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A Study on Students' Enervation in Schools for Physical Therapists

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Abstract The present study was designed to clarify correlations between problem behavior in enervated students and related factors, that is, identity, moratorium, self-esteem, and motives for entering school. Enervation in students, a disturbance of mental health, is an important facet of quality of life. The enervation or volitional degeneracy observed was divided into three areas: schoolactivity enervation, class enervation, and school institution enervation.

Multiple regression analysis was performed on the resulting correlation coefficients among scores representing identity, moratorium, self-esteem, and motives for entering school. We found that moratorium directly impacted on overall enervation ($R^2=0.166$, $p<0.01$). Similarly, the factors affecting schoolactivity enervation were identity and self-esteem ($R^2=0.135$, $p<0.01$), those affecting class enervation were moratorium and self-esteem ($R^2=0.209$, $p<0.01$), while that impacting on school institution enervation was identity ($R^2=0.148$, $p<0.01$). Thus, in educational intervention regarding enervation, consideration of the problematic content is especially important in order to enhance the students' quality of life.

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Key Words : Enervation, Quality of Life(QOL), Multiple regression analysis

Introduction

We live in a stressful social, so problems of mental health are an important matter of concern¹⁾. This is true even in the field of education, as has been repeatedly reported since P.A. Walters coined the phrase "student apathy" to describe passive and enervated university students. Such circumstances are also observed in schools of physical therapy which are comparatively definite in vocational decision-making. In consequence, some students end up staying in school for an extra year, taking a temporary leave of absence, or quitting school²⁾. Given these conditions, it is necessary for us to better understand students' mental health in order to improve their quality of life (QOL).

In this study, we focused on student apathy, i.e., students' enervation as a disturbance of mental health, which is an important a facet of students' QOL or thereof. We distinguished student apathy from personality disorder apathy in the light of a previous study³⁾, and the enervation was interpreted as volitional degeneracy. In addition, the observed

volitional degeneracy was divided into three areas. The present study was designed to clarify the correlations between the problem behavior in such students and previously reported related factors, consisting of identity, moratorium, self-esteem, and motives for entering school.

Methods

Subjects

The subjects were students at three schools located within Nagasaki prefecture in Japan. All newly enrolled students in the three departments of physical therapy were invited to participate in this study. A total of 102 students (41 male, mean age 19.2 ± 1.8 years; and 61 female, mean age 18.8 ± 2.0 years) participated. No students declined to participate.

Data collection questionnaires

Five sets of questionnaires, corresponding to scales for enervation, identity, moratorium, self-esteem, and motives for entering school were

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incorporated in assessment materials for research purposes. The demographic data included age and sex.

Shimoyama³⁾ developed the scale used here for assessing enervation. It is designed to measure the degree of three subscales: schoolactivity enervation typified by loss of interest in studies, class enervation demonstrated by lack of interest during school hours, and school institution enervation characterized by a lack of a feeling of belonging to the school. Each subscale consists of 5 items and uses a four-step rating for each item.

The Shimoyama identity scale⁴⁾ consists of 20 items, and is designed to measure the degree of foundation and the level of achievement of one's identity. This scale also uses a four-step rating for each item. The moratorium scale, also developed by Shimoyama⁴⁾, consists of 24 items and is designed to measure the avoidance, diffusion, postponement, and searching characteristics of moratorium. This scale uses a four-step rating for each item as well.

The self-esteem scale developed by Rosenberg⁵⁾ is designed to measure degrees of self-worth and self-receptivity as evaluated by oneself and others. The self-esteem scale, consisting of ten items, is designed to be both comprehensive and manageable. A four-step rating is used for each item, and Japanese version of the test was used in this study.

The scale for assessing motives for entering school was developed by Fuchigami⁶⁾ and is designed to measure fundamental awareness and attitude in relation to decision-making for school entrance. We adopted a shorter version of this scale, consisting of 20 items and using a four-step rating for each item.

