Teacher’s Work Stress and Coping Strategies under the Trend of Low Fertility in Vocational High School

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ABSTRACT

The study examined Vocational High School teachers’ work stress and coping strategies under the trend of low fertility. The study used the questionnaire survey method. Teachers approved by the Ministry of Education as Vocational High School teachers for electrical and electronics subjects in 2012 nationwide were the study population. Using a simple random sampling method, the author picked 32 schools participating in the questionnaire survey. A total of 657 teachers received the questionnaire, and 504 responses were valid (response rate = 76.7%). The study results are as follows. First, teachers in the study perceived more intense work stress from governmental decisions for current situations. Secondly, majority teachers in the study showed the use of problem solving and emotional adjustment as strategies for coping with work stress. Third, female teachers and teachers for special education or having student counseling expertise showed to experience significant work stress. Fourth, significantly, male teachers showed the use of seeking for support as the coping strategy. Fifth, in the study, more teachers with 6-10 years or more than 16 years of teaching experience at present school than teacher with 11-15 years of teaching experience at present school showed a preference for using the strategy of seeking for support. Sixth, teachers experiencing higher work stress showed tendency to adopt more apparent and more pluralistic strategies for coping with the pressure. According to these findings, the author offered suggestions for education authorities and school teachers based on the conclusions of the study.

Keywords: Low fertility, Vocational High School, Teachers’ work stress, Coping strategies
1. INTRODUCTION

(1). Research Background and Motivation

The fast social change in recent years has speeded up education change. According to Department of Household Registration of Ministry of the Interior [2], the number of newborns in Taiwan has dropped continuously from the highest of 424,250 in 1963 to the lowest of 166,886 in 2010. Low fertility is an issue confronted by many nations, and according to World Population Summary [1], many highly advanced nations have very low fertility rates, and even the global population growth rate has gone down [9]. Between late 1960s and late 1990s, India, Mexico, and China had all experienced significantly reduced fertility rates [5], and therefore, it is likely that other countries are also challenged by this issue. A low fertility rate can affect school education, and education agencies have to seriously evaluate the situation and formulate corresponding strategies. In 2010, there are 42969 registered Vocational High School and general high school teachers nationwide, but according to the fertility rates, the number will drop to 22,027 in 15 years. Among these 22,027 registered teachers, 5,506 of them will be Vocational High School teachers, indicating a 40% reduction in the number of Vocational High School teachers in 15 years. This change can certainly bring impact to frontline educators.

The theme of study is school teachers’ work stress under the impact from low fertility rates. In addition, due to the low fertility rates, changes in parenting can be observed too. When there is only one child in the family, resources from parents are more centralized, and as a result, the only child tends to receive more care and protection [9]. Yet the lack of interacting with siblings in terms of competition and cooperation are associated with some learning issues, making these only children vulnerable at school. It is therefore important for teachers to develop strategies for coping with such issues [6]. In addition, every parent believes that his or her child should receive nothing but the best, and so it is common for parents to demand teachers to pay more attention on their children without considering the rights of other students. While spending energy to communicate with parents, teachers also have to pay attention on certain students. This can be a source of stress on teachers [11]. Yet with low fertility rates, school administrative work remains the same, and consequently, many teachers have to take part-time administrative work due to reduced teaching responsibility. It is therefore possible that the low fertility trend can
add more burden to teachers’ workload. Although there are many studies examined work stress of teachers, few of them explored the impact from low fertility on work stress of Vocational High School teachers, and filling such a gap is one of the research motivations here.

The essence of the profession of teachers is different from others. Although teaching has properties of the service industry, the service contents cannot be itemized. Although there are graduation ceremonies marking the end of the service, the relationship between teachers and students continues. This is because Taiwanese believe in the old saying that a teacher for a day is a father for a lifetime. Aside from heavy teaching responsibilities, teachers are also challenged by countless problems from students, marking assignments, participating in school activities, or taking administrative work. Because of the general belief of pursuing higher education, teachers also experience pressure from the society as well as parents. In other words, teachers receive so much pressure and face countless challenges at work. This stressful working environment is one reason for the high turnover rate of this profession [7]& [8]. Furthermore, an unstable workforce in schools can interfere with teaching and administrative works. For students, during their learning process, they may become discontent with the school, incapable of trusting their teachers, and doubtful about their self-value. Some teachers may feel stressful toward the burden, yet there are also teachers good at coping with it. The second research motivation is to explore Vocational High School teachers’ coping strategies for work stress under the trend of low fertility rates.

