

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Legends to figures:

Fig. 1: Difference in School Avoidance Scale scores according to grade

Fig. 2: Difference in CDI scores according to grade