Procedure

Subjects received both written and oral explanations concerning the aim of the study and their rights. After the subjects agreed to participate in this study, the questionnaires were distributed and the responses were received from the participants in a single open-ended sitting at each participating school. Prior approval for the study was obtained from each physical therapy department director.

Statistics

Pearson's product-moment coefficients of correlation between the enervation total score and the subscores were computed. The same calculations

were performed on correlation between the enervation scores and the scores for identity, moratorium, self-esteem and motives for entering school. Multiple regression analysis was used to investigate mediation and moderation of variables on the relationship between explanatory variables and the dependent variable, and standardized regression coefficients (β coefficient) were then computed. All statistical analyses were performed with Stat View software. All tests were two-tailed; statistical significance of data was accepted if $p < 0.05$.

Results

Table 1 presents descriptive statistics for the scales scored by enervation, identity, moratorium, self-esteem, and motive for entering school.

Correlation coefficients between the overall enervation score, schoolactivity enervation score, class enervation score, and school institution enervation score for subjects are shown in Table 2. The overall enervation score correlated significantly with the scores of the three subscales. There were no significant correlations among the scores representing schoolactivity enervation, class enervation, and school institution enervation. The three subscales were respectively independent, but each scale reacted to the overall enervation.

Correlation coefficients among the overall enervation and three subscale scores and the scores for

Table 1 Means and standard deviations for total and subscale scores (n=102)

| | mean (%) | SD | range |
|-------------------------------|------------|------|-------|
| Enervation (overall) | 41.7(69.4) | 2.96 | 29-49 |
| Schoolactivity enervation | 11.6(57.8) | 1.74 | 7-16 |
| Class enervation | 16.8(84.2) | 2.13 | 10-20 |
| School institution enervation | 13.3(66.3) | 1.24 | 9-16 |
| Identity | 53.6(67.0) | 5.25 | 42-66 |
| Moratorium | 79.0(82.3) | 9.40 | 56-96 |
| Self-esteem | 26.5(66.2) | 3.89 | 13-35 |
| Motive for entering school | 62.7(78.4) | 7.12 | 37-77 |

Table 2 Correlations between overall enervation and subscales (n=102)

| | OE | SAE | CE | SIE |
|-----|----|---------|---------|---------|
| OE | — | 0.523** | 0.678** | 0.489** |
| SAE | | — | -0.114 | 0.047 |
| CE | | | — | 0.058 |
| SIE | | | | — |

** : $p < 0.01$

OE=Overall Enervation; SAE=Schoolactivity Enervation; CE=Class Enervation; SIE=School Institution Enervation

the related factors (identity, moratorium, self-esteem, and motive for entering school) are shown in Table 3. Multiple regression analysis was performed on the basis of these results, adopting overall enervation as the dependent variable, and identity and moratorium as explanatory variables. The results were significant, with multiple correlation coefficient (R)=0.407, contribution (R²)=0.131, and F ratio=4.813 (df=4/97, p<0.01). On the basis of these results, β coefficients were then computed. The only factor that had a direct impact on overall enervation was moratorium (β =0.300, p<0.01). Similar multiple regression analyses were performed on the other significant correlations, with results shown in Table 4.

Table 3 Correlations of the identity, moratorium, self-esteem, and motive for entering school scales with scales from the OE, SAE, CE, and SIE (n=102)

| | OE | SAE | CE | SIE |
|----------------------------|---------|---------|---------|----------|
| Identity | -0.225, | -0.209, | 0.068 | -0.361,, |
| Moratorium | 0.315,, | -0.049 | 0.388,, | 0.150 |
| Self-esteem | 0.141 | -0.232, | 0.299,, | 0.145 |
| Motive for entering school | -0.194 | -0.227, | -0.043 | -0.071 |

* : p<0.05 ** : p<0.01

OE=Overall Enervation; SAE=Schoolactivity Enervation;

CE=Class Enervation; SIE=School Institution Enervation

Table 4 Multiple regression analysis results for enervation and related factors (n=102)

| | OE | SAE | CE | SIE |
|----------------------------|---------|---------|---------|----------|
| Identity | -0.149 | -0.201, | 0.158 | -0.347,, |
| Moratorium | 0.300,, | 0.033 | 0.333,, | 0.097 |
| Self-esteem | 0.029 | -0.257, | 0.214,, | 0.062 |
| Motive for entering school | -0.173 | -0.152 | -0.122 | 0.010 |
| R | 0.407 | 0.367 | 0.457 | 0.385 |
| R ² | 0.131 | 0.135 | 0.209 | 0.148 |
| F change | 4.813,, | 3.775,, | 6.413,, | 4.224,, |

* : p<0.05 ** : p<0.01

OE=Overall Enervation; SAE=Schoolactivity Enervation;

CE=Class Enervation; SIE=School Institution Enervation

Discussion

The total scores for the three scales of class enervation, moratorium, and motive for entering school in this study were high average scores. It can be inferred from these results that certain subjects were not interested in their classes and had a high condition of moratorium in spite of having clear-cut motives for entering school. It is often said that university students in Japan are comparatively passive and enervated³⁾, and phenomenon was also observed in this study.

The results of multiple regression analysis indicated that only moratorium had significant correlation in contributing to the overall enervation. Murata⁷⁾ reports that moratorium and identity are key words for studies dealing with student apathy. Adolescents establish their identity through a moratorium period and then become adults. In certain cases, however, the moratorium period is unusually extended, causing under-developed identity. Likewise, it was suggested by the present study that the enervated subjects stood at moratorium states, resulting in premature identity. However, our results, showing significant negative relationships between identity both the enervation subscales of schoolactivity enervation and school institution enervation, indicated a growing tendency towards identity formation.

Self-esteem is an important factor in understanding students' enervation^{4), 5), 8)}, and correlates with identity⁷⁾. The results of this study showed that the self-esteem score correlated negatively and significantly with schoolactivity enervation, and positively with the class enervation. In other words, the subjects with high self-esteem lacked interest in classes in spite of involvement in schoolactivity. Accordingly, this suggested that it is necessary for instructors to contrive classes that will better evoke their interest.

Many reports^{6), 9)-12)} have shown that students' enervation is partially responsible for vocational indecision. One implication of matriculation in a specialized field such as physical therapy may be that students have basically made a vocational decision. However, vocational decision (i.e., motive for entering school) did not correlate with overall enervation and the corresponding subscales in this study. Our results were not in accord with a previous report, which directly investigate the relation between motive for entering school and students' enervation¹⁰⁾. The previous report points out that motive for entering school interacts with students' enervation, and it was inferred that the difference between this report and ours is possibly dependent on the specific nature of the subjects' academic studies. We hope to clarify this by further confirmative research.

In conclusion, students' enervation was observed among physical therapy students, and related factors differed with overall enervation and each subscale. Accordingly, we must confirm the content

of enervation through a more detailed investigation into actual conditions. In educational intervention concerning enervation, consideration of the problematic content is especially important and may result in enhancing the students' QOL.

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理学療法学科学生の意欲低下についての研究

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要 旨 理学療法学科学生102名を対象に、その意欲低下について学業、授業、学校の3領域に分け、これに関与するといわれている要因との関連について検討した。これらの尺度間の相関係数から、意欲低下全体と各下位尺度を目的変数に、アイデンティティ、モラトリアム、自尊感情、進学志望動機を説明変数として重回帰分析を行った。その結果、いずれの重相関係数も有意であった。また、標準偏回帰係数が有意な関連は、意欲低下全体とモラトリアム ($\beta=0.300, p<0.01$)、学業とアイデンティティ ($\beta=-0.201, p<0.05$) および自尊感情 ($\beta=-0.257, p<0.05$)、授業とモラトリアム ($\beta=0.333, p<0.01$) および自尊感情 ($\beta=0.214, p<0.01$)、学校とアイデンティティ ($\beta=-0.347, p<0.01$) において認められた。意欲低下は3領域で異なる関連性を示し、このことは学生との対応において問題の実態を把握し、各領域との関連要因を考慮する必要のあることを示唆するものである。

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