Majority studies exploring impacts from low fertility are centered on kindergartens, elementary schools or middle schools. Few studies have examined strategies adopted by vocational and general high school teachers for the low fertility trend. Therefore, the third motivation of this study is to provide results for relevant agencies and researchers that they can refer to.

Taken together, the study used a questionnaire survey method to examine Vocational High School teachers’ work stress and coping strategies under the trend of low fertility. The researcher analyzed differences in work stress and coping strategies among teachers due to different background variables. The researcher also discussed impacts from work stress on coping strategies.

(2). Research Objectives
A. The first objective is to understand the current conditions of Vocational High School teachers’ work stress and coping strategies under the trend of low fertility.

B. The second objective is to analyze differences in Vocational High School teachers’ work stress due to different background variables.

C. The third objective is to analyze differences in Vocational High School teachers’ strategies for coping with work stress due to different background variables.

2. RESEARCH DESIGN AND IMPLEMENTATION

(1). Research Methods: The study used the questionnaire survey method. The theoretic foundation of the study is results from the literature review and relevant information from Taiwan and from other countries. “The Questionnaire for Vocational High School Teachers’ Work Stress and Coping Strategies under the Low Fertility Trend” was developed according to relevant empirical studies. The collected data were summarized and analyzed, and then conclusions and suggestions were drawn accordingly.

(2). Research Procedure

A. Formulating the research theme: At the beginning of the research, the author collected relevant information, including these, journal articles and reports, to determine the research theme.

B. Carrying out the literature review: The collected studies and research reports related to the theme of the study were analyzed, integrated and synthesized to establish the theoretical structure and foundation of the study. The researchers also determined the variables of the study.

C. Formulating the research framework and plan: After carrying out the literature review, the author summarized types of work stress of Vocational High School teachers and coping strategies under the low fertility trend and established the research framework for preparing the research plan.

D. Developing research tools: The author collected relevant questionnaires and inventories from studies in the literature review. These questionnaires and inventories were used as references for developing a draft for “The Questionnaire for Vocational High School Teachers’ Work Stress and
Coping Strategies under the Low Fertility Trend.”

E. Expert review and questionnaire revision: After drafting the questionnaire, experts and scholars were invited to review the contents and structure of the draft. The contents were revised based on feedbacks from the experts and scholars.

F. Pilot test and questionnaire revision: A pilot test was conducted using the draft of “The Questionnaire for Vocational High School Teachers’ Work Stress and Coping Strategies under the Low Fertility Trend”. The respondents were picked from the study population.

G. Formal questionnaire survey: The stratified random sampling method was used for picking up schools for participating in the questionnaire survey. The questionnaires were mailed to the participating schools.

H. Survey result analysis: Responses from the survey were reviewed, proofread and checked to remove invalid responses. Valid responses were entered into the computer and statistically analyzed using software to verify the objectives of the study.

I. Writing up the report: After conducting the literature review, summarizing relevant information, and analyzing the survey results statistically, the author prepared a research report based on the above information.

J. The author drew conclusions and suggestions based on the findings to complete the thesis.

(3). Research Framework: The study examined nine personal background variables, which are Gender, Age, Marital Status, Accumulated Teaching Experience, Teaching Experience at Present School, Education Background, Expertise in Counseling or Special Education, Number of Classes for the Responsible Subject, and School Region. The dependent variables are types of work stress of vocation high school teachers under the low fertility rates, and these are Workload, Professional Knowledge and Skills, Interpersonal Relationship, Governmental Decisions for Current Situations, and Teaching Counseling. The strategies adopted by Vocational High School teachers to cope with the trend of low fertility are Problem Solving, Postponing and Escaping, Seeking for Help, and Emotional Adjustment.

(4). Research Subjects: The study population was 144 Taiwanese public and
private Vocational High Schools with a full-time electrical and electronic program in 2011. These 144 schools offered a total of 281 course subjects and had 1587 classes of students. The respondents were picked using the simple random sampling method and the scale of the school and the proportion of teachers of the school were taken into account. According to Vocational High School course outlines for electrical and electronic subjects, teachers teaching electrical technology, electronics, information technology, aviation electronics, refrigeration and air conditioning, and controlling were included in the sampling population. When sampling for the formal questionnaire survey, teachers were randomly picked from teachers teaching electrical and electronic courses to the 1587 classes of electrics and electronic major students at 144 Vocational High Schools at the northern, central, southern, and eastern regions of Taiwan using the simple random sampling method.

(5). Research tools: The Questionnaire for Vocational High School Teachers’ Work Stress and Coping Strategies under the Low Fertility Trend prepared by the author was used. The questionnaire was used to investigate work stress and coping strategies of Vocational High School teachers under low fertility rates. The questions, presented using the five-point Likert Scale, can be divided into two parts, work stress and coping strategies. The respondents were asked to read each question and picked up an answer that suit themselves the best from the five available options.

(6). Content validity: Once the questionnaire draft was prepared, experts, scholars, and Vocational High School teachers teaching electrical and electronic courses were asked to assess the appropriateness and wording of the questions. Their comments were adopted for revising the questionnaire to increase the validity.

(7). Pilot test and result analysis: After preparing the draft of the questionnaire, a pilot test was carried out to ensure the appropriateness and feasibility of the test. Pilot questionnaire was mailed starting from May 2012, and the pilot subjects were picked using the purposive sampling method. Seven Vocational High Schools were picked and a total of 124 respondents participated in the pilot test. For “The Questionnaire for Vocational High School Teachers’ Work Stress”, $\alpha$ coefficient of the overall questionnaire was 0.975. $\alpha$ coefficients of internal consistency of the five subsections of the questionnaire were 0.872, 0.847, 0.932, 0.915, and 0.950. For “The Questionnaire for Vocational High School Teachers’ coping strategies for
work stress”, α coefficient of the overall questionnaire was 0.816. α coefficients of internal consistency of the five subsections of the questionnaire were 0.829, 0.789, 0.805 and 0.813.

(8). Formal Questionnaire: The draft used in the pilot test was revised based on feedbacks from experts and scholars. Results from item analysis, factor analysis and reliability analysis were considered to eliminate unsuitable questions. After the revision, the formal questionnaire was ready.

3. DATA ANALYSIS AND RESULTS

(1). Analysis of Teachers’ Background Variables

A. Gender: Among the 504 valid respondents, 79.6% of the respondents were male, and 20.4% were female.

B. Age: Among the 504 valid respondents, 8.5% of them were less than 29 years old (including 29 years old), 40.1% between 30 and 39 years old, 33.7% between 40 and 49 years old, and 17.7% older than 50 years old (including 50 years old).

C. Marital status: Among the 504 valid respondents, 23.6% of them were single, and 76.4% married.

D. Accumulated teaching experience: Among the 504 valid respondents, 16.3% of them had less than 5 years of teaching experience, 27.8% between 6 and 10 years, 17.5% between 11 and 15 years, 12.7% between 16 and 20 years, and 25.8% more than 21 years.

E. Teaching experience at the present school: Among the 504 valid respondents, 10.3% of them had less than 2 years of teaching experience at the present school, 1.67% between 3 and 5 years, 27.4% between 6 and 10 years, 14.5% between 11 and 15 years, and 31.2% more than 16 years.

F. Education background: Among the 504 valid respondents, 33.3% of them had a normal college degree, 20.5% had a college degree, and 46.2% had a postgraduate degree.

G. Counseling or special education expertise: Among the 504 valid respondents, 5.0% of them had a counseling or special education expertise, 46.8% had three credits for special education, and 48.2% had no relevant credits.

H. Number of classes for the responsible subject: Among the 504 valid respondents, 18.5% of them taught less than 3 classes, 41.5% 4-6 classes, 12.0% 7-9 classes, and 28.0% more than 10 classes.
I. School Location: Among the 504 valid respondents, 26.8% of the respondents’ schools were in the northern region of Taiwan, 30.6% in the central region of Taiwan, 36.3% in the southern region of Taiwan, and 6.3% in the eastern region of Taiwan.

(2). Analysis of Vocational High School teachers’ current work stress and coping strategies under the low fertility trend

A. Analysis of the current conditions of Vocational High School teachers’ current work stress under the trend of low fertility

For Vocational High School teachers’ work stress under the low fertility trend, Governmental Decisions for Current Situations were rated as qualified, while Workload, Professional Knowledge and Skills, Interpersonal Relationship, and Teaching Counseling were rated as neutral. The average overall score was 3.36, indicating that the perceived work stress by Vocational High School teachers under the trend of low fertility was more toward “qualified.” See Table 1.

B. Analysis of current conditions of Vocational High School teachers’ work stress and current coping strategies under the trend of low fertility

For Vocational High School teachers’ work stress and coping strategies under the low fertility trend, Problem Solving, Seeking for Support, and Emotional Adjustment were rated as qualified, whereas Postponing the Handling was rated as neutral. The average overall score was 3.68, indicating the overall tendency of coping strategies used by Vocational High School teachers for work stress under the trend of low fertility was more toward “qualified.” See Table 1.

| Table 1: Descriptive Statistically Results for Aspects Of Vocational High School Teachers’ Work Stress and Coping Strategies under the Low Fertility Trend |
|-------------------------------|------------------|-------|-----------------|-------------------|------------------|
| Variable                      | Dimension        | Mean  | SD   | Dimension Rank | Stress level / Coping strategy |
| Teacher’s work stress         | Workload         | 3.42  | 0.67 | 2               | Neutral           |
|                               | Professional knowledge and skills | 3.22  | 0.74 | 4               | Neutral           |
|                               | Interpersonal relationship | 3.20  | 0.64 | 5               | Neutral           |
|                               | Governmental decisions for current situations | 3.53  | 0.73 | 1               | Qualified         |
|                               | Teaching counseling | 3.38  | 0.66 | 3               | Neutral           |
| Coping strategies             | Problem solving  | 3.84  | 0.51 | 1               | Qualified         |
|                               | Postponing the handling | 3.33  | 0.76 | 4               | Neutral           |
|                               | Seeking for support | 3.54  | 0.61 | 3               | Qualified         |
|                               | Emotional adjustment | 3.83  | 0.47 | 2               | Qualified         |

N=504
(3). Association between teachers’ background variables and work stress

Differences in Vocational High School teachers’ work stress under the trend of low fertility due to different background variables of teachers are presented in Table 2.

A. The effect of gender on teachers’ work stress: Gender was a significant factor affecting Workload, Professional Knowledge and Skills, Governmental Decisions for Current Situations and the overall teachers’ work stress. This indicates that male and female teachers in this study experienced significant differences in work stress. Female teachers showed to receive slightly more stress than male teachers. The finding here is consistent with findings [3], [4] & [10].

B. The effect of counseling or special education expertise of teachers on teachers’ work stress: The effect of counseling or special education expertise can significantly affect the Workload dimension of work stress.

C. The effect of Age, Marital Status, Accumulated Teaching Experience, Teaching Experience at Present school, Number of Class for The Responsible Subject and School Region on teachers’ work stress: The effects of Workload, Professional Knowledge and Skills, Interpersonal Relationship, Governmental Decisions for Current Situations, Teaching Counseling, and the overall teachers’ work stress were not statistically significant.

Table 2: A Summary of Effects of Teachers’ Background Variables on Teachers’ Work Stress

<table>
<thead>
<tr>
<th>Factor/Dimension</th>
<th>Gender</th>
<th>Counseling and special education expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workload</td>
<td>(2)&gt;(1)</td>
<td>(1)&gt;(2),(3)</td>
</tr>
<tr>
<td>Professional knowledge and skills</td>
<td>(2)&gt;(1)</td>
<td></td>
</tr>
<tr>
<td>Governmental Decisions for current situations</td>
<td>(2)&gt;(1)</td>
<td></td>
</tr>
<tr>
<td>Overall teachers’ work stress</td>
<td>(2)&gt;(1)</td>
<td></td>
</tr>
</tbody>
</table>

Note: N =504; Gender: (1) Male; (2) Female; Counseling and special education expertise: (1) With counseling and special education expertise; (2) Three credit for special education; (3) No relevant credits.

(4). Association between teachers’ background variables and coping strategies for work stress

Effects of teachers’ background variables on strategies adopted by Vocational High School teachers for coping with work stress under the trend of low fertility are presented in Table 3.
A. Association between gender and strategies for work stress: In this study, gender was a significant factor affecting Vocational High School teachers’ use of Seeking for Help as a strategy for coping with work stress. Significantly more male teachers than female teachers showed the use of Seeking for Help for coping with work stress.

B. Association between teaching experience at the present school and strategies for work stress: In this study, teaching experience at the present school was a significant factor affecting Vocational High School teachers’ use of Seeking for Help as a strategy for coping with work stress. Significantly more teachers with 6-10 years or more than 16 years of teaching experience at their present schools than teachers with 11-15 years of teaching experience at their present schools showed the use of Seeking for Help for coping with work stress.

C. The effects of Age, Marital Status, Accumulated Teaching Experience, Teaching Experience at Present school, Number of Class for the responsible subject, and School Region on teachers’ coping strategies for work stress: No significance was found in Problem Solving, Postponing Handling, Seeking for Help, Emotional Adjustment and the overall coping strategies.

Table 3: A Summary of Effects of Teachers’ Background Variables on Coping Strategies for Work Stress

<table>
<thead>
<tr>
<th>Factor/Dimension</th>
<th>Gender</th>
<th>Teaching experience at the present school</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeking for support</td>
<td>(1) &gt; (2)</td>
<td>(3), (5) &gt; (4)</td>
</tr>
</tbody>
</table>

Note: N =504; Gender: (1) Male, (2) Female; Teaching experience at present school: (1) Equal to or less than 2 years, (2) 3-5 years, (3) 6-10 years, (4) 11-15 years, (5) Equal to or more than 16 years

4. CONCLUSIONS AND SUGGESTIONS

(1). Conclusions

A. Teacher’s perceived more intense work stress from governmental decisions for current situations: The research of this study classified work stress into workload, professional knowledge and skills, interpersonal relationship, governmental decisions for current situations, and teaching counseling. The most intense stress perceived by study subjects was making decisions for current situations. This finding is consistent with results from the semi-structured questionnaire on teachers’ work stress. The respondents considered that education is crucial for the future of a nation, and any educational reform can
affect frontline educators. Measures such as adjusting school syllabus, changing subjects for examination, or reducing number of classes can affect teachers’ work stress and students’ learning.

B. Majority respondents used problem solving and emotional adjustment for coping with work stress. Study results suggest that problem solving is the most selected approach by teachers for coping with work stress. These teachers would confront problems actively and use their past experience for solving problems. If there are problems that cannot be resolved immediately, these respondents would be engaged in hobbies or leisure activities to adjust their mood and reduce work stress.

C. In this study, female teachers and teachers with counseling or special education expertise showed to experience more work stress: 1) Female teachers showed to experience more work stress than male teachers did; 2) Teachers with counseling or special education expertise showed to experience more stress than teachers with three special education credits or without the three credits did.

D. Male teachers in the study significantly preferred to adopt seeking for support as the strategy for coping with work stress. Teachers with 6-10 years or more than 16 years of teaching experience at present school significantly preferred to use seeking for support as the strategy for coping with stress than teachers with 11-15 years of teaching experience at present school did.

E. The study showed that the major source of teachers’ work stress are low learning motivation in students, lack of respect of teachers’ expertise, and unclear education policies.

(2). Suggestions

A. For education administrative authorities, it is important to revise the education policy with caution, and to avoid disturbing education frontline and adding stress to teachers, more comprehensive and all-dimension communication is necessary. It can be found from the study that governmental decisions for current situations is the most intense work stress perceived by Vocational High School teachers under the trend of low fertility. Such stress is generated due to a lack of comprehensiveness and communication when revising the education policy by education administrative authorities. It is therefore recommended that education administrative authorities should exchange ideas with frontline educators, i.e., teachers, to help them understand the situations and have fewer uncertainties so
their work stress can be reduced.

B. For school teachers, the results suggest that the key source of work stress of teachers is students’ low learning motivation. Therefore, it is recommended to provide Vocational High School administrative assistance, such as holding relevant seminars, to help students gain a sense of crisis and become more interested and motivated in learning. Teachers should well use the interaction between students and teachers to encourage learning, to motivate students to develop a vision for the future, and to use peers to elevate students’ learning motivation step by step.

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