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**JOB STRESS, SELF-EFFICACY, BURNOUT, AND INTENTION TO LEAVE  
AMONG KINDERGARTEN TEACHERS IN TAIWAN**

**DISSERTATION**

**Presented in Partial Fulfillment of the Requirements for the Degree of**

**Doctor of Philosophy**

**Lynn University**

**By**

**Mao-Nan Cheng**

**2008**



**Order Number:** \_\_\_\_\_

**JOB STRESS, SELF-EFFICACY, BURNOUT, AND INTENTION TO LEAVE  
AMONG KINDERGARTEN TEACHERS IN TAIWAN**

Mao-Nan Cheng, Ph.D.

Lynn University, 2008

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**JOB STRESS, SELF-EFFICACY, BURNOUT, AND INTENTION TO LEAVE  
AMONG KINDERGARTEN TEACHERS IN TAIWAN**

**Mao-Nan Cheng**

**Dissertation Chair: Dr. Maureen Goldstein**

**Abstract**

Teaching is far more stressful and challenging than ever before, and teacher burnout has an alarming effect on teaching quality, student achievement, school climate, and teacher's intention to leave. In Taiwan, the percentage of kindergarten teacher turnover is even higher, about 65% (National Policy Foundation, 2002). Battling teacher burnout and intention to leave are the most critical issues in a school system.

The general purpose of this quantitative, non-experimental comparative (exploratory) and correlation (explanatory) study is to examine the relationships between level of stress, burnout, self-efficacy and intention to leave among the kindergarten teachers in Taiwan. The sample consisted of the total target population of 1,599 teachers of schools with kindergarten in Kaohsiung City, Taiwan. The post mailed survey obtained teachers' perceptions of job stress, self-efficacy, burnout, and intention to leave. The survey was translated into Traditional Chinese.

Independent *t*-tests and ANOVA with post hoc comparisons were used to answer the exploratory (comparative) research questions. Multiple regression analyses, simple regression analyses, mediated multiple regression analyses were used to test the explanatory hypotheses.

Findings indicated that Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfactory, total years of teaching experience), job stress, and self-efficacy, showed significant differences on the levels of burnout (Emotional Exhaustion, Depersonalization, and Personal Accomplishment). Another finding suggested that levels of burnout were significant contributors to the intention to leave. In addition, there was an inverse relationship between job stress and self-efficacy.

The empowerment training for teaching should not only focus on theoretical preparation, but also pay much attention on individual's personality characteristics, included mental and physical factors. Moreover, the school systems should focus on strengthening teachers' self-efficacy. Let teachers participate in the decision making about school goals and structure; supply constant professional consultation and support; and go through informative feedback and regular evaluation sessions.

Likewise, school systems should try to create stress-free working conditions and eliminate as much stress as possible. Then teachers would not doubt their capability and cope with the challenge of obstacles and failure. Overall, teachers will build a sustainable competitive advantage, and gain superior performance for future education.

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## CHAPTER I

### INTRODUCTION

#### **Introduction and Background to the Problem**

Education Advil is needed for fast pain relief for teachers who are angry, troubled, exhausted or confused. Battling teacher burnout is the most critical issue in a school system. In the U.S., 46% of all new teachers leave the profession within five years (NCTAF, 2005). In Taiwan, the percentage of kindergarten teacher turnover is higher, about 65% (NPF, 2002). Facing enormous challenges in today's interconnected, competitive, global society, teachers have to be well- prepared, capable, skillful, and have creative ideas. The role of today's teacher is extremely comprehensive. Teachers not only confront a heavy workload in teaching, but also have to cope with parental pressures, rapid changes in curricular demands, disruptive classroom-behavior, pressures from bureaucrats and administrators, and the demands of preparing students for future education (Romanowaski, 2006).

Teaching is a low income profession with overloaded personnel, and low societal recognition of the vocation's many problems (Jarvis, 2002). Teaching is much more stressful than nursing, managerial jobs, and professional and support management (Evers, Brouwers & Tomic, 2002). After enduring increased chronic pressure, many teachers have been hospitalized for serious health problems with both psychological and physiological symptoms, which are signs of teacher burnout (Jepson & Forrest, 2006). Teacher burnout is a major concern that impacts teaching quality, student achievement, and school climate (Wong & Cheuk, 2005).

Empirical examination of stress indicates that burnout has been attributed to the symptoms that resulted from the educational environment: (a) support from administration and supervision is not enough as expected (Farber, 1984; Friedman 2000; Hoover-Dempsey, & Bassler, 1988; Rottier, Kelly, & Tomhave, 1983); (b) teaching workloads are overwhelming (Friedman, 2000; Rottier et al., 1983; Wood & McCarthy, 2002); (c) student behavior patterns are the major factor related to teacher burnout (Abel & Swell, 1999; Evers, Brouwers, & Tomic, 2003; Friedman, 1995; Friedman, 2000; Gold, 1985; Gold & Bachelor, 1988; Lau, Yuen, & Chan, 2005; Montgomery & Rupp, 2005; Rottier et al., 1983); (d) urban teachers identified poor working condition as more serious than rural teachers (Abel & Swell, 1999; Rottier et al., 1983); and (e) teachers are dissatisfied with salary levels (Farber, 1984; Tang, Au, Schwarzer, & Schmitz, 2001; Wood & McCarthy, 2002).

Teachers are respected less by students than in the past (Montgomery & Rupp, 2005). Teacher burnout has been significantly predicted by student's disrespect in the non-religious schools (Friedman, 1995). In addition, student misbehavior patterns interfere with class activities and offend teachers. The stress resulting from student misbehavior had a much greater impact on both rural and urban teachers than poor working conditions, and poor staff relations (Abel & Swell, 1999). Furthermore, teachers who experienced greater degrees of disruptive student behaviors had greater emotional exhaustion and feelings of depersonalization (Evers et al., 2002).

Teacher salaries have been lower than salaries paid to other professionals with comparable education and training (Darling-Hammond, 2003). In Taiwan, according to the Executive Yuan of Republic of China (2006), the average salary of a kindergarten

teacher was NT\$25,514, appropriately 20% below other human service professions, such as nurses (NT\$30,333), accountants/ auditors (NT\$46,669), and computer programmers (NT\$71,130). Teachers with lower salaries, especially in areas where alternative wages were higher, were more likely to leave teaching. In addition, low salaries resulted in financial pressures and cause a burden on teachers' lives. As a result, many teachers quit their jobs and have left the classroom (Romanowski, 2006). Personality characteristics of teachers have also had an effect on the degree of seeking social support when experiencing stressful events (Houston & Vavak, 1991; Kobasa, Maddi, Ouccelli, & Zola, 1985; Watson & Clark, 1984).

The critical problem of teacher burnout is extremely important today because the high rate of teacher turnover results in schools losing an inestimable investment in the professional development of educators, curriculum development, and related personnel costs (Farber, 1991; Granziano, 2005; Huston, 1989).

In Taiwan, the birthrates plummet year by year. Parents always supply the most financial support and the best opportunities to ensure the students achieving higher academic achievement, especially from childhood. Furthermore, parents often blame teachers if the students do not fit parents' strong expectation. Parents feel they may "lose face" or be embarrassed when students fail in academic performance (Romanowski, 2006).

In addition, the children in kindergarten are more difficult to teach, due to less reception to reason, less self-discipline, less emotional stability, and less interest in school matters (Wong & Cheuk, 2005). Kindergarten teachers not only confront a heavy workload in teaching, but also have to cope with parental pressures, rapid changes in

curricular demands, disruptive classroom behavior, pressures from bureaucrats and administrators, and developing scholastic programs for future education (Chen, 2002).

### **Purpose of the Study**

Teaching is far more stressful and challenging than ever before, and teacher burnout has an alarming effect on teaching quality, student achievement, school climate, and teacher's intention to leave (Evers, et al., 2002; Gold, 1985). The general purpose of this quantitative, non-experimental comparative (exploratory) and correlation (explanatory) mailed survey research design is to examine the relationships between level of stress, burnout, self-efficacy and intention to leave among the kindergarten teachers in Taiwan. There is one specific descriptive purpose, one exploratory (comparative) purpose, one exploratory (correlation) purpose and five explanatory (correlation) purposes:

1. A descriptive purpose is to describe Taiwanese kindergarten teachers' demographic characteristics, work profile, job stress, self-efficacy, levels of burnout, and intention to leave;
2. An exploratory (comparative) purpose is to examine the relationships between Taiwanese kindergarten teachers' job stress, self-efficacy, levels of burnout, and intention to leave according to demographic characteristics of gender, marital status, age, educational level, and religious category;
3. An exploratory (correlation) purpose is to examine the relationships between Taiwanese kindergarten teachers' job stress, self-efficacy, levels of burnout, intention to leave and work profile (working hours, salary satisfactory, and total years of teaching experience);

4. The first explanatory purpose is to determine if Taiwanese kindergarten teachers' demographic characteristics, work profile, job stress, and self-efficacy, are significant explanatory variables of levels of burnout;
5. The second explanatory purpose is to determine if Taiwanese kindergarten teachers' demographic characteristics, work profile, job stress, self-efficacy, and levels of burnout are significant explanatory variables of intention to leave;
6. The third explanatory purpose is to determine whether there is an inverse relationship between Taiwanese kindergarten teachers' self-efficacy and job stress.
7. The fourth explanatory purpose is to determine whether Taiwanese kindergarten teachers' self-efficacy is significantly related to teacher burnout levels; and
8. The fifth explanatory purpose is to determine whether self-efficacy mediates the relationship between Taiwanese kindergarten teachers' demographic characteristics, work profile, job stress, self-efficacy, levels of burnout and intention to leave.

## **Definition of Terms**

### *Job Stress*

#### *Theoretical Definition*

Job stress is defined as “work-related demands tend to interfere with teacher work effort, deplete valuable time and energy, and cause tension in teachers” (Blasé, 1982, p. 103).



### ***Operational Definition***

Job stress was measured by the 10-item *Perceived Stress Scale* (PSS) developed by Cohen and Williamson (1988). The content of the PSS was identified to detect the degree of respondents' experienced unpredictable, uncontrollable stress and felt overloaded in their lives. The PSS also can be used to investigate how often the teachers experienced an event in their life over the last month (Cohen & Williamson, 1988). The *Perceived Stress Scale* (PSS) is in Appendix A, Survey Part 3.

### ***Burnout***

#### ***Theoretical Definition***

Burnout is defined as a tripartite construct: (a) emotional exhaustion, where teachers feel worn-out and drained and are emotionally overwhelmed, powerless, and frustrated. People feel emptied of their emotional resources; (b) depersonalization, where teachers distance themselves from students and treat students impersonally with negative attitudes or callous responses to people; and (c) reduced personal accomplishment, where teachers feel inefficient, have low morale, and feel inadequate to achieve their work demands. There is a devaluing of personal efficacy and a decline in one's feeling of competence and achievement in working with others (Maslach & Jackson, 1986). Burnout has also been defined as "a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment which is a special risk for individuals who work with other people in some capacity" (Leiter & Maslach, 1998, p. 347).

### ***Operational Definition***

In this study, perceived level of burnout of kindergarten teachers was measured by the scores on the educational form of the Maslach Burnout Inventory (MBI-ES) developed in 1996 by Maslach, Jackson, and Schwab. The MBI-ES contains three subscales that assess three different aspects of experienced burnout: (a) Emotional Exhaustion (EE); (b) Depersonalization (DP); and (c) Personal Accomplishment (PA). The Maslach Burnout Inventory *Form ED* (MBI-ES) is in Appendix A, Survey Part 5.

### ***Intention to Leave***

#### ***Theoretical Definition***

Teachers who do not remain in the field of education are often likely to leave their jobs if another appropriate post is found (Weisberg & Sagie, 1999).

#### ***Operational Definition***

In this study, kindergarten teachers' intention to leave resulting from burnout was measured. The *Teacher Intention to Leave Scale*, developed in 1994 by Weisberg, and is shown in Appendix A, Survey Part 6.

### ***Perceived Self-Efficacy***

#### ***Theoretical definition***

Perceived self-efficacy refers to the "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). Perceived self-efficacy can also be defined as the confidence to complete assigned

work and manage prospective situations, no matter what happens (Bandura, 1994). A strong sense of self-efficacy makes a difference in how people think, feel, act and motivate themselves. People with high self-efficacy have a high quality of decision-making and higher academic achievement (Schwarzer & Scholz, 2002).

### ***Operational definition***

The *General Self-Efficacy Scale* (GSE), developed in 1995 by Schwarzer and Jerusalem, was used to measure the belief of kindergarten teachers to fulfill novel or tough works, or cope with misadventure. The *General Self-Efficacy Scale* (GSE) is in Appendix A, Survey Part 4.

### ***Demographic Characteristics of Kindergarten Teachers***

#### ***Theoretical Definition***

**Gender** is noted as either male or female. Anderson and Iwanicki (1984) indicated that male teachers had higher rates of burnout than female teachers.

**Marital status** is categorized as married, single, and other. These classifications are based on Heys and Diekstra's (1999) study which provided evidence that unmarried teachers recorded higher burnout levels than married teachers.

**Age** is categorized as 35 and below, 36-45, 46 and above. Huston (2001) pointed out teachers in the 36-45 age range presented as more isolated and alienated.

**The level of education** variable is categorized as Bachelors Degree (B.A.), Masters Degree (M.A.), Doctoral Degree (Ph.D. or Ed.D.) or other. These classifications are according to Friedman's (1991) study, in which people who had higher degrees of education reported higher levels of burnout.

**Religious** is categorized as with religious beliefs or not. Teachers who were without religious belief experienced a greater sense of all three burnout syndromes (Lau, Yuen, and Chan, 2005).

### ***Operational Definition***

The Demographic Characteristics profile, developed by the researcher, including the following five attribute variables of kindergarten teachers: (a) gender; (b) marital status; (c) age; (d) educational level; and (e) religious category. This profile is shown in Appendix A, Survey Part 1.

## ***Work Profile of Kindergarten Teachers***

### ***Theoretical Definition***

**Total numbers of working hours** is categorized as 50 hours per week and below, and 51 hours per week and above. On average, teachers work approximately 50 hours weekly (NEA, 2006b). Actually, teachers prepare more education-related activities during after-school time, and on weekends. Overloaded, work schedules make teachers feel that they do not have a personal life, and this often results in burnout (Arnstine, 2002).

**Teaching experience** is categorized as 5 years and less, 6-10 years, 11 years and more. These classifications are based on Mo's study (1991), in which teachers with fewer years of teaching, experienced more burnout than teachers with more years of teaching experience.

**Salary level** is categorized as \$35,000 and below, \$35,001~ \$45,000, \$45,001 and above. These classifications are based on data from The National Teacher

Association (NEA) which reported that “the average salary for veteran teachers in the 2004-05 school year was \$47,808” (NEA, 2005, p. 1). Moreover, the average salary of the beginning teacher in the 2003-2004 school year was \$31,704. (American Federation of Teachers 2003-04 Teacher Salary Survey, 2005). According to Hammond (2003), teachers are most likely to leave teaching when they earn lower pay compared with other occupations.

### ***Operational Definition***

The *Work Profile* developed by the researcher, contains: (a) working hours; (b) teaching experience; and (c) satisfaction with salary. The *Work Profile* is shown in Appendix A, Survey Part 2.

### **Justification of the Study**

Teacher burnout is a major concern that impacts teaching quality, student achievement, and school climate (Wong & Cheuk, 2005). Moreover, teachers that suffer from job burnout are at risk for a high rate of teacher turnover (NCE, 2003). In the U.S., 46% of all new teachers leave the profession within five years (NCTAF, 2005). In Taiwan, the percentage of kindergarten teacher turnover is about 65% (NPF, 2002).

The majority of burnout studies in education have only focused on classroom teachers, special education teachers, and professional support staff (Montgomery & Rupp, 2005). Furthermore, the personal, organizational, and role-related conditions related to burnout need to be identified (Maslach & Jackson, 1986).

No single study has integrated the factors of demographic characteristics, work profile, job stress, and perceived self-efficacy to explore the differences and explain the

relationships to teacher burnout and intention to leave in Taiwan. This study was designed to evaluate and improve previous research designs. Moreover, this study contributed to existing literature and future practices in the field. Teacher burnout is extremely important today because the high rate of teacher turnover results in schools losing an inestimable investment in professional development of educators, curriculum development, and related personnel costs (Farber, 1991; Granziano, 2005; Huston, 1989).

In addition, research has provided evidence that the activities of education do not fit today's teachers' expectations (Wood & McCarthy, 2002). The findings of this study helped teachers conduct better performance in teaching by using self-efficacy to cope with the stress and burnout. The school system may keep more qualified teachers and students may reach a higher level of academic achievement.

The proposed study was researchable. The research questions asked in this study are scientific. All the variables and theoretical framework was measured. The study was feasible because it was implemented in a reasonable amount of time. The cost of conducting this research was reasonable. The participants were available and the proposed sample size was sufficient to conduct the analyses. All variables were analyzed by statistical analyses, including descriptive analysis, correlation, *t*-tests, ANOVA with post hoc comparison, simple regression, multiple regression, and multiple mediated regression. The concepts in the theoretical framework were measured. Finally, this study was implemented necessary procedures to protect the rights of human subjects.

### **Delimitation and Scope**

This geographic area and setting of this study was restricted to teachers in schools with kindergartens in Kaohsiung City, Taiwan. The target population was kindergarten

teachers listed in the 2006 to 2007 school year of 11 school districts in Kaohsiung City, Taiwan. Eligibility criteria included teachers who had the capability of speaking, reading, and writing Traditional Chinese. The age of the teachers was at least 18 years old.

The delimitations in geographic area and to kindergarten teachers were to promote the feasibility of this study. In addition, the sample and setting of this study were more homogenous due to this delimitation. This reduced the impact of extraneous variables, including teachers who did not hold a current Taiwan Teacher Certification in Kindergarten, and diverse cultures. An estimated 1,599 kindergarten teachers were invited to participate in this survey research. The survey was translated from English into Traditional Chinese.

### **Organization of the Study**

Chapter I provided an overview of this study about the kindergarten teachers' job stress, burnout, perceived self-efficacy, and intention to leave in Taiwan. This introduction includes the background and purpose of the study related to teacher burnout and intention to leave. Both theoretical and operational definitions of terms were presented for each of study variables is defined. The justification for the study was identified, because this study is significant, researchable, and feasible. The delimitations and scope were listed as they apply to kindergarten teachers.

Chapter II provides an in-depth literature review and theoretical framework leading to the propositions tested by the research questions and hypotheses addressed in this study.

Chapter II provides an in-depth literature review of perceived stress attributes on teacher burnout. A critical analysis of theoretical and empirical literature about teachers' job stress, burnout, perceived self-efficacy, and intention to leave will be presented. The theoretical framework (research model) was derived from the literature gap, and led to the propositions and hypotheses presented at the end of the chapter. Research question and hypotheses are the third and fourth sections of chapter II.

Chapter III presents the research methodology, consisting of the research design, population, sampling, survey instruments, data analysis procedures, ethical considerations, methods of data analysis, and finally the evaluation of the research methodology.

Chapter IV describes the findings of the study including the results of hypotheses testing, while Chapter V presents the interpretations of those results. Chapter V also includes conclusions related to the study, along with their implications and limitations, and suggestions for future research.



**CHAPTER II**

**REVIEW OF THE LITERATURE, THEORETICAL FRAMEWORK,  
RESEARCH QUESTIONS, AND HYPOTHESES**

**Introduction**

Many studies have explored the factors of burnout and intention to leave for diverse occupations, but teacher burnout and intention to leave earn the most attention of researchers. That is why the governments of many countries focus upon this critical educational threat and try to retain good teachers who achieve a high quality of teaching. Burnout is a topic of global interest as teachers who burn out do not care about what they do, and their students make no progress in academic achievement. Teachers who reach the burnout level feel anxious, frustrated and worn-out and expect under-performing from their students. Obviously, teacher burnout has a negative impact on the educational system. Furthermore, the high rate of teachers leaving their profession imposes heavy costs on schools. Therefore, it is important to understand how to prevent teacher burnout and how to substantially reduce the percentage of experienced, qualified teachers who leave their jobs. It is also critical to examine how teachers perceive the factor of burnout and what strategies can be used to prevent it.

Chapter II supplied a critical analysis and review of theoretical and empirical literature to explore the factors leading to teacher burnout and intention to leave and identify areas of future scholarly inquiry. A review of the theoretical and empirical literature found that the demographic characteristics, work profile, self-efficacy made a great impact on teacher burnout and intention to leave. As there is only little current literature in this area, this produced a literature gap, and additional research was needed

to explore the topic of this research proposal on the basis of that gap. The theoretical framework was developed for this study. Research questions were explored and will be answered. Hypotheses of this study were developed and will be tested. The following section supplied an overview of the concept of teacher's demographic characteristics, work profile, stress, burnout, self-efficacy, and intention to leave.

## **Review of the Literature**

### ***Job Stress***

Blase (1982) conducted research in a predominantly white, suburban high school in New York City. This researcher spent approximately 400 hours collecting data over a school year. The school was divided into five parts each containing 43 teachers, 800 students, four full-time guidance counselors, one principal, and one part-time drug counselor. The average teaching experience of teachers was 10 years. Each teacher participated in three structured and unstructured interviews, five closed-ended and open-ended questionnaires. Throughout the data collection period, coding was established and the validity was evaluated. Blase investigated the relationship between teacher stress and burnout, based on Teacher Performance Motivation Theory (TP-M Theory). According to TP-M Theory, teachers experienced stress from student needs, and teachers implemented their performance ineffectively, which resulted in a negatively stressful cycle leading to a long-term period of job-related stress and eventual burnout.

TP-M Theory views teacher burnout as the accumulated result of job stress. Due to a lack of positive resources to deal with stress and without positive feedback, teachers decrease their involvement in student activities, and unenthusiastically interact with their students. These symptoms are the result of teacher stress related to their job.

Teachers who are eager to fulfill student needs feel a shortage of personal and professional resources and present negative attitudes toward students. To reduce environmental stressors and be able to supply positive supports to students, teachers need to feel more self-confidence and motivation to cope with student behavior problems to avoid burnout.

The strength of the study was that the quantitative data related to teacher stress and burnout. The author raised relevant questions and identified problems involved in the concept of teacher burnout. Further studies should include a broad range of qualitative research related to teacher's perspectives on work involved in different levels of schools and examine, refine and expand TP-M Theory.

### ***Burnout***

Burnout is a significant issue in all trades and occupations, especially for employees who work in human service professions (Schwarzer, Schmitz & Tang, 2000). Burnout can be seen in people who are worn out physically or emotionally from long-term stress. It is a major contributor to poor performance, reduced well-being and reduced accomplishments (Au, Schwarzer, Schmitz & Tang, 2000). The most widely accepted conceptualization of burnout is articulated by Maslach and Jackson (1986). These theorists define burnout as a tripartite construct:

1. Emotional exhaustion, where teachers feel worn-out and drained and are emotionally overwhelmed, powerless, and frustrated. People feel emptied of their emotional resources;
2. Depersonalization, where teachers distance themselves from students and treat students impersonally by negative attitudes or callous responses to people; and

3. Reduced personal accomplishment, where teachers feel inefficient, have low morale, and feel inadequate to achieve their work demands. There is a devaluing of personal efficacy and a decline in one's feeling of competence and achievement in working with others.

Burnout has also been defined as “a syndrome of emotional exhaustion, depersonalization, and reduced accomplishment which is a special risk for individuals who work with other people in some capacity”. (Leiter and Maslach, 1998, p. 347)

### ***Meta analysis of all factors***

Montgomery and Rupp (2005) conducted research on the relationships between psychological stress and related constructs. Using a meta-analysis of 65 past literature reviews from 1998 to 2003, the data included published studies from 51 journals, 13 dissertations, and 1 refereed conference proceeding. Based on quantitative and qualitative studies, teachers who were unable to cope with stresses effectively and could not find useful strategies to eliminate pressure were more likely to become emotionally exhausted. After a chronic accumulation of negative emotional responses, teachers felt burned out and had a breakdown due to the failure of personal coping mechanisms.

Stresses on teachers include: (a) poor pupil motivation; (b) time pressures; (c) workload demands; (d) rapid changes in curricular demands; (e) others' evaluation of their performance; (f) conflicts with colleagues; (g) poor administrators' support; (h) lack of classroom management skills, and (i) poor working conditions. Using the literature research and definitions of stress, Montgomery and Rupp (2005) built a theoretical-empirical model of teacher stress. The core of the model is the teacher's personality. This model focused on personal characteristics in response to the stressors. The external

stressors include (a) student behavior; (b) school structure; (c) workload; (d) colleagues; (e) administration; (f) personal life; and (g) environmental structure. When teachers perceived environmental stresses, they reacted with either active coping mechanisms or passive coping mechanisms, including cognitive strategies, behavioral strategies, and emotional strategies. Then, teachers had either positive or negative emotional responses after perceiving the feelings of the three symptoms of burnout: (a) emotional exhaustion; (b) depersonalization; and (c) personal accomplishment.

Using the data obtained from past students, Montgomery and Rupp (2005) analyzed the correlations between variables and found the following results:

1. External stressors were the most highly influential in burnout;
2. Emotional response variables were significantly related to burnout; and
3. Personality mediators had a high correlation between environmental structure, personal support and emotional responses.

The objectives of these studies were to understand the relationship between (a) external stressors; (b) negative emotions; (c) personality mediators; (d) support variables; and (e) burnout. The first important strategy toward teacher burnout was to let teachers perform at a high level of teaching, feel more satisfied in the teaching environment, and to train teachers to understand the emotional signals related to external stressors that create burnout. The limitations of the Montgomery and Rupp's (2005) study were in the sample coding. Suggestions for future studies are (a) investigate the impact of external stressors on negative emotions; and (b) determine environmental and emotional factors related to burnout.

### *Student Behavior Factor*

Rottier, Kelly, and Tomhave (1983) conducted research in West Central Minnesota school districts with 348 teachers ranging from kindergarten to 12<sup>th</sup> grade. The researchers tried to examine information about teacher's attitudes toward their students and school administrators, the relationships between school districts and communities, and teachers' health patterns.

The results of the study were as follows:

1. The relationships between teachers and students: (a) teachers are less respected by students than in the past before; and (b) teachers who ask students to follow school rules are popular with students;
2. The perceived satisfaction with teaching was as follows: (a) Female teachers think teaching is more interesting than before, but male teachers do not; (b) Female teachers feel they can get enough fulfillment in teaching, but male teachers do not; (c) Most male teachers are considering changing to other occupations, while female teachers plan to remain in teaching; (d) Male teachers become more emotional than female teachers; (e) 35% of the total teachers view teaching as hard and interfering with their family life; (f) Most of the teachers (53% of the total group) stated that their enthusiasm for teaching has not increased from the beginning of their careers; and (g) male teachers have a higher tendency to leave teaching than female teachers;
3. Teacher reaction to administration: (a) Support from the building principal is not as useful as before; (b) Presently, principals are more amiable, and they are more accessible than before; (c) Administrators are loath to make difficult

- decisions; (d) Principals do not make a positive appraisal of good things teachers have done; and (e) Support from administration and supervision is disappointing;
4. Teacher reaction to the school district: (a) Parental support is a good feedback measure of teacher's efforts; and (b) Student discipline is not viewed as an obstacle by teachers;
  5. Teacher satisfaction with school expectations are: (a) Teachers feel more responsibility and less control than before; (b) Teachers are overloaded with preparations which decrease their classroom performance; and (c) There is a shortage of curriculum supplies and financial support; and
  6. Teacher health patterns: (a) Teachers always have difficulty sleeping at night after teaching; and (b) Teachers often have colds and catch the flu.

The conclusions of the research results are as follows:

1. Teachers from small rural school districts express less satisfaction in teaching;
2. Male teachers are perceived as more uncomfortable than female teachers, especially in the age range of 41 to 50;
3. Male teachers feel less satisfied than female teachers;
4. Male teachers are unlikely to communicate with the administration;
5. Male teachers seldom identify themselves with the community; and
6. Male teachers from small rural schools have lower expectations from teaching.

Friedman (1995) had completed two studies on teacher burnout. The first study contained 348 teachers and 365 students from 12 religious and non-religious schools in Israel. The sample was randomly chosen from 1,200 primary schools in Israel by a

stratified single-stage cluster sampling, and the sample was divided into religious and non-religious schools. Measures used in this study were The Teachers' Work and a Teacher-Student Interaction questionnaire, including teacher's personal characteristics, the level of burnout teachers reach, and student behavior patterns occurring in the classroom. The research findings were (a) teacher burnout was significantly predicted by student's attentiveness in the religious schools; moreover, teacher burnout was significantly predicted by student's disrespect in the non-religious schools; (b) there was no significant relationship between teacher exhaustion and student attentiveness; student sociability and accomplishment was not a significant factor; and (c) 475 statements were analyzed using content analysis with the finding that student misbehavior patterns always represented interference with class activities or offending teachers. Using a Chi-square test on student behavior pattern, there were no significant differences found between religious and non-religious schools.

The target population in study two included 122 humanistic teachers (13 male and 109 female) and 119 (63 male and 56 female) custodial teachers. Measurement includes three subscales: (a) Teacher Burnout Scale; (b) the Pupil Behavior Patterns scale (PBP); and (c) the Pupil Control Ideology Scale (PCI). The findings were: (a) There is no significant difference between pupil control ideology and gender; (b) Female teachers met the challenges from students' disrespect better than male teachers; (c) Using a hierarchical regression analysis, one of the student behavior patterns, disrespect to teachers, could be predicted as contributing to teacher burnout; and (d) Based on the separate regression analyses, there were significant differences between disrespect and



humanistic teacher burnout. Similarly, lack of attentiveness contributed significantly to the prediction of custodial teachers' burnout.

From these two studies, the research results are as follows: (a) Student behavior patterns were the major factor related to teacher burnout; (b) Paying less respect to teachers and peers was a prevalent behavior among students; (c) Different student control ideologies used by teachers made no difference according to teacher self-reports; (d) Humanistic teachers felt burnout related to student disrespect; likewise, custodial teachers perceived burnout due to lack of attentiveness; (e) Lack of attentiveness has an influence on male teachers; female teachers identified students' disrespect as an important factor related to burnout; (f) Humanistic teachers emphasized personal relationship with students and encourage students' self-discipline. Due to little training for teachers' classroom management, students paid less respect to teachers; and teachers could not keep students in order, so students paid less attention to their teaching; and (g) The sources of stress came from the goals and beliefs of teachers.

The strengths of this study were providing two theoretical contributions. The findings were limited to 391 elementary and secondary teachers. Further studies should include a broad range of junior high or senior high school teachers. Research should focus on the association between student academic achievement and teacher burnout.

Abel and Swell (1999) explored the sources of stress and symptoms of burnout in eleven school systems in South Georgia and North Carolina. The sample included 52 (10 male and 42 female) rural school teachers and 46 (four male and 42 female) urban teachers. Of the rural teachers, there were 28 teachers from South Georgia and 24 teachers from North Carolina. Of the urban teachers, 23 teachers were from South

Georgia and 23 teachers were from North Carolina. All teachers volunteered to participate in the present research.

A rural area was defined as having a population of 30,000 or less, and an urban area was viewed as having a population of 100,000 or more. The years of teaching experience in education was calculated for both groups; the average number of years of teaching of rural teachers was 15.35 and the average number of years of teaching of urban teachers was 15.70.

The measures used were (a) Sources of Stress Questionnaire (Borg and Riding, 1991), which included four dimensions: pupil misbehavior, poor working conditions, poor staff relations, and time pressures; and (b) Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981, 1986), which contained three subscales: Emotional Exhaustion (EE), Depersonalization (DP), and Personal Accomplishment (PA).

The results obtained through the use of multivariate analysis of variance (MANOVA) are listed below:

1. There was no significant difference between rural and urban teachers in pupil misbehavior and time pressures;
2. From the self-reported stress questionnaires, the most stressful source in the urban teachers was from poor working conditions, and poor staff relations;
3. Data from the statistical analysis found that the urban teachers identified poor working condition as more serious than rural teachers, due to large class sizes, scanty teaching supplies, and a shortage of education funds. Furthermore, the larger school systems with a greater number of staff members resulted in poorer staff socialization and less collegial support; and

4. The stress resulting from pupil misbehavior, and time pressures had much greater impact on both rural and urban teachers than poor working conditions, and poor staff relations.

This study did not indicate reliability and validity and the findings were limited to 98 secondary teachers. Further studies should include a broad range of elementary, junior high or senior high school teachers to investigate the qualitative research. Research should focus on the differences between male and female teachers.

Friedman (2000) carried out research on teacher's perceived self-efficacy between expected and observed levels. The data were collected from self-reports of eight first year teachers; four regular teachers and four special-education teachers in Israel. The method used was individual interview. The obvious difference between expected and observed in teaching is after teachers' experienced the "reality shock crisis" which differentiated, those who continued to teach and those who left the profession.

The findings of this study were: (a) Novice teachers found out their training for teaching could not prepare them for real classroom teaching. As a result, teachers felt disappointed, despairing, and discouraged. It was the initial teaching crisis; (b) Teachers found that realistic teaching was really different from their theoretical preparation. As a result, teachers experienced symptoms of depression, exhaustion, reduced accomplishment, and depersonalization leading to teacher burnout. The differences were in (a) Classroom management: student misbehavior was the most frustrating issue; (b) Workload demands: Teaching took up an entire day without end and included preparation, classroom teaching, administrative demands, paper correcting, and communicating with parents at night time; (c) Negative evaluation by others such as complaints or criticisms

from parents, administrators, and students imposed on them left them feeling worn-out; (d) Low societal recognition and poor student motivation in academic achievement had a negative impact on teachers; (e) Lack of socialization with colleagues created a distance from teachers and teachers perceived alienation and isolation during the school day; and (f) Poor administrative support and lack of mentoring made teachers feel helpless and incapacitated.

Based on this study, there are ways for teachers to understand and eliminate burnout: (a) Setting up realistic and achievable goals in teaching and schoolwork; (b) Using professional self-efficacy to reduce the stress; (c) Having good interactions with colleagues, students, and principals; and (d) Winning support from others, especially from parents as this was the most important factor to cope with teacher burnout.

The findings were limited to 16 teachers in Israel and the method of data collection was only through interviews. Further qualitative and quantitative research studies should include a larger number of teachers in the investigation. Research should focus on the relationship between personal characteristics, perceived self-efficacy and teacher burnout.

Evers et al. (2003) investigated 411 students at a Regional Training Center (RTC) in the south of the Netherlands. Participants included 159 females (38.7%) and 252 males (61.3%). The average age of students was 18.3 years. There were 73 teachers (58 male and 15 female). The study focused on students' viewpoints of perceived teacher burnout related to student misbehavior and teacher strategies to deal with the behavior problems. Measurements consisted of three questionnaires: (a) Burnout: The Maslach Burnout

Inventory (MBI); (b) Teacher Competence: Coping with Disruptive Behavior Scale (CDDBS); and (c) Disruptive Behavior: Perceived Disruptive Behavior Scale (PDDBS).

The research findings using a hierarchical regression analysis were as follows: (a) perceived disruptive student behaviors led to significant differences among teachers in both emotional exhaustion and depersonalization; (b) Teachers' skills to deal with students' misbehavior was significant on all three symptoms of burnout: emotional exhaustion, depersonalization, and personal accomplishment; (c) Teacher gender showed significant differences in emotional exhaustion;. (d) Teachers' efficacy to handle the students' misbehavior was the most critical factor related to burnout; (e) Some teachers effectively coped with behaviors related to burnout; and (f) Teachers should pay more attention to their interaction with students. An effective communication between teachers and students improved classroom climate and allowed a higher level of teaching quality.

The findings were limited to 411 students in the south of the Netherlands and the study was based on students' perceptions. Further studies should include a larger number of students to investigate the students' perceptions of their teachers and the mental health of teachers. Research should focus on the interaction between students and teachers based on the teachers' self-report and on students' reports.

**Summary.** Teachers are less respected by students than in the past before (Rottier et al., 1983). Friedman (1995) had pointed out teacher burnout was significantly predicted by student's disrespect in the non- religious schools. In addition, student misbehavior patterns always represented interference with class activities or offending teachers. The stress resulting from pupil misbehavior had much greater impact on both rural and urban teachers than poor working conditions, and poor staff relations (Abel &

Swell, 1999). Friedman (2000) carried out research on teacher's perceived self-efficacy between expected and observed levels. From this research finding student misbehavior was the most frustrating issue. Furthermore, Evers et al. (2003) pointed out perceived disruptive student behaviors led to significant differences among teachers in both emotional exhaustion and depersonalization

### ***Age Factor***

Farber (1984) conducted a study based on a sample of 365 suburban teachers from three school districts in Putnam, Westchester, and Dutchess Countries in New York. The compositions of the target population were 236 female teachers and 129 male teachers chosen from 398 public schools. The teachers were primarily white (96%), and married (72%); the average age of the teachers was 40.3; the average number of years of teaching experience was 13.9; the average years of retention in their present school was 10.5; about 37% of the teachers had other working experience before teaching. Teachers represented each of the grades in kindergarten through high school. Approximately 95% of the teachers participated in the teacher's union.

The measure used in this study was the Teacher Attitude Survey (TAS), a modified version of the Maslach Burnout Inventory (MBI). The results of the study were (a) 21% of the teachers would not want to be a teacher any more if they could choose again; (b) 87% of the teachers viewed administrative meetings as do nothing or contributing only a little to solve problems teachers met; (c) almost 73% of the teachers were dissatisfied with their salary; only 11.2% of the teachers felt their payment was adequate; and (d) 35.1% of the teachers thought their opinions were not accepted by school administrators.

In the age ranges of 21 to 23, 34 to 44, and 45 to 65, teachers felt more burnout. Only 15.2% of the teachers viewed school as a community they lived in; almost 60.8% have no or infrequent feelings that their school was like a community. The heaviest pressure was experienced by teachers 31 to 40 years old in both rural and urban areas. Teachers who taught in junior high or middle schools perceived it as much more stressful than those who taught in the elementary or high schools.

This study was limited to 365 suburban teachers and only in three New York school districts. Moreover, the data collection was only from 30% on the sample. Further studies should include a broad range of urban and rural school teachers, and should focus on the needs of teachers, teacher-student contact, and teaching experience, which are related to teacher burnout.

Gold and Bachelor (1988) conducted research on a sample of 106 full-time practice teachers teaching in elementary schools (K-6). The participant's schools were distributed in urban and suburban areas of Southern California. The participants were drawn from one large university. Of the participants, there were 97 female teachers and nine male teachers. The average age was 27.83 years. Gold and Bachelor investigated the relationship of gender, age, marital status, teaching grades, teacher training experience, and student misbehaving management as related to teacher burnout.

The measurement used was three subscales of the Maslach Burnout Inventory. The data was analyzed using one-way analysis of variance and the data results provide the means, standard deviations, and *t*-tests of significance.

The findings were: (a) Gender: There is no statistically significant relationship between gender and teacher burnout; (b) Age: Younger practice teachers experienced

lower levels of burnout symptoms than older practice teachers. Furthermore, younger practice teachers had more personal accomplishments; (c) Marital Status: Married, single, or divorced statuses did not have a direct influence on teacher burnout; (d) Teaching grades: There was no statistically significant relationship between the grade taught and teacher burnout; (e) Teacher training experience: teachers who experience training before student teaching felt less emotionally exhausted; and (f) Training in Disciplining Students: Students misbehavior was a serious threat to novice teachers. There were significant differences between emotional exhaustion, personal accomplishment and teacher burnout based upon the ability to effectively discipline students.

Limitations in the study were limited to 106 elementary practice teachers, the sampling setting and the fact that there were only nine male teachers in the sample. Further studies should include a broad range of junior high or senior high school teachers, and a large sample of male teachers. Research should focus on more background variables and investigate the combined effects related to teacher burnout.

Friedman (1991) researched school factors associated with teacher burnout. The study used a random sample of 1,579 teachers in 78 elementary schools. There were 1,485 female teachers and 112 male teachers. Sixty-three percent of the teachers were of Israeli origin, 20% were European or American, and 17% were of Afro-Asian origin. The teacher's average age was 34 years. The study used the Maslach Burnout Inventory (MBI) and a personal demographic characteristics information sheet to collect data to test the status of teacher burnout.

According to the teacher burnout result, the participating schools were divided into high-burnout schools and low-burnout schools. Furthermore, based on the



differences between school climate and culture, and according to the administrative stability and social and geographic position, there were six schools chosen from high-burnout schools and six schools chosen from low-burnout schools.

The results provided evidence that there were four school-culture factors related to teacher burnout: (a) school measurable goals, like teacher evaluation, academic skills; (b) lack of confidence in teacher's professional ability;(c) limited and restricted school climate; (d) poor physical environment.

The research results found the following:

1. The age range from 41 to 45 was the peak of teacher burnout. The average age of teachers in the low-burnout schools was 33 years old, and in the high-burnout schools 33.5 years old;
2. Teachers with high degrees of education had greater expectations in their teaching career, but also had higher levels of frustration resulting from teaching stress; and
3. The average age of teachers in high-burnout school teachers is 2.39 years older than teachers in low-burnout school; and the difference in average years of experience in teaching was 3.76 years for teachers in high-versus-low burnout school.

A traditional, successful school can satisfy teachers with what they need, and help them achieve high standards of academic excellence. However, such a school may not be open to accepting new instruction or method, as the older strategies have been effective. On the other hand, teachers see new teaching methods as a challenge to them which is considered to be a stressful factor. This finding was relevant to McGregor's (1960)

Theory X and Theory Y. According to Theory X, high levels of stress results in high levels of teacher burnout.

This study did not indicate the method to collect the survey, and the findings were limited to 1, 597 elementary practice level teachers with a sample of only 112 male teachers. Further studies should include a broad range of junior high or senior high school teachers, and a large sample of male teachers. Research should focus on more background variables, including working hours, educational levels, and marital status.

**Summary.** According to Farber (1984), teachers are grouped into (a) 22 to 33; (b) 34 to 44; and (c) 45 to 65 year-old age groups. Teachers in the age range of 34 to 44 years old perceive symptoms of burnout more than in the other two age groups. Studies using personal characteristics such as age showed that older teachers experienced more burnout than younger teachers. Gold and Bachelor (1988) conducted a research on a sample of 106 full-time practice teachers teaching in elementary schools (K-6) and conducted a finding that younger practice teachers experienced lower levels of burnout symptoms than older practice teachers. Furthermore, younger practice teachers had more personal accomplishments.

Teachers in the 41 to 45 year old age group were most likely to feel burnout and leave the profession (Friedman, 1991). Teachers who were 36 to 45 years old expressed more depersonalization than teachers who were younger or older (Huston, 2001). Younger teachers were more burned-out on all three syndromes than older teachers who noticed less feelings of burnout than younger teachers (Lau et al., 2005).

### ***Gender Factor***

Milstein, Golaszewski, and Duquette (1984) conducted research in a large urban school system. There were nine volunteer schools that participated, and four other

schools were chosen from similar demographic backgrounds. The sample population contained 3,400 teachers and 48,000 students in grades Kindergarten through eight in a large urban school system. The study used the “Stress in Schools” Scale to measure organizational stress, and there was an individual health manifestation item questionnaire.

Stress occurs when a person perceives environmental demands which are beyond an individual’s perceived capability to endure them and when a person fails to tackle these demands. In addition, stress is produced from the lack of fit between environmental demands and personal ability facing those demands, like technique, aptitudes, and faith in the situation (Milstein et al., 1984).

The results of the study were that (a) Female teachers feel more stress than male teachers, because female teachers think the work is not so hard that their students cannot do as well as they expect to do; (b) Preschool and kindergarten teachers perceive less stress than any other grade teachers, because they do not have to pay as much attention to student’s academic achievement; and (c) The third-grade and fourth-grade teachers expressed a great deal of stress due to the heavy workload as they report that they worked an average of nine hours or more per day.

If organizational leaders consider the fit between the environment and person (P-E fit), they can design a much better plan for pressure management. According to French and Caplan’s P-E fit, there are five environmental categories: (a) Relationship at Work; (b) Organizational Structure and Climate; (c) Factors Intrinsic to the Job; (d) Role in the Organization; and (e) Career Development.

Limitations in the study were only 130 elementary teachers (K-8) participated and the sampling setting focused only on four participating schools. In addition, the method

of data collection was not clearly described. Further studies should include a broad range of junior high or senior high school teachers, and should focus on personal teacher characteristics, and psychological stressors.

Huston (1989) conducted a case study on the relationships between teacher burnout and selected demographic characteristics, such as personal locus of control and teacher effectiveness as perceived by students. The research finding pointed out that male teachers perceived more depersonalization than female teachers

Lau et al. (2005) conducted research on the relationship between teacher's demographic characteristics and teacher burnout in Hong Kong. There were 1,797 secondary teachers participating in the study of which 819 were males, 969 were females, and 9 teachers did not identify gender. The age range was from 21 to 60 years with an average teacher age of 35. The average number of years of teaching experience was 10.93. Burnout was measured by the Maslach Burnout Inventory (MBI) which contains three subscales: (a) Emotional Exhaustion (EE); (b) Depersonalization (DP); and (c) Personal Accomplishment (PA).

Using factor analysis, reliability tests, frequency checks, analysis of variance and multiple regression to analyze the data, the research results were as follows:

1. Gender revealed significant differences in teacher burnout; male teachers perceived more depersonalization than female teachers. Female teachers perceived more emotional exhaustion and reduced personal accomplishment than male teachers;
2. Younger teachers presented much higher levels of emotional exhaustion and reduced personal accomplishment, especially if they were 30 years old and

below. Teachers more than 41 years old kept much more distance from others, including students;

3. Single teachers experienced more burnout than married teachers;
4. Teachers who had religious beliefs paid more concern to personal accomplishment. They felt more reduced personal accomplishment than those who do not have religious beliefs;
5. Teachers with fewer years of teaching experience suffered from much more burnout, especially those with five years and fewer teaching experience;
6. Teachers who had already completed training had much more burnout than teachers who were being trained or were not trained yet;
7. The low ranking of teachers in society was the most serious factor to impact burnout. Teachers who were ranked as low level have strong feelings about leaving teaching.
8. Student's academic achievement was related to teacher burnout. The lower the academic abilities of students achieved, the more depersonalization teachers had; and
9. Teachers who encountered student discipline problems or student misbehaviors perceived less personal accomplishment.

This study did not indicate the validity, and reliability and findings were limited to 1,797 secondary teachers. Further studies should include a broad range of elementary, junior high or senior high school teachers. Research should focus on more background variables, including total hours of working, teacher income, and family support.

**Summary.** Milstein, Golaszewski, and Duquette (1984) conducted research in a large urban school system. This research pointed out that female teachers feel more stress than male teachers, because female teachers think the work is not so hard that their students cannot do as well as they expect to do. Male teachers had higher levels of depersonalization than female teachers (Huston, 1989), although female teachers scored significantly higher in emotional exhaustion than male colleagues (Maslach et al., 1996). Female teachers expressed more burnout as measured by emotional exhaustion and personal accomplishment, while male teachers showed greater burnout syndromes in depersonalization than female teachers (Lau et al., 2005).

### ***Religious Beliefs Factor***

Huston (1989) conducted a case study on the relationships between teacher burnout and selected demographic characteristics, such as personal locus of control and teacher effectiveness as perceived by students. Samples were selected from 68 voluntarily full-time teachers who taught grades nine to twelve in secondary schools in a small city in Western New York. Measurements in this study used three scales and interviews, including the Maslach Burnout Inventory (MBI), the Rotter Internal-External Locus of Control Scale, and the Purdue Teacher Evaluation Scale (PTES). A chi-square test was used to analyze the data.

The six findings of this study are as follows: (a) Religion - Protestant teachers perceived more depersonalization than Catholics or non-believers; (b) Ages - Teachers below 36 years old or over 45 years old expressed less depersonalization than teachers in the age range from 36 to 45 years old; (c) Gender - Male teachers perceived more

depersonalization than female teachers; (d) Marital status - Married teachers perceived more internal orientation than single, divorced, or separated teachers; (e) Years of teaching experience—Teachers who had taught 15 to 19 years perceived more internal orientation and (f) Teachers who were evaluated by their students as effective teachers had low levels of emotional exhaustion.

The study found that teachers achieved a high level of burnout (over one-half). Suggestions to decrease teacher burnout and increase teacher effectiveness included (a) Empowering teachers to participate in the process of decision-making and letting teachers view school as a community; (b) Enhancing teacher's comparable worth and allowing teachers to be proud of being a teacher; and (c) Improving working conditions and providing teaching supplies. Self-fulfilled teachers exhibit lower levels of burnout and higher levels of effectiveness as perceived by students.

This study did not indicate reliability and validity and the findings were limited to 68 secondary teachers. Further studies should include a broad range of elementary, junior high or senior high school teachers, and a large sample of rural and inner-city school systems. Research should focus on providing more background variables, including the religious and socio-economic perceptions, and examine the relationship between burnout and effectiveness.

Lau et al. (2005) conducted research on the relationship between teacher's demographic characteristics and teacher burnout in Hong Kong. Burnout was measured by the Maslach Burnout Inventory (MBI) which contains three subscales: (a) Emotional Exhaustion (EE); (b) Depersonalization (DP); and (c) Personal Accomplishment (PA). Using factor analysis, reliability tests, frequency checks, analysis of variance and

multiple regression to analyze the data, one of the research results was that teachers who had religious beliefs paid more concern to personal accomplishment. They felt more reduced personal accomplishment than those who do not have religious beliefs;

*Summary.* Huston (1989) reported on the religion factor as related to teacher burnout. Protestant teachers perceived more depersonalization than Catholic teachers or non-believing teachers. Teachers without religious beliefs tended to be more burned-out than those who had religious beliefs (Lau et al., 2005).

### ***Education Level Factor***

Brissie, Hoover-Dempsey, and Bassler (1988) carried out research on a sample of 1,213 elementary teachers in a midsouthern state. The participant's schools were distributed in rural, urban, and suburban areas, and schools were different in size, resources, and social-economic status (SES). There were 78 schools from eight school districts in this study. The average number of teachers in a school ranged from six to 43. The rate of data collection, which included responses by teacher participation, was approximately 69% per school.

The measurements included a Teacher Information Questionnaire, a School Information Questionnaire, and a Teacher Opinion Questionnaire. Through statistical analyses using multiple regression, the data included the means, standard deviations, regression coefficients ( $\beta$ ), multiple coefficient of determination ( $R^2$ ), and  $t$ -tests ( $t$ ) of significance. The results found that (a) The level of teacher education accounted for positive significance in burnout due to organizational rigidity; (b) School social-economic status (School SES) was significantly related to burnout; other significant relationships were between principal support and peer support, participation and



organization rigidity, family peer support, participation and organization rigidity, and efficacy and internal rewards. These relationships had a potential problem related to multicollinearity, because variables entered into the step wise regression equation and the value of variables increase; (c) Environmental Support had a high level of significance related to perceived burnout; (d) Principal, peer support, friends and family support, and parent support had an impact on teacher burnout; and (e) Organization rigidity was negatively related to participation. Suggestions from this present study include: empowering teachers to participate in the decision making about school goals and structure; supplying constant professional consultation and support; letting teachers feel self-efficacy and self-esteem by way of informative feedback and regular evaluation sessions.

Limitations in the study were weakness in external validity as findings were limited to 1213 elementary (K-4) teachers and the sampling setting only focuses on eight participating school districts in a midsouthern state. Further studies should include a broad range of junior high or senior high school teachers, and should focus on professional factors, including low pay and lack of prestige.

Friedman (1991) researched school factors associated with teacher burnout. The study used a random sample of 1,579 teachers in 78 elementary schools. There were 1,485 female teachers and 112 male teachers. Sixty-three percent of the teachers were of Israeli origin, 20% were European or American, and 17% were of Afro-Asian origin. The teacher's average age was 34 years. The study used the Maslach Burnout Inventory (MBI) and a personal demographic characteristics information sheet to collect data to test the status of teacher burnout.

This research pointed out that teachers who possessed high degrees of education had greater expectations in their teaching career, but also had higher levels of frustration resulting from teaching stress.

**Summary.** The higher the levels of education teachers possessed, the higher the level of burnout teachers reached (Friedman, 1991). The level of education of teacher accounted for positive significance in organizational rigidity (Brissie, Hoover-Dempsey, and Bassler, 1988).

### ***Marital Status Factor***

Huston (1989) conducted a case study on the relationships between teacher burnout and selected demographic characteristics, such as personal locus of control and teacher effectiveness as perceived by students. Measurements in this study used three scales and interviews, including the Maslach Burnout Inventory (MBI), the Rotter Internal-External Locus of Control Scale, and the Purdue Teacher Evaluation Scale (PTES). A chi-square test was used to analyze the data. From this research, the researcher pointed out married teachers perceived more internal orientation than single, divorced, or separated teachers. In addition, Lau et al. (2005) conducted research on the relationship between teacher's demographic characteristics and teacher burnout in Hong Kong. There were 1,797 secondary teachers participating in the study. The age range was from 21 to 60 years with an average teacher age of 35. The average number of year of teaching experience was 10.93. One of the research findings was single teachers experienced more burnout than married teachers

**Summary.** Huston (1989) found that married teachers had a greater internal orientation than single, divorced, or separated individuals; Married teachers are less

exhausted, experienced less depersonalization and express more personal accomplishment than non-married teachers (Lau et al., 2005).

### ***Teaching Years Factor***

Friedman (1991) researched school factors associated with teacher burnout. The study used a random sample of 1,579 teachers in 78 elementary schools. There were 1,485 female teachers and 112 male teachers. The teacher's average age was 34 years. The study used the Maslach Burnout Inventory (MBI) and a personal demographic characteristics information sheet to collect data to test the status of teacher burnout. This research pointed out teachers who had served school for 20 to 24 years were more likely to achieve the level of burnout. Furthermore, Lau et al. (2005) conducted research on the relationship between teacher's demographic characteristics and teacher burnout in Hong Kong. There were 1,797 secondary teachers participating in the study of which 819 were males, 969 were females, and 9 teachers did not identify gender. The age range was from 21 to 60 years with an average teacher age of 35. The average number of years of teaching experience was 10.93. Burnout was measured by the Maslach Burnout Inventory (MBI) which contains three subscales: (a) Emotional Exhaustion (EE); (b) Depersonalization (DP); and (c) Personal Accomplishment (PA). From this research, Teachers with fewer years of teaching experience suffered from much more burnout, especially those with 5 years and fewer teaching experience.

***Summary.*** Teachers with 20 to 24 years of teaching experience reached a peak of teacher burnout (Friedman, 1991). Less experienced teachers, especially those teaching less than 5 years, expressed the strongest feelings of burnout and tended to leave teaching (Lau et al., 2005).

### ***Salary Factor***

As Darling-Hammond (2003) pointed out, teacher salaries were less than that paid to other professionals with comparable education and training. According to National Commission on Teaching and America's Future [NCTAF] (2003), the average salary of a teacher was \$44,040 appropriately 20% below other human service professions, such as nurses (\$48,240), accountants/ auditors (\$50,700), dental hygienists (\$56,770) and computer programmers (\$71,130) (as cited in Darling-Hammond, 2003). Teachers with lower salaries, especially in areas where alternative wages were higher were more likely to leave teaching. In addition, low salaries resulted in financial pressures and cause a burden on teachers' lives. As a result, many teachers quit their jobs and left the classroom (Romanowski, 2006).

### ***Coping Methods***

Rottier et al (1983) conducted research in West Central Minnesota school districts with 348 teachers ranging from kindergarten to 12<sup>th</sup> grade. The researchers tried to examine information about teacher's attitudes toward their students and school administrators, the relationships between school districts and communities, and teachers' health patterns.

The researchers recommend that school systems should implement procedures to reduce the stress and strain from teachers. The procedures are:

1. Check out the environmental factors which may have influences on personnel and the school;
2. Based on the stress conditions, construct and set strategies related to decreasing stress;

3. Carry out positive strategies to lessen or get rid of pressured situations; and
4. Evaluate the impact on the implemented strategies on the mental health of the personnel and the organization.

This study was limited to 348 Midwestern kindergarten teachers in a middle sized K-12 system. Further studies should include a broad range of elementary, junior high and senior high school teachers, and should investigate other relevant factors, like total years of teaching and academic preparation, which are related to teacher satisfaction.

Gold (1985) explored the factors related to teacher stress and burnout. This researcher stated that teaching was more stressful than before and the impact of stress and burnout on education was more serious. Gold (1985) reported that student behavior and classroom management were more challenging and uncontrolled. Teachers who failed to cope with these stressors experienced more depersonalization and feeling of reduced personal accomplishment. The purposes of this study were: (a) providing different definitions of burnout, its causes, and clarifying the effects of burnout; (b) identifying recent perspectives on teacher burnout; (c) investigating the stressors of classroom teaching; and (d) supplying suggestions for teachers to eliminate the obstacles of stress and have to tackle them.

The most effective methods for teachers to cope with stress are:

1. Using a stress inventory to recognize stress sources and learn useful strategies to deal with stressful events;
2. Effectively communicating with mentors and asking for support from other teachers and supervisors;

3. Contacting the University supervisors weekly to feel more comfortable and decrease the feeling of stress;
4. Planning outside activities and a good social life to prevent stress;
5. Making good use of planning and preparation of lessons helps teachers perceive less stress and anxiety;
6. Sharing teaching experiences and personal views of teaching with colleagues; and
7. Learning to do relaxation exercises to handle stress.

The strengths of this study were in the quantitative and qualitative methodologies used to test burnout theory, but this study did not indicate reliability and validity. Further studies should focus on stress in student teaching and factors related to teacher burnout in the beginning of student teaching.

Wood and McCarthy (2002) pointed out stress related symptoms of teacher burnout. Teachers suffered from loss of idealism and enthusiasm for teaching after a long period of stress. If teachers could not cope with pressure, teachers felt burnout and left the profession. The stressors related to burnout included (a) feeling disconnected with other teachers; (b) expressing cynical attitudes toward colleagues and students; (c) experiencing role conflict; (d) having role ambiguity; (e) having large class sizes and heavy paper work demands and workloads; (f) getting paid a low salary; and (g) having little communication with colleagues, students, administrators and parents.

How to prevent teacher burnout is a critical issue. Solutions include (a) mentoring; (b) supplying all-out administrative support; (c) establishing clear school goals; and (d) providing better working conditions.

## *Perceived Self-Efficacy*

Bandura (1997) referred to perceived self-efficacy as “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (p. 3). Perceived self-efficacy impacts personal feelings, thoughts and motivation (Evers et al., 2002). Perceived self-efficacy can be defined as the confidence to complete assigned work and manage prospective situations, no matter what happens (Bandura, 1994).

People’s thinking, feeling, action and motivation make a difference from personal self-efficacy. People with higher self-efficacy possess higher quality of decision-making and achieve higher academic achievement. People prefer to cope with more challenges. On the other hand, people with a low sense of self-efficacy give up quickly, have low aspirations, and weak commitment about personal accomplishment and development (Schwarzer & Scholz, 2002).

According to Bandura (1994), the procedures that create these beliefs go through four processes:

1. Cognitive: Personal self-appraisal of capabilities. This is the thinking process involved in the acceptance, learning, predictive and organization of thought and use of information. People who possess stronger self-efficacy strive for high achievement goals to reach;
2. Motivational: Activation to action. People believe in what they can do and motivate themselves to reach the goals they set. The level of motivation depends on three different forms of cognitive motivators: (a) causal attributions; (b) outcome expectancies; and (c) cognized goals. There are three types of self-influences: (a) self-satisfying; (b) self-dissatisfying reactions to

one's performance; and (c) perceived self-efficacy for goal attainment. People exercise self-influence to cope with the challenge of obstacles and failures.

The stronger the belief in the capabilities people possess, the greater effort people exert to manage challenges;

3. Affective: People deal with the emotions resulting from threatening or difficult situations. To eliminate stress and depression, they learn to regulate avoidance behavior and anxiety arousal. The more self-efficacy people perceive, the less negative thought is produced that people have to cope with; and
4. Selection: The choices of activities and environments people make. People with beliefs in themselves are capable of handling the situations they have selected and tackling challenging activities.

Schwarzer and Schmitz (2000) explored stress factors leading to teacher burnout as measured by perceived self-efficacy and proactive attitude. These researchers examined the tripartite construct of burnout within Germany and Hong Kong to replicate an American study. There were two sampling groups: 261 Chinese teachers (76 male and 185 female) and 257 German teachers (109 male and 148 female). Measurements were (a) the Maslach Burnout Inventory (MBI); (b) The General Perceived Self-Efficacy Scale (GSE); and (c) The Proactive Attitude Scale (PAS).

Using a multivariate three-factorial analysis of variance (MANOVA) to analyze both samples data, the results were (a) Both sub samples (Germany and Hong Kong) did not replicate the U.S. American three-factorial structure of the burnout construct; (b) Younger Chinese teachers were perceived as higher emotionally exhausted, especially in



the age range of 31 to 40. On the other hand, German teachers had different perceptions than Chinese and American teachers. The older German teachers experienced higher levels of emotional exhaustion; (c) Proactive teachers presented less symptoms of burnout than reactive teachers; (d) Teachers with higher self-efficacy were less burned out than those who were not confident of themselves; and (e) Male teachers reached a higher level of depersonalization than female teachers.

The strength of this study was the comparison of samples across two different nations within the context of a burnout model. The findings were limited to 542 teachers in Hong Kong and Germany. In addition, sampling methods and ways of data collection were not indicated clearly. Further studies should include a broader range of elementary, junior high or senior high school teachers. Research should focus on the impact of burnout on teacher behavior, interaction between teachers and students, students' perception of teacher burnout, and school innovation.

Au et al. (2001) conducted research on mental health status and job stress among 269 Chinese teachers in Hong Kong. These researchers used measures of self-efficacy and proactive attitude to investigate the perception of teacher burnout and status of mental health among the participants. Two studies were reported on: (a) Study 1 investigated the relationship among stressful variables based on cross sectional data; and (b) Study 2 explored the direction of relationships among the variables after a six-month longitudinal study. Measurements used were (a) the Maslach Burnout Inventory (MBI); (b) The General Perceived Self-Efficacy Scale; (c) The Proactive Attitude Scale; and (d) the Chinese version of the General Health Questionnaire.

Using structural equation modeling analyses, the findings were: (a) Teachers, who were younger, had fewer years of teaching, and earned lower salaries were more likely to reach a higher level of emotional exhaustion; (b) Teachers with higher levels of self-efficacy and proactive attitudes were motivated to tackle more challenging tasks and actions and suffered less burn-out and had better mental health; and (c) Stress factors which were related to burnout directly had an impact on mental health.

The strength of this study was the use of a longitudinal measure within the context of a burnout model. Limitations of the study were weakness in external validity as findings were limited to 269 teachers in Hong Kong and only focused on individual differences and experiences. Further studies should include a broad range of elementary, junior high or senior high school teachers. Research should examine the external evaluation of teacher's mental health status and test the stress-strain interaction models of job stress of teachers through measures of environmental factors.

Evers et al. (2002) conducted research in the Netherlands on the relationship between stress, self-efficacy, and burnout of teachers who were involved in educational innovations. The researchers pointed out that teaching was an extremely stressful job compared to the other client-related professions. Teachers experienced a high degree of stress and doubted that their abilities would afford them success in teaching, resulting in a loss of self-efficacy and impacting classroom achievement. Evers et al. (2002) indicated that negative influences resulting from stress were highly likely to lead to feelings of burnout. The subjects included 490 secondary teachers from 33 randomly selected schools in the Netherlands, including 114 females and 376 males. The average age of the

teachers was 47.23 years. The average number of years of teaching was 22.14. The average working hours in a week was 20.65.

Teacher measurements included (a) The Maslach Burnout Inventory which was used to investigate the level of burnout teachers experienced. There were 20 items divided into three subscales: i) eight items on emotional exhaustion (EE); ii) five items in depersonalization (DP); iii) seven items on personal accomplishment (PA). The results are scored using a seven-point Likert scale; (b) A perceived self-efficacy instrument was developed for this study which included 13 items and teachers were scored using a six-point Likert scale; and (c) An attitude instrument developed for this study which included 5 items with scores ranging from 1 to 10 points.

Using hierarchical regression analyses, the results were as follows:

1. Teachers who scored high and performed strategies effectively experienced less burnout than those who scored low;
2. Teachers who perceived themselves as having a high level of self-efficacy had high levels of school achievement;
3. Classroom management skills were significantly related to burnout; and
4. Teacher perceived self-efficacy was related to burnout, especially in the area of personal accomplishment.

Limitations in the study included (a) findings were limited to 490 secondary teachers involved in the innovative educational practices; (b) factors were measured only at one time, and required a longitudinal study; and (c) Self-reported questionnaires should be developed which were not influenced by social desirability. Further studies should include a broad range of junior high or senior high school teachers. Research should

focus on more background variables and investigate longer periods of the effects related to teacher burnout. Providing group-centered in-service training or peer coaching would help teachers to improve self-efficacy beliefs and help tackle obstacles related to innovations. In other words, teachers would not suffer from burnout even when facing new challenges.

### ***Teacher commitment***

Jepson and Forrest (2006) used four scales (a) Perceived Stress Scale (PSS); (b) Type A Behavior Scale; (c) Achievement Striving Scale (TASS); and (d) Occupational Commitment Scale (TOCS) to measure the relationship between teacher's perceived stress and (a) gender; (b) teaching experience; (c) achievement striving; and (d) occupational commitment. Using a snowball sampling technique, the participants consisted of 71 female teachers and 24 male teachers from primary and secondary schools in the UK. The average number of years of teaching was 12.3.

The researchers found that occupational commitment significantly predicted stress. Individuals who were perceived as having higher occupational commitment had less stress occurring. Next, personal experience was highly related to stress, especially feelings of striving to achieve. The implications of this study are to try to create stress-free working conditions and eliminate as much stress as possible. The limitation of this research was the sampling of only 95 teachers in the UK. The strength of this study was the examination and testing of the interplay between environmental and intrinsic factors within the context of a transactional model.

Future studies need to be replicated on a larger scale to include environmental and intrinsic job factors, and explore the relationship between personal characteristics and

perceived stress within a transactional model. Further studies should also include a broad range of elementary, junior high or senior high school teachers. Research should focus on more individual contributory variables, and measure environmental and intrinsic job features.

### *Intention to Leave*

Weisberg (1994) conducted research in the largest city of Israel, Tel-Aviv, on the relationship between the burnout of female school teachers and its effect on their intentions to leave their jobs. The researcher pointed out a worker's "intention to leave" can be seen as a signal of leaving the job. Weisberg (1994) indicated that the intention of a teacher to leave teaching is the best predictor to measure the level of teacher burnout. Teachers who suffered from physical and mental burnout are more likely to result in the intention to leave teaching. The subjects included a study with 28 female teachers in a secondary school. The average age of the teachers was 40 years. The average number of years of teaching was 17. The educational level of the teachers is 39.2 per cent held a BA or MA degree, the other 60.8 per cent had accomplished teacher's seminary. 57.1 per cent were married, 28.6 per cent were spinsters, and 14.3 percent were either widowed or divorced.

Teacher measurements included (a) The intention to leave scale which was used to investigate the degree of intention to leave the teaching teachers assessed. There were three items. The results are scored using a five-point scale; (b) An overall burnout score scale was developed for this study which included a direct single question to measure the general feeling of burnout; and (c) A burnout scale was used to measure the level of

burnout teachers represented in physical, emotional, and mental aspects. There were 21 items and teachers were evaluated on a seven-point scale.

Using multiple regression analysis, the results were as follows:

1. Teachers who scored high in burnout presented a higher motivation in the intention to leave; and
2. Three burnout factors were measured the relationship with intention to leave.

Physical and mental burnout components were significantly related to burnout.

Limitations in the study included (a) sample size was only 28 secondary female teachers in Tel-Aviv city; (b) factors were measured only at one time, and required a longitudinal study. The strength of this study was the use of three different burnout measures to supply the explanation for the measurements' power over the teacher's intention to leave the teaching. Further studies should include a broad range of other populations. Research should also examine the actual turnover behavior and investigate longer periods of the effects related to teacher burnout.

## *Conclusions*

### *Theoretical*

The sources of teacher stress are very complicated, and there are many factors that cause teachers to leave teaching which have been explored for decades. It is not a new issue but with one development based on the theory cited in this review: Teacher Performance Motivation Theory (TP-M Theory) by Blasé (1982) proposes that teachers experience stress from student needs, causing teachers to implement their performance ineffectively. This resulted in a negatively stressful cycle with teachers experiencing a

long-term period of job-related stress and experiencing the phenomenon of burnout (Blase, 1982). The theoretical literature on teacher stress and burnout by Blasé (1982) provides sufficient framework to facilitate thinking about this topic. An additional issue suggested by the existing theoretical literature is that teachers suffering from chronic job stress have lower work involvement. Decreases in environmental stressors may actually decrease the impact of stress on teachers more rapidly. The significance of the theoretical literature for the topic is that by identifying how teachers experience job stress and burnout and how it impacts on their performance which allows for developing a broad based framework for redressing these concerns.

The theoretical literature on teacher burnout by Maslach and Jackson (1986) provides sufficient framework to facilitate thinking about this topic. The burnout model based on Maslach Burnout Inventory (MBI) proposes that if a teacher reaches the level of burnout, the teacher can be examined from tripartite factors: (a) Emotional exhaustion, the degree to which teachers feel worn-out and drained; (b). Depersonalization, the degree to which teachers distance themselves from students and treat students impersonally; and (c) Reduced personal accomplishment, the degree to which teachers feel inefficient, low morale, and inadequate to achieve work demands (Maslach & Jackson, 1986).

An additional question suggested by the existing theoretical literature is why the majority of burnout studies in education have only focused on classroom teachers, special education teachers, and professional support staff. Furthermore, the personal, organizational, and role-related conditions related to burnout need to be identified. The significance of the theoretical literature for the topic is that identifying teacher

experiences over a long period of time with stressful demands resulting in the symptoms of burnout can be analyzed by three dimensions of burnout: (a) emotional exhaustion; (b) depersonalization; and (c) reduced personal accomplishment.

The theoretical literature on perceived self-efficacy by Bandura (1994) provides sufficient framework to facilitate thinking about this topic. Perceived self-efficacy theory (Bandura, 1994) proposes that a person who possesses a high degree of perceived self-efficacy means a person with a strong sense of competence which facilitates cognitive processes and performance in a variety of settings, including quality of decision-making and academic achievement.

An additional question suggested by the existing theoretical literature relates to the motivation for teachers to deal with the issues related to teaching that creates stress and leads to burnout. The significance of the theoretical literature for the topic is the importance of identifying teachers who possess a high degree of perceived self-efficacy to cope with the stress and burnout through four processes: (a) cognitive process; (b) motivation; (c) affective process; and (d) selection.

### ***Empirical***

The critical problem of teacher burnout is extremely important today because high rate of teacher turnover results in schools losing an inestimable investment in professional development of teacher, curriculum development, and related personnel costs (Farber, 1991; Granziano, 2005; Huston, 1989). Teaching is more stressful than in the past and the influences of stress and burnout on education are more serious (Gold, 1985; Evers et al., 2002).



The major factors related to teacher stress and burnout include (a) Support from administration and supervision is disappointing (Farber, 1984; Friedman, 2000; Hoover-Dempsey, & Bassler, 1988; Rottier et al., 1983); (b) Teaching work loads are overwhelming (Friedman, 2000; Kelly et al., 1983; Wood & McCarthy, 2002); (c) Student behavior patterns are the major factor related to teacher burnout (Abel & Swell, 1999; Evers et al., 2003; Friedman, 1995; Friedman, 2000; Gold, 1985; Gold & Bachelor, 1988; Lau et al., 2005; Montgomery & Rupp, 2005; Kelly et al., 1983); (d) urban teachers identified poor working condition as more serious than rural teachers (Abel & Swell, 1999; Kelly et al., 1983); and (e) teachers were dissatisfied with their salary (Farber, 1984; Tang et al., 2001; Wood & McCarthy, 2002).

The activities of teaching do not fit today's teachers' expectations (Wood & McCarthy, 2002). Most male teachers are considering changing to other occupations (Farber, 1984; Kelly et al. 1983). Teachers are less respected by students than in the past (Friedman, 1995; Kelly et al., 1983). Teachers in junior high or middle schools perceived teaching as much more stressful than those who taught in the preschool, kindergarten, elementary or high schools (Farber, 1984; Duquette et al. 1984).

In the MBI model, three dimensions of burnout: (a) emotional exhaustion; (b) depersonalization; and (c) reduced personal accomplishment have been explored in burnout studies, such as (1) Female teachers experience more emotional exhaustion and reduced personal accomplishment than male teachers (Lau et al., 2005; Duquette et al., 1984); (2) male teachers experience more depersonalization than female teachers (Evers et al., 2003; Huston, 1989; Lau et al., 2005; Schwarzer & Schmitz, 2000); (3) Teachers who are young or with fewer years of teaching experience have much higher levels of

emotional exhaustion and reduced personal accomplishment (Lau et al., 2005; Tang et al., 2001); (4) Single teachers experience more burnout than married teachers (Huston, 1989; Lau et al., 2005); (5) Teachers with a higher level of educational degree are more likely to feel burnout (Brissire et al. 1988; Friedman, 1991).

There are also some contradictions in the research: (1) Female teachers think that teaching is more interesting than before, and male teachers become more emotional than female teachers (Kelly et al., 1983). (2) There is no statistically significant relationship between gender and teacher burnout (Gold & Bachelor, 1988). (3) Teachers in the age range from 41 to 45 are at the peak of teacher burnout (Farber, 1984; Friedman, 1991; Huston, 1989; Kelly et al., 1983; Schwarzer & Schmitz 2000). Younger practice teachers experienced lower levels of burnout symptoms than older practice teachers. (4) The marital and divorce statuses do not have a direct influence on teacher burnout (Gold & Bachelor, 1988).

The sources of job stress come from the goals and beliefs of teachers (Friedman, 1995). Teachers who fail to cope with stress experience more depersonalization and feelings of reduced personal accomplishment (Evers et al., 2002; Gold, 1985) which directly impact their mental health (Schwarzer & Schmitz, 2001). Helping teachers perceive themselves as having higher self-efficacy and self-esteem, and feeling proud of being a teacher reduces the stress teachers experience, and prevents burnout (Evers et al., 2002; Evers & Tomic, 2003; Friedman, 2000; Hoover-Dempsey & Bassler, 1988; Huston, 1989; Schwarzer & Schmitz, 2000; Tang et al., 2001).

The majority of burnout studies in education have only focused on classroom teachers, special education teachers, and professional support staff. Furthermore, the

personal, organizational, and role-related conditions related to burnout need to be identified (Maslach & Jackson, 1986). The individual's personality characteristics had an effect on the degree of seeking social support when they experienced stressful events (Houston & Vavak, 1991; Kobasa et al., 1985; Watson & Clark, 1984).

Though there are many empirical studies about teacher stress and burnout, and perceived self-efficacy, and other factors (personal characteristics, resources of stress, self-beliefs), there are limitations in the literature that these include limited sample sizes (Abel & Swell, 1999; Farber, 1984; Jepson & Forrest, 2006; Rottier et al, 1983), the lack of the reliability and validity (Friedman, 2000; Gold, 1985; Lau et al, 2005), the lack of use of an IRB (Evers& Tomic, 2003; Gold & Bachelor, 1988; Huston, 1989;). The strengths of these studies are that researchers adequately clarified and measured the impact of teacher stress and symptoms of burnout, and the relationship between stress and burnout (Friedman, 1995; Gold, 1985; Montgomery & Rupp, 2005), and the role of perceived self-efficacy related to stress and burnout (Tang, Au, Schwarzer & Schmitz, 2001). No studies were found that perceived self-efficacy as a mediating variable between teacher stress and burnout intention.

In addition, most empirical studies on teacher stress and burnout and perceived self-efficacy cited in this review used quantitative literature to measure hypotheses or research questions. Some studies used methodological literature, and a few studies used qualitative literature to measure hypotheses or research questions. In regard to teacher burnout, a number of significant problems surfaced as a result of analyzing past and current research. An additional question suggested by the existing empirical literature is whether perceived self-efficacy and teacher burnout have different degrees of impact due

to personal characteristics. The significance of the empirical literature for the topic is that perceived self-efficacy enhances self-confidence to cope with stress from teaching and to avoid teacher burnout and intention to leave.

### ***Recommendations***

#### ***Theoretical Reformulations***

Propositions in teacher burnout model by Maslach and Jackson (1986)'s Burnout Inventory can be extended to a multi-dimensional nature such as psychological and somatic strain aspects of emotional exhaustion, and two aspects of the lack of personal accomplishment, self and others. There is a need to further develop theoretical formulations of the burnout syndrome and to better predict why teachers leave the profession. The distinction between burnout and stress is important to understand because of their inter-relationship. The affect of personal characteristics in burnout and psychometric properties related to burnout can explain how high positive perceived self-efficacy leads teachers away from burnout.

#### ***Empirical Studies***

Maslach Burnout Inventory (MBI) can serve as useful theory to explain burnout intention in the school system of teachers (Evers et al., 2003; Farber, 1984; Friedman, 1991; Lau et al., 2005; Schwarzer & Schmitz, 2000; Tang et al., 2001). As the main proposition, reasons serve as linkage between people's concepts (such as depression, dissatisfaction, tension, conflict, pressure, and particular stress), and intentions (intentions to leave the teaching). Perceived self-efficacy has been shown to affect teacher burnout. While perceived self-efficacy has been found to be a powerful predictor of teacher burnout (Evers et al, 202; Schwarzer & Schmitz, 2000; Tang et al., 2001), no study was

found that examined perceived self-efficacy as mediating the relationship between stress and teacher burnout in the field of kindergarten teachers. Therefore, it is recommended that a non-experimental, quantitative, causal-comparative, and correlational explanatory study can be conducted to explain this mediating relationship of perceived self-efficacy.

In addition, conflicting empirical results were found about the relationship between personal characteristics and teacher burnout (Farber, 1984; Friedman, 1991; Gold & Bachelor, 1988; Huston, 1989; Rottier, Kelly, & Tomhave, 1983; Schwarzer et al., 2000). Therefore, it is recommended that a non-experimental, quantitative explanatory (correlation) study be conducted to determine whether personal characteristics [(a) salary level; (b) total years of teaching experience; (c) educational level of the teacher; (d) marital status; (e) gender; (f) age; (g) religious status; and (h) total numbers of working hours] of teachers are significant explanatory variables of teacher burnout (propensity to leave).

The Bandura's proposition that interventions successfully targeting teacher's stress-strain interaction and specific reasons will result in changes in intention and behavior has only been demonstrated in a few studies (Evers et al., 2003; Schwarzer et al., 2000; Tang et al., 2001). In addition, the differential weight factors of job stress and burnout among teachers remain unclear. Therefore, it is recommended that an experimental study be conducted to implement programs which include specific components to enhance teachers' self-efficacy, sense of work at work, and occupational commitment.

Because the critical problem of teacher burnout has been demonstrated with schools losing an inestimable investment in professional development of teacher,

curriculum development, and related personnel costs (Farber, 1991; Granziano, 2005; Huston, 1989), there is a need for a systematic study identifying and exploring a broader range of demographic characteristics and perceived self-efficacy to teacher burnout.

Due to few empirical studies provided regarding job stress, teacher burnout and perceived self-efficacy, it is recommended to demonstrate adequately sized samples, representative sample studies, narrowing the target population, and focusing on specific levels of teachers in school systems.

### **Theoretical Framework for the Study**

Based on the critical analysis of theoretical and empirical review, teachers experience stress and resulted in a negatively stressful cycle with experiencing the phenomenon of burnout (Blase, 1982). A high rate of the teachers who suffer from burnout choose to withdraw from the teaching (Maslach, 1976). Thus, this study proposes an integrated approach of combining Cohen's (1988) teacher stress factors, Maslach and Jackson's (1986) burnout framework, and Bandura's (1994) perceived self-efficacy propositions about coping with stress and burnout. Furthermore, this study also includes the Weisberg's (1999) framework of intention to leave to prevent teacher turnover. A schematic model (See Figure 2-1) depicts the relationships among the major theories and variables in this study.

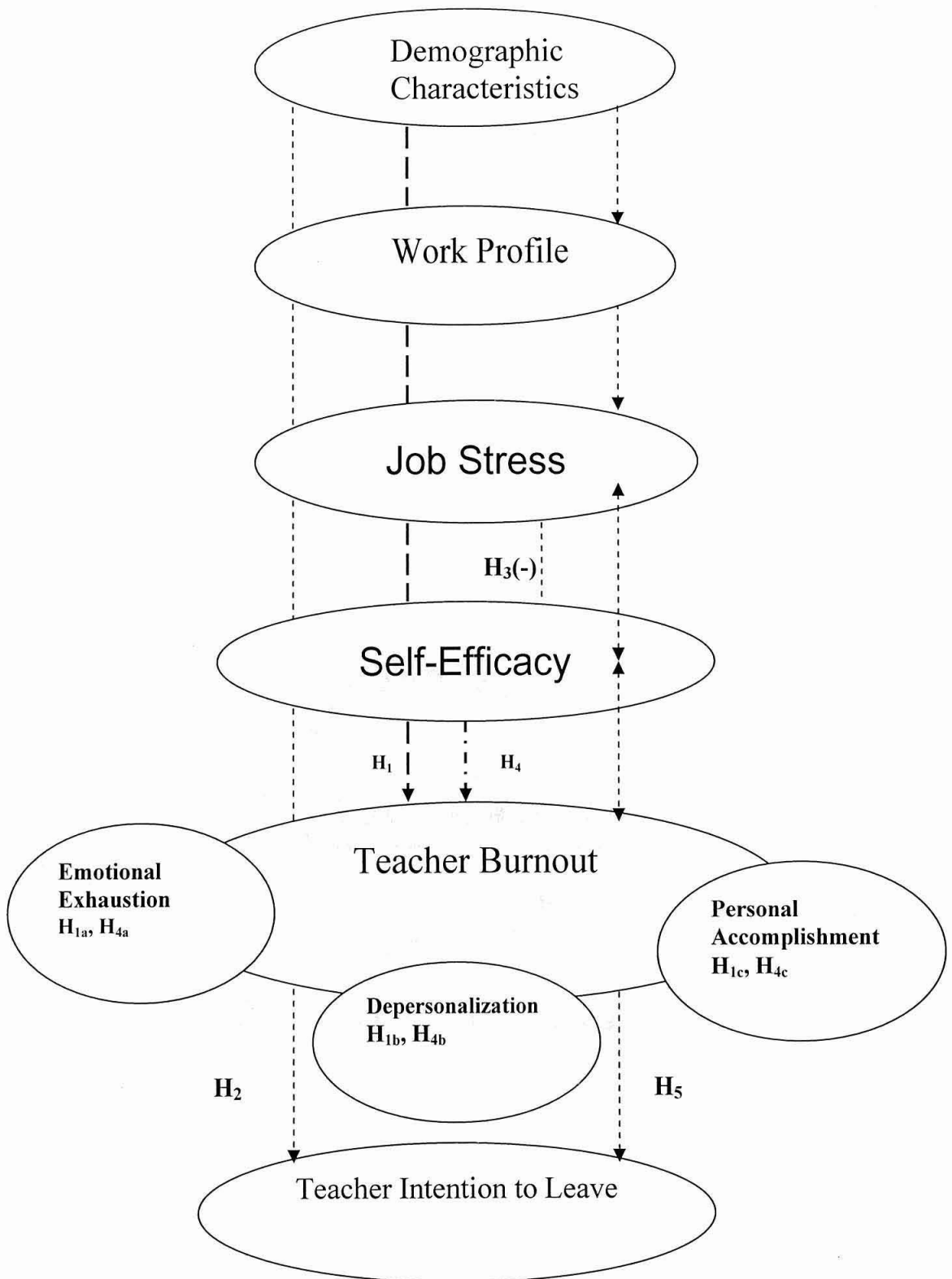


Figure 2-1. Hypothesized model about the relationships between demographic characteristics, work profiles, job stress, perceived self-efficacy, burnout, and teacher intention to leave.

The most widely accepted conceptualization of burnout articulated by Maslach and Jackson (1986) stresses that people experience burnout with a tripartite syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment. There are three constructs that organize the burnout model:

1. Emotional exhaustion, where teachers feel worn-out and drained and are emotionally overwhelmed, powerless, and frustrated. People feel emptied of their emotional resources;
2. Depersonalization, where teachers distance themselves from students and treat students impersonally by negative attitudes or callous responses to people; and
3. Reduced personal accomplishment, where teachers feel inefficient, have low morale, and feel inadequate to achieve their work demands. There is a devaluating of personal efficacy and a decline in one's feeling of competence and achievement in working with others.

Perceived self-efficacy based on Bandura's(1994) propositions stress that beliefs in one's capabilities can be perceived as the confidence to complete assigned work and manage prospective situations, no matter what happens. Helping teachers perceive themselves as having higher self-efficacy and self-esteem, and feeling proud of being teachers reduce the stress which teachers experience and prevents burnout. According to Bandura (1994), the procedures that create these beliefs go through four processes:

1. Cognitive Process: Personal self-appraisal of capabilities. This is the thinking process involved in the acceptance, learning, predictive and organization of thought and use of information. People who possess stronger self-efficacy strive for high achievement goals to reach;



2. Motivation: Activation to action. People believe in what they can do and motivate themselves to reach the goals they set. The level of motivation depends on three different forms of cognitive motivators: (a) causal attributions; (b) outcome expectancies; and (c) cognized goals. There are three types of self-influences: (a) self-satisfying; (b) self-dissatisfying reactions to one's performance; and (c) perceived self-efficacy for goal attainment. People exercise self-influence to cope with the challenge of obstacles and failures. The stronger the belief in the capabilities people possess, the greater effort people exert to manage challenges;
3. Affective Process: People deal with the emotions resulting from threatening or difficult situations. To eliminate stress and depression, they learn to regulate avoidance behavior and anxiety arousal. The more self-efficacy people perceive, the less negative thought is produced that people have to cope with; and
4. Selection: The choices of activities and environments people make. People with beliefs in themselves are capable of handling the situations they have selected and tackling challenging activities.

Based on Bandura's(1994) social-cognitive theory, a conceptual model was developed by Schwarzer & Scholz (2002) to propose the framework of perceived self-efficacy. The model is to access a general sense of perceived self-efficacy and makes a difference in how people think, feel, act and motivate themselves. People with high self-efficacy have a high quality of decision-making and higher academic achievement. Such people like to perform more challenging tasks. On the other hand, people with a low sense of self-efficacy give up quickly, have low aspirations, and weak commitment about

personal accomplishment and development

In addition, Blasé's (1982) data-based, grounded theory proposes that teachers fail to cope with job-related stressors and are not given adequate feedback, will present low motivation and distance themselves from their students and colleagues. After experiencing long-term job stress, teachers feel frustrated and are prone to burnout. Fimian (1987) conducted a model about teacher stress provided ten factors leading to the occupational stress experienced or exhibited by school teachers. The ten factors were described as follows: (a) Sources of stress: (1) Time Management; (2) Work-Related Stressor; Professional Distress; (3) Discipline and Motivation; (4) Professional Investment; (b) Manifestations of occupational stress: (1) Emotional Manifestations; (2) Fatigue Manifestations; (3) Cardiovascular Manifestations; (4) Gastronomic Manifestations; (5) Behavioral Manifestations.

Teachers that experience the most on-the-job stress will also be the most prone to occupational burnout and this would be associated with intentions to leave teaching. Weisberg (1994) developed a model on the impact of burnout dimensions (physical, emotional, and mental exhaustion) on the intention of teachers to leave the teaching.

The major factors related to teacher stress and burnout include (a) Support from administration and supervision is disappointing (Farber, 1984; Friedman 2000; Hoover-Dempsey, & Bassler, 1988; Rottier, Kelly, & Tomhave, 1983); (b) Teaching work loads are overwhelming (Friedman, 2000; Rottier, Kelly, & Tomhave, 1983; Wood & McCarthy, 2002); (c) Student behavior patterns are the major factor related to teacher burnout (Abel & Swell, 1999; Evers & Tomic, 2003; Friedman, 1995; Friedman, 2000; Gold, 1985; Gold & Bachelor, 1988; Lau, Yuen, & Chan, 2005; Montgomery & Rupp, 2005; Rottier, Kelly, &

Tomhave, 1983); (d) urban teachers identified poor working condition as more serious than rural teachers (Abel & Swell, 1999; Rottier, Kelly & Tomhave,1983;); and (e) teachers were dissatisfied with their salary (Farber, 1984; Tang, Au, Schwarzer, & Schmitz, 2001; Wood and McCarthy, 2002).

This study will also include personal characteristics: [(1)educational level of the teacher; (2)marital status; (3)age; and(4)religious category]; work profiles: [(1) salary satisfactory; (2) total years of teaching experience; and(3) total numbers of working hours] to examine what factors may play a significant role in teacher burnout and determine the extent of perceived teacher burnout comparing those different variables (Farber, 1984; Friedman, 1991; Gold & Bachelor, 1988; Huston, 1989; Rottier, Kelly, & Tomhave, 1983; Schwarzer et al., 2000).

Teacher burnout has a negative impact on the educational system. Schools lose an inestimable investment in professional development of teacher, curriculum development, and related personnel costs (Farber, 1991; Granziano, 2005; Huston, 1989). Both the student and teacher may benefit if the teacher burnout rate can be reduced substantially (Weisberg, 1994; Weisberg & Sagie, 1999). No studies were found in the kindergarten teachers in Kaohsiung city, Taiwan that measures the pervasiveness of teacher burnout and the impact on the intention to leave across the variables of marital status, age, working hours, salary level, total years of teaching experience, educational level of the teacher, religious status and perceived self-efficacy. The careers of countless numbers of qualified teachers may be saved if problems are addressed before the teachers reach the burnout level or decide to leave teaching.

With these purposes in mind and based on the recommendations for future study resulting from the review of the literature and the theoretical framework guiding this study, the following research questions and hypotheses are addressed in this study about the relationship between occupational stress, perceived self-efficacy, personal characteristics: [(a) educational level of the teacher; (b) marital status; (c) age; and (d) religious category] work profiles: [(a) salary satisfactory; (b) total years of teaching experience; and (c) total numbers of working hours] teacher burnout; and intention to leave.

### **Research Questions**

1. What are Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious status), work profiles (working hours, salary satisfactory and total years of teaching experience), job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), and intention to leave?
2. Are there significant differences in Taiwanese kindergarten teachers' job stress (perceived stress), self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), and intention to leave according to their demographic characteristics (gender, marital status, age, educational level, and religious category)?
3. Are there significant relationships between Taiwanese kindergarten teachers' job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), and intention to leave according to their work profiles (working hours, salary satisfactory, and total years of teaching experience)?

## Research Hypotheses

1. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfactory, total years of teaching experience), job stress (perceived stress), and self-efficacy, are significant explanatory variables of levels of burnout.
  - 1a. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfactory, total years of teaching experience), job stress, and self-efficacy are significant explanatory variables of levels of emotional exhaustion.
  - 1b. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfactory, total years of teaching experience), job stress, and self-efficacy are significant explanatory variables of levels of depersonalization.
  - 1c. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfactory, total years of teaching experience), job stress, and self-efficacy, are significant explanatory variables of level of personal accomplishment.

2. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfactory, total years of teaching experience), job stress, self-efficacy, and levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), are significant explanatory variables of intention to leave.
3. There is an inverse relationship between Taiwanese kindergarten teachers' self-efficacy and job stress.
- 4: Taiwanese kindergarten teachers' self-efficacy is significantly related to teacher burnout levels.
  - 4a. There is a significant positive relationship between self-efficacy and level of emotional exhaustion.
  - 4b. There is a significant positive relationship between self-efficacy and level of depersonalization.
  - 4c. There is a significant inverse relationship between self-efficacy and level of burnout (personal accomplishment).
5. Self-efficacy mediates the relationship between Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfactory, total years of teaching experience), job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment) and intention to leave.

Chapter II provides an in-depth literature review and theoretical framework leading to the propositions tested by the research questions and hypotheses addressed in this study. The major gaps in the literature consist of the following: (a) a limited number of empirical studies conducted among kindergarten teachers; (b) a limited number of empirical studies exploring the impact of self-efficacy on the teacher burnout and intention to leave. The theoretical framework presented in Chapter II emphasizes the effect of demographic characteristics, work profile, and self-efficacy on the perception of teacher stress, burnout and intention to leave. Chapter III presents the methodology to be used to answer the research questions and testing the hypotheses for this study about the relationships between the demographic characteristics, work profile, stress, self-efficacy, burnout and intention to leave of Taiwanese kindergarten teachers.

## CHAPTER III

### RESEARCH METHODOLOGY

The purpose of this chapter is to present the research methodology that was used to answer the research questions and analyze the hypotheses about relationships among demographic characteristics, work profile, perceived self-efficacy, teacher stress, burnout, and intention to leave in kindergarten teachers in Kaohsiung, Taiwan. Teacher burnout is a mental state that has a negative impact on a teacher's job performance and attitude toward education. The research questions and hypotheses evolved from gaps in the literature and the importance of teacher burnout and intention to leave teaching in the school system. There are six sections included in this chapter: (a) a description of the research design: the research method was discussed and independent (causal, attribute and explanatory), mediating and dependent variables were identified; (b) the sampling plan and setting: the target and accessible population were defined and sampling was drawn; (c) instrumentation: questionnaires were described and their reliability and validity were explained; (d) human subjects' procedures and data collection procedures: methods of data collection and ethical consideration were included; (e) methods of data analysis: this section described the statistical procedures, including exploratory data analysis, internal consistency reliability, exploratory factor analysis, descriptive analysis, *t*-tests, Pearson *r*, ANOVA, simple regression, multiple regression, multiple mediated regression; and (f) evaluation of research methods: strengths and weakness of the research method were evaluated.



## Research Design

A quantitative, non-experimental, causal-comparative (exploratory) and correlation (explanatory) postal mail survey design was applied to answer the research questions and test the hypotheses in the study proposed. The design examined the relationships among stress, perceived self-efficacy, demographic characteristics [i.e., (a) educational level of the teacher; (b) marital status; (c) age; (d) gender; and (e) religious category], work profiles [(a) salary satisfactory; (b) total years of teaching experience; and (c) total number of working hours], burnout, and intention to leave for kindergarten teachers in Kaohsiung, Taiwan. The self-report survey instrument contained six parts (56 items) (See Appendix A). Several measures were used in this study, including the *Perceived Stress Scale* (PSS), *Generalized Self-Efficacy* (GSE) scale, the *Maslach Burnout Inventory* for teachers (MBI, Form ED), and Intention to Leave scale. In addition, the socio-demographic data of kindergarten teachers were measured by the *Demographic Questionnaire* and *Work Profile* scale.

The independent and dependent variables changed with the research questions and hypotheses. For research question two, the causal variable was demographic characteristics. The comparative design was established to examine the differences between demographic characteristics and the dependent variables of demographic characteristics, job stress (perceived stress), self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), and intention to leave for Taiwanese kindergarten teachers.

For research question three, the causal variables of work profiles were (a) working hours; (b) salary satisfaction; and (c) total years of teaching experience. The correlation

design was established to examine the relationships between work profile and the dependent variables of work profile, job stress (perceived stress), self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), and intention to leave for Taiwanese kindergarten teachers.

Five hypotheses were tested in this study. For the first hypothesis, about the relationship between Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfactory, total years of teaching experience), job stress (perceived stress), self-efficacy, and levels of burnout, the explanatory variables were the (a) demographic characteristics, measured by the *Demographic Questionnaire*; (b) work profiles, measured by the *Work Profile* scale; (c) job stress, measured by the *Perceived Stress Scale* (PSS); and (d) self-efficacy, measured by the *Generalized Self-Efficacy (GSE)* scale. The dependent variable was the perceived levels of burnout, measured by the *Maslach Burnout Inventory* for teachers (MBI-Form ED).

For the second hypothesis, about the relationship between Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfactory, total years of teaching experience), job stress (perceived stress), self-efficacy, and intention to leave, the independent variables were the (a) demographic characteristics; (b) work profile; (c) job stress, measured by , by the *Perceived Stress Scale* (PSS); and (d) self-efficacy, measured by the *Generalized Self-Efficacy (GSE)* scale. The dependent variable was the intention to leave, measured by the *Intention to Leave* scale.

For the third hypothesis, about the inverse relationship between Taiwanese

kindergarten teachers' self-efficacy and job stress, the dependent variable was job stress, measured by the *Perceived Stress Scale* (PSS). The explanatory variable was self-efficacy, measured by the *Generalized Self-Efficacy (GSE)* scale.

For the fourth hypothesis, about the relationship between the kindergarten teachers' self-efficacy and burnout levels, the dependent variable was teacher burnout level, measured by the *Maslach Burnout Inventory* for teachers (MBI-Form ED). The explanatory variable was self-efficacy, measured by the *Generalized Self-Efficacy (GSE)* scale.

For the fifth hypothesis, about the self-efficacy mediating the relationship between Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfactory, total years of teaching experience), job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment) and intention to leave, the mediating variable was self-efficacy, measured by the *Generalized Self-Efficacy (GSE)* scale. The dependent variable was intention to leave, measured by the *Intention to Leave* scale. The independent variables were the demographic characteristics; work profile; job stress, measured by the *Perceived Stress Scale* (PSS); and levels of burnout, measured by the *Maslach Burnout Inventory* for teachers (MBI-Form ED). See figure 2-2 in the review of the literature for an illustration of the dependent and independent variables examined in this study, and hypothesized relationships. Through mailing questionnaires, data was collected from selected kindergarten teachers in Kaohsiung City, Taiwan.

A descriptive research design, and descriptive statistics including the frequency distributions, measures of central tendency and variability were utilized to describe all the

variables in this study and answer Research Question One about the demographic characteristics (marital status, gender, age, educational level, and religious status), work profile (total numbers of working hours, salary satisfaction, and total years of teaching experience), job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), and intentions to leave.

A two-tailed *t*-tests, ANOVA with post hoc comparisons were used to respond to the Research Question Two of the difference in demographic characteristics (marital status, gender, age, educational level, and religious status), job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), and intentions to leave for the exploratory, comparative design of this research design.

A Pearson *r* correlation was used to respond to the Research Question Three of the relationships between work profile (total numbers of working hours, salary satisfaction, and total years of teaching experience), job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), and intentions to leave for the correlation (exploratory) design of this research design.

Multiple regression was used to examine the explanatory relationships between demographic characteristics (marital status, gender, age, educational level, and religious category), work profile (total numbers of working hours, salary satisfaction, total years of teaching experience), job stress, and self-efficacy with levels of burnout including, emotional exhaustion (Hypothesis 1a), levels of depersonalization (Hypothesis 1b), level of personal accomplishment (Hypothesis 1c), and intention to leave (Hypothesis 2).

A simple regression was used to examine the explanatory (correlation) relationship between job stress and self-efficacy (Hypothesis 3), level of emotional exhaustion

(Hypothesis 4a), level of depersonalization (Hypothesis 4b), and level of personal accomplishment (Hypothesis 4c).

The explanatory relationships among demographic characteristics (marital status, gender, age, educational level, and religious category), work profile (total numbers of working hours, salary satisfaction, total years of teaching experience), job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment) and intentions to leave were analyzed through moderated multiple regression (MMR) (Hypothesis 5).

### **Population and Sampling Plan**

#### ***Target Population***

Every kindergarten teacher in Kaohsiung city in South of Taiwan during the school year of 2006-2007 was a potential participant in the study. A list of schools and teachers in kindergartens in Kaohsiung city for the 2006-2007 school year was obtained from the Child Welfare Service Center of Social Affairs Bureau, Kaohsiung City Government.

The total population of general classroom kindergarten teachers during the year 2006-2007 was 1599 employed in 11 school districts in Kaohsiung [(a) Sanmin District; (b) Xiaogang District; (c) Zuoying District; (d) Cianjin District; (e) Cianjhen District; (f) Lingya District; (g) Sinsing District; (h) Nanzih District; (i) Ku-Shan District; (j) Cijin District; and (k) Yangcheng District] included in Kaohsiung city. In these 11 districts there were 173 schools, including 68 public kindergartens and 105 private kindergartens. The number of public kindergarten teachers was 472 (30%), and 1,127 (70%).

### *Accessible Population*

The accessible population was the same as the target population. All 1,599 kindergarten teachers of the 11 school districts in Kaohsiung City were invited to participate in this study. There was no probability or non-probability sampling plan designed. Surveys were mailed to the school address of the kindergarten teachers, according to the target population list. Each mailer included the survey, a content form which were given a brief introduction to the investigation and contact details, a cover letter recommended from the director of Child Welfare Service Center of Social Affairs Bureau, Kaohsiung City Government, and a self-addressed postage-stamped envelope which were used to mail back the survey.

The final data producing sample were self-selected based on those that agreed to participate in the study.

### *Eligibility Criteria*

The accessible population for this study was Kaohsiung City School District kindergarten teachers that met the following eligibility criteria to for this study;

1. Kindergarten teachers were employed in the geographic area of 11 school districts in Kaohsiung City, Taiwan;
2. The teachers held a current Taiwan Teacher Certification in Kindergarten;
3. The kindergarten teachers were general education classroom teachers;
4. The kindergarten teachers were at least 18 years of age; and
5. The kindergarten teachers had the capability of speaking, reading, and writing Traditional Chinese.

### ***Exclusion Criteria***

1. Kindergarten teachers that were not employed in 11 school districts in Kaohsiung City, Taiwan;
2. The teachers had not held a current Taiwan Teacher Certification in Kindergarten yet;
3. Kindergarten teachers that were not general education classroom teachers;
4. Kindergarten teachers who were younger than 18 years old; and
5. Kindergarten teachers that did not have the capability of speaking, reading, and writing Traditional Chinese.

### ***Setting***

The research setting for data collection of kindergarten teacher perceptions were at the Kaohsiung city, Taiwan.

### ***Instrumentation***

The self-report survey instrument contained six parts to measure the major constructs in this study. Part One was the *Demographic Questionnaire* and Part Two was the *Work Profile*, developed by the researcher. Part Three was *Job Stress* measured by the Perceived Stress Scale (PSS) developed by Cohen (1983). Part Four was *Self-Efficacy* measured by the General Self-Efficacy Scale (GSE) developed by Schwarzer and Jerusalem (1981). Part Five was *Burnout* measured by the Maslach Burnout Inventory-Form ED (MBI-ES) developed by Maslach, Jackson and Schwab (1996). Part Six was *Intention to Leave* developed by Weisberg (1994).

A total of 56 items constituted the six parts of the survey, and took 15 minutes to complete. The survey was summarized in Table 3-1. This survey was distributed through postal mail. The following section discussed each construct in details.

**Table 3-1**

*Constructs of the Self-Report Survey*

<b>Part</b>	<b>Constructs</b>	<b>Questionnaire Developers</b>	<b>Items</b>
1	Demographic	The researcher	7
2	Work Profile	The researcher	4
3	Job Stress	Perceived Stressor Scale (PSS) by developed by Cohen, Kamarck & Mermelstein (1983)	10
4	Self-Efficacy	General Self-Efficacy Scale by Schwarzer and Jerusalem (1981)	10
5	Burnout	Burnout Inventory by Maslach, Jackson and Schwab (1996) The scale consists of 22 items three subscales: (1) emotional exhaustion (EE; 9 items); (2) depersonalization (DP; 5 items); and (3) personal accomplishment (PA; 8 items)	22
6	Intention to Leave	Intention to Leave by Weisberg (1994)	3

***Part One: Demographic Characteristics***

The *Demographic Characteristics* included personal information about kindergarten teachers in Kaohsiung, Taiwan. The seven questions were developed by the researcher. Response categories to the questions were filled in the blank multiple choice about gender, marital status, age, educational level of the teacher, religious category, school location and school type (see Appendix E, Part 1).



### ***Part Two: Work Profile***

The *Works Profile* contained four items developed by the researcher and consisted of three fill in the blank items. The four items included: (a) total number of working hours when in a week; (b) monthly salary in NT dollars; (c) total years of teaching experience; and (d) salary satisfactory (see Appendix E, Part 2).

### ***Part Three: Job Stress***

#### ***Description***

Job stress was measured by the 10-item *Perceived Stress Scale* (PSS) developed by Cohen, Kamarck & Mermelstein. The content of the PSS was identified to detect the degree respondents experienced unpredictable, uncontrollable stress and overloaded in their lives. The PSS was the most widely used psychological instrument for measuring a global perception of stress (Cohen, 2005). This instrument had been used in the perceptions of global stress assessed in people after cancer surgery (Golden-Kreutz, Browne & Frierson, 2004). The PSS also could be used to investigate how often the teachers experienced an event in their life over the last month (Cohen & Williamson, 1988).

In this study, teachers were asked to respond to each item using a five-point rating scale where 0= never; 1= almost never; 2= sometimes; 3=fairly often; 4= very often. Higher scores of participants represent a higher degree of self-perceived stress. The score range is 0-40. Four items (items 4, 5, 7, and 8) were reversed scored (e.g., “In the last month, how often have you felt that you were on top of things?”). The total score was obtained by reversing the scores on the four items, e.g., 0=4, 1=3, 2=2, etc. and summing across all the 10 items responses (see Appendix E, Part 3).

### ***Reliability***

With respect to the reliability of the PSS, the PSS demonstrated good internal consistency reliability with a Cronbach's alpha of .88. The test-retest reliability coefficient to measure scale stability ranged from .85 to .88 (Cohen, Williamson & Kamarck, 1983; Golden-Kreutz, Browne & Frierson, 2004). Coefficient alpha as an estimate of internal consistency reliability was reported for this scale in this study.

### ***Validity***

Convergent validity of the scale was satisfactory, and correlates with various external criteria including life-event scores, depressive and physical symptomatology, utilization of health services, social anxiety, and smoking-reduction maintenance (Cohen, 1986; Cohen, Kamarck, & Mermelstein, 1983; Golden-Kreutz, Browne & Frierson, 2004). Evidence for construct validity of the scale was published in the study by Cohen and Williamson (1988) with other measures of appraised stress, greater help-seeking, poor health, more health service utilization, and poorer life satisfaction. The PSS had also been used as an outcome variable to predict changes in perceived stress with life events, coping processes, and personality factors prospectively (Cohen & Williamson, 1988). Factor analysis was conducted on Perceived Stress Scale to establish construct validity and its uni-dimensionality.

## ***Part Four: Self-Efficacy Scale***

### ***Description***

Self efficacy was measured by the 10-item *General Self-Efficacy Scale* (GSE) (Schwarzer & Jerusalem, 1981). This scale assessed the strength of people's belief in their own abilities to respond to novel or difficult situations and to deal with any

associated obstacles or set backs. Each item referred to successful coping and implies an internal-stable attribution of success. High self-efficacy reflected an optimistic self-belief (Schwarzer, 1992). A belief of a person is to fulfill novel or tough works, or cope with misadventure. People with high self-efficacy had a high quality of decision-making and higher academic achievement. Such people like to perform more challenging tasks.

On the other hand, people with a low sense of self-efficacy give up quickly, have low aspirations, and weak commitment about personal accomplishment and development. GSE was a universal and cross-cultural construct that yields meaningful relations with other psychological constructs (included social cognitive constructs; well-beings; health behaviors; and coping) (Luszczynska, Scholz & Schwarzer, 2005). This scale appeared to be configurable equivalent across 29 nations (Schwarzer & Schmitz, 2004). In this study, teachers were asked to respond on a four-point, forced-choice, rating scale where 1 = Not at all true, 2= Barely true, 3= Mostly true, and 4= Exactly true to the 10 items.

The final composite score were obtained by summing up the responses to all 10 items with a range from 10 to 40 points. There was no cut-off score. The higher the GSE scores, the greater level of self-efficacy (optimistic self-beliefs reached by the participant) (see Appendix E, Part 4).

### ***Reliability***

The scale had been used in numerous research projects, where it had typically yielded internal consistencies with Cronbach's alpha ranging from .76 to .90, with the majority in the high .80s (Lau et al., 2005; Luszczynska et al., 2005; Schwarzer et al., 2000). This scale's stability had been examined in several longitudinal studies and in sample from 23 nations, with the test-retest reliability coefficient range from .55 to .67

(Schwarzer et al., 2000). These 10 self-efficacy items had been adapted to 29 languages by bilingual native speakers based on the German and English versions of the instrument (Schwarzer et al., 2005). The Chinese version of the scale was available and shows a satisfactory internal consistency of 0.86 (Zhang & Schwarzer, 1995).

Evidence for the reliability of the scale was published in the studies by (a) Schwarzer, Schmitz and Tang (2000), with 542 German and Chinese teachers. The Cronbach's alpha was .86 for the German, and .84 for the Hong Kong sample; and (b) Luszczynska, Scholz & Schwarzer (2005), with 1,933 respondents in three countries: Germany, Poland, and South Korea. The Cronbach's alpha was .94 for the German, .90 for the Poland, and .87 for the South Korea sample. Coefficient alpha as an estimate of internal consistency reliability were reported for this scale in this study.

### ***Validity***

Criterion-related validity was documented in numerous correction studies. This scale correlated positively with favorable emotions, self-esteem, dispositional optimism and work satisfactory. Negative coefficients were found with anxiety, depression, stress, burnout, health complaints and physical symptoms (Schwarzer, 1993). GSE forms unidimensionality (Luszczynska et al., 2005; Schwarzer & Schmitz, 2004). This scale was valid in terms of convergent and discriminable validity (Tang et al., 2000). Factor analysis was conducted on General Self-Efficacy Scale to establish construct validity and its dimensionality.

## *Part Five: Burnout*

### *Description*

Burnout was measured by the Maslach Burnout Inventory developed by Maslach, Jackson, & Schwab (1996). Maslach and Leiter (1998) defined burnout as “a syndrome of emotional exhaustion, depersonalization, and reduced accomplishment which is a special risk for individuals who work with other people in some capacity” (p. 347). The MBI, Form Educational, was designed specially for educators, and was a derivation of Maslach’s original survey which was directed towards the helping professions.

In order to adapt to the educational environment, Maslach changed some of the wording in the MBI questions. For example, the word “recipient” had been replaced with “student.” In this study, teachers were asked to respond to 22 items, organized by three subscales, on a 7-point, frequency rating scale where 0= never, 1= a few times a year or less, 2= once a month or less, 3= a few times a month, 4= once a week, 5=a few times a week, and 6= everyday to these 22 items (Maslach, Jackson, & Schwab, 1996).

Three subscales were Emotional Exhaustion (EE) with nine items (this subscale measures the degree of exhaustion that results from the working environment. Items for this subscale included: 1, 2, 3, 6, 8, 13, 14, 16, 20 and a score range of 0-54); Depersonalization (DP) with five items (this subscale measured the relationship between the giver (teacher), and the recipient (student) of the service. Items from this subscale include: 5, 10, 11, 15, 22 and a score range of 0-30; and Personal Accomplishment (PA) with eight items (this subscale measured the perceived feeling of accomplishments and success in the working environment. Items from this subscale included: 4, 7, 9, 12, 17, 18, 19, 21 and a score range of 0-48) (Maslach et al., 1996).

Maslach et al. (1996) cautioned against obtaining a total score from the three subscale scores. Therefore, this inventory measured three dimensions of burnout independently, and each subscale had a tailored score by summing each item response to respective subscales. The scores for each subscale were considered separately and were not combined into a single, total score. Table 3-2 presents the subscales for the MBI Form ED, including the number of subscale items, possible score range, and score analysis (Maslach et al., 1996) to permit interpretation of results.

Table 3-2

*Maslach Burnout Inventory Form ED Subscales: Number of Items, Score Range, and Score Analysis*

	<b>Emotional Exhaustion (EE)</b>	<b>Depersonalizo n (DP)</b>	<b>Personal Accomplishment (PA)<sup>a</sup></b>
<b>Number of Items</b>	9	5	8
<b>Score Range</b>	0-54	0-30	0-48
<b>Score Analysis</b>			
High	27 or over	13 or over	0-31
Moderate	17-26	7-12	32-38
Low	0-16	0-6	39 or over

<sup>a</sup> Personal Accomplishment (PA) subscale items are reverse scored, where the lower the score the better the PA.

In addition, the Chinese version of the MBI was also available and had been used as a reference by Mo (1991), which measured teacher burnout in the territory. Backward translation was adopted to ensure that the original meaning of each item was conveyed in the newly translated version (see Appendix E, Part 5).

### ***Reliability***

The internal consistency was estimated by Cronbach's coefficient alpha. The reliability coefficients for the subscales were .90 for Emotional Exhaustion; .79 for

Depersonalization; and .71 for Personal Accomplishment respectively (Maslach et al., 1996). In addition, reliability coefficient was also reported by Tourigny, Baba, and Lituchy (2005) in measuring job burnout in Japan. Cronbach's coefficient alpha for each of the subscale was: Emotional Exhaustion (.89), Depersonalization (.79), and Personal Accomplishment (.78). Furthermore, the Cronbach's coefficient alphas of .90, .79, and .71 had been reported by Wechwerth and Flynn (2006) for each of the subscale Emotional Exhaustion, Depersonalization, and Personal Accomplishment, respectively. Data on test-retest reliability coefficients was to estimate stability ranged from .60 to .82 (.82 for EE; .60 for DP; and .80 for PA) (Maslach et al., 1996). The internal consistency reliability estimated of the Chinese version was also satisfactory, with coefficient alpha values ranging from 0.79 to 0.88 (.88 for EE; .79 for DP; and .83 for PA) (Tang et al., 2000).

Coefficient alpha as an estimate of internal consistency reliability was reported for the total scale, and MBI subscales in this study.

### ***Validity***

Convergent validity of the scale was also satisfactory, and correlates with various external criteria including personal experience, dimensions of job experience, and personal outcomes. The MBI scale formed multidimensional perspective. The Chinese version of the inventory was available and exploratory and confirmatory factors analyses of data from Chinese samples yielded factor structures similar to American samples (Tang, 1998). Factors analysis was conducted on *Maslach Burnout Inventory* to establish construct validity.

## ***Part Six: Intention to Leave***

### ***Description***

Weisberg (1994) developed Intention to Leave. When a teacher no longer endured occupational stress and felt totally worn out by stress, the teacher experienced a syndrome of burnout. The outcome of teacher burnout resulted in the long absenteeism, emotional exhaustion, depersonalization, reduced personal accomplishment and subsequently influence turnover intention (Weisberg, 1994)

In this study, teachers were asked to respond to three items using a five-point rating scale where 1=very little; 2=little; 3=average; 4=much; and 5= very much. The second statement was a reverse-coded item. The score range for the scale was 3 to 15. Higher scores represented a higher degree of intention to leave. Higher scores had been associated with higher turnover (Weisberg & Sagie, 1999) (see Appendix E, Part 6).

### ***Reliability***

From the literature review (Weisberg, 1994; Weisberg and Sagie, 1999), there was no report for the reliability of the *Teacher Intention to Leave* scale. In this study, the Coefficient alpha as an estimate of internal consistency reliability was reported for the *Teacher Intention to Leave* scale in this study.

### ***Validity***

Convergent validity of the scale was also satisfactory and correlates with various external criteria including physical, emotional, and mental burnout (Weisberg, 1994; Weisberg and Sagie, 1999). In addition, factors analysis was conducted on Teacher Intention to *Leave* scale to establish construct validity.



This study was quantitative in nature. The use of the MBI, GSES, PSS, and *Measure of Intention to Leave* scale, along with the Demographic Characteristics and Work Profile of teachers, provided data that were analyzed to determine the levels of stress, perceived burnout, perceived self-efficacy and the intention to leave in the kindergarten teachers of Kaohsiung City, Taiwan.

### **Procedures: Ethical Considerations and Data Collection Methods**

The overall purpose of the study involved assessing perceived burnout of kindergarten teachers across the Kaohsiung city of South Taiwan. A survey which included the MBI, GSE, PSS, and Intention to Leave scales, a work profile and demographic questions were used to determine the perceived level of burnout and intention to leave in selected kindergarten teachers. In this section, the ethical considerations about protecting participants was described and other ethical considerations, and methods of collecting data were also be discussed.

1. The researcher obtained permission from the instrument developers to use all the scales in this study. These included permissions to use the *Maslach Burnout Inventory* for teachers, the *Perceived Stress Scale*, the *Generalized Self-Efficacy Scale*, and the *Intention to Leave Scale* (see Appendix H, I, J, and K);
2. A letter was obtained from the Child Welfare Service Center of Social Welfare Bureau, Kaohsiung City Government indicating they will provide a list of 1,599 teachers in kindergartens in Kaohsiung city for the 2006-2007 to use as the accessible population (sample) for this dissertation study (See Appendix L). In addition, a request was made to the Child Welfare Service Center of

Social Affairs Bureau, Kaohsiung City Government to provide a cover letter to accompany the survey to teachers, of their support and recommendation to participate in the study (see Appendix M);

3. After successful defense of the dissertation proposal, an application and research protocol was submitted to the Institutional Review Board (IRB) of Lynn University. Because this study was conducted in Taiwan, a foreign country, there was a need for full board review by the IRB complied with CFR (45CFR 46 101 [h]). In this IRB application, a request was made to waive documentation of a signed consent, in order to maintain anonymity of respondents;
4. Upon receiving IRB approval to proceed with translations, the survey (see Appendix E), a cover letter from the Child Welfare Service Center of Social Affairs Bureau, Kaohsiung City Government, (see Appendix M) and authorization for voluntary consent form (see Appendix B) to be used in this study were translated from English to Traditional Chinese by experts proficient at both the Traditional Chinese and English languages and reverse-translated from the Traditional Chinese into English to ensure the consistency. The certified translations were submitted to the IRB for review; (see Appendix D, G).
5. After receiving the final approval of Lynn University's IRB to conduct the study, data collection was initiated (see Appendix A);

6. The assessable population of 1,599 kindergarten teachers were invited to participate from the list provided by the Child Welfare Center of Social Affairs Bureau, Kaohsiung City Government;
7. A cover letter written by the researcher, the letter of support written by the Child Welfare Center of Social Affairs Bureau, Kaohsiung City Government, the voluntary consent form, and the survey (see Appendixes E, F, G, and A) were mailed on the same day to the sample of 1,599 kindergarten teachers across the eleven school districts of Kaohsiung city. A self-addressed envelope (with return postage provided) was included in the mailing. The respondents were asked to answer the questionnaires completely, seal them in an enclosed envelope with stamp and put the envelope into a mailbox. Return of the complete survey constituted the respondents' informed consent to participate. All information was held in strict confidence and was not disclosed unless required by law or regulation;
8. A reminder post card was sent to kindergarten teachers after two weeks, and a final reminder was sent out the last week of data collection;
9. Respondents were anonymous to protect the identities of the participants. There were no personal identifiers of respondents on the survey questionnaire. However, the surveys were coded by numbers representing different school;
10. The researcher recorded the number of surveys distributed and the number of return in order to calculate the response rate;
11. Data collection lasted for six weeks and no longer than one year from the data of IRB approval;

12. Once survey data were returned, the data were analyzed using the Statistical Package for Social Sciences (SPSS);
13. The researcher submitted to the Lynn University IRB the Report of Termination of Project within a month of the data collection completed;
14. The data collected is being kept in a computer with password protection for a period of five years, at which time it will be destroyed; and
15. Survey responses are being stored in a locked depository box. The data will also be destroyed after five years.

### **Evaluation of Ethical Aspects of the Study**

This research study is regarded as ethical for the following reasons:

1. Proper permission was obtained from instrument developers;
2. An approval from Lynn University's IRB obtained prior to data collection and ensure the necessary procedures were used in this study;
3. Participants were informed and received a sufficient explanation of the dissertation research, including the purpose of investigation and contact details;
4. Respondents were notified that the responses would be anonymous;
5. The IRB were informed when data collection completed;
6. The data collected is being kept in a password protected computer. In addition, all data collected is being kept confidential, saved electronically with security for a period of five years, and then destroyed; and
7. All paper documents of survey responses are being stored in a locked depository box and are being destroyed after a period of five years.

## Methods of Data Analysis

When all surveys had been collected from the target population, data were analyzed using the Statistical Package for Social Science (SPSS) for Windows version 11.0. Statistical procedures that were used to respond to answer the research questions and test hypotheses in this study included (a) descriptive statistics; (b) coefficient alpha to estimate internal consistency reliability; (c) exploratory factor analysis; (d) independent two-tailed *t*-tests; (e) one-way ANOVA with post hoc, simple regression, multiple regression, and moderated multiple regression (MMR). Before the actual data began, there were essential steps that needed to be taken as following:

1. Data Coding: Data collected were coded with numbers of levels for each response category and each variable. Each variable was assigned a code name;
2. Internal Consistency Reliability: Most variables consisted of items measured with multiple rating scales. The internal consistency of the multiple-item scales was measured by the Cronbach's coefficient alpha. The Cronbach's coefficient alpha of each variable should be attained an estimate equal to or higher than .70, which is the minimum threshold for the internal consistency reliability in the social science research;
4. Exploratory Factor Analysis (EFA): Through EFA, a larger set of items resembled a construct. Factor analysis was conducted for each scale;
5. Correlation between select scales was performed using Pearson *r* correlation to establish convergent validity; and

6. Pearson  $r$  correlation: Pearson  $r$  correlation was used to show functional relationships between the variables when both were normally distributed.

### ***Descriptive Statistics***

Through descriptive analysis, mean scores on scales, frequency distributions, percentage of responses within each variable, and variability (such as the range and standard deviation) were used to answer Research Question One. Those procedures helped to obtain the characteristics of all variables including demographic characteristics of kindergarten teachers (gender, marital status, age, educational level, and religious status), work profiles (working hours, salary satisfactory and total years of teaching experience), job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), and intentions to leave.

### ***One-Way ANOVA and Independent $t$ -Tests***

Research Question Two was designed to report significant differences in Taiwanese kindergarten teachers' job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), and intentions to leave according to their demographic characteristics (gender, marital status, age, educational level, and religious category). For the causal-comparative (exploratory) aspect of this survey research design, a two-tailed independent  $t$ -tests and one way ANOVA with Tukey's post-hoc test, if there were significant differences according to other demographic categorical variables, were used to answer Research Question Two.

### ***Pearson $r$ Correlation***

Pearson  $r$  correlation, producing an inter correlation matrix was used to answer Research Question Three of the relationships between in work profile (total numbers of

working hours, salary satisfaction, and total years of teaching experience), job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), and intentions to leave.

### ***Multiple Regression***

Multiple regression was used to examine the significant explanatory relationships among demographic characteristics (marital status, gender, age, educational level, and religious category), work profiles (total numbers of working hours, salary satisfaction, total years of teaching experience), job stress, self-efficacy and the dependent variable of levels of burnout including: levels of emotional exhaustion (Hypothesis 1a), levels of depersonalization (Hypothesis 1b), and levels of personal accomplishment (Hypothesis 1c). Multiple regression was used to examine explanatory relationships between demographic characteristics, work profile, job stress, self-efficacy, levels of burnout and kindergarten teachers' intention to leave (Hypothesis 2).

Moreover, the explanatory relationship between demographic characteristics, work profile, job stress, and self-efficacy and the level of burnout was described as follows:

$$y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \varepsilon_1$$

Where,

$y$  = denotes the dependent variable separately [emotional exhaustion (Hypothesis 1a), levels of depersonalization (Hypothesis 1b), level of personal accomplishment (Hypotheses 1c), and intention to leave (Hypothesis 2)].

$x_1$  = Demographic Characteristics;

$x_2$  = Work Profile;

$x_3$  = Job Stress; and

$x_4$  = Self-Efficacy

$\beta_0$  = constant

$\varepsilon_1$  = error

### *Simple Regression*

Hypothesis 3 and Hypothesis 4 were designed to test the explanatory (correlation) relationship between self-efficacy, and job stress (Hypothesis 3), level of emotional exhaustion (Hypothesis 4a), level of depersonalization (Hypothesis 4b), level of personal accomplishment (Hypothesis 4c). Simple regression was used to examine the Hypothesis 3 and Hypothesis 4.

The explanatory relationship between job stress, self-efficacy and the level of burnout was described as followed:

$$y = \alpha + \beta x_i + \varepsilon_i$$

Where,

$y$  = perceived self-efficacy

$x_i$  = denotes the explanatory variables [job stress for Hypothesis 3; emotional exhaustion for Hypothesis 4a; depersonalization Hypothesis 4b; personal accomplishment for Hypothesis 4c].

$\alpha$  = constant

$\varepsilon_i$  = the term  $\varepsilon$  represents the unpredicted or unexplained variation, called the "error". The error term is conventionally assumed to have expected value equal to zero.



### ***Moderated Multiple Regression***

The explanatory relationships among demographic characteristics (marital status, gender, age, educational level, and religious category), work profile (total numbers of working hours, salary satisfaction, total years of teaching experience), job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment) and intentions to leave were analyzed through moderated multiple regression (MMR) (Hypothesis 5).

The regression model to test Hypothesis 5 with MMR included the mediating variable of self-efficacy, and was expressed as follows:

$$y = \alpha_2 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 z_1 + \beta_6 x_1 \cdot z_1 + \beta_7 x_2 \cdot z_1 + \beta_8 x_3 \cdot z_1 + \beta_9 x_4 \cdot z_1 + \varepsilon_2$$

Where,

$y$  = Intention to leave

$x_1$  = demographic characteristics;

$x_2$  = work profile;

$x_3$  = job stress; and

$x_4$  = levels of burnout

$z_1$  = self-efficacy

$\alpha_2$  = constant

$\varepsilon_2$  = error

### **Evaluation of Research Methods**

In this section, both internal and external validity were examined in order to represent the strengths and weaknesses of the research methods that were used in this study. Internal validity of the research study considered the extent of establishing cause-

effect relationships between independent and dependent variables expressed in, the theoretical framework, hypotheses testing, research design, instruments to measure variables, procedures, and data analyses. External validity was related to the degree to which findings could be generalized to the accessible population.

### *Internal Validity*

#### *Strengths*

1. This study was exhibited in a quantitative, non-experimental, and explanatory research design. This design was stronger than an exploratory or descriptive design;
2. Quantitative study has more internal validity than qualitative analysis;
3. Statistical procedures were appropriate for answering research questions and testing hypotheses. Furthermore, the internal validity of this study was consolidated;
4. Adopted study instruments (MBI, GSE) were standardized measures previously tested on diverse populations;
5. The estimated sample size was adequate to conduct the data analysis;
6. Limiting the sample to kindergarten teachers in Kaohsiung city in Taiwan improved homogeneity of the sample (decreasing the influence of extraneous variables); and
7. A back-translation of the questionnaire from Traditional Chinese into English was administrated in order to improve the validity of this study.

### *Internal Validity*

#### *Weaknesses*

1. A non-experimental design is a threat to internal validity and will be weaker than an experimental design in drawing causal model building; and
2. Using an instrument with no previous estimates of reliability and established validity to measure outcomes weakens the internal validity of the study.

However, estimates of internal consistency reliability and factor analysis were conducted prior to inferential statistical analysis.

### *External validity*

#### *Strengths*

1. Inclusion of the total accessible population is strength, creating a strong sampling design and allowing for generalizability to the accessible population; and
2. Data collection occurred in a natural setting, not a lab setting. The survey was completed in a natural environment.

### *External validity*

#### *Weaknesses*

1. Self-selective sampling bias of those who agreed to participate, might not represent the accessible population, and affect generalizability; and
2. Limiting the accessible population to kindergarten teachers in Kaohsiung city in Taiwan limited generalizability beyond these parameters.

Charter III described the research methods that were used to answer the research questions and test the hypotheses about the relationships among demographic

characteristics, work profile, perceived self-efficacy, teacher stress, burnout, and intention to leave in kindergarten teachers in Kaohsiung, Taiwan. This chapter also described the research design, the sampling plan, instruments, procedures and data collection methods, and data analyses methods. Chapter IV presents the findings of this study.

## CHAPTER IV

### RESULTS

The results of the study on the relationships among demographic characteristics, work profile, perceived self-efficacy, job stress, burnout, and intention to leave in kindergarten teachers in Kaohsiung, Taiwan. First, descriptive analyses of demographic characteristics, work profile, and all other variables are provided to give a brief summary of the sample profiles. Second, the results of exploratory factor and reliability analyses which were used to validate the instruments used in this study are presented. Finally, the outcomes of inferential statistics of one-way ANOVA and moderated multiple regression (MMR), that were used as methods of data analyses and to answer the hypotheses testing are given.

#### **Final Data-Producing Sample and Research Question**

The accessible population of 1,599 kindergarten teachers was invited by mail to participate in this study. Of the 1,599 kindergarten teachers, only 515 returned the mailed survey. Additionally, seven surveys were returned either incomplete or invalid. This resulted in a total of 508 usable responses for data analysis, representing a response rate of 31.77 % (see Table 4-1).

Table 4-1

#### *Summary of Responses to the Mail Survey*

Responses	Frequency	Percent
Returned	515	32.20%
Valid	508	<b>31.77%</b>
Invalid	7	0.004%
Total	1599	100%

To answer the research question, the demographic characteristics, work profile, perceived self-efficacy, teacher stress, burnout, and intention to leave in kindergarten teachers in Kaohsiung, Taiwan were presented first. Descriptive analyses of frequency distribution, central tendency (mean) and variance (standard deviation) were used to supply basic information about each of the sociodemographic variables. Moderated multiple regression was used to answer the research hypotheses.

### ***Demographic Characteristics of Kindergarten Teachers***

Characteristics of kindergarten teachers (including gender, age, marital status, education level, religion, school location and school type) are presented. As shown in Table 4-2, the sample indicated that the kindergarten teachers were dominated by females (97.4%). Most of the kindergarten teachers taught in the public school (95.1%). There was a strong representation of non-married kindergarten teachers (60%). Sixty percent of them have obtained bachelor's degrees and 28.7% have college's degrees. Of the respondents, 54.7% of respondents were Buddhist teachers, forty respondents were Protestant teachers (7.9%) and forty teachers were Catholic (2.8%). The mean age of the kindergarten teachers was 30.63 years, ranging from 20 to 54 years of age with a standard deviation of 7.336. As shown in Figure 4-1, the largest age group (27%) was between 25 and 29 years old, and the smallest age group (0.8%) was between 50 and 54 years of age. The majority (60.8%) were between 20 and 34 years old.

Table 4-2

*Characteristics of Kindergarten Teachers by Gender, Age, Marital Status, Education Level, Religion, School location and School Type*

Demographic Variables	Frequency	Percent	Mean	Standard Deviation
<b>Gender</b>				
Female	495	97.4%		
Male	13	2.6%		
Total	508	100%		
<b>School Type</b>				
Public	483	95.1%		
Private	25	4.9%		
Total	508	100%		
<b>Married Status</b>				
Married	203	40.0%		
Non-Married	305	60.0%		
Total	508	100%		
<b>Education</b>				
High School Degree (Professional School Degree)	57	11.3%		
Community College Degree (Technology Institute Degree)	146	28.7%		
Bachelor's Degree	303	59.6%		
Master's Degree	2	0.4%		
Total	508	100%		
<b>Age</b>				
20-24	121	23.8%		
25-29	137	27.0%		
30-34	94	18.5%		
35-39	86	16.9%		
40-44	42	8.3%		
45-49	24	4.7%		
50-54	4	0.8%		
Total	508	100%	30.63	7.336
<b>Religion</b>				
Buddhist	248	54.7%		
Protestant	40	7.9%		
Catholic	14	2.8%		
Others	176	34.6%		
Total	508	100%		
<b>School Located</b>				
Sanmin District	127	25.0%		
Xiaogang District	30	5.9%		
Zuoying District	75	14.8%		
Cianjin District	11	2.2%		
Cianjhen District	44	8.7%		
Lingya District	61	12.0%		
Sinsing District	10	2.0%		
Nanzih District	61	12.0%		
Ku-Shan District	53	10.4%		
Cijin District	4	0.8%		
Yangcheng District	32	6.3%		
Total	508	100%		

### *Work Profiles*

Work profiles (including teaching experience, working hours, monthly payment and salary satisfaction) are presented. Descriptive analyses of means and standard deviations are shown in Table 4-3. The teaching experience of kindergarten teachers had a mean of 7.56 years, ranging from 0 to 30 years with a standard deviation of 6.1 years. In addition, the working hours of kindergarten teachers ranged from 12 to 64 with a mean of 31.10 hours and had a standard deviation of 18.15 hours. With regards to the monthly payment of kindergarten teachers, there was a mean of NT\$23,800 (\$800), ranging from NT\$20,000 (\$650) to NT\$70,000 (\$2,300). Of the respondents, 30.8% of respondents agreed slightly that their monthly payment were paid a fair amount. One hundred and twenty-four teachers disagreed moderately about their monthly payment (24.4%) and fifty-three disagreed very much.



Table 4-3

*Work Profiles of Kindergarten Teachers by Teaching Experience, Working Hours, Monthly Payment and Salary Satisfaction*

Working Profiles	Frequency	Percent	Mean	Standard Deviation
<b>Teaching Experience</b>				
(Year)				
0- 1	62	12.2%		
1- 3	111	21.9%		
4- 7	122	24.0%		
8-10	96	18.9%		
10-12	22	4.3%		
13-15	38	7.5%		
15-30	57	11.2%		
Total	508	100%	7.56	6.10
<b>Working Hours (Week)</b>				
0-30	302	59.5%		
30-34	0	0%		
35-39	5	1%		
40-44	51	10.0%		
45-49	27	5.3%		
50-54	63	12.4%		
55-59	9	1.8%		
60-64	51	10.0%		
Total	508	100%	26.78	22.11
<b>Monthly Payment</b>				
Less than NT\$ 25,000( Less than \$850)	376	74.0%		
NT\$25,000 ~ 30,000 (\$850~\$1,000)	88	17.3%		
NT\$30,001 ~ 35,000 (\$1,000~\$1,150)	16	3.1%		
NT\$35,001 ~ 40,000 (\$1,150~\$1,300)	13	2.6%		
NT\$40,001 ~ 45,000 (\$1,300~\$1,450)	5	1.0%		
NT\$45,001 ~ 50,000 (\$1,450~\$1,600)	6	1.2%		
Above 50,001 (Above \$1,600)	4	0.8%		
Total	508	100%	NT\$23,800 (\$800)	6,776
<b>Salary Satisfaction</b>				
Disagreed very much.	53	10.4%		
Disagreed moderately	124	24.4%		
Disagreed slightly	56	11.0%		
Agreed slightly	157	30.8%		
Agreed moderately	103	20.2%		
Agreed very much.	16	3.1%		
Total	508	100%		

### *Kindergarten Teachers' Perceptions of Job Stress*

Participating teachers were asked to respond to ten items about their job stress. The Job Stress was a uni-dimensional measurement developed by Cohen, S., Kamarck, T and Mermelstein, R. (1983). Each item was rated on a 5-point rating scale from “never” (0) to “very often” (4). Table 4-4 shows the percent distribution of response categories, item means, standard deviations, and dimension scores for job stress. The measurement of job stress had a mean score of 2.67, ranging from item two at 2.32 (the lowest), to item five at 3.15 (the highest), with a standard deviation of 0.574. The mean for item five was the highest at 3.15 (between fairly often and very often). Kindergarten teachers perceived item five as never (3.30%), followed by almost never (20.9%), sometimes (38.6%), fairly often (31.7%) and very often (5.5%). Most kindergarten teachers experienced unpredictable, uncontrollable stress and overloaded in their lives (between sometimes to fairly often).

Table 4-4

*Percent Distribution of Kindergarten Teachers' Perceptions of Job Stress*

Item	Response Categories (Percent Distribution)					Mean	Std. Deviation
	Never	Almost Never	Sometimes	Fairly Often	Very Often		
<b>Job Stress</b>	0	1	2	3	4	2.67	0.574
1. In the last month, how often have you been upset because of something that happened unexpectedly?	6.3%	47.0%	35.0%	8.9%	2.8%	2.55	0.847
2. In the last month, how often have you felt that you were unable to control the important things in your life?	17.3%	43.1%	31.7%	6.1%	1.8%	2.32	0.891
3. In the last month, how often have you felt nervous and "stressed"?	7.5%	36.6%	31.5%	19.3%	5.1%	2.78	1.008
4. In the last month, how often have you felt confident about your ability to handle your personal problems?	9.1%	26.2%	39.6%	20.9%	4.3%	2.85	0.993
5. In the last month, how often have you felt that things were going your way?	3.3%	20.9%	38.6%	31.7%	5.5%	3.15	0.927
6. In the last month, how often have you found that you could not cope with all the things that you had to do?	12.4%	44.7%	32.1%	8.7%	2.2%	2.44	0.894
7. In the last month, how often have you been able to control irritations in your life?	9.4%	26.8%	35.2%	25.4%	3.1%	2.86	1.004
8. In the last month, how often have you felt that you were on top of things?	8.5%	29.5%	36.0%	22.6%	3.3%	2.83	0.983
9. In the last month, how often have you been angered because of things that were outside of your control?	8.3%	42.7%	37.4%	9.1%	2.6%	2.55	0.865
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	20.1%	42.3%	25.6%	8.5%	3.5%	2.33	1.003
Dimension Score (Range 0-40)						26.66	

### *Kindergarten Teachers' Perceptions of Self-Efficacy*

Participating teachers were asked to respond to ten items about their self efficacy. The self efficacy was a one-dimensional measurement developed by Schwarzer and Jerusalem (1981). Each item was rated on a four-point, forced-choice, rating scale from "Not at all true" (1) to "Exactly true" (5).

Table 4-5 shows the percent distribution of response categories, item means, standard deviations, and dimension scores for self efficacy. The measurement of self efficacy had a mean score of 2.69, ranging from item two at 2.41 (the lowest), to item one at 2.97 (the highest), with a standard deviation of 0.558. Teachers perceived item one as the mostly true (50.2%), followed by exactly true agree (24.8%), hardly true (22.2%) and not at all true (2.6%). Most kindergarten teachers agreed that self efficacy help them to fulfill novel or tough works, or cope with misadventure (between hardly true agree and mostly true agree).

Table 4-5

*Percent Distribution of Kindergarten Teachers' Perceptions of Self-Efficacy*

Item	Response Categories (Percent Distribution)				Mean	Std. Deviation
	Not at all true	Hardly true	Mostly true	Exactly true		
<b>Self-Efficacy</b>	1	2	3	4	2.69	0.558
1. I can always manage to solve difficult problems if I try hard enough.	2.6%	22.2%	50.2%	24.8%	2.97	0.758
2. If someone opposes me, I can find the means and ways to get what I want.	10.0%	47.4%	34.4%	8.1%	2.41	0.777
3. It is easy for me to stick to my aims and accomplish my goals.	9.8%	40.9%	43.3%	5.9%	2.45	0.751
4. I am confident that I could deal efficiently with unexpected events.	4.3%	39.8%	44.9%	11.0%	2.63	0.763
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.	5.5%	47.6%	38.6%	8.3%	2.50	0.726
6. I can solve most problems if I invest the necessary effort.	2.6%	22.6%	53.1%	21.7%	2.94	0.737
7. I can remain calm when facing difficulties because I can rely on my coping abilities.	2.8%	29.9%	48.4%	18.9%	2.83	0.756
8. When I am confronted with a problem, I can usually find several solutions.	2.0%	33.5%	48.2%	16.3%	2.79	0.730
9. If I am in trouble, I can usually think of a solution.	2.4%	30.7%	51.4%	15.6%	2.55	0.761
10. I can usually handle whatever comes my way.	6.5%	42.3%	41.1%	10.0%	2.69	0.558
Dimension Score (Range 10-40)					26.76	

### *Kindergarten Teachers' Perceptions of Burnout*

Teacher burnout contained twenty-two items and were organized by three subscales (or dimensions), developed by Maslach, Jackson, and Schwab (1996). The three dimensions of teacher burnout used a 7-point, frequency rating scale, ranging from “never” (0) to “everyday” (6). Table 4-6 shows the percent distribution of response categories, means, and standard deviations of the twenty-two items. Three dimensions were Emotional Exhaustion (EE) with nine items (this subscale measures the degree of exhaustion that results from the working environment. Items for this subscale include: 1, 2, 3, 6, 8, 13, 14, 16, 20 and a score range of 0-54); Depersonalization (DP) with five items (this subscale measures the relationship between the giver (teacher), and the recipient (student) of the service. Items from this subscale include: 5, 10, 11, 15, 22 and a score range of 0-30. Personal Accomplishment (PA) with eight items (this subscale measures the perceived feeling of accomplishments and success in the working environment. Items from this subscale include: 4, 7, 9, 12, 17, 18, 19, 21 and a score range of 0-48).

Table 4-7 shows the items, means, and standard deviations of the three dimensions. The highest rated dimension was Emotional Exhaustion (EE), which had a mean of 3.22, with a standard deviation of 1.25. The second dimension followed by Personal Accomplishment (PA) had a mean of 3.00, with a standard deviation of 1.15. The lowest rated dimension was Depersonalization (DP) which had a mean of 2.42 and a standard deviation of 1.47. The frequency distributions for each dimension were quite similar. Most kindergarten teachers perceived burnout between “once a month or less” and “a few times a month or less”.

Table 4-6

*Percent Distribution of Kindergarten Teachers' Perceptions of Burnout*

Item	Response Categories (Percent Distribution)							Mean	Std. Deviation
	Never	Once a month or less	A few times a month or less	Once a week	Strongly Agree	A few times a week	Every day		
<b>Burnout</b>	0	1	2	3	4	5	6		
1. I feel emotionally drained from my work.	12.0%	26.0%	22.4%	20.3%	9.8%	5.3%	4.1%	3.22	1.56
2. I feel used up at the end of the work day.	7.5%	15.7%	21.7%	15.9%	14%	15.2%	10%	3.98	1.78
3. I feel fatigued when I get up in the morning and have to face another day on the job.	13.8%	15.7%	21.3%	15.4%	14.0%	10.6%	9.3%	3.68	1.84
4. I can easily understand how my students feel about things.	31.1%	28.7%	10.2%	7.5%	10.8%	6.3%	5.3%	2.78	1.84
5. Working with people directly puts too much stress on me.	50.8%	12.2%	14.2%	7.5%	6.1%	5.3%	3.9%	2.37	1.78
6. Working with people directly puts too much stress on me.	32.3%	22.0%	18.3%	15.2%	6.5%	3.4%	2.4%	2.60	1.56
7. I deal very effectively with the problems of my students.	25.6%	27.4%	7.3%	11.6%	11.8%	11.0%	5.3%	3.10	1.92
8. I feel burned out from my work.	20.1%	22.4%	22.8%	13.6%	9.8%	4.9%	6.3%	3.10	1.72
9. I feel I am positively influencing other people's lives through my work.	23.4%	17.5%	10.4%	11.4%	14.0%	12.0%	11.2%	3.56	2.09
10. I've become more callous toward people since I took this job	48.4%	20.7%	13.0%	8.9%	5.1%	2.8%	1.2%	2.14	1.45
11. I've become more callous toward people since I took this job	49%	17.3%	13.2%	9.1%	5.1%	3.7%	2.6%	2.24	1.61
12. I feel very energetic.	19.9%	23.6%	15.2%	10.2%	14.8%	7.7%	8.7%	3.34	1.92
13. I feel frustrated by my job.	19.5%	26.8%	22.0%	15.4%	7.3%	6.1%	3%	2.93	1.58
14. I feel I'm working too hard on my job	11.6%	19.9%	18.9%	12.0%	13.0%	13.2%	11.4%	3.81	1.92
15. I do not really care what happens to some students.	50.0%	16.5%	13.2%	9.6%	4.9%	3.9%	1.8%	2.21	1.57
16. Working with people directly puts too much stress on me	27.6%	24.2%	18.1%	14.2%	6.9%	6.5%	2.6%	2.78	1.64
17. I can easily create a relaxed atmosphere with my students	39.4%	21.7%	11.2%	8.1%	8.7%	6.9%	4.1%	2.61	1.83
18. I feel exhilarated after working things in this job	40.7%	20.9%	8.9%	9.1%	10.4%	5.9%	4.1%	2.61	1.84
19. I have accomplished many worthwhile things in this job	28.9%	23.0%	12.4%	12.6%	11.4%	8.1%	3.5%	2.92	1.80
20. I feel like I'm at the end of my rope	27.2%	26.4%	15.4%	11.4%	9.4%	5.5%	4.7%	2.84	1.75
21. In my work, I deal with emotional problems very calmly	24.6%	25.8%	9.8%	12.6%	11.2%	12.0%	3.9%	3.11	1.87
22. I feel students blame me for some of their problems	22.6%	23.8%	15.4%	12.6%	9.7%	10.2%	5.7%	3.16	1.86

Table 4-7

*The Items of Response Categories, Means, and Standard Deviations of the Three Dimensions with Burnout*

<b>Dimension</b>	<b>Items</b>	<b>Mean</b>	<b>Std. Deviation</b>
Emotional Exhaustion (EE)	9	3.22	1.25
Depersonalization (DP)	5	2.42	1.15
Personal Accomplishment (PA)	8	3.00	1.47

### *Kindergarten Teachers' Perceptions of Intention to Leave*

Intention to leave refers to a teacher no longer endure occupational stress and feel totally worn out by stress, the teacher experienced a syndrome of burnout. (Weisberg, 1994) This measurement has only three items, developed by Weisberg (1994) The three items were measured by a five-point rating scale, ranging from "very little" (1) to "very much" (5). The score range for the scale is 3 to 15. Table 4-8 shows the percent distribution of response categories, means, and standard deviations of the three items. The measurement of intention to leave had a mean score of 2.80, ranging from item one at 2.50 (the lowest), to item two at 3.17 (the highest), with a standard deviation of 1.01. Teachers perceived item two as the "much" (28.7%), followed by "average" (20.1%), "very much" (18.8%), "very little" (16.7%) and. "little" (15.8%).



Table 4-8

*Percent Distribution of Kindergarten Teachers' Perceptions of Intention to Leave*

Item	Response Categories (Percent Distribution)					Mean	Std. Deviation
	Very Little	Little	Average	Much	Very Much		
<b>Intention to Leave</b>	1	2	3	4	5	2.80	1.01
1. I have considered leaving teaching.	17.3%	40.9%	23.6%	9.6%	8.5%	2.50	1.13
2. I think that if I were choosing my career again, I would choose teaching	16.7%	15.8%	20.1%	28.7%	18.75	3.17	1.36
3. I think in the near future I will leave teaching..	18.3%	31.9%	22.0%	13.8%	14%	2.72	1.30
Dimension Score (Range 3-15)							

Descriptive analyses of frequency distribution, mean, and standard deviation were used to assess Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious status), work profiles (working hours, salary satisfaction and total years of teaching experience), job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), and intention to leave. Before hypotheses testing, exploratory factor analysis and reliability analysis were conducted to establish validity and provide estimates of reliability. The following section provides the results of exploratory factor analysis and reliability analysis.

## **Construct Validity**

### ***Correlation Matrix***

Construct validity determines how the operationalization of the measurement can be generalized to the intended concept and the accuracy with which it reflects its construct (Trochim, 2002). In general, construct validity consists of predictive, concurrent, convergent, and discriminant validity (Trochim, 2002). A correlation matrix was used to show each item's association with each of the other items. When the association between the two items is high, convergent validity is established; whereas, when the association between the two items is low, discriminant validity is established. Because the measurements of job stress, self-efficacy, and intention to leave adopted in this study were uni-dimensional instruments, their construct validity cannot be tested by exploratory factor analysis. Therefore, convergent and divergent validity was assessed to show that items of job stress, self-efficacy, and intention to leave were different from each other. As a result, the construct of job stress, self-efficacy were further validated by convergent and discriminant validity, and construct validity of intention to leave was established.

To distinguish items that differ from the other constructs (discriminant validity), the correlation should be lower than .6, and no higher than .7 (Leech, Baret, & Morgan, 2005). The correlation matrix shows associations between each pair of item. A total of 45 inter-item correlation coefficients were lower than .7. However, eight pairs of associations were higher than .6. The highest association was found between intention to leave item 1 and item 3. Since both items represent the same construct, their high correlation shows convergent validity. The second highest association was found

between burnout item 16 and item 20. They were factored into the same construct (see the following section of exploratory factor analysis). As their correlations were lower than .7 and close to the minimum level, discriminant validity was considered established among constructs of job stress, self-efficacy, and intention to leave.

### *Exploratory Factor Analysis*

Factor analysis helps to identify a set of interrelated variables that represent the underlying construct (George & Mallery, 2003). Thus, the factor analysis in this study was mainly executed to examine whether or not the same set of interrelated variables still represented the same construct based on the sample collected from Taiwan's kindergarten teachers. In addition, the result of factor analysis could further validate the instrument.

The instrument of burnout has three dimensions, Emotional Exhaustion (EE), Personal Accomplishment (PA), and Depersonalization (DP). Emotional Exhaustion (EE) dimension has nine items; Depersonalization (DP) dimension has five items; and Personal Accomplishment (PA) dimension has eight items. Factor analysis was utilized to examine whether or not the same items still hung together as a group. Before conducting factor analysis, two tests of Kaiser-Meyer-Olkin (KMO) and Barlett were needed. Both are tests of multivariate normality and adequacy of items for conducting factor analysis (George & Mallery, 2003). KMO tests should be greater than .7 demonstrating that items for each factor are sufficient (George & Mallery, 2003). Barlett's test needs to have a significant value less than .05 indicating that items do not generate an identity matrix (Leech, Barrett, & Morgan, 2005).

Table 4-9 shows that the KMO test was greater than .90, meaning that items for each factor were sufficient and that Barlett's test was significant ( $p < .000$ ). The results of both tests indicated that these items were multivariate, normal and suitable for factor analysis.

Table 4-9

*KMO and Barlett's Test*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.910
Bartlett's Test of Sphericity	Approx. Chi-Square	6021.236
	df	231
	Sig.	.000

Principal axis factoring was used with varimax rotation (used for factors that are uncorrelated with each other). Based on the research conducted by Maslach, Jackson, and Schwab (1996), the instrument developers, items were factored into three sub-constructs (or dimensions), Emotional Exhaustion (EE), Personal Accomplishment (PA), and Depersonalization (DP). Table 4-10 presents the results of factor analysis for this study. All factor loadings were greater than .4, the minimum acceptable level for items to be grouped as measuring the same construct (construct validity) (Leech, Barrett, & Morgan, 2005).

Table 4-10

*Factor Loadings for the Burnout*

Item	Factor Loadings		
	Emotional Exhaustion	Personal Accomplishment (PA)	Depersonalization (DP)
Burnout1	0.016	0.197	-0.057
Burnout2	0.003	0.239	-0.133
Burnout3	0.024	0.25	-0.135
Burnout4	0.143	-0.044	0.016
Burnout5	-0.047	-0.114	0.286
Burnout6	0.01	0.09	0.071
Burnout7	0.142	-0.045	0.018
Burnout8	0.025	0.197	-0.055
Burnout9	0.132	-0.01	-0.038
Burnout10	-0.014	-0.094	0.3
Burnout11	-0.015	-0.079	0.275
Burnout12	0.161	0.117	-0.107
Burnout13	0.009	0.103	0.068
Burnout14	-0.016	0.2	-0.101
Burnout15	-0.037	-0.137	0.311
Burnout16	0.015	0.089	0.08
Burnout17	0.181	0.03	-0.036
Burnout18	0.181	0.043	-0.04
Burnout19	0.173	0.042	-0.035
Burnout20	-0.006	0.037	0.139
Burnout21	0.157	0.011	-0.019
Burnout22	-0.059	-0.023	0.148

This section established the validity of the instrumentation. First, a correlation matrix was created to establish convergent and discriminant validity of job stress, self-efficacy, and intention to leave. Second, exploratory factor analysis was utilized to establish the construct validity of burnout.

### ***Reliability Analysis***

Reliability is intended to estimate the quality, meaning the consistency and repeatability, of measurement (Trochim, 2002). According to Trochim (2002), four types of reliability estimates are generally used. First, internal consistency reliability based on Cronbach's coefficient alpha ( $\alpha$ ) is used for multiple item scales to test the consistency of results. Test-retest reliability is used to determine whether measurement results are consistent over time. Inter-rater reliability examines correlated different raters to see whether they provide consistent estimates. Last, parallel-forms reliability is used to see whether the results of two tests constructed in the same way in the same domain are consistent.

#### ***Reliability Estimates of Kindergarten Teachers' Job Stress***

In this study, internal consistency reliability used Cronbach's alpha to test the consistency of kindergarten teachers' job stress. Cronbach's alpha should be higher than .7, the minimum acceptable level (Leech et al., 2005). The Cronbach's alpha for kindergarten teachers' job stress dimension was .81, exceeding the required minimum level. Thus, internal consistency of kindergarten teachers' job stress dimension was reliable.

#### ***Reliability Estimates of Kindergarten Teachers' Self-Efficacy***

In this study, internal consistency reliability used Cronbach's alpha to test the consistency of kindergarten teachers' job stress. Cronbach's alpha should be higher than .7, the minimum acceptable level (Leech et al., 2005). The Cronbach's alpha for kindergarten teachers' self-efficacy dimension was .92, exceeding the required minimum

level. Thus, internal consistency of kindergarten teachers' job stress dimension was reliable.

***Reliability Estimates of Kindergarten Teachers' Burnout***

Table 4-11 shows the estimates of internal consistency reliability for kindergarten teachers' burnout. Three sub-constructs of kindergarten teachers' burnout met the minimum .7 level, indicating that the items of the instrument were internally consistent.

Table 4-11

*Internal Consistency Reliability of Kindergarten Teachers' Burnout*

<b>Variables</b>	<b>Items</b>	<b>Cronbach's Alpha (<math>\alpha</math>)</b>
Emotional Exhaustion (EE)	9	0.90
Depersonalization (DP)	5	0.73
Personal Accomplishment (PA)	8	0.91

***Reliability Estimates of Kindergarten Teachers' Intention to Leave***

In this study, internal consistency reliability used Cronbach's alpha to test the consistency of kindergarten teachers' intention to leave. The Cronbach's alpha for kindergarten teachers' intention to leave dimension was .72, exceeding the required minimum level. Thus, internal consistency of kindergarten teachers' job stress dimension was reliable.

Descriptive analyses were conducted not only to have a general idea of the sample but to also answer the research question. In addition, exploratory factor analysis was run to examine the construct validity of instruments used in this study. Moreover, reliability analyses were estimated to assess internal consistency of measurement. After validation of measurement was completed, one-way ANOVA and moderated multiple regression were conducted to test the research hypotheses.



## Research Questions

Research Question Two was designed to report significant differences in Taiwanese kindergarten teachers' job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), and intentions to leave according to their demographic characteristics (gender, marital status, age, educational level, and religious category). To answer Research Question Two and Research Question Three, a two-tailed independent *t*-tests and one way ANOVA with Tukey's post-hoc test, if there were significant differences according to other demographic categorical variables, were used to answer Research Question Two and Research Question Three.

The followings are Q2:

Q2 Are there significant differences in Taiwanese kindergarten teachers' job stress (perceived stress), self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), and intention to leave according to their demographic characteristics (gender, marital status, age, educational level, and religious category)?

The demographic characteristics of kindergarten teachers included marital status, gender, age, educational level, and religious category. The final mailed-back sample consisted of 508 kindergarten teachers. In this sample, collected from kindergartens in eleven school districts in Kaoshiung City, Taiwan, the position of kindergarten teachers was dominated by females (97.4%). Of the kindergarten teachers, over one-half of them hold a bachelor's degree (59.6%) and 28.7 % of them hold a college's degree (technology institute's degree). Only .4% of kindergarten teachers hold a master diploma. The findings indicate that school systems seem to require their kindergarten teachers to have

at least a bachelor's degree. The largest age group of kindergarten teachers was between 25 and 29 years old, accounting for 27 % of the total sample. The second largest age group was between 20 and 24 years old, comprising 23.8 % of the total sample. Findings showed that 54.7 % of kindergarten teachers were Buddhist. The second largest age group was Protestant (7.9 %). As for kindergarten teachers' marital status, the majority of kindergarten teachers were single (60.0 %), 40% of the total sample got married.

### ***Emotional Exhaustion***

An analysis of the data indicated that kindergarten teachers' age was significantly positive in association with level of burnout (emotional exhaustion) ( $F = 8.4, p < .05$ ). Younger teachers had more burnout than older teachers who noticed fewer feelings of burnout than younger teachers.

There was no significant differences between gender and level of burnout (emotional exhaustion) ( $F = 3.15, p > .05$ ), meaning that level of burnout (emotional exhaustion) of kindergarten teachers showed no difference in male and female.

In addition, kindergarten teachers' educational level had a positive significant correlation with levels of burnout (emotional exhaustion) ( $F = 3.39, p < .05$ ). Furthermore, kindergarten teachers' religious category had a positive significant correlation with level of burnout (emotional exhaustion) ( $F = 3.97, p < .05$ ). The Catholic kindergarten teachers were more likely to reach a higher level of exhaustion than the other groups.

As for kindergarten teachers' marital status, there was a positive significant correlation with level of burnout (emotional exhaustion) ( $F = 19.60, p < .05$ ). Married teachers are less exhausted than non-married teachers.

### ***Depersonalization***

Based on the analysis of the kindergarten teachers' demographic characteristics with level of burnout (depersonalization), the findings are quite the same as the level of burnout (emotional exhaustion). Kindergarten teachers' age ( $F = 5.49, p < .05$ ), educational level ( $F = 2.77, p < .05$ ), religious category ( $F = 2.48, p < .05$ ), marital status ( $F = 8.01, p < .05$ ) had significant correlation with levels of burnout (depersonalization). Demographic factors of gender also had no relationship with level of burnout (depersonalization) ( $F = 0.46, p > .05$ ).

### ***Personal Accomplishment***

When the kindergarten teachers' demographic characteristics were analyzed with level of burnout (personal accomplishment), the findings are also the same as the level of burnout (emotional exhaustion). Kindergarten teachers' age ( $F = 2.96, p < .05$ ), educational level (Bachelor's degree) ( $F = 12.78, p < .05$ ), religious category (Catholic) ( $F = 3.81, p < .05$ ), marital status ( $F = 13.24, p < .05$ ) had significant correlation with level of burnout (personal accomplishment). Demographic factors of gender also had no relationship with level of burnout (personal accomplishment) ( $F = 0.00, p > .05$ ).

### ***Stress***

An analysis of the data indicated that kindergarten teachers' age was significantly positive in association with stress ( $F = 10.16, p = 0.000 < .05$ ). Younger teachers presented much higher levels of stress from their teaching.

There was no significant differences between gender and stress ( $F = 0.57$ ,  $p=0.479 > .05$ ), meaning that the stress of kindergarten teachers showed no difference in male and female.

In addition, kindergarten teachers' educational level significantly positive in association with stress ( $F = 0.33$ ,  $p=0.010 < .05$ ). Kindergarten teachers with high school level were more likely to suffer from stress.

Furthermore, kindergarten teachers' religious category had a positive significant correlation with stress ( $F=2.89$ ,  $p=0.045 < .05$ ). The Catholic kindergarten teachers were more likely to reach a higher level of stress than the other groups.

As for kindergarten teachers' marital status, there was a positive significant correlation with stress ( $F = 0.56$ ,  $p=0.032 < .05$ ). Married teachers were less stressed than non-married teachers.

### ***Self-Efficacy***

An analysis of the data indicated that kindergarten teachers' age was significantly positive in association with levels of self-efficacy ( $F = 9.14$ ,  $p=0.000 < .05$ ). The finding was consistent with the current literature (Lau et al., 2005). The age range from fifty to fifty-four teachers presented much higher levels of self-efficacy than the other age groups.

There was no significant differences between gender and self-efficacy ( $F = 1.67$ ,  $p=0.403 > .05$ ), meaning that the self-efficacy of kindergarten teachers showed no difference in male and female.

In addition, kindergarten teachers' educational level had significantly positive differences with self-efficacy ( $F = 1.06, p=0.029 < .05$ ). The higher educational degree the kindergarten teachers had, the higher level of self-efficacy they reached.

Furthermore, kindergarten teachers' religious category had no significant correlation with self-efficacy ( $F = 1.48, p=0.231 > .05$ ). That means that the self-efficacy of kindergarten teachers showed no difference in religious beliefs.

As for kindergarten teachers' marital status, there was a positive significant correlation with self-efficacy ( $F = 13.25, p=0.000 < .05$ ). Married teachers expressed higher level of self-efficacy than non-married teachers.

### ***Intention to Leave***

An analysis of the data indicated that kindergarten teachers' age was significantly positive in association with intention to leave ( $F = 5.07, p=0.000 < .05$ ). Younger teachers presented much higher levels of emotional exhaustion, especially if they were 30 years old and below. Moreover, they have strong feelings about leaving teaching.

There was no significant differences between gender and intention to leave ( $F = 5.75, p=0.092 > .05$ ), meaning that the intention to leave of kindergarten teachers showed no difference in male and female.

In addition, kindergarten teachers' educational level did not have relationship with intention to leave ( $F = 1.46, p=0.496 > .05$ ). That means the intention to leave of kindergarten teachers showed no difference in kindergarten teachers' educational level.

Furthermore, kindergarten teachers' religious category had a positive significant correlation with intention to leave ( $F = 4.12, p = 0.020 < .05$ ). The Catholic kindergarten teachers were more likely to reach a higher level of intention to leave than the other groups. Then they would intend to leave teaching.

As for kindergarten teachers' marital status, there was a positive significant correlation with level of intention to leave ( $F = 8.30, p = 0.009 < .05$ ). Married teachers were less exhausted than non-married teachers. Single teachers were the most likely to leave teaching.

The following is Question 3:

Q3. Are there significant relationships between Taiwanese kindergarten teachers' job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), and intention to leave according to their work profiles (working hours, salary satisfaction, and total years of teaching experience)?

The work profiles of kindergarten teachers included total years of teaching experience, total numbers of working hours and salary satisfaction. The final mailed-back sample consisted of 508 kindergarten teachers. In this sample, of the kindergarten teachers, 24% had four to seven years working experience. The second largest working experience group was one to three years (21.9%). Over one-half of them worked less than 30 hours per week (58.5%) and 12.4% of them worked 50 to 54 hours per week.

The findings indicate that most of the kindergarten teachers did not need to pay as much attention to student's academic achievement as the other grade teachers. The

largest monthly payment group of kindergarten teachers was under NT\$ 25,000 (\$850), accounting for 72.4 % of the total sample. The second largest age group was between NT\$ 25,000 (\$850) and NT\$ 30,000 (\$1,000), comprising 17.3 % of the total sample. Findings showed that 30.8% of kindergarten teachers agree slightly for their monthly payment. The second largest group of kindergarten teachers (24.4 %) disagreed moderately for their monthly payment.

### ***Emotional Exhaustion***

An analysis of the data indicated that kindergarten teachers' total years of teaching experience was significantly positive in association with levels of burnout (emotional exhaustion) ( $F = 7.91, p < .05$ ). Less experienced teachers, especially those teaching less than 5 years, expressed the strongest feelings of burnout and tended to leave teaching.

In addition, there was no significant correlation between kindergarten teachers' total numbers of working hours and level of burnout (emotional exhaustion) ( $F = 1.39, p > .05$ ), meaning that total numbers of working hours of kindergarten teachers showed no difference in the level of burnout (emotional exhaustion).

Furthermore, kindergarten teachers' salary satisfaction had a positive significant correlation with levels of burnout (emotional exhaustion) ( $F = 14.40, p < .05$ ). Teachers with lower salaries were more likely to leave teaching.

### ***Depersonalization***

Based on the analysis of the kindergarten teachers' demographic characteristics with level of burnout (depersonalization), the findings are quite the same as the level of

burnout (emotional exhaustion). Kindergarten teachers' total years of teaching experience ( $F= 5.50, p < .05$ ), salary satisfaction ( $F =5.82, p < .05$ .) had significant correlation with levels of burnout (depersonalization). Work profiles factors of total numbers of working hours also had no relationship with level of burnout (depersonalization) ( $F = 1.90, p > .05$ ).

### ***Personal Accomplishment***

When the kindergarten teachers' demographic characteristics were analyzed with level of burnout (personal accomplishment), the findings are also the same as the level of burnout (emotional exhaustion). Kindergarten teachers' total years of teaching experience ( $F= 5.24, p < .05$ ), total numbers of working hours ( $F = 3.91, p < .05$ ) had significant correlation with levels of burnout (personal accomplishment). Work profiles factors of salary satisfaction had no relationship with level of burnout (personal accomplishment) ( $F =0.97, p > .05$ ).

### ***Stress***

An analysis of the data indicated that kindergarten teachers' total years of teaching experience were significantly positive in association with stress ( $F = 8.12, p=0.000 < .05$ ). Novice teachers were more likely to perceive stress.

There were significant differences between total numbers of working hours and stress ( $F = 0.62, p=0.000 < .05$ ). Kindergarten teachers who worked thirty hours per week perceived higher stress.



Work profiles factors of salary satisfaction was significantly positive in association with stress ( $F = 7.97, p=0.002 < .05$ ). Teachers felt unfair far the amount of their work.

### ***Self-Efficacy***

An analysis of the data indicated that kindergarten teachers' total years of teaching experience were significantly positive in association with self-efficacy ( $F = 11.79, p=0.000 < .05$ ). Kindergarten teachers with ten to twelve years experience expressed the strongest feelings of self-efficacy.

There was no significant differences between total numbers of working hours and self-efficacy ( $F = 2.08, p=0.210 > .05$ ), meaning that the self-efficacy of kindergarten teachers showed no difference in total numbers of working hours.

Work profile factors of salary satisfaction were significantly positive in association with level of intention to leave ( $F = 4.10, p=0.000 < .05$ ). The finding was teachers who agreed with their monthly payment perceived higher level of self efficacy.

### ***Intention to Leave***

An analysis of the data indicated that kindergarten teachers' total years of teaching experience was significantly positive in association with intention to leave ( $F = 4.32, p=0.007 < .05$ ). Less experienced teachers expressed the strongest feelings of burnout and tended to leave teaching.

There was no significant difference between total numbers of working hours and intention to leave ( $F = 2.38, p=0.092 > .05$ ), meaning that the intention to leave of kindergarten teachers showed no difference in total numbers of working hours.

Work profile factors of salary satisfaction were significantly positive in association with level of intention to leave ( $F = 13.04, p=0.000 < .05$ ). Teachers with lower salaries were more likely to leave teaching.

## Research Hypotheses

To answer Hypothesis 1, multiple regression was used to examine the significant explanatory relationships among demographic characteristics (marital status, gender, age, educational level, and religious category), work profile (total numbers of working hours, salary satisfaction, total years of teaching experience), job stress, self-efficacy and the dependent variable of levels of burnout including: levels of emotional exhaustion (Hypothesis 1a), levels of depersonalization (Hypothesis 1b), and levels of personal accomplishment (Hypothesis 1c).

The followings are H1:

H1. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfactory, and total years of teaching experience), job stress (perceived stress), and self-efficacy, are significant explanatory variables of levels of burnout.

1a. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfaction, and total years of teaching experience), job stress, and self-efficacy are significant explanatory variables of levels of emotional exhaustion.

1b. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfaction, and total years of teaching

experience), job stress, and self-efficacy are significant explanatory variables of levels of depersonalization.

- 1c. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfaction, and total years of teaching experience), job stress, and self-efficacy, are significant explanatory variables of level of personal accomplishment.

Table 4-12 presents means and standard deviations of Taiwanese kindergarten teachers' age for the three dimensions of burnout (emotional exhaustion, depersonalization, and personal accomplishment)

Table 4-12

*Regression of Significant Differences of Kindergarten Teachers' Age to Burnout*

	1. 20-24 year old (n=121)			2. 25-29 year old (n=137)			3. 30-34 year old (n=94)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Emotional Exhaustion.	3.74	1.34	1	3.39	1.14	1	3.25	1.24	1
Depersonalization	2.90	1.25	3	2.55	1.11	3	2.21	1.11	3
Personal Accomplishment.	3.10	1.31	2	3.25	1.50	2	3.13	1.45	2

\*P< .05

Table 4-12 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Age to Burnout*

	4. 35-39 year old (n=86)			5. 40-44 year old (n=42)			6. 45-49 year old (n=24)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Emotional Exhaustion.	2.98	1.11	1	2.49	1.00	1	2.31	1.11	2
Depersonalization	2.26	1.01	3	1.87	0.91	3	2.16	0.94	3
Personal Accomplishment.	2.76	1.58	2	2.48	1.38	2	2.38	1.32	1

\*P< .05

Table 4-12 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Age to Burnout*

	7. 50-54 year old (n=4)			8. 55-59 year old (n=0)			9. over 60year old (n=0)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Emotional Exhaustion.	1.89	0.70	2	0	0	0	2.31	1.11	2
Depersonalization	1.65	0.81	3	0	0	0	2.16	0.94	3
Personal Accomplishment.	1.94	1.21	1	0	0	0	2.38	1.32	1

\*P< .05

Table 4-12 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Age to Burnout*

	<i>F</i>	Post hoc Comparison
Emotional Exhaustion.	8.40*	1>4,1>5,1>6,1>7 2>5,2>6,3>5,3>6
Depersonalization	5.49*	1>3,1>4,1>5,2>5
Personal Accomplishment.	2.96	--
Wilks' $\lambda=0.827$ P=0.000*		

\*P< .05

This research results found the following:

1. The age range from 20 to 24 was the peak of teacher burnout.
2. Teachers in the 20 to 24 year old age group were most likely to feel emotional exhaustion than teachers who were 34 to 54 year old. Teachers who were 25 to 34 year old presented more emotional exhaustion than teachers in the 40 to 49 year old.
3. Teachers in the 20 to 24 year old age group expressed more depersonalization than teachers who were 40 to 44 year old. Teachers who were 25 to 29 year old felt higher levels of depersonalization than teachers in the 40 to 44 year old.
4. There were significant differences between teachers' age, emotional exhaustion and depersonalization.
5. There was no significant difference between personal accomplishment and age ( $P > .05$ ). Then the procedure to run post hoc comparisons to investigate hypothesis involving means of individual groups or sets of groups was brought to an end.

Table 4-13 presents means and standard deviations of Taiwanese kindergarten teachers' gender for the three dimensions of burnout (emotional exhaustion, depersonalization, and personal accomplishment)

Table 4-13

*Regression of Significant Differences of Kindergarten Teachers' Gender to Burnout*

	1. Male (n=14)			2. Female (n=494)			<i>F</i>	Post hoc Comparison
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort		
Emotional Exhaustion.	2.58	1.54	2	3.23	1.24	1	3.15	--
Depersonalization	2.20	1.34	3	2.43	1.14	3	0.46	--
Personal Accomplishment.	3.01	1.91	1	3.00	1.46	2	0.00	--
Wilks' $\lambda=0.993$ $P=0.384$								

\* $P < .05$

This research results found the following:

1. Female teachers perceived higher levels of burnout than male teachers;
2. Due to the  $P$  value is  $0.384 > 0.05$ , gender did not reveal significant differences in kindergarten teachers' burnout.

Table 4-14 presents means and standard deviations of Taiwanese kindergarten teachers' educational level for the three dimensions of burnout (emotional exhaustion, depersonalization, and personal accomplishment).

Table 4-14

*Regression of Significant Differences of Kindergarten Teachers' Educational Level to Burnout*

	1.High School's Degree (Professional School) (n=57)			2.College's Degree (Technology Institute) (n=146)			3. Bachelor's Degree (n=301)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Emotional Exhaustion.	2.94	1.43	2	3.07	1.08	2	3.34	1.28	1
Depersonalization	2.69	1.31	3	2.53	1.17	3	2.33	1.09	3
Personal Accomplishment.	3.72	1.59	1	3.34	1.59	1	2.71	1.30	2

\* $P < 0.05$

Table 4-14 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Educational Level to Burnout*

	4.Master's Degree(or Higher) (n=2)			$F$	Post hoc Comparison
	Mean	Std. Deviation	Sort		
Emotional Exhaustion.	1.94	0.39	1	3.39*	--
Depersonalization	1.40	0.28	2	2.77*	--
Personal Accomplishment.	1.31	0.09	3	12.78*	1>3,2>3

Wilks'  $\lambda = 0.881$   $P = 0.000^*$

\* $P < 0.05$

This research results found the following:

1. There was statistically significant relationship between kindergarten teachers' level of education and personal accomplishment.
2. High school (Professional School) level of kindergarten teachers felt less personal accomplishment than the other groups

Table 4-15 presents means and standard deviations of Taiwanese kindergarten teachers' religious category for the three dimensions of burnout (emotional exhaustion, depersonalization, and personal accomplishment).

Table 4-15

*Regression of Significant Differences of Kindergarten Teachers' Religious Category to Burnout*

	1. Buddhist (n=277)			2. Catholic (n=14)			3. Protestants(n=39)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Emotional Exhaustion.	3.30	1.21	1	2.60	0.94	2	2.68	0.99	1
Depersonalization	2.51	1.18	3	2.39	1.16	3	1.96	0.87	3
Personal Accomplishment.	2.93	1.28	2	3.63	1.78	1	2.38	1.16	2

\*P<0.05

Table 4-15 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Religious Category to Burnout*

	4. others (n=176)			<i>F</i>	Post hoc Comparison
	Mean	Std. Deviation	Sort		
Emotional Exhaustion.	3.30	1.21	1	3.97*	1>3,4>3
Depersonalization	2.51	1.18	3	2.48*	4>3
Personal Accomplishment	2.93	1.28	2	3.81*	1>3,2>3

Wilks'  $\lambda=0.951$  P=0.003\*

\*P<0.05



This research results found the following:

1. Buddhist kindergarten teachers perceived more emotional exhaustion than Protestant teachers
2. Buddhist and Catholic kindergarten teachers felt higher level of personal accomplishment than Protestant teachers.
3. There were significant differences between Taiwanese kindergarten teachers' religious category, emotional exhaustion, depersonalization, and personal accomplishment.

Table 4-16 presents means and standard deviations of Taiwanese kindergarten teachers' marital status for the three dimensions of burnout (emotional exhaustion, depersonalization, and personal accomplishment)

Table 4-16

*Regression of Significant Differences of Kindergarten Teachers' Marital Status to Burnout*

	1. Married (n=203)			2. Single (n=303)			<i>F</i>	Post hoc Comparison
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort		
Emotional Exhaustion.	2.92	1.18	2	3.41	1.26	1	19.60*	2>1
Depersonalization	2.25	1.06	3	2.54	1.19	3	8.01*	2>1
Personal Accomplishment	2.97	1.54	1	3.02	1.42	2	0.16	--
Wilks' $\lambda=0.962$ $P=0.000^*$								

\* $P<0.05$

This research results found the following:

1. Married teachers perceived less exhausted, experienced less depersonalization than non-married teachers.
2. There were significant differences among marital status of kindergarten teachers, emotional exhaustion and depersonalization ( $P < 0.05$ ).

Table 4-17 presents means and standard deviations of Taiwanese kindergarten teachers' teaching experience (teaching years) for the three dimensions of burnout (emotional exhaustion, depersonalization, and personal accomplishment)

Table 4-17

*Regression of Significant Differences of Kindergarten Teachers' Teaching Experience to Burnout*

	1. Less than one year (n=62)			2. 1-3 years (n=111)			3. 4-7years (n=122)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Emotional Exhaustion.	3.83	1.27	1	3.35	1.20	1	3.20	1.18	2
Depersonalization	2.96	1.30	3	2.53	1.10	3	2.44	1.16	3
Personal Accomplishment.	3.12	1.23	2	3.05	1.38	2	3.30	1.48	1

\*P<0.05

Table 4-17 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Teaching Experience to Burnout*

	4. 8-10 years (n=96)			5. 10-12years (n=22)			6. 13-15years (n=38)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Emotional Exhaustion.	3.21	1.13	2	3.59	1.51	1	2.76	1.35	1
Depersonalization	2.41	1.08	3	2.35	1.07	3	2.04	1.15	3
Personal Accomplishment.	3.23	1.56	1	2.78	1.62	2	2.19	1.10	2

\*P<0.05

Table 4-17 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Teaching Experience to Burnout*

	7. More than 15 years (n=57)			F	Post hoc Comparison
	Mean	Std. Deviation	Sort		
Emotional Exhaustion.	2.46	1.04	2	7.91*	1>3,1>4,1>6 1>7,2>7,3>7 4>7,5>7
Depersonalization	1.89	0.84	3	5.50*	1>3,1>4,1>6 1>7,2>7,3>7
Personal Accomplishment	2.38	1.53	1	5.24*	1>6,2>6,3>6 3>7,4>6,4>7

Wilks'  $\lambda=0.843$  P=0.000\*

\*P<0.05

This research results found the following:

1. Teachers with fewer years of teaching experience suffered from much more burnout, especially those with one year teaching experience;
2. Teachers with ten years and less teaching experience suffered from much more reduced personal accomplishment than teachers with 13 to 15 years teaching experience.
3. For the three dimensions of burnout, the overall F values were all significant ( $P < 0.5$ ). There were significant differences among Taiwanese kindergarten teachers' teaching experience (teaching years), emotional exhaustion, depersonalization, and personal accomplishment.

Table 4-18 presents means and standard deviations of Taiwanese kindergarten teachers' working hours for the three dimensions of burnout (emotional exhaustion, depersonalization, and personal accomplishment)

Table 4-18

*Regression of Significant Differences of Kindergarten Teachers' Working Hours to Burnout*

	1. Less than 30 hours (n=297)			2. 30-34 hours (n=0)			3. 35-39 hours (n=5)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Emotional Exhaustion.	3.30	1.23	1	0	0	0	3.58	0.80	1
Depersonalization	2.55	1.24	3	0	0	0	2.48	0.67	2
Personal Accomplishment.	3.18	1.50	2	0	0	0	2.33	0.47	3

\* $P < 0.05$

Table 4-18 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Working Hours to Burnout*

	4. 40-44 hours (n=51)			5. 45-49 hours (n=27)			6. 50-54 hours (n=63)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Emotional Exhaustion.	3.00	1.06	2	2.98	1.36	1	2.98	1.39	1
Depersonalization	2.10	0.81	3	2.53	1.17	3	2.14	0.92	3
Personal Accomplishment.	3.40	1.70	1	2.73	1.39	2	2.66	1.29	2

\*P&lt;0.05

Table 4-18 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Working Hours to Burnout*

	7. 55-59hours (n=9)			8. more than 59hours (n=51)			F	Post hoc Comparison
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort		
Emotional Exhaustion.	2.62	0.64	1	3.41	1.38	1	1.39	--
Depersonalization	1.93	0.77	2	2.39	1.07	3	1.90	--
Personal Accomplishment.	1.85	0.83	3	2.45	1.15	2	3.91*	1>8,4>8

Wilks'  $\lambda=0.913$  P=0.002\*

\*P&lt;0.05

This research results found the following:

1. Teachers working 35 to 39 hours per week felt more reduced personal accomplishment than the other groups.
2. There was significant difference between Taiwanese kindergarten teachers' working hours and personal accomplishment (P < 0.5).

Table 4-19 presents means and standard deviations of Taiwanese kindergarten teachers' monthly payment for the three dimensions of burnout (emotional exhaustion, depersonalization, and personal accomplishment).

Table 4-19

*Regression of Significant Differences of Kindergarten Teachers' Monthly Payment to Burnout*

	1. Less than NT\$25,000 (Less than \$850) (n=368)			2. NT\$25,000~30,000 (\$850~\$1,000) (n=88)			3. NT\$30,001~35,000 (\$1,000~\$1,150) (n=16)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Emotional Exhaustion	3.43	1.23	1	2.59	1.19	2	2.84	1.11	1
Depersonalization	2.57	1.17	3	2.06	1.01	3	1.91	0.56	3
Personal Accomplishment	3.20	1.44	2	2.60	1.44	1	2.30	1.30	2

\*P&lt; 0.05

Table 4-19 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Monthly Payment to Burnout*

	4. NT\$35,001 ~ 40,000 (\$1,150~\$1,300) (n=13)			5. NT\$40,001~45,000 (\$1,300~\$1,450) (n=5)			6. NT\$45,001 ~ 50,000 (\$1,450~\$1,600) (n=6)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Emotional Exhaustion	2.53	0.89	1	2.76	0.77	1	2.65	1.16	1
Depersonalization	1.98	1.00	3	2.12	0.46	3	2.27	1.37	2
Personal Accomplishment	2.47	1.79	2	2.18	1.61	2	1.98	1.03	3

\*P&lt;0.05

Table 4-19 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Monthly Payment to Burnout*

	6. more than NT\$50,001 (more than \$1,600) (n=4)			<i>F</i>	Post hoc Comparison
	Mean	Std. Deviation	Sort		
Emotional Exhaustion	3.14	1.84	1	6.46 *	1>2
Depersonalization	2.25	2.37	2	3.61 *	1>2
Personal Accomplishment	1.53	0.71	3	4.01 *	1>2

Wilks'  $\lambda=0.852$  P=0.000\*

\*P&lt;0.05

This research results found the following:

1. Teachers with NT\$ 25,000 (\$850) monthly payment perceived symptoms of burnout more than the other groups.
2. There were significant differences between Taiwanese kindergarten teachers' monthly payment salary, emotional exhaustion, depersonalization, and personal accomplishment.

Table 4-20 presents means and standard deviations of Taiwanese kindergarten teachers' salary satisfactory for the three dimensions of burnout (emotional exhaustion, depersonalization, and personal accomplishment).

Table 4-20

*Regression of Significant Differences of Kindergarten Teachers' Salary Satisfactory to Burnout*

	1. Disagree very much (n=53)			2. Disagree moderately (n=124)			3. Disagree slightly (n=56)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Emotional Exhaustion	4.03	1.26	1	3.61	1.24	1	3.32	1.24	1
Depersonalization	3.12	1.25	3	2.49	1.19	3	2.50	1.18	3
Personal Accomplishment	3.23	1.28	2	2.92	1.36	2	2.99	1.33	2

\*P<0.05

Table 4-20 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Salary Satisfactory to Burnout*

	4. Agree slightly (n=157)			5. Agree moderately (n=103)			7. Agree very much (n=15)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Emotional Exhaustion	2.99	1.07	2	2.75	1.15	2	2.25	1.21	3
Depersonalization	2.26	1.02	3	2.20	1.00	3	2.32	1.52	2
Personal Accomplishment	3.00	1.48	1	3.09	1.76	1	2.36	1.04	1

\*P<0.05

Table 4-20 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Salary Satisfactory to Burnout*

	<i>F</i>	Post hoc Comparison
Emotional Exhaustion	14.40*	1>3,1>4 1>5,1>6 2>4,2>5 2>6,3>5 3>6
Depersonalization	5.82*	1>2,1>3 1>4,1>5
Personal Accomplishment	0.97	--
Wilks' $\lambda=0.852$ $P=0.000^*$		

\* $P<0.05$ 

This research results found the following:

1. Teachers who felt they received an unfair amount for their work they did (group of “Disagree very much”) reach the higher level of emotional exhaustion and depersonalization.
2. There were significant differences between Taiwanese kindergarten teachers' salary satisfactory, emotional exhaustion, and depersonalization.

To answer Hypothesis 2, multiple regression was used to examine explanatory relationships between demographic characteristics, work profiles, job stress, self-efficacy, levels of burnout and kindergarten teachers' intention to leave (Hypothesis 2).

The following is H2:

H2. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfactory, total years of teaching experience), job stress, self-efficacy, and levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), are significant explanatory variables of intention to leave.

Table 4-21 presents means and standard deviations of Taiwanese kindergarten teachers' age for the intention to leave.

Table 4-21

*Regression of Significant Differences of Kindergarten Teachers' Age to Intention to Leave*

	1. 20-24 year old (n=121)			2. 25-29 year old (n=137)			3. 30-34 year old (n=94)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Intention to Leave 1	2.94	1.21	3	2.56	1.13	3	2.37	0.94	3
Intention to Leave 2	3.46	1.19	1	3.33	1.29	1	2.96	1.36	1
Intention to Leave 3	3.14	1.21	2	2.82	1.27	2	2.47	1.15	2
Average	3.18	0.97		2.91	1.00		2.60	0.90	

\*P< .05

Table 4-21 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Age to Intention to Leave*

	4. 35-39 year old (n=86)			5. 40-44 year old (n=42)			6. 45-49 year old (n=24)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Intention to Leave 1	2.48	1.14	3	2.02	1.00	3	2.17	1.13	3
Intention to Leave 2	3.29	1.48	1	2.90	1.32	1	2.50	1.47	2
Intention to Leave 3	2.56	1.30	2	2.52	1.53	2	2.75	1.45	1
Average	2.78	1.01		2.48	1.02		2.47	1.20	

\*P< .05



Table 4-21 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Age to Intention to Leave*

	7. 50-54 year old (n=4)			8. 55-59 year old (n=0)			9. over 60year old (n=0)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Intention to Leave 1	1.00	0.00	2	0	0	0	0	0	0
Intention to Leave 2	2.00	2.00	1	0	0	0	0	0	0
Intention to Leave 3	1.00	0.00	2	0	0	0	0	0	0
Average	1.33	0.67		0	0	0	0	0	0

\*P< .05

Table 4-21 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Age to Intention to Leave*

	<i>F</i>	Post hoc Comparison
Intention to Leave 1	4.82*	2>4,2>6,2>7,2>8
Intention to Leave 2	2.98*	2>7
Intention to Leave 3	3.49*	3>4,3>8
Average	5.07*	2>4,2>6,2>7 2>8,3>8

Wilks'  $\lambda=0.897$  P=0.000\*

\*P< .05

This research results found the following:

1. Teachers with age range from 20 to24 had more intention to leave teaching.
2. There was significant differences between teachers' age, and intention to leave  
( $P < .05$ ).

Table 4-22 presents means and standard deviations of Taiwanese kindergarten teachers' gender for the intention to leave.

Table 4-22

*Regression of Significant Differences of Kindergarten Teachers' Gender to Intention to Leave*

	1. Male (n=14)			2. Female (n=494)			<i>F</i>	Post hoc Comparison
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort		
Intention to Leave 1	1.92	0.99	2	2.51	1.13	3	3.28	--
Intention to Leave 2	2.58	1.73	1	3.19	1.34	1	2.34	--
Intention to Leave 3	1.83	1.03	3	2.74	1.29	2	5.90	--
Average	2.11	1.11		2.82	1.00		5.75	--

Wilks'  $\lambda=0.987$   $P=0.092$

\* $P<0.05$

This research results found the following:

1. Female teachers perceived higher levels of intention to leave than male teachers;
2. Due to the  $P$  value is  $0.092 > 0.05$ , gender is no direct influence on kindergarten teachers' intention to leave.

Table 4-23 presents means and standard deviations of Taiwanese kindergarten teachers' educational level for the intention to leave.

Table 4-23

*Regression of Significant Differences of Kindergarten Teachers' Educational Level to Intention to Leave*

	1.High School Degree (Professional School) (n=57)			2.College's Degree (Technology Institute) (n=146)			3.Bachelor's Degree(n=301)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Intention to Leave 1	2.47	1.10	3	2.38	1.08	2	2.57	1.16	3
Intention to Leave 2	3.30	1.38	1	3.03	1.45	1	3.23	1.31	1
Intention to Leave 3	2.84	1.36	2	2.66	1.26	3	2.74	1.30	2
Average	2.87	1.00		2.69	0.99		2.84	1.02	

\* $P<0.05$

Table 4-23 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Educational Level to Intention to Leave*

	4.Master's Degree(or Higher) (n=2)			<i>F</i>	Post hoc Comparison
	Mean	Std. Deviation	Sort		
Intention to Leave 1	1.50	0.71	2	1.41	--
Intention to Leave 2	2.50	0.71	1	1.04	--
Intention to Leave 3	1.50	0.71	2	0.87	--
Average	1.83	0.24		1.46	--
Wilks' $\lambda=0.983$ $P=0.496$					

\* $P<0.05$

This research results found the following:

1. High school (Professional school) level of kindergarten teachers reached the higher level of intention to leave than the other groups
2. There were no significant differences between the level of education of kindergarten teachers and intention to leave ( $P > 0.05$ ).

Table 4-24 presents means and standard deviations of Taiwanese kindergarten teachers' religious category for the intention to leave.

Table 4-24

*Regression of Significant Differences of Kindergarten Teachers' Religious Category to Intention to Leave*

	1. Buddhist (n=277)			2. Catholic (n=14)			3. Protestants(n=39)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Intention to Leave 1	2.51	1.15	3	2.36	1.34	3	2.15	1.06	3
Intention to Leave 2	3.22	1.32	1	3.79	1.19	1	2.46	1.29	1
Intention to Leave 3	2.75	1.30	2	2.79	1.42	2	2.18	1.25	2
Average	2.83	0.99		2.98	1.08		2.26	1.00	

\* $P<0.05$

Table 4-24 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Religious Category to Intention to Leave*

	4. others (n=176)			<i>F</i>	Post hoc Comparison
	Mean	Std. Deviation	Sort		
Intention to Leave 1	2.57	1.09	3	1.55	--
Intention to Leave 2	3.21	1.39	1	4.79*	1>3,2>3,4>3
Intention to Leave 3	2.79	1.26	2	2.55*	1>3,2>3
Average	2.86	1.02		4.12*	1>3,2>3

Wilks'  $\lambda=0.961$   $P=0.020^*$

\* $P<0.05$ 

This research results found the following:

1. Catholic kindergarten teachers perceived higher level of intention to leave than the other groups.
2. There were significant differences between Taiwanese kindergarten teachers' religious category and intention to leave.

Table 4-25 presents means and standard deviations of Taiwanese kindergarten teachers' marital status for the intention to leave.

Table 4-25

*Regression of Significant Differences of Kindergarten Teachers' Marital Status to Intention to Leave*

	1. Married (n=203)			2. Single (n=303)			<i>F</i>	Post hoc Comparison
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort		
Intention to Leave 1	2.30	1.04	3	2.64	1.17	3	11.29*	2>1
Intention to Leave 2	3.10	1.42	1	3.22	1.31	1	0.92	--
Intention to Leave 3	2.53	1.31	2	2.85	1.27	2	7.94*	2>1
Average	2.64	1.00		2.90	1.01		8.30*	2>1

Wilks'  $\lambda=0.977$   $P=0.009^*$

\* $P<0.05$

This research results found the following:

1. Non-married teachers expressed more intention to leave teaching than married teachers.
2. There were significant differences between marital status of kindergarten teachers and intention to leave ( $P < 0.05$ ).

Table 4-26 presents means and standard deviations of Taiwanese kindergarten teachers' teaching experience (teaching years) for the intention to leave.

Table 4-26

*Regression of Significant Differences of Kindergarten Teachers' Teaching Experience to Intention to Leave*

	1. Less than one year (n=62)			2. 1-3 years (n=111)			3. 4-7years (n=122)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Intention to Leave 1	2.94	1.25	3	2.65	1.07	3	2.53	1.14	3
Intention to Leave 2	3.47	1.21	1	3.24	1.25	1	3.21	1.37	1
Intention to Leave 3	3.21	1.27	2	2.90	1.22	2	2.71	1.19	2
Average	3.20	1.01		2.93	0.95		2.82	1.00	

\* $P < 0.05$

Table 4-26 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Teaching Experience to Intention to Leave*

	4. 8-10 years (n=96)			5. 10-12years (n=22)			6. 13-15years (n=38)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Intention to Leave 1	2.38	1.00	3	2.64	1.47	3	2.32	1.11	3
Intention to Leave 2	3.15	1.27	1	2.82	1.56	2	2.95	1.67	1
Intention to Leave 3	2.66	1.31	2	2.82	1.40	1	2.35	1.42	2
Average	2.73	0.92		2.76	1.08		2.54	1.17	

\* $P < 0.05$

Table 4-26 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Teaching Experience to Intention to Leave*

	7. More than 15 years (n=57)			<i>F</i>	Post hoc Comparison
	Mean	Std. Deviation	Sort		
Intention to Leave 1	1.95	0.95	3	4.73*	1>4,1>7,2>7,3>7
Intention to Leave 2	2.98	1.48	1	1.17	--
Intention to Leave 3	2.19	1.29	2	4.15*	1>6,1>7,2>7
Average	2.37	0.98		4.32*	1>4,1>6,1>7,2>7

Wilks'  $\lambda=0.931$   $P=0.007^*$

\* $P<0.05$ 

This research results found the following:

1. Less experienced teachers, especially those teaching less than one year expressed the strongest feelings of intention to leave.
2. The overall *F* values were all significant ( $P < .5$ ). There were significant differences between Taiwanese kindergarten teachers' teaching experience (teaching years), and intention to leave.

Table 4-27 presents means and standard deviations of Taiwanese kindergarten teachers' working hours for the intention to leave.

Table 4-27

*Regression of Significant Differences of Kindergarten Teachers' Working Hours to Intention to Leave*

	1. Less than 30 hours (n=297)			2. 30-34 hours (n=0)			3. 35-39 hours (n=5)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Intention to Leave 1	2.58	1.14	3	0	0	0	3.00	1.41	2
Intention to Leave 2	3.30	1.37	1	0	0	0	2.40	0.55	3
Intention to Leave 3	2.85	1.33	2	0	0	0	3.60	0.89	1
Average	2.91	1.02		0	0	0	3.00	0.67	

\* $P < 0.05$

Table 4-27 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Working Hours to**Intention to Leave*

	4. 40-44 hours (n=51)			5. 45-49 hours (n=27)			6. 50-54 hours (n=63)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Intention to Leave 1	2.38	1.19	3	2.19	1.04	3	2.17	0.98	3
Intention to Leave 2	3.40	1.32	1	2.74	1.26	1	2.95	1.29	1
Intention to Leave 3	2.66	1.10	2	2.37	1.28	2	2.37	1.26	2
Average	2.81	0.88		2.43	1.05		2.50	0.95	

\*P&lt;0.05

Table 4-27 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Working Hours to**Intention to Leave*

	7. 55-59 hours (n=9)			8. more than 59hours (n=51)			<i>F</i>	Post hoc Comparison
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort		
Intention to Leave 1	2.33	0.71	2	2.75	1.23	2	2.18*	--
Intention to Leave 2	3.00	1.12	1	2.94	1.45	1	2.24*	--
Intention to Leave 3	2.33	0.87	3	2.67	1.32	3	1.97	--
Average	2.56	0.65		2.78	1.15		2.38*	--

Wilks'  $\lambda=0.926$  P=0.11

\*P&lt;0.05

This research results found the following:

1. Teachers working 35 to 39 hours per week felt higher level of intention to leave than the other groups.
2. There were no significant difference between Taiwanese kindergarten teachers' working hours and intention to leave ( $P > 0.5$ ).

Table 4-28 presents means and standard deviations of Taiwanese kindergarten teachers' monthly payment for the intention to leave.

Table 4-28

*Regression of Significant Differences of Kindergarten Teachers' Monthly Payment to Intention to Leave*

	1. Less than NT\$25,000 (Less than \$850) (n=368)			2. NT\$25,000~30,000 (\$850~\$1,000) (n=88)			3. NT\$30,001~35,000 (\$1,000~\$1,150) (n=16)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Intention to Leave 1	2.67	1.13	3	2.08	1.04	3	2.00	0.97	3
Intention to Leave 2	3.31	1.28	1	2.66	1.53	1	3.44	1.21	1
Intention to Leave 3	2.91	1.27	2	2.19	1.22	2	2.38	1.15	2
Average	2.96	0.97		2.31	1.01		2.60	0.99	

\*P&lt;0.05

Table 4-28 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Monthly Payment to Intention to Leave*

	4. NT\$35,001 ~ 40,000 (\$1,150~\$1,300) (n=13)			5. NT\$40,001~45,000 (\$1,300~\$1,450) (n=5)			6. NT\$45,001 ~ 50,000 (\$1,450~\$1,600) (n=6)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Intention to Leave 1	1.69	0.63	3	2.60	0.89	3	1.50	0.55	2
Intention to Leave 2	3.15	1.41	1	3.60	1.14	1	3.00	1.10	1
Intention to Leave 3	2.00	0.91	2	3.60	1.34	2	1.33	0.82	3
Average	2.28	0.79		3.27	0.83		1.94	0.49	

\*P&lt;0.05

Table 4-28 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Monthly Payment to Intention to Leave*

	7. More than NT\$50,001dollars (More than \$1,600) (n=4)			<i>F</i>	Post hoc Comparison
	Mean	Std. Deviation	Sort		
Intention to Leave 1	2.00	1.41	2	5.44*	1>3,1>4
Intention to Leave 2	2.75	1.50	1	3.18*	1>2
Intention to Leave 3	2.00	1.41	2	5.81*	1>2,1>6
Average	2.25	1.26		6.32*	1>2

Wilks'  $\lambda=0.880$  P=0.000\*

\*P&lt;0.05



This research results found the following:

1. Teachers with NT\$ 40,000~45,000 (\$1,300~\$1,450) monthly payment perceived higher level of intention to leave than the other groups.
2. There were significant differences between Taiwanese kindergarten teachers' monthly payment and intention to leave.

Table 4-29 presents means and standard deviations of Taiwanese kindergarten teachers' salary satisfactory for the intention to leave.

Table 4-29

*Regression of Significant Differences of Kindergarten Teachers' Salary Satisfactory to Intention to Leave*

	1. Disagree very much (n=53)			2. Disagree moderately (n=124)			3. Disagree slightly (n=56)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Intention to Leave 1	3.47	1.28	2	2.70	1.07	3	2.34	1.07	1
Intention to Leave 2	3.53	1.37	3	3.59	1.24	1	3.05	1.37	2
Intention to Leave 3	3.60	1.34	1	2.98	1.22	2	2.54	1.24	3
Average	3.53	1.00		3.09	0.97		2.64	1.03	

\*P< 0.05

Table 4-29 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Salary Satisfactory to Intention to Leave*

	4. Agree slightly (n=157)			5. Agree moderately (n=103)			3. Agree very much (n=15)		
	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort	Mean	Std. Deviation	Sort
Intention to Leave 1	2.36	0.98	3	2.17	1.02	3	1.67	1.23	3
Intention to Leave 2	2.97	1.33	1	2.89	1.37	1	3.00	1.51	1
Intention to Leave 3	2.59	1.19	2	2.36	1.22	2	2.13	1.64	2
Average	2.64	0.93		2.48	0.89		2.27	1.14	

\*P<0.05

Table 4-29 (continued)

*Regression of Significant Differences of Kindergarten Teachers' Salary Satisfactory to Intention to Leave*

	<i>F</i>	Post hoc Comparison
Intention to Leave 1	14.30*	1>2,1>3 1>4,1>5 1>6,2>5
Intention to Leave 2	4.90*	2>6 2>4,2>5
Intention to Leave 3	9.52*	1>2,1>3 1>4,1>5 1>6,2>5
Average	13.04*	1>3,1>4 1>5,1>6
Wilks' $\lambda=0.849$ $P=0.000^*$		

\* $P<0.05$

This research results found the following:

1. Teachers who felt they received an unfair amount for their work did (group of “Disagree Moderately”) reached the higher level of intention to leave.
2. There were significant differences between Taiwanese kindergarten teachers' salary satisfactory and intention to leave.

To answer Hypothesis 3 and Hypothesis 4, simple regression was used to examine the Hypothesis 3 and Hypothesis 4.

Statistics analysis were designed to test the explanatory correlation relationship between self-efficacy, and job stress (Hypothesis 3), level of emotional exhaustion (Hypothesis 4a), level of depersonalization (Hypothesis 4b), level of personal accomplishment (Hypothesis 4c).

The following are H 3 and H 4:

H3. There is an inverse relationship between Taiwanese kindergarten teachers' self-efficacy and job stress.

H4. Taiwanese kindergarten teachers' self-efficacy is significantly related to teacher burnout levels.

4a. There is a significant positive relationship between self-efficacy and level of emotional exhaustion

4b. There is a significant positive relationship between self-efficacy and level of depersonalization.

4c. There is a significant inverse relationship between self-efficacy and level of burnout (personal accomplishment).

Correlation analysis between self-efficacy, and job stress, level of emotional exhaustion, level of depersonalization, level of personal accomplishment. is presented in Table 4-30. The results showed that 1) there was an inverse relationship between Taiwanese kindergarten teachers' self-efficacy and job stress ( $r = -.507, p < .001$ ); 2) there is a significant negative relationship between self-efficacy and level of emotional exhaustion ( $r = -.319, p < .001$ ); 3) There is a significant negative relationship between self-efficacy and level of depersonalization ( $r = -.315, p < .001$ ); and 4) There is a significant inverse relationship between self-efficacy and level of burnout (personal accomplishment) ( $r = -.332, p < .001$ ).

Table 4-30

*Correlation Analysis of Kindergarten Teachers' Stress, Self-Efficacy, and Burnout**(Emotional Exhaustion, Depersonalization, and Personal Accomplishment)*

	Stress	Self-Efficacy	Emotional Exhaustion	Depersonalization	Personal Accomplishment
Stress					
Self-Efficacy	-0.507***				
Emotional Exhaustion	0.563***	-0.319***			
Depersonalization	0.379***	-0.315***	0.560***		
Personal Accomplishment	0.315***	-0.332***	-0.046	0.132*	
Intention to Leave	0.350***	-0.200***	0.503***	0.282***	0.167***

\*P&lt;0.05、\*\*P&lt;0.01、\*\*\*P &lt;0.001

In this study, the regression model contains a set of independent and control variables to explain intention to leave. To test H5, the statistical method of moderated multiple regression (MMR) was utilized to analyze the explanatory relationships among demographic characteristics (marital status, gender, age, educational level, and religious category), work profile (total numbers of working hours, salary satisfaction, total years of teaching experience), job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment) and intentions to leave (Hypothesis 5).. The following was the hypothesis that was investigated:

- H5. Self-efficacy mediates the relationship between Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfactory, total years of teaching experience), job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment) and intention to leave.

Based on Baron and Kenny (1986), three steps were taken to compute moderated multiple regression.

Step 1: Show that the independent variable and mediating variable are correlated with the dependent variable. This step establishes that there is an effect that may be mediated.

Step 2: Show that the independent variable is correlated with the mediated variable. This step essentially involves treating the mediating variable as if it were a dependent variable.

Step 3: Show that the mediated variable affects the dependent variable. The effect of independent variable on dependent variable should be lower than before without mediating variable.

If all three of these steps are met, then the data are consistent with the hypothesis that mediated variable completely mediates the independent variable and dependent relationship.

Independent variables included demographic characteristics (marital status, gender, age, educational level, and religious category), work profiles (total numbers of working hours, salary satisfaction, and total years of teaching experience), job stress, and levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment). The mediated variable was self-efficacy, and the dependent variable was intention to leave.

There were four models to distinguish which variable had an influence on the outcome. The independent variables included demographic characteristics (marital status, gender, age, educational level, and religious category), and work profiles (total numbers of working hours, salary satisfaction, and total years of teaching experience) were entered

each model (Model 1 to Model 4), then job stress, and levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment) were input afterward (Model 2). Followed by Model 3, self-efficacy was input. In addition, there were overall variables put into Model 4.

As shown in Table 4-31, the results of moderated multiple regression analysis demonstrated that the combination of eight independent variables of demographic characteristics (marital status, gender, age, educational level, and religious category), work profiles (total numbers of working hours, salary satisfaction, and total years of teaching experience) to intention to leave, there were five variables significantly contributed to the model ( $F=16.433$ ,  $p<.001$ ) The adjusted  $R^2$  value was .13, meaning that 13% of variances in Model 1 was explained by the eight variables. In Model 2, four variables of job stress, and levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment) were added, but only emotional exhaustion and personal accomplishment significantly contributed to the model. The adjusted  $R^2$  was .31 ( $F=58.36$ ,  $p<.001$ ) in Model 2, meaning that 31% of the variances in Model 2 was predicted by the prior independent variables and the four control variables.

In Model 3, only the variable of self-efficacy was added. There was significantly contributed to the model. The adjusted  $R^2$  was .13 ( $F=21.24$ ,  $p<.001$ ) in Model 3, meaning that 13% of the variances in Model 3 was predicted by the prior independent variables and self-efficacy.

In Model 4, overall variables were added. There were only emotional exhaustion and personal accomplishment significantly contributed to the model. The adjusted  $R^2$

was .318 ( $F=58.25$ ,  $p<.001$ ) in Model 4, meaning that the self-efficacy variable did not contribute the influence on the mediation.

Table 4-31  
*Moderated Multiple Regression Coefficients of Intention to Leave*

Independent Variables	Intention to Leave			
	Model 1	Model 2	Model 3	Model 4
	$\beta$	$\beta$	$\beta$	$\beta$
Salary Satisfactory (Disagree very much)	0.266***	0.159***	0.263***	0.159***
Monthly Payment (Disagree Moderately)	0.209***	0.118**	0.201***	0.118**
Religious Category (Protestants)	-0.125**		-0.116**	
Marital Status (Married)	-0.094*			
Gender(Male)	-0.086*			
Job Stress				
Emotional Exhaustion		0.454***		0.454***
Depersonalization				
Personal Accomplishment		0.183***		0.183***
Self-Efficacy			-0.145**	
$R^2$	0.141	0.318	0.145	0.318
Adj $R^2$	0.133	0.312	0.138	0.312
F	16.433***	58.364***	21.247***	58.250***

\* $P<0.05$  , \*\* $P<0.01$  , \*\*\* $P<0.001$

To test H1 to H5, one-way ANOVA, Multiple Regression, and Simple Regression were conducted. In addition, H5 were tested by moderated multiple Regression (MMR) for Intention to Leave. Chapter V provides a discussion of the study's findings and interpretations of the results. Practical implications and conclusions are also provided. Limitations of the study are discussed and recommendations for future research are proposed.

## CHAPTER V

### DISCUSSION

Practically, battling teacher burnout is the most critical issue in a school system, especially for kindergarten teachers. The children in kindergarten are difficult to teach, due to less reception to reason, less self-discipline, less emotional stability, and less interest in school matters. Moreover, kindergarten teachers not only confront a heavy workload in teaching, but also have to cope with parental pressures, rapid changes in curricular demands, disruptive classroom behavior, pressures from bureaucrats and administrators, and developing scholastic programs for future education.

Academically, researchers have been seeking to find what factors can contribute to teacher burnout and decrease teachers' intention to leave. However, past studies explored only one or two factors in relation to teacher burnout and intention to leave. This study was the first to combine theories of the job stress, burnout, self-efficacy to integrate different factors of demographic characteristics (marital status, gender, age, educational level, and religious category), work profiles (total numbers of working hours, salary satisfaction, and total years of teaching experience), job stress, self-efficacy and levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment) to examine their impact on kindergarten teachers' intention to leave.

The purpose of this quantitative, non-experimental comparative (exploratory) and correlation (explanatory) mailed survey research design was to examine the relationships between level of stress, burnout, self-efficacy and intention to leave among the kindergarten teachers in Taiwan. This study further investigated whether different factors resulted in different levels of teachers' burnout and intention to leave.



Chapter V provides interpretations of the research findings, practical implications, limitations, and conclusions, and ends with recommendations for future research.

### **Interpretations**

Findings in this study were compared with current literature to provide possible insights. Based on the data analysis in the previous chapter, this section provides further explanations of all variables.

First, demographic characteristics of kindergarten teachers (age, gender, educational level, religious category and marital status,), work profiles of kindergarten teachers (total years of teaching experience, total numbers of working hours, and salary satisfaction), job stress, self-efficacy was discussed to see how different impact on levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment).

Second, demographic characteristics (marital status, gender, age, educational level, and religious category), work profiles (total years of teaching experience, total numbers of working hours, and salary satisfaction), job stress, self-efficacy and levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment) were interpreted to see how these variables explain intention to leave in Taiwanese kindergarten teachers.

Third, the influence of job stress was examined on self-efficacy.

Fourth, self-efficacy was discussed to see how different impact on levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment).

Lastly, self-efficacy was explained as mediating the relationship between Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfactory, and total years of teaching experience), job stress, self-efficacy, levels of

burnout (emotional exhaustion, depersonalization, and personal accomplishment) and intention to leave.

### *Demographic Characteristics of Kindergarten Teachers*

The demographic characteristics of kindergarten teachers included marital status, gender, age, educational level, and religious category. The final mailed-back sample consisted of 508 kindergarten teachers. In this sample, collected from kindergartens in eleven school districts in Kaoshiung City, Taiwan, the position of kindergarten teachers was dominated by females (97.4%). Of the kindergarten teachers, over one-half of them hold a bachelor's degree (59.6%) and 28.7% of them hold a college's degree (technology institute's degree). Only 4% of kindergarten teachers hold a master diploma. The findings indicate that school systems seem to require their kindergarten teachers to have at least a bachelor's degree. The largest age group of kindergarten teachers was between 25 and 29 years old, accounting for 27% of the total sample. The second largest age group was between 20 and 24 years old, comprising 23.8% of the total sample. Findings showed that 54.7 % of kindergarten teachers were Buddhist. The second largest age group was Protestant (7.9%). As for kindergarten teachers' marital status, the majority of kindergarten teachers were single (60.0%), 40% of the total sample got married.

### *Emotional Exhaustion*

An analysis of the data indicated that kindergarten teachers' age was significantly positive in association with level of burnout (emotional exhaustion) ( $F = 8.4, p < .05$ ). The finding was consistent with the current literature (Lau et al., 2005). Younger teachers experienced more burnout than older teachers.

There was no significant difference between gender and level of burnout (emotional exhaustion) ( $F = 3.15, p > .05$ ), indicating that level of burnout (emotional exhaustion) of kindergarten teachers showed no difference in male and female. This result was inconsistent with prior empirical studies (Lau et al., 2005; Maslach et al., 1996; Milstein, Golaszewski, & Duquette 1984). Possible reasons to explain this result may be that most kindergarten teachers were female, male teachers were just a small part of kindergarten teachers.

In addition, kindergarten teachers' educational level had a significant correlation with levels of burnout (emotional exhaustion) ( $F = 3.39, p < .05$ ). The finding was also inconsistent with prior empirical literature (Brissie, Hoover-Dempsey & Bassler, 1988; Friedman, 1991). The reason for the inconsistency can be explained to kindergarten teachers with high school level (professional school) the training of teaching was not enough. So they experienced stress from their work and felt more emotional exhaustion than the other groups.

Furthermore, kindergarten teachers' religious category had a significant correlation with levels of burnout (emotional exhaustion) ( $F = 3.97, p < .05$ ). The finding was consistent with prior empirical studies (Huston, 1989; Lau et al., 2005). Kindergarten teachers who did not have religious beliefs were more likely to reach a higher level of exhaustion.

As for kindergarten teachers' marital status, there was a positive significant correlation with level of burnout (emotional exhaustion) ( $F = 19.60, p < .05$ ). The

finding was consistent with the current literature (Huston, 1989; Lau et al., 2005). Married teachers were less exhausted than non-married teachers.

Demographic factors of educational level ( $\beta = .111$ ), religious category (Catholic) ( $\beta = -.081$ ) and marital status ( $\beta = -.083$ ) were significant contributor to the regression model. This means that kindergarten teachers' level of burnout (emotional exhaustion) was significantly predicted by educational level, religious category and marital status.

### ***Depersonalization***

Based on the analysis of the kindergarten teachers' demographic characteristics with level of burnout (depersonalization), the findings were quite the same as the level of burnout (emotional exhaustion). Kindergarten teachers' age ( $F= 5.49, p < .05$ ), educational level ( $F = 2.77, p < .05$ ), religious category ( $F=2.48, p < .05$ ), marital status ( $F = 8.01, p < .05$ ) had significant correlation with levels of burnout (depersonalization). Demographic factors of gender also had no relationship with level of burnout (depersonalization) ( $F = 0.46, p > .05$ ).

Educational level (Bachelor's degree) was the only demographic factor significantly predicted the kindergarten teachers' level of burnout (depersonalization).

The  $\beta$  weight of educational level ( $-.095$ ) was significant contributor to the regression model.

### ***Personal Accomplishment***

When the kindergarten teachers' demographic characteristics were analyzed with level of burnout (personal accomplishment), the findings were also the same as the level

of burnout (emotional exhaustion). Kindergarten teachers' age ( $F= 2.96, p < .05$ ), educational level ( $F = 12.78, p < .05$ ), religious category ( $F=3.81, p < .05$ ) marital status ( $F = 13.24, p < .05$ ) had significant correlation with level of burnout (personal accomplishment). Demographic factors of gender had no relationship with level of burnout (personal accomplishment) ( $F = 0.00, p > .05$ ).

The  $\beta$  weight of educational level (Bachelor's degree) (-.242) and religious category (Catholic) (.082) were significant contributor to the regression model. That means educational level and religious category can be predictors of the kindergarten teachers' level of burnout (personal accomplishment).

### ***Intention to Leave***

An analysis of the data indicated that kindergarten teachers' age was significantly positive in association with intention to leave ( $F = 5.07, p=0.000 < .05$ ). The finding was consistent with the current literature (Lau et al., 2005). Younger teachers presented much higher levels of emotional exhaustion, especially if they were 30 years old and below. Moreover, they had strong feelings about leaving teaching.

There was no significant differences between gender and intention to leave ( $F = 5.75, p=0.092 > .05$ ), indicating that the intention to leave of kindergarten teachers showed no difference in male and female. This result was inconsistent with prior empirical studies (Golaszewski, & Duquette 1984; Lau et al., 2005; Maslach et al., 1996; Milstein, Weisberg, 1994). Possible reasons to explain this result maybe most

kindergarten teachers were female, male teachers were just a little part of kindergarten teachers.

In addition, kindergarten teachers' educational level did not have relationship with intention to leave ( $F = 1.46, p=0.496 > .05$ ). The finding was also inconsistent with prior empirical literature (Brissie, Hoover-Dempsey & Bassler, 1988; Friedman, 1991). The reason for the inconsistency can be explained that although kindergarten teachers suffered from burnout, they resigned themselves to keep teaching. They did not want to change to another new profession.

Furthermore, kindergarten teachers' religious category had a significant correlation with intention to leave ( $F = 4.12, p=0.020 < .05$ ). The finding was consistent with prior empirical studies (Huston, 1989; Lau et al., 2005). Kindergarten teachers without religious belief were more likely to reach a higher level of burnout. Then they would have intention to leave teaching.

As for kindergarten teachers' marital status, there was a positive significant correlation with level of intention to leave ( $F = 8.30, p=0.009 < .05$ ). The finding was consistent with the current literature (Huston, 1989; Lau et al., 2005). Married teachers were less exhausted than non-married teachers. Single teachers were the most likely to leave the teaching.

No demographic factors contributed to the regression model of intention to leave.

### *Work Profiles of Kindergarten Teachers*

The work profiles of kindergarten teachers included total years of teaching experience, total number of working hours and salary satisfaction, and. The final mailed-back sample consisted of 508 kindergarten teachers.

In this sample, of the kindergarten teachers, 24% had four to seven years working experience. The second largest working experience group was one to three years (21.9%). Over one-half of them worked less than 30 hours per week (58.5%) and 12.4 % of them worked 50 to 54 hours per week.

The findings indicate that most of the kindergarten teachers were younger and lack of teaching experience. The largest monthly payment group of kindergarten teachers was under NT\$ 25,000 (\$850), accounting for 72.4 % of the total sample. The second largest age group was between NT\$ 25,000 (\$850) and NT\$ 30,000 (\$1,000), comprising 17.3 % of the total sample. Findings showed that 30.8% of kindergarten teachers agree slightly for their monthly payment. The second largest group of kindergarten teachers (24.4 %) disagreed moderately for their monthly payment.

### ***Emotional Exhaustion***

An analysis of the data indicated that kindergarten teachers' total years of teaching experience were significantly positive in association with levels of burnout (emotional exhaustion) ( $F = 7.91, p < .05$ ). The finding was consistent with the current literature (Lau et al., 2005). Less experienced teachers, especially those teaching less than 5 years, expressed the strongest feelings of burnout and tended to leave teaching.

In addition, there was no significant correlation between kindergarten teachers' total numbers of working hours and levels of burnout (emotional exhaustion) ( $F = 1.39, p > .05$ ). The finding was inconsistent with the prior empirical literature (Wood & McCarthy, 2002). The reason can be explained that kindergarten teachers did not need to pay as much attention to student's academic achievement as the other grade teachers.

Furthermore, kindergarten teachers' salary satisfaction had a positive significant correlation with levels of burnout (emotional exhaustion) ( $F = 14.40, p < .05$ ). The finding was consistent with prior empirical studies (Wood & McCarthy, 2002, Romanowski, 2006). Teachers with lower salaries were more likely to leave teaching. No work profiles factors contributed to the regression model of burnout (emotional exhaustion).

### ***Depersonalization***

Based on the analysis of the kindergarten teachers' demographic characteristics with level of burnout (depersonalization), the findings are quite the same as the level of burnout (emotional exhaustion). Kindergarten teachers' total years of teaching experience ( $F = 5.50, p < .05$ ), salary satisfaction ( $F = 5.82, p < .05$ ) had significant correlation with levels of burnout (depersonalization). Work profiles factors of total numbers of working hours had no relationship with level of burnout (depersonalization) ( $F = 1.90, p > .05$ ).

No work profiles factors contributed to the regression model of burnout (depersonalization).

### ***Personal Accomplishment***

When the kindergarten teachers' demographic characteristics were analyzed with level of burnout (personal accomplishment), the findings are also the same as the level of burnout (emotional exhaustion). Kindergarten teachers' total years of teaching experience ( $F = 5.24, p < .05$ ), total numbers of working hours ( $F = 3.91, p < .05$ ) had significant correlation with levels of burnout (personal accomplishment). Work profiles



factors of salary satisfaction had no relationship with level of burnout (personal accomplishment) ( $F = 0.97, p > .05$ ).

No work profiles factors contributed to the regression model of burnout (personal accomplishment).

### ***Intention to Leave***

An analysis of the data indicated that kindergarten teachers' total years of teaching experience was significantly positive in association with intention to leave ( $F = 4.32, p = 0.007 < .05$ ). The finding was consistent with the current literature (Lau et al., 2005). Less experienced teachers expressed the strongest feelings of burnout and tended to leave teaching.

There was no significant differences between total numbers of working hours and intention to leave ( $F = 2.38, p = 0.092 > .05$ ), indicating that the intention to leave of kindergarten teachers showed no difference in total numbers of working hours. The result was inconsistent with the prior empirical literature (Wood & McCarthy, 2002). The reason can be explained that kindergarten teachers suffered from heavy work demand and workload. However, they did not want to challenge another profession.

Work profiles factors of salary satisfaction was significantly positive in association with level of intention to leave ( $F = 13.04, p = 0.000 < .05$ ). The finding was consistent with the current literature (Wood & McCarthy, 2002). Teachers with lower salaries were more likely to leave teaching.

No work profiles factors contributed to the regression model of intention to leave.

### *Stress of Kindergarten Teachers*

The data of job stress was collected from 508 kindergarten teachers in eleven school districts in Kaoshiung City, Taiwan. The measurement of job stress had a mean score of 2.67, with a standard deviation of 0.574. Most kindergarten teachers experienced unpredictable, uncontrollable stress and felt overloaded in their lives (between sometimes to fairly often).

#### *Emotional Exhaustion*

An analysis of the data indicated that kindergarten teachers' job stress was significantly positive in association with level of burnout (emotional exhaustion) ( $r = 0.563, p = 0.000 < .05$ ). The finding was consistent with the current literature (Lau et al., 2005). Younger teachers presented much higher levels of emotional exhaustion, especially if they were 30 years old and below. Moreover, they have strong feelings about leaving teaching.

The  $\beta$  weight of stress (.551) was a significant contributor to the regression model.

#### *Depersonalization*

As for the kindergarten teachers' job stress and level of burnout (depersonalization), there was significantly positive relationship ( $r = 0.379, p = 0.000 < .05$ ). The finding was consistent with the prior empirical studies (Evers et al., 2002; Gold, 1985). Teachers who fail to cope with stress experience more depersonalization.

There were kindergarten significant differences between teachers' job stress and level of burnout (personal accomplishment) ( $r = 0.379, p = 0.000 < .05$ ). The finding was

consistent with the prior empirical studies (Evers et al., 2002; Gold, 1985). Teachers who suffered from stress felt the reduced personal accomplishment.

The  $\beta$  weight of stress (0.298) was a significant contributor to the regression model.

### ***Personal Accomplishment***

There were significant differences between stress and level of burnout (personal accomplishment) ( $r = 0.315$ ,  $p=0.000 < .05$ ). This result was consistent with prior empirical studies (Evers et al., 2002; Gold, 1985). Teachers who perceived more stress felt more depersonalization.

The  $\beta$  weight of stress (0.191) was a significant contributor to the regression model.

### ***Self-Efficacy***

There were significant differences between stress and level self-efficacy ( $r = -0.315$ ,  $p=0.000 < .05$ ). This result was consistent with prior empirical studies (Evers et al., 2002; Evers & Tomic, 2003; Friedman, 2000; Hoover-Dempsey & Bassler, 1988; Huston, 1989; Schwarzer & Schmitz, 2000; Tang et al., 2001). Teachers who perceived higher self-efficacy, experienced less stress.

The  $\beta$  weight of stress (-0.507) was a significant contributor to the regression mode of self-efficacy.

### ***Intention to Leave***

An analysis of the data indicated that kindergarten teachers' stress was significantly positive in association with intention to leave ( $r = 0.350$ ,  $p=0.000 < .05$ ).

The finding was consistent with the current literature (Lau et al., 2005). Less

experienced teachers expressed the strongest feelings of stress and tended to leave teaching.

No work profile factors contributed to the regression model of intention to leave.

### ***Self-Efficacy of Kindergarten Teachers***

The final mailed-back sample consisted of 508 kindergarten teachers. In this sample, collected from kindergartens in eleven school districts in Kaoshiung City, Taiwan, the measurement of self efficacy had a mean score of 2.69, with a standard deviation of 0.558. Most kindergarten teachers agreed that self efficacy help them to fulfill novel or tough work, or cope with misadventure (between hardly true agree and mostly true agree).

### ***Emotional Exhaustion***

An analysis of the data indicated that kindergarten teachers' self-efficacy was significantly negative in association with level of burnout (emotional exhaustion) ( $r = -.319, p=0.000 < .05$ ). The finding was consistent with the current literature (Evers et al., 2002; Evers & Tomic, 2003; Friedman, 2000; Hoover-Dempsey & Bassler, 1988; Huston, 1989; Schwarzer & Schmitz, 2000; Tang et al., 2001). Teachers who perceived higher self-efficacy had less burnout than the others.

The self-efficacy factor did not contribute to the regression model of emotional exhaustion.

### ***Depersonalization***

As for the kindergarten teachers' self-efficacy and level of burnout (depersonalization), there was significantly negative relationship ( $r = -0.319, p=0.000 <$

.05). The findings were the same with the level of burnout (emotional exhaustion). Teachers with higher self-efficacy felt more reduced personal accomplishment.

The  $\beta$  weight of self-efficacy (-.160) was a significant contributor to the regression model of depersonalization.

### ***Personal Accomplishment***

There were significant differences between self-efficacy and level of burnout (personal accomplishment). ( $r = -.332, p=0.000 < .05$ ). The findings are also the same with the level of burnout (emotional exhaustion). The more self-efficacy the kindergarten teachers perceived, the higher personal accomplishment they reached.

The  $\beta$  weight of stress (-.222) was a significant contributor to the regression model of personal accomplishment.

### ***Intention to Leave***

An analysis of the data indicated that kindergarten teachers' self-efficacy was significantly positive in association with intention to leave ( $r = -0.20, p=0.000 < .05$ ). The finding was consistent with the current literature (Evers et al., 2002; Lau et al., 2005; Schwarzer & Schmitz, 2000). Teachers with higher self-efficacy were less burned out and perceived high levels of school achievement. Then they would not intend to leave teaching.

No work profile factors contributed to the regression model of burnout (personal accomplishment).

### ***Levels of Burnout of Kindergarten Teachers***

Based on the data, the measurement of levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment) had a mean score of 3.22 for emotional

exhaustion, 2.42 for depersonalization, and 3.00 for personal accomplishment.

Moreover, there was a standard deviation of 1.25 for emotional exhaustion, 1.15 for depersonalization, and 1.47 for personal accomplishment. Most kindergarten teachers perceived burnout between “once a month or less” and “a few times a month or less”.

### ***Emotional Exhaustion***

An analysis of the data indicated that kindergarten teachers’ level of burnout (emotional exhaustion) was significantly positive in association with intention to leave ( $r = .503$ ,  $p=0.000 < .05$ ). The finding was consistent with the current literature (Montgomery & Rupp, 2005; Weisberg, 1994). Teachers who perceived more emotional exhaustion felt more intention to leave the teaching.

The  $\beta$  weight of self-efficacy (0.511) was a significant contributor to the regression model of intention to leave.

### ***Depersonalization***

As for the kindergarten teachers’ level of burnout (depersonalization) and intention to leave, there was significantly a positive relationship ( $r = .282$ ,  $p=0.000 < .05$ ). The findings are also the same with the level of burnout (emotional exhaustion). Teachers that reached the higher level of depersonalization were more likely to leave teaching.

The depersonalization factor did not contribute to the regression model of intention to leave.

### ***Personal Accomplishment***

There were significant differences between level of burnout (personal accomplishment) and intention to leave ( $r = .167$ ,  $p=0.000 < .05$ ). The findings are also

the same with the level of burnout (emotional exhaustion). The kindergarten teachers perceived reduced personal accomplishment correlated with the more intention they perceived to leave teaching.

The  $\beta$  weight of stress (.191) was a significant contributor to the regression model of intention to leave.

Based on the interpretations above, the results could be concluded as following:

1. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfaction, and total years of teaching experience), job stress, and self-efficacy are significant explanatory variables of level of emotional exhaustion. The explained variance was 34.2%. From the  $\beta$  weight of explanatory variables, levels of emotional exhaustion were significantly predicted by marital status, educational level, religious category and job stress. The regression equation was as follows:

$$\text{Emotional Exhaustion} = 0.551(\text{job stress}) + 0.111(\text{educational level- Bachelor's degree}) - 0.081(\text{religion-Catholic}) - 0.083(\text{marital status})$$

Hence, the Hypotheses 1a was supported.

2. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfaction, and total years of teaching experience), job stress, and self-efficacy are significant explanatory variables of levels of depersonalization. The explained variance was 16.8%. From the  $\beta$  weight of explanatory variables, level of depersonalization was significantly predicted by educational level, self-efficacy and job stress. The regression equation was as follows:

$$\text{Depersonalization} = 0.298(\text{job stress}) - 0.095(\text{educational level- Bachelor's degree}) - 0.160(\text{self-efficacy})$$

Hypotheses 1b was accepted.

3. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profile (working hours, salary satisfaction, total years of teaching experience), job stress, and self-efficacy, are significant explanatory variables of level of personal accomplishment. The explained variance was 20.3%. From the  $\beta$  weight of explanatory variables, level of personal accomplishment was significantly predicted by educational level, religious category, self-efficacy and job stress. The regression equation was as follows:

$$\text{Personal Accomplishment} = 0.191(\text{job stress}) - 0.242(\text{educational level- Bachelor's degree}) - 0.222(\text{self-efficacy}) + 0.082(\text{religious category-Catholic})$$

Hypotheses 1c was accepted.

4. There are thirteen variables, including demographic characteristics (gender, marital status, age, educational level, and religious category), work profile (working hours, salary satisfaction, total years of teaching experience), job stress, self-efficacy, and levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), to examine the dependent variable of intention to leave. Only emotional exhaustion and personal accomplishment could be used to be significant explanatory variables of intention to leave. The explained variance was 28.6%. From the  $\beta$  weight of explanatory variables, intention to leave was significantly predicted by emotional exhaustion and personal accomplishment. The regression equation was as follows:



Intention to leave = 0.511(emotional exhaustion) + 0.191(personal accomplishment)

Hypotheses 2 was partly accepted.

5. Due to significant differences between Taiwanese kindergarten teachers' self-efficacy and job stress, there is an inverse relationship between job stress and self-efficacy. The  $\beta$  weight of job stress was -0.507 and the explained variance was 25.5%. That means the self-efficacy was significantly predicted by job stress. The regression equation was as follows:

$$\text{Self-Efficacy} = -0.507 (\text{Job Stress})$$

Hypotheses 3 was accepted.

6. There were significant differences between Taiwanese kindergarten teachers' self-efficacy and level of emotional exhaustion ( $r = -0.319$ ,  $P = 0.000 < 0.5$ ). In addition, the  $\beta$  weight of self-efficacy was -0.315 and the explained variance was 9.7%. That means the level of emotional exhaustion was significantly predicted by self-efficacy. Moreover, there was a significant negative relationship between self-efficacy and level of emotional exhaustion. The regression equation was as follows:

$$\text{Emotional Exhaustion} = -0.332 (\text{Self-Efficacy})$$

Therefore, the Hypotheses 4a was not supported.

7. There were significant differences between Taiwanese kindergarten teachers' self-efficacy and level of depersonalization ( $r = -0.315$ ,  $P = 0.000 < 0.5$ ). In addition, the  $\beta$  weight of self-efficacy was -0.332 and the explained variance was 9.7%. That means the level of depersonalization was significantly predicted by self-efficacy. Moreover, there was a significant negative relationship between self-efficacy and level of depersonalization. The regression equation was as follows:

$$\text{Depersonalization} = -0.315 (\text{Self-Efficacy})$$

Hypotheses 4b was not supported.

8. There were significant differences between Taiwanese kindergarten teachers' self-efficacy and level of personal accomplishment ( $r = -0.332$ ,  $P = 0.000 < 0.5$ ). In addition, the  $\beta$  weight of self-efficacy was  $-0.332$  and the explained variance was 10.9%. That means the level of personal accomplishment was significantly predicted by self-efficacy. Moreover, there was a significant reverse relationship between self-efficacy and level of personal accomplishment. The regression equation was as follows:

$$\text{Personal Accomplishment} = -0.315 (\text{Self-Efficacy})$$

Hypotheses 4c was accepted.

9. An analysis of the regression models indicated that
- a) Emotional exhaustion and personal accomplishment had significantly positive influence on intention to leave
  - b) Self-efficacy had significantly negative relationship with intention to leave.
  - c) When using emotional exhaustion, personal accomplishment, self-efficacy and job stress as predicted variables to examine the intention to leave, variables of emotional exhaustion and personal accomplishment also had significantly positive influence on intention to leave. On the contrary, self-efficacy did not express the influence on intention to leave.

The result showed that the self-efficacy variable did not mediate the relationship between Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profile (working hours, salary satisfactory, total years of teaching experience), job stress, self-efficacy, levels of burnout

(emotional exhaustion, depersonalization, and personal accomplishment) and intention to leave. Therefore, Hypotheses 5 was not supported.

This section provided an interpretation for each variable's impact on levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment) and intention to leave. Table 5-1 provides a summary of the research purpose, hypotheses tested, and the results of this study.

Table 5-1

*Research Purpose, Hypotheses, and Results*

Research Purpose	Hypotheses	Results
1. To investigate the differences among Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious status), work profile (working hours, salary satisfactory and total years of teaching experience), job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), and intention to leave	1. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profile (working hours, salary satisfactory, total years of teaching experience), job stress, and self-efficacy are significant explanatory variables of levels of emotional exhaustion.	Supported
	2. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profile (working hours, salary satisfactory, total years of teaching experience), job stress, and self-efficacy are significant explanatory variables of levels of depersonalization	Supported
	3. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profile (working hours, salary satisfactory, total years of teaching experience), job stress, and self-efficacy, are significant explanatory variables of level of personal accomplishment.	Supported
	4. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profile (working hours, salary satisfactory, total years of teaching experience), job stress, self-efficacy, and levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment), are significant explanatory variables of intention to leave.	Partly Supported

Table 5-1(continued)

*Research Purpose, Hypotheses, and Results*

Research Purpose	Hypotheses	Results
2. To examine the influence of kindergarten teachers' self-efficacy and job stress.	5. There is an inverse relationship between Taiwanese kindergarten teachers' self-efficacy and job stress.	Supported
3. To examine the influence of kindergarten teachers' self-efficacy and levels of burnout	6. There is a significant positive relationship between self-efficacy and level of emotional exhaustion.	Not Supported
	7. There is a significant positive relationship between self-efficacy and level of depersonalization.	Not Supported
	8. There is a significant inverse relationship between self-efficacy and level of burnout (personal accomplishment).	Supported
3. To examine the self-efficacy can be a mediating variable between burnout and intention to leave	9. Self-efficacy mediates the relationship between Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profile (working hours, salary satisfactory, total years of teaching experience), job stress, self-efficacy, levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment) and intention to leave.	Not Supported

## Practical Implications

Findings in this study have some implications for kindergarten teachers' burnout and intention to leave. In particular, school systems that want to improve kindergarten teachers' performance should invest their resources in their core capabilities (self-efficacy). For instance, Providing group-centered in-service training or peer coaching would help teachers to improve self-efficacy beliefs and help tackle obstacles related to innovations. In other words, teachers would not suffer from burnout even when facing new challenges. This is considered a way of creating added value for teachers who deal with the emotions resulting from threatening or difficult situations and eliminate stress and depression. This can be an invaluable core competency for school systems to retain teachers and prevent school systems from losing an inestimable investment in the professional development of educators, curriculum development, and related personal costs. The continuous improvement and strengthening of teachers' burnout are most likely to enhance teachers' self-efficacy and reach higher achievement goals (Bandura, 1994). According to the findings in this study, implications for practice are as follows:

1. Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), and work profiles (working hours, salary satisfactory, total years of teaching experience) have relationships with levels of burnout. The empowerment training for teaching should not only focus on theoretical preparation, but also pay much attention on individual's personality characteristics, included mental and physical factors. Let teachers motivate themselves.

2. Kindergarten teachers' job stress contributed a positive significance to self-efficacy.

On the contrary, job stress contributed negative significance to levels of burnout.

Self-efficacy (indicated beliefs in one's capabilities can be perceived as the confidence to complete assigned work and manage prospective situations, no matter what happens) can help teachers feel proud of being teachers, and reduce the stress which teachers experience and prevents burnout. Thus, school systems should focus on strengthening teachers' self-efficacy. Just like letting teachers participate in the decision making about school goals and structure; supply constant professional consultation and support; and go through informative feedback and regular evaluation sessions.

3. Findings indicated that job stress of kindergarten teachers is a significant factor

affecting levels of burnout. Teaching is more stressful than in the past and the influences of stress and burnout on education are more serious. School systems should try to create stress-free working conditions and eliminate as much stress as possible. Then teachers would not doubt their capability and cope with the challenge of obstacles and failure. Just like supply all-out administrative support for teachers' innovation of teaching; establish clear school goals and provide mentoring when teachers experienced stressful events.

## Conclusions

Teachers suffering from chronic job stress have lower work involvement. Decreases in environmental stressors may actually decrease the impact of stress on teachers more rapidly (Blase, 1982). In addition, teacher experiences over a long period of time with stressful demands resulting in the symptoms of burnout can be analyzed by three dimensions: (a) emotional exhaustion; (b) depersonalization; and (c) reduced personal accomplishment (Maslach & Jackson, 1986).

Thus, this study combined the resource-based view to explain the influence of Taiwanese kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfactory, total years of teaching experience), job stress, and self-efficacy on levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment ) and intention to leave.

Based on the findings in this study, the following conclusions are presented:

1. Younger teachers experienced more emotional exhaustion and depersonalization than older teachers. Married teachers perceived less exhaustion, and experienced less depersonalization than non-married teachers. Teachers who had Catholic beliefs felt most burnout. Kindergarten teachers with high school level (professional school) felt less personal accomplishment than the other groups. In addition, teachers with fewer years of teaching experience suffered from much more burnout. Teachers who were working 35 to 39 hours per week felt more reduced personal accomplishment than the other groups. Teachers who were dissatisfied with their salary expressed more emotion exhaustion and depersonalization.



2. Novice and younger kindergarten teachers were more likely to suffer from stress. In addition, teachers with high school level (professional school) and low salaries felt stress from their teaching.
3. The kindergarten teachers with an age range from 40 to 45, teaching experience within 10 to 12 years and married perceived the strongest feelings of self-efficacy. They felt satisfied with their monthly payment.
4. Due to the younger and less teaching experienced teachers were more likely to perceive stress, and then they expressed the syndromes of burnout. Those teachers would be more likely to leave teaching.
5. Although self-efficacy had influence on the levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment); self-efficacy did not contribute to the influence on the mediation.

## **Limitations**

No study is without its limitations. Therefore, this study has the following limitations:

1. The design of this study was non-experimental which weakened internal validity.
2. This study was restricted to Taiwanese kindergarten teachers of Kaohsiung city, Taiwan; therefore, the result could not be generalized to other schools in Taiwan and other occupations.
3. The quantitative design of this study might lack the depth that a qualitative research design could have produced.
4. Due to the limitations of cost and time, the study applied a cross-sectional, “one-time survey” whereas a longitudinal approach might be better for a study examining teacher burnout and intention to leave.
5. This study was based on the findings obtained using multiple regression analyses. Structural equation modeling might have provided additional information.
6. This study was limited to measuring attitudes of respondents who could be reached through mail, and who were willing to respond to a survey about Taiwanese kindergarten teachers’ demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfactory, total years of teaching experience), job stress, and self-efficacy on levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment ) and intention to leave.

## **Recommendations**

The findings from this study have implications for other individuals and groups affiliated with education. The following is a list of recommendations for policy makers, educational administrators, training institutions and for future study. Those are intended to extend the body of this study. In addition, recommendations can provide possible directions for researchers who are interested in the same field.

### ***Policy Makers***

It is estimated that 30% of kindergarten teachers have less than three years of teaching experience. Even with current concerns regarding high teacher dropout rate in the early years of service, this study could suggest that beginning teachers either accept, tolerate, or are unaware of certain stress factors in their lives, compared to their veteran colleagues.

Policies must be in place by the turn of the century to ensure that early childhood education has a viable workforce for the new age. This study suggests that such legislation must allow for smaller class sizes and the development of positive mentoring programs that provide professional support and stress-reduction strategies. In addition, the government should carefully plan induction programs that help beginning teachers recognize stressors inside and outside of the school setting, thus securing the educational workforce of the future.

### ***Educational Administrations***

Educational administrators should make a commitment to novice teachers. It is essential that new teachers are given instructional responsibilities that will ensure teachers' initial success, and long term professional achievement. Educational

administrators should make effort to provide adequate mentoring programs, including teacher training and ongoing support.

In addition, competitive salaries need to be paid to kindergarten teachers. This study suggests that low salaries, especially for beginning teachers, are another factor of concern that impacts intention to leave. Therefore, a preventative method would be to offer competitive salaries to promote the kindergarten teachers' sense of personal value.

Finally, another concern in this study was the more the kindergarten teachers worked, the lower their levels of personal accomplishment. A suggested solution for this dilemma could include limiting teacher work hours to 30 hours a week or less. According to the findings of this study, more than 30 working hours a week led to diminished sense of personal accomplishment, which could contribute to burnout and intention to leave.

### ***Higher Educational Institutions***

Teacher-education programs have to emphasize the likelihood of stress for beginning teachers and make student-teachers aware of signs of burnout. Certain courses and internships should be designed to provide student-teachers with real-life teaching situations. Institutions of higher education should provide classes that present life skills training, such as: (a) financial planning; (b) family counseling; and (c) even marital counseling. In fact, professional guidance in these areas should expand into the early years of the profession, quite possibly throughout a teacher's career. Policy makers, educational administrations, and higher educational institutions must discuss the effectiveness of the future education programs and stress reduction strategies.

### ***Future Study***

This study has provided insight into areas of concern regarding Taiwanese

kindergarten teachers' demographic characteristics (gender, marital status, age, educational level, and religious category), work profiles (working hours, salary satisfactory, total years of teaching experience), job stress, and self-efficacy on levels of burnout (emotional exhaustion, depersonalization, and personal accomplishment ) and intention to leave. However, more work must be done to ensure that kindergarten teachers are given every opportunity to make teaching experience as successful as possible. Therefore, future studies will be necessary to address the issues of self-efficacy, stress, burnout and intention to leave.

1. Future studies might adopt a qualitative research by interviewing participants and eliciting their opinions about burnout and intention to leave.
2. The study should be replicated in different school levels in Taiwan as this would strengthen and validate the findings of some of the hypotheses.
3. Future studies may add other variables, such as student behavior, classroom management, parents' pressure, and students' academic achievement.
4. Further studies should enlarge the sample size and broaden the population in order to strengthen generalized ability of the study.
5. Further study can determine whether the variables and the relationships related research topics are consistent over time in a longitudinal case study.
6. A cross-country comparison of the kindergarten teachers can be conducted to see how different factors affect teachers' burnout and intention to leave in different countries.

Hopefully, the findings of this study contribute to the understanding of teachers' stress, self-efficacy, burnout and intention to leave. Chapter V discussed the analyses related to answering the research questions and testing the hypotheses that flowed from the research purposes of this study. Findings were interpreted in light of the instrumentation. Implications for practices as well as the conclusions drawn from interpretations were discussed. The limitations of the study and recommendations for the future were also included.

## REFERENCES

- Abel, M. H., & Sewell, J. (1999). Stress and burnout in rural and urban secondary school teachers. *The Journal of Educational Research*, 92(5), 287-296. Retrieved April 26, 2006, from ProQuest database.
- Anna, W., Ken, R., & Michael, O. (2000). Burnout among New Zealand primary school teachers. *New Zealand Journal of Psychology*, 29(2), 52. Retrieved April 15, 2006, from ProQuest database.
- Bandura, A. (1994). Self-Efficacy. *Encyclopedia of Human Behavior*, 4, 71-81. Retrieved March 28, 2006, from <http://www.des.emory.edu/mfp/BanEncy.html>
- Blasé, J.J., (1982). A social-psychological grounded theory of teacher stress and burnout. *Educational Administration Quarterly*, 18(4), 93-113.
- Brissie, J. S., & Hoover-Dempsey, K. V., & Bassler, O. (1988). Individual, situational contributors to teacher burnout. *Journal of Educational Research*, 82(2), 106-112. Retrieved May 15, 2006, from Academic Search Premier database.
- Claudia, G. (2005). Teacher burnout: How to keep teachers. *Current*, 472(B), 12-16.
- Darling-Hammond, L. (2003). Keeping good teachers. *Educational Leadership*. May, 6-13.
- Evers, W. J. G., Brouwers, A. & Tomic, W. (2002). Burnout and self-efficacy: A study on teachers' beliefs when implementing an innovative educational system in the Netherlands. *British Journal of Educational Psychology*, 72(2), 227-244. Retrieved March 15, 2006, from ProQuest database.

- Farber, B. A., (1984). Stress and burnout in suburban teachers. *Journal of Educational Research*, 77(6), 325-331. Retrieved April 1, 2006, from Academic Search Premier database.
- Freudenberger, H. J., (1974). Staff burnout. *Journal of Social Issues*, 30(1), 159-165.
- Friedman, I. A. (1991). High and low burnout schools: School culture aspects of teacher burnout. *The Journal of Educational Research*, 84(6), 325-333. Retrieved April 28, 2006, from Academic Search Premier database.
- Friedman, I. A. (1995). Student behavior patterns contributing to teacher burnout. *The Journal of Educational Research*, 88(5), 281-289. Retrieved April 3, 2006, from Academic Search Premier database.
- Friedman, I. A. (2000). Burnout in teachers: Shattered dreams of impeccable professional performance. *JCLP/In Session:Psychotherapy in Practice*, 56(5), 595-606. Retrieved April 8, 2006, from Academic Search Premier database.
- Gold, Y. (1985). Does teacher burnout begin with student teaching? *Education*, 105(3), 254-257. Retrieved April 18, 2006, from Academic Search Premier database.
- Gold, Y., & Bacherlor, P. (1988). Signs of burnout are evident for practice teachers during the teacher training period. *Education*, 108(4), 546-555. Retrieved April 28, 2006, from Academic Search Premier database.
- Huston, J. (1989). Teacher burnout and effectiveness: A case study. *Education*, 110(1), 70-78. Retrieved April 24, 2006, from Academic Search Premier database.
- Jarvis, M. (2002). Teacher stress: A critical review of recent findings and suggestions for future research. Retrieved May 18, 2006, from <http://www.isma.org.uk/stressnw/teachstress1.htm>



- Jepson, E., & Forrest, S. (2006). Individual contributory factors in teacher stress: The role of achievement striving and occupational commitment. *British Journal of Educational Psychology*, 76(1), 183-197. Retrieved April 25, 2006, from ProQuest database.
- Lau, P. S. Y., Yuen, M. T. & Chan, R. M. C. (2005). Do demographic characteristics make a difference to burnout among Hong Kong secondary school teachers? *Social Indicators Research*, 71(1), 491-516. Retrieved May 9, 2006, from ProQuest database.
- Linda, D. H. (2003). Keeping good teachers: Why it matters what leaders can do. *Educational Leadership*. May 2003, 6-13.
- Maslach, C., & Jackson, S. E. (1996). *Maslach Burnout Inventory (2<sup>nd</sup> ed.)*. Palo Alto, CA: Consulting Psychologists Press.
- Milsteln, M. M., Golaszewski, T. J., & Duquette, R. D. (1984). Organizationally based stress: What bothers teacher. *Journal of educational research*, 77(5), 293-297. Retrieved April 20, 2006, from Academic Search Premier database.
- Montgomery, C., & Rupp, A. A. (2005). A meta-analysis for exploring the diverse causes and effects of stress in teachers. *Canadian Journal of Education*, 28(3), 458-486. Retrieved April 25, 2006, from ProQuest database.
- National Education Association (NEA). (2003). *Teacher shortage*. Retrieved May 15, 2006, from [http://www.nea.org/nea\\_today\\_extra/salaries.html](http://www.nea.org/nea_today_extra/salaries.html)
- National Commission on Teaching and America's Future (NCTAF). (2005). Cost of teacher turnover today. Retrieved May 15, 2006, from [http://www.nctaf.org/resources/demonstration\\_projects/turnover/index.htm](http://www.nctaf.org/resources/demonstration_projects/turnover/index.htm)

- National Policy Foundation (NPF). (2002). Public conference of kindergarten teacher turnover. Retrieved May 15, 2006, from <http://www.npf.org.tw/Symposium/s90/900504-EC.htm>
- Romanowski, M. H. (2006). A Changing nation: Issues facing Chinese Teachers. *Kappa Delta Pi Record*, 42(2), 76-81. Retrieved April 25, 2006, from ProQuest database.
- Schwarzer, R., Schmitz, G., & Tang, C. (2000). Teacher burnout in the Hong Kong and Germany: A cross-cultural validation of the Maslach Burnout Inventory. *Anxiety, Stress, and Coping*, 13, 309-326. Retrieved March 13, 2006, from Academic Search Premier database.
- Tang, C. S. K., Au, W. T., Schwarzer, R., & Schmitz, G. (2001). Mental health outcomes of job stress among Chinese teachers: Role of stress resource factors and burnout. *Journal of Organizational Behavior*, 22(8), 887-901. Retrieved March 20, 2006, from ProQuest database.
- Weisberg, J. (1994). Measuring workers' burnout and intention to leave. *International Journal of Manpower*, 15 (1), 4-15. Retrieved Oct 26, 2005, from ProQuest database.
- William, K., & William, K. T. (1983). Teacher burnout-small and rural school style. *Education*, 104(1), 72-79. Retrieved May 1, 2006, from Academic Search Premier database.
- Wood, T., & McCarthy, C. (2002). Understanding & preventing teacher burnout. Retrieved March 10, 2006, from <http://www.vtaide.com/png/ERIC/Teacher-Burnout.htm>.

## BIBLIOGRAPHY

- Alati, S. (2005). What about our passions as teachers? Incorporating individual interests in emergent curricula. *YC Young Children*, 60(6), 86-89. Retrieved April 23, 2006, from ProQuest database.
- Anderson, N. A., Barksdale, M. A., & Hite, C. E. (2005). Pervasive teachers' observations of cooperating teachers and peers while participating in an early field experience. *Teacher Education Quarterly*, 32(4), 97-117. Retrieved April 25, from ProQuest database.
- Bomer, K., & Meyer, R. (2005). Missing the children: When politics and programs impede our teaching. *Language Arts*, 82(3), 168-176. Retrieved April 25, 2006, from ProQuest database.
- Brewer, E. W., & Shaard, L. (2004). Employee burnout: A meta-analysis of the relationship between age and years of experience. *Human Resource Development Review*, 3(2), 102-124. Retrieved April 7, 2006, from ProQuest database.
- Bühler, K. E. & Land, T. (2003). Burnout and personality in intensive care: An empirical study. *Hospital topics*, 81(4), 5-12. Retrieved April 25, 2006, from ProQuest database.
- Carmona, C., Buunk, A. P., Peiró, J. M., Rodríguez, I., & Bravo, M. J. (2006). Do social comparison and coping styles play a role in the development of burnout? Cross sectional and longitudinal findings. *Journal of Occupational and Organizational Psychology*, 79(1), 85-99. Retrieved April 25, 2006, from ProQuest database.

- Center, D. B., & Stevenon, C. (2001). The EBD teacher stressors questionnaire. *Education & Treatment of Children, 24*(3), 323-336. Retrieved April 25, 2006, from ProQuest database.
- Demirel, Y., Guler, N., Toktamis, A., Ozdemir, D., & Sezer, R. (2005). Burnout among high school teachers in Turkey. *Middle East Journal of Family Medicine, 3*(3), 33-36.
- Densten, I. (2001). Re-thinking burnout. *Journal of Organizational Behavior, 22*(8), 833-847. Retrieved April 28, 2006, from ProQuest database.
- Dick, R. V., & Wagner, U. (2001). Stress and strain in teaching: A structural equation approach. *British Journal of Educational Psychology, 71*(2), 243-260. Retrieved April 2, 2006, from ProQuest database.
- Easthope, C. & Easthope, G. (2000). Intensification, extension and complexity of teachers' workload. *British Journal of Sociology of Education, 21*(1), 43-58. Retrieved April 25, 2006, from ProQuest database.
- Farber, B.A. (1991). *Crisis in Education: Stress and burnout in the American teacher*. New York: Jossey-Bass Inc., Publishers.
- Gehrke, R. S. (2005). Poor schools poor students successful teachers. *Kappa Delta Pi Record, 42*(1), 14-18. Retrieved March 22, 2006, from ProQuest database.
- Guglielmi, R. S., & Tatrow, K. (1998). Occupational stress, burnout, and health in teachers: A methodological and theoretical analysis. *Review of Educational Research, 68*(1), 61-99. Retrieved April 25, 2006, from ProQuest database.

- Higgins, C. (2003). Teaching and the good life: A critique of the ascetic ideal in education. *Educational Theory*, 53(2), 131-154. Retrieved May 2, 2006, from ProQuest database.
- Hsieh, Y. M., & Hsieh, A. T. (2003). Does job standardization increase job burnout? *International Journal of Manpower*, 24(5), 590-614. Retrieved March 25, 2006, from ProQuest database.
- James C, S., & Anne M, S. (1992). Social support and teacher burnout. *Journal of Educational Administration*, 30(1), 55-70. Retrieved April 25, 2005, from ProQuest database.
- Kaufhold, J. A., & Johnson, L. R. (2005). The analysis of the emotional intelligence skills and potential problem areas of elementary educators. *Education*, 125(4), 615-626. Retrieved April 18, 2006, from ProQuest database.
- Marijane, S. J. F. (1995). The relationship of school climate factors to counselor self-efficacy. *Journal of Counseling and Development: JCD*, 73(3), 331-337. Retrieved April 15, 2006, from ProQuest database.
- Merrifield, J. (2005). Specialization in a competitive education industry: Areas and impacts. *Cato Journal*, 25(2), 317-335. Retrieved April 29, 2006, from ProQuest database.
- Milner, H. R. (2002). A case study of an experienced English teacher's self-efficacy and persistence through "crisis" situations: Theoretical and practical considerations. *The High School Journal*, 86(1), 28-35. Retrieved April 23, 2006, from ProQuest database.

- Morin, J., & Battalio, R. (2004). Construing misbehavior: The efficacy connection in responding to misbehavior. *Journal of Positive Behavior Interventions*, 6(4), 251-254. Retrieved April 14, 2006, from ProQuest database.
- Nagel, L., & Brown, S. (2003). The ABCs of managing teacher stress. *The Clearing House*, 76(5), 255-258. Retrieved April 25, 2006, from ProQuest database.
- Palenzuela, S. M. (2004). Measuring pre-kindergarten teachers' perceptions: Compliance with the High/Scope program. *Journal of Research in Childhood Education*, 18(4), 321-333. Retrieved April 25, 2006, from ProQuest database.
- Parrillo, V. A. (2001). A challenge for educators: Dealing with demographic changes in the school system. *Vital Speeches of the Day*, 68(1), 19-25. Retrieved May 22, 2006, from ProQuest database.
- Pearson, L. C., & Moomaw, W. (2005). The relationship between teacher autonomy and stress, work satisfaction, empowerment, and professionalism. *Educational Research Quarterly*, 29(1), 37-53. Retrieved April 26, 2006, from ProQuest database.
- Robertson, H. J. (2005). Does Size Matter? *Phi Delta Kappan*, 87(3), 251-257. Retrieved April 22, 2006, from ProQuest database.
- Rubinstein, R. (2005). To teach or not to teach? *The Humanist*, 65(3), 15-16. Retrieved April 23, 2006, from ProQuest database.
- Schlichte, J., Yssel, N., & Merbler, J. (2005). Pathways to Burnout: Case Studies in teacher isolation and alienation. *Preview School Failure*, 55(1), 35-40.
- Schutte, N., Toppinen, S., Kalimo, R., & Schaufeli, W. (2000). The factorial validity of the Maslach burnout inventory--general survey (MBI-GS) across occupational

- groups and nations. *Journal of Occupational and Organizational Psychology*, 73(1), 53-66. Retrieved April 25, 2006, from ProQuest database.
- Shechtman, Z., Levy, M., & Leichtenritt, J. (2005). Impact of life skills training on teachers' perceived environment and self-efficacy. *The Journal of Educational Research*, 98(3), 144-154. Retrieved April 5, 2006, from ProQuest database.
- Shek, D. T. L., & Chan, Y. K., & Lee, P. S. N. (2005). Quality of Life in the Global Context: A Chinese Response. *Social Indicators Research*, 71(1), 1-10. Retrieved April 10, 2006, from ProQuest database.
- Snyder, C. R., & Lopez, S. J., & Shorey, H. S., Rand, K. L., & Feldman, D. B. (2003). Hope theory, measurements, and applications to school psychology. *School Psychology Quarterly*, 18(2), 122-132. Retrieved April 25, 2006, from ProQuest database.
- Tatar, M., & Yahav, V. (1999). Secondary school pupils' perceptions of burnout among teachers. *British Journal of Educational Psychology*, 69(4), 457-469. Retrieved April 25, 2006, from ProQuest database.
- Tsigilis, N., Koustelios, A., & Togia, A. (2004). Multivariate relationship and discriminate validity between job satisfaction and burnout. *Journal of Managerial Psychology*, 19(7), 666-675. Retrieved April 25, 2006, from ProQuest database.
- Wong, K. S., & Cheuk, W. H. (2005). Job-related stress and social support in kindergarten principals: the case of Macau. *The International Journal of Educational Management*, 19(2/3), 183-196. Retrieved April 25, 2006, from ProQuest database.

## APPENDICES



**Appendix A**  
**IRB Approval**



**Principal Investigator:** Mao-Nan Cheng

**Project Title:** Job Stress, Self-Efficacy Burnout, and Intention to Leave Among Kindergarten Teachers in Taiwan

**IRB Project Number** 2007-013

APPLICATION AND PROTOCOL FOR REVIEW OF RESEARCH INVOLVING HUMAN SUBJECTS OF A NEW PROJECT. Request for Exempt Status  Expedited review  Convened Full-Board

**IRB ACTION by the CONVENED FULL BOARD**

Date of IRB Review of Application and Research Protocol 3/14/07  
IRB ACTION: Approved  Approved w/provision(s)  Not Approved  Other

**COMMENTS**

Consent Required: No  Yes  Not Applicable  Written  Signed

Consent forms must bear the research protocol expiration date of 3/14/08

Application to Continue/Renew including an updated consent, is due:

- (1) For a Convened Full-Board Review, two months prior to the due date for renewal
- (2) For an Expedited IRB Review, one month prior to the due date for renewal
- (3) For review of research with exempt status, by a College or School Annual Review of Research Committee . If the academic unit ("The Colleges and Schools") where the researcher is assigned does not have a committee in place, the application to Continue/Renew is submitted to the IRB, for an Expedited IRB Review no later than one month prior to the due date.

Name of IRB Chair Farideh Farazmand

Signature of IRB Chair  Date 3/14/07

Cc: Maureen Goldstein

Institutional Review Board for the Protection of Human Subjects  
Lynn University  
3601 N. Military Trail Boca Raton, Florida 33431

## **Appendix B**

### **Authorization for Voluntary Consent (English Version)**

THIS DOCUMENT SHALL ONLY BE USED TO PROVIDE AUTHORIZATION FOR  
VOLUNTARY CONSENT



Lynn University

**PROJECT TITLE:**

Job Stress, Self-Efficacy, Burnout, and Intention to Leave Among Kindergarten Teachers in Taiwan

Project IRB Number: 2007-013 Lynn University 3601 N. Military Trail Boca Raton, Florida 33431

I, Mao-Nan Cheng, am a doctoral student at Lynn University. I am studying Global Leadership, with a specialization in Educational Leadership. One of my degree requirements is to conduct a research study.

**DIRECTIONS FOR THE PARTICIPANT:**

You are being asked to participate in my research study. Please read this carefully. This form provides you with information about the study. The Principal Investigator (Mao-Nan Cheng) will answer all of your questions. Ask questions about *anything you don't understand* before deciding whether or not to participate. You are free to ask questions at any time before, during, or after your participation in this study. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled. You acknowledge that you are at least 18 years of age, and that you do not have medical problems or language or educational barriers that precludes understanding of explanations contained in this authorization for voluntary consent.

**PURPOSE OF THIS RESEARCH STUDY:**

The study is about *job stress, self-efficacy, burnout, and intention to leave* among Kindergarten Teachers in Taiwan. There will be 1,680 people invited to participate in this study. Participants are Kindergarten teachers employed in the geographic area of 11 school districts in Kaohsiung City, Taiwan and hold a current Taiwan Teacher Certification in Kindergarten. Participants are general education classroom teachers and must be at least 18 years of age. Participants have the capability of speaking, reading, and writing Traditional Chinese.

**PROCEDURES:**

You will be given a package with this authorization for voluntary consent, including a survey questionnaire, cover letter and self-addressed envelope (with return postage provided) so that you can seal the completed survey and put it into a postal mailbox. You will first complete a demographic part. Then you will be asked to complete work profile, job stress, self-efficacy, burnout, and intention to leave surveys. The five parts of the survey should take about 15 minutes to complete. Do not write any personal identifiers on the survey or envelope.

**POSSIBLE RISKS OR DISCOMFORT:**

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3601 N. Military Trail Boca Raton, Florida 33431

This study involves minimal risk. You may find that some of the questions are sensitive in nature. In addition, participation in this study requires a minimal amount of your time and effort.

**POSSIBLE BENEFITS:**

There may be no direct benefit to you in participating in this research. But knowledge may be gained which may help provide valuable information regarding strategies needed to increase teacher retention in school system and reduce teacher burnout.

**FINANCIAL CONSIDERATIONS:**

There is no financial compensation for your participation in this research. There are no costs to you as a result of your participation in this study.

**ANONYMITY:**

Surveys will be anonymous. You will not be identified and data will be reported as "group" responses. Participation in this survey is voluntary and return of the completed survey will constitute your informed consent to participate.

The results of this study may be published in a dissertation, scientific journals or presented at professional meetings. In addition, your individual privacy will be maintained in all publications or presentations resulting from this study.

All the data gathered during this study, which were previously described, will be kept strictly confidential by the researcher. Data will be kept in a password protected computer and the survey responses will be stored in locked depository box for a period of five years, then it will be destroyed after five years. All information will be held in strict confidence and will not be disclosed unless required by law or regulation.

**RIGHT TO WITHDRAW:**

You are free to choose whether or not to participate in this study. There will be no penalty or loss of benefits to which you are otherwise entitled if you choose not to participate.

**CONTACTS FOR QUESTIONS/ACCESS TO CONSENT FORM:**

Any further questions you have about this study or your participation in it, either now or any time in the future, will be answered by Mao-Nan Cheng (Principal Investigator) who may be reached at [redacted] and Dr. Maureen Goldstein, faculty advisor who may be reached at [redacted]. For any questions regarding your rights as a research subject, you may call Dr. Farideh Farazmand, Chair of the Lynn University Institutional Review Board for the Protection of Human [redacted]. If any problems arise as a result of your participation in this study, please call the Principal Investigator (Mao-Nan Cheng) and the faculty advisor (Dr. Maureen Goldstein) immediately.

**INVESTIGATOR'S AFFIDAVIT:**

I hereby certify that a written explanation of the nature of the above project has been provided to the person participating in this project. A copy of the written documentation provided is attached hereto. By the person's consent to voluntarily participate in this study, the person has represented that he/she is at least 18 years of age, and that he/she does not have a medical problem or language or educational barrier that precludes his/her understanding of my explanation. Therefore, I hereby certify that to the best of my knowledge the person participating in this project understands clearly the benefits, and risks involved in his/her participation.

[redacted]  
Signature of Investigator *8*

[redacted]

approval: 3/14/07 77

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## **Appendix C**

### ***Authorization for Voluntary Consent (Chinese Version)***

本文件只適用於自願參與同意書



Lynn University

**研究計畫名稱:**

工作壓力、自我效能、職業倦怠與離職意願關係之研究: 以台灣地區幼兒園教師為例。

研究計畫 IRB 編號: 2007-013 Lynn University 3601 N. Military Trail Boca Raton, Florida 33431

研究者姓名: 鄭茂男, 目前是美國 Lynn University 博士班學生, 正在研究全球性領導統御之議題。我的主修是教育領導, 進行本研究調查是我取得博士學位的必要條件。

**對參與者的說明:**

您被邀請參與此研究計畫, 請仔細閱讀有關此研究計畫所提供的說明, 研究者鄭茂男將回答您所有的問題。在您參與此研究計畫的期間或前後, 如有任何疑問, 請隨時提出您的問題。您參與此研究計畫是完全自願性的, 如果您拒絕參與此研究計畫將不會損失或喪失任何利益和權利。此外, 您必需年滿十八歲, 而且您沒有身體、語言或教育等的障礙, 以致於會阻礙到您理解以下的說明。

**研究目的:**

本研究是以台灣地區幼兒園教師為例, 來探討工作壓力、自我效能、職業倦怠與離職意願之間的關係。預估將會有兩千名幼兒園教師被邀請參與此研究, 參與者必需工作於高雄市十一個行政區內的幼兒園且取得幼兒園教師證照的班級老師。參與者必需年滿十八歲且精通中文。

**步驟:**

您將會拿到這份自願參與同意書、問卷、推薦信以及一個寫好回郵地址、貼上回郵的自黏式信封以便您密封您填寫的問卷然後投入郵筒寄回。首先請您先填寫有關您的基本資料, 然後填寫工作壓力、自我效能、職業倦怠與離職意願的調查問卷。整份問卷調查大概僅需花費您十五分鐘即可完成。請勿填寫任何有關個人的身份辨識資料於問卷或信封上。

**可能的風險或不適感:**

此研究牽涉到極微小的風險, 您也許會覺得有些問題較敏感。此外, 參與這項研究調查將佔用您極少的時間及精力。

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**潛在的受益:**

雖然參與此次研究調查您將無法直接受益，但所獲得的研究結果將有助於增強學校老師的留職意願並消弭老師的職業倦怠。

**財務考量:**

參與此次研究調查您將沒有任何報酬，您也無需支付任何費用。

**匿名性:**

這份問卷調查是匿名的，沒有人會知道誰完成這份問卷。所有回答者將被視為團體作答，數據將採集體處理。參與本研究完全出於自願，且問卷的回收亦徵得您的同意。本研究的結果將會被登載於論文、學術期刊或學術研討會上，但對外發表結果絕不會公開您的個人資料。所有資料都會被編碼，回收問卷也都妥善保管，所有資料的搜集都是機密的，除非法令的要求，絕不會對外公開。所有研究資料將被保存五年，待五年後所有研究資料將被清除。

**撤銷之權利:**

您可自行決定是否參與此學術研究，若您選擇不參與，將不會對您造成任何權力或利益上的損失。

**連絡方式:**

對於參與此學術研究若有任何疑問，研究者：鄭茂男將樂意回答任何有關此次研究的問題。您可以透過電話 [redacted] 或者您可連絡我的指導教授 Dr. Maureen Goldstein，電話：[redacted]。若您想詢問您的權益問題，您亦可聯絡 Lynn University IRB 主席 Dr. Farideh Farazmand，電話：[redacted]。若您參與此研究而導致任何困擾，請立即連絡論文研究者鄭茂男或研究指導教授 Dr. Maureen Goldstein。此外，這份同意書的影本您可以保留下來。

**研究者誓詞:**

我已經以書面文件向受訪者說明此項研究計劃，當受訪者表明願意參與本研究計劃時，也同時代表參與者的年齡已滿十八歲，而且沒有身體上、語言上及教育上的障礙，以至於無法了解我的說明及本自願參與同意書的內容。因此，我保證參與者都能清楚瞭解此研究計劃，以及參與此研究計劃所涉及的利益及風險。

[redacted]  
研究者簽名

核准日期:

3/14/07

7.7

Institutional Review Board for the Protection of Human Subjects  
Lynn University  
3601 N. Military Trail Boca Raton, Florida 33431



## **Appendix D**

### **Certification of Chinese Translation (Authorization for Voluntary Consent)**

AFFIDAVIT

I, LISA YU, SWEAR THAT I AM FLUENT WITH BOTH THE English  
AND Chinese LANGUAGES AND FURTHER SWEAR THAT THE  
ATTACHED TRANSLATION IS TRUE AND CORRECT TO THE ORIGINAL  
TO THE BEST OF MY KNOWLEDGE.

[REDACTED]

LISA YU  
TRANSLATOR

STATE OF FLORIDA )

COUNTY OF DADE )

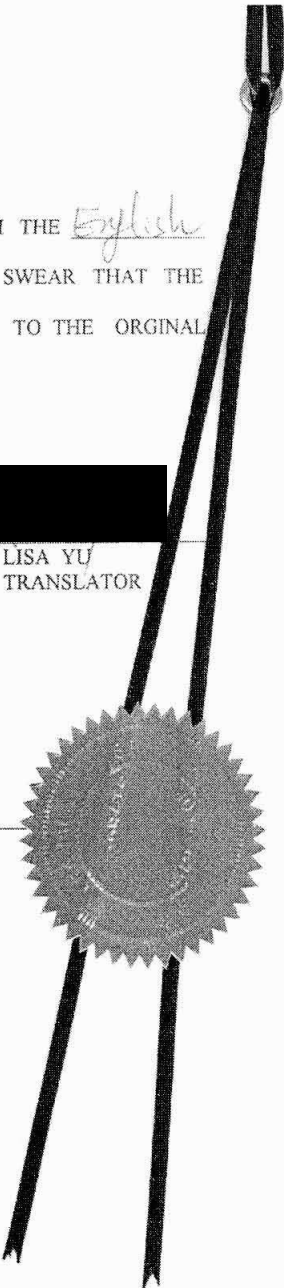
SWORN AND SUBSCRIBED BEFORE ME THIS \_\_\_\_\_

MAR 2 2007

[REDACTED]

NOTARY PUBLIC

MY COMMISSION EXPIRES:



**Appendix E**  
**Survey Instrument (English Version)**

*Part 1: The Demographic Characteristics*

**INSTRUCTION: Please fill in the blank or check the appropriate box.**

1. Age in Years: \_\_\_\_\_
2. What is your current school type?  
 Public                       Private
3. Gender  
 Male                       Female
4. Highest level of education  
 High School Degree     Community College Degree  
 Bachelor's Degree     Master's Degree (or Higher)
5. Religious Category  
 Buddhist                       Catholic                       Protestants  
 Other \_\_\_\_\_ (Please specify)
6. Marital Status  
 Married                       Single
7. Which school district is your current school located in?  
 Sanmin District             Xiaogang District         Zuoying District  
 Cianjin District             Cianjhen District         Lingya District  
 Sinsing District             Nanzih District             Ku-Shan District  
 Cijin District                 Yangcheng District

*Part 2: Work Profile*

**INSTRUCTION: Please fill in the blank or check the appropriate box.**

1. Teaching experience in years: \_\_\_\_\_
  
2. On the average, how many hours per week do you spend on the teaching (including planning, instructing, correcting, and communicating with parents)?  
hours per week
  
3. Monthly salary: Every month NTS : \_\_\_\_\_
  
4. Do you feel you are being paid a fair amount for the work you do? (Check one box)  
 Disagree very much     Disagree moderately     Disagree slightly  
 Agree slightly     Agree moderately     Agree very much

**Part 3: Job Stress**

**INSTRUCTIONS:** The questions in this scale ask you about your feeling and thoughts during the last month. In each case, please indicate with a check how often you felt or thought a certain way.

- |                         |                         |
|-------------------------|-------------------------|
| <b>0 = Never</b>        | <b>3 = Fairly Often</b> |
| <b>1 = Almost Never</b> | <b>4 = Very Often</b>   |
| <b>2 = Sometimes</b>    |                         |

*Note.* From the “A global measure of perceived stress. *Journal of Health and Social Behavior.* 24(4), 385-396.” by Cohen, S., Kamarck, T & Mermelstein, R. (1983). Adapted with permission of the author

	Never	Almost Never	Sometimes	Fairly Often	Very Often
	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>1. In the last month, how often have you been upset because of something that happened unexpectedly?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2. In the last month, how often have you felt that you were unable to control the important things in your life?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>3. In the last month, how often have you felt nervous and "stressed"?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>4. In the last month, how often have you felt confident about your ability to handle your personal problems?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>5. In the last month, how often have you felt that things were going your way?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>6. In the last month, how often have you found that you could not cope with all the things that you had to do?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>7. In the last month, how often have you been able to control irritations in your life?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>8. In the last month, how often have you felt that you were on top of things?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>9. In the last month, how often have you been angered because of things that were outside of your control?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Part 4: Self-Efficacy*

**INSTRUCTIONS:** Certain barriers make difficult demands in life. How sure are you that you can assess optimistic self-beliefs to cope with?

**1 = Not at all true                      3 = Mostly true**  
**2 = Hardly true                        4 = Exactly true**

*Note.* From “*Perceived self-efficacy and teacher burnout: A longitudinal study in ten schools*” by Schwarzer, R. & Schmitz, G., 2004. Freie University Berlin, Germany. Adapted with permission of the author

	Not at all true	Hardly true	Mostly true	Exactly true
	1	2	3	4
<b>1. I can always manage to solve difficult problems if I try hard enough.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2. If someone opposes me, I can find the means and ways to get what I want.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>3. It is easy for me to stick to my aims and accomplish my goals.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>4. I am confident that I could deal efficiently with unexpected events.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>5. Thanks to my resourcefulness, I know how to handle unforeseen situations.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>6. I can solve most problems if I invest the necessary effort.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>7. I can remain calm when facing difficulties because I can rely on my coping abilities.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>8. When I am confronted with a problem, I can usually find several solutions.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>9. If I am in trouble, I can usually think of a solution.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>10. I can usually handle whatever comes my way.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Part 5: Burnout

**INSTRUCTIONS:** Please read each statement carefully and decide if you ever feel this way about your job. If you have **never** had this feeling, write a **“0” (zero)** in the space before the statement. If you have had this feeling, indicate how often you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way,

**0 = Never**

**4 = Once a week**

**1 = A few times a year or less**

**5 = A few times a week**

**2 = Once a month or less**

**6 = Every day**

**3 = A few times a month or less**

*Note.* From “*Maslach Brnout Inventory*” by Maslach, C., Jackson, S. E. & Schwab, R. L., 1996. Consulting Psychologists Press, Inc. (CPP). California. Adapted with permission of the author

#### HOW OFTEN Statements:

0-6

1. \_\_\_\_\_ I feel emotionally drained from my work.
2. \_\_\_\_\_ I feel used up at the end of the workday.
3. \_\_\_\_\_ I feel fatigued when I get up in the morning and have to face another day on the job.
4. \_\_\_\_\_ I can easily understand how my students feel about things.
5. \_\_\_\_\_ I feel I treat some students as if they were impersonal objects.
6. \_\_\_\_\_ Working with people directly puts too much stress on me.
7. \_\_\_\_\_ I deal very effectively with the problems of my students.
8. \_\_\_\_\_ I feel burned out from my work.
9. \_\_\_\_\_ I feel I am positively influencing other people’s lives through my work.
10. \_\_\_\_\_ I’ve become more callous toward people since I took this job.
11. \_\_\_\_\_ I worry that this job is hardening me emotionally.
12. \_\_\_\_\_ I feel very energetic.
13. \_\_\_\_\_ I feel frustrated by my job.
14. \_\_\_\_\_ I feel I’m working too hard on my job.
15. \_\_\_\_\_ I do not really care what happens to some students.
16. \_\_\_\_\_ Working with people directly puts too much stress on me.
17. \_\_\_\_\_ I can easily create a relaxed atmosphere with my students
18. \_\_\_\_\_ I feel exhilarated after working things in this job
19. \_\_\_\_\_ I have accomplished many worthwhile things in this job.
20. \_\_\_\_\_ I feel like I’m at the end of my rope
21. \_\_\_\_\_ In my work, I deal with emotional problems very calmly.
22. \_\_\_\_\_ I feel students blame me for some of their problems



**Part 6: Intention to Leave**

**INSTRUCTIONS:** Please check the one number for each question that comes closest to reflecting your opinion about it.

- 1 = Very Little**                      **4 = Much**  
**2 = Little**                              **5 = Very Much**  
**3 = Average**

*Note.* From “*Teachers’ physical, mental, and emotional burnout: Impact on intention to quit*” by Weisberg, J., 1994. International Journal of Manpower, Bradford. Adapted with permission of the author.

	Very Little	Little	Average	Much	Very Much
	1	2	3	4	5
<b>1. I have considered leaving teaching.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2. I think that if I were choosing my career again, I would choose teaching</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>3. I think in the near future I will leave teaching.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Thank You for Your Participation**

**Appendix F**  
**Survey Instrument (Chinese Version)**

F

研究施測問卷內容

幼兒園教師工作壓力、自我效能、職業倦怠及離職意願



A

第一部份：基本資料

以下想了解一些您的基本資料，請在適當的空格內加上V號 或於空白處填上

1. 您的年齡： \_\_\_\_\_
2. 您目前教的幼兒園為  
 公立                       私立
3. 您的性別：  
 男                       女
4. 您的最高教育程度：  
 高中職                       專科                       大學  
 研究所(含)以上
5. 宗教信仰  
 佛教徒                       天主教                       基督教  
 其他 \_\_\_\_\_
6. 婚姻狀況  
 已婚                       未婚
7. 現任教幼兒園所在高雄市哪個行政區域？  
 三民區                       小港區                       左營區  
 前金區                       前鎮區                       苓雅區  
 新興區                       楠梓區                       鼓山區  
 旗津區                       鹽埕區

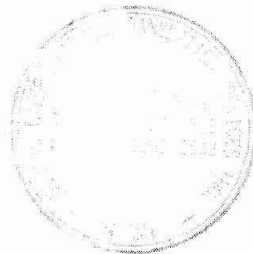


## 第二部份：工作概況

以下想了解一些您的工作情形，請在適當的空格內加上√號 或於空白處填上

1. 您的教學經歷大約 \_\_\_\_\_ 年
2. 您每週大約花幾小時在教學工作上面(含平日上課，編寫教案，與家長溝通...等與教學相關活動) 大約 \_\_\_\_\_ 小時
3. 您的月薪，每月支領全新 新台幣： \_\_\_\_\_ 元
4. 您覺得這樣的工作報酬，您滿意嗎？  

<input type="checkbox"/> 非常不滿意	<input type="checkbox"/> 不滿意	<input type="checkbox"/> 稍為不滿意
<input type="checkbox"/> 尚可	<input type="checkbox"/> 滿意	<input type="checkbox"/> 非常滿意



### 第三部份：壓力知覺

說明：這部份是在詢問在最近一個月來，您個人的感受和想法，請您於每一個題項上作答，指出您感受或想到某一特定想法的頻率。請依據你自己的情況在適當的空格內加上√號。

	從不	偶爾	有時	常常	總是
	0	1	2	3	4
1. 在過去一個月內，您是否經常會因為一些突發的事情，而讓心情變得不好？	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. 在過去一個月內，您是否經常會覺得您沒有辦法控制生活裡一些重要的事情？	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. 在過去一個月內，您是否經常會覺得緊張而且有壓力？	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. 在過去一個月內，您對自己處理個人問題的能力，是否經常會覺得有信心？	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. 在過去一個月內，您是否經常會覺得一切的事情都很順心如意？	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. 在過去一個月內，您是否經常會覺得無法應付您必須要做的事？	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. 在過去一個月內，對於生活中一些容易惹人生氣的小事情，您是否經常能夠控制得宜？	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. 在過去一個月內，您是否經常會覺得事情都在您可以控制的範圍內？	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. 在過去一個月內，您是否經常會因為一些您無法控制的事情，而讓您感到生氣？	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. 在過去一個月內，您是否經常覺得困難已經堆積如山（太多），讓您無法克服？	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### 第四部份：自我效能

說明：這部份是在詢問當您個人遭遇到生活上的困境時，您是否樂觀的深信自己有能力來解決，請您於每一個題項上作答時，去指出您感受或想到某一特定想法的頻率。請依據你自己的情況在適當的空格內加上√號。

	完全 不 正確	尚算 正確	多數 正確	完全 正確
	1	2	3	4
1. 如果我盡力去做的話，我總是能夠解決難題的。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. 即使別人反對我，我仍有辦法取得我所要的。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. 對我來說，堅持理想和達成目標是輕而易舉的。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. 我自信能有效地應付任何突如其來的事情。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. 以我的才智，我定能應付意料之外的情況。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. 如果我付出必要的努力，我一定能解決大多數的難題。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. 我能冷靜地面對困難，因為我可信賴自己處理問題的能力。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. 面對一個難題時，我通常能找到幾個解決方法。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. 有麻煩的時候，我通常能想到一些應付的方法。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. 無論什麼事在我身上發生，我都能夠應付自如。	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 第五部份：職業倦怠

說明：這部份是在詢問關於教學工作上的一些感受及教師所持態度的描述，請依據你自己的情況在適當的空格內加上√號。

	從 不 發 生	一 年 一 次 或 更 少	一 月 一 次 或 更 少	一 月 一 次	一 週 一 次	一 週 數 次	天 天 皆 發 生
1. 我對教學工作感到熱情減退	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. 一天的工作使我感到筋疲力盡	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. 每早起來要面對新一天的工作，使我感到疲累	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. 我很容易明白學生對事物的感受	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. 我感到我對待學生有如當他們是非人化的物體	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. 要整天與人接觸共處對我實在是一項負擔	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. 我很有效地處理學生問題	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. 工作令我感到枯竭	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. 我感到我能透過工作，正面地影響別人的生命	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. 自執教數年後，我對人變得冷漠麻木	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. 我擔心教育工作使我的感情麻木	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. 我覺得精力充沛	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. 我的職業使我感到挫敗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. 我感到我太辛苦工作	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. 我真的不在乎甚麼事情發生在一些學生身上	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. 要與人共事實在給予我太大的壓力	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. 我與學生共處可以很容易營造輕鬆的氣氛	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. 我與學生緊密地相處後，我常感到輕鬆愉快	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. 我在工作上有很多有意義的成就	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. 我感到好像有身臨絕境的感覺	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. 在工作上我能冷靜地處理情緒問題	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. 我覺得學生將他們的問題歸咎於我	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



第六部份：離職意願

說明：這部份是在詢問關於老師留任的意願傾向，請依據你自己的情況在適當的空格內加上√號。

	從不	偶爾	有時	常常	總是
	1	2	3	4	5
1. 我有考慮離開教職,不再當幼兒園老師	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. 我想如果有機會再重新選擇我的職業,我仍然會選擇當幼兒園老師	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. 我想在不久的將來,我將會離開幼兒園教職	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

本問卷到此結束，感謝您花寶貴的時間填寫。隨卷並附上信封。

請將問卷裝入信封袋內並封好寄回施測研究者。

由衷感謝您的合作和協助，謝謝您！



## **Appendix G**

### **Certification of Chinese Translation (Survey Instrument)**

**AFFIDAVIT**

I, LISA YU, SWEAR THAT I AM FLUENT WITH BOTH THE English  
AND Chinese LANGUAGES AND FURTHER SWEAR THAT THE  
ATTACHED TRANSLATION IS TRUE AND CORRECT TO THE ORIGINAL  
TO THE BEST OF MY KNOWLEDGE.

[REDACTED]  
LISA YU  
TRANSLATOR

STATE OF FLORIDA )

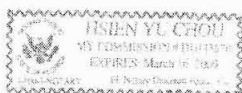
COUNTY OF DADE )

SWORN AND SUBSCRIBED BEFORE ME THIS \_\_\_\_\_

MAR 2 2007

[REDACTED]  
NOTARY PUBLIC

MY COMMISSION EXPIRES:



## **Appendix H**

### **Authorization to Use Maslach Burnout Inventory**



Mao-Nan-Cheng  
Lynn University



**PERMISSION AGREEMENT TO INCLUDE  
SAMPLE ITEMS IN A RESEARCH PUBLICATION**

Agreement Issued: January 2, 2007  
Customer Number:  
Product Code: 3465IL  
Permission Number: 16310

In response to your request of November 1, 2006, upon concurrent receipt by CPP, Inc. of this signed Permission Agreement and payment of the Permission Fee, permission is hereby granted to you to include sample items, selected and provided by CPP, Inc. from the **Maslach Burnout Inventory-Educators Survey (MBI-ES)** in your Research entitled "*Job Stress Self Efficacy, Burnout, and Intention to Leave Among Kindergarten Teachers in Taiwan*". **These sample items may remain in your Research for microfilming and individual copies may be distributed upon demand.** This Permission Agreement shall automatically terminate upon violation of this Permission Agreement including, but not limited to, failure to pay the Permission Fee of \$75.00 + processing fee \$WAIVED = Total Due \$75.00 or by failure to sign and return this Permission Agreement within 45 days from January 2, 2007.

The permission granted hereunder is limited to this one-time use only.  
The permission granted hereunder is specifically limited as specified in this agreement.

This Permission Agreement shall be subject to the following conditions:

- (a) Any material reproduced must be used in accordance with the guidelines of the American Psychological Association.
- (b) Any material reproduced must contain the following credit lines:

"Modified and reproduced by special permission of the Publisher, CPP, Inc., Mountain View, CA 94043 from **Maslach Burnout Inventory-ES** by Christina Maslach, Susan E. Jackson, and Richard Schwab. Copyright 1986 by CPP, Inc. All rights reserved. Further reproduction is prohibited without the Publisher's written consent."

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- (d) CPP subscribes to the general principles of test use as set forth in the *Standards for Educational and Psychological Testing* by the American Psychological Association. The customer's/user's attention is drawn to the following statements:

"The test user, in selecting or interpreting a test, should know the purposes of the testing and the probable consequences. The user should know the procedures necessary to facilitate effectiveness and to reduce bias in test use. Although the test developer and publisher should provide information on the strengths and weaknesses of the test, the ultimate responsibility for appropriate test use lies with the test user. The user should become knowledgeable about the test and its appropriate use and also communicate this information, as appropriate, to others.

- (c) CPP subscribes to the general principles of test use as set forth in the *Standards for Educational and Psychological Testing* by the American Psychological Association. The customer's/users attention is drawn to the following statements: "The test user, in selecting or interpreting a test, should know the purposes of the testing and the probable consequences. The user should know the procedures necessary to facilitate effectiveness and to reduce bias in test use. Although the test developer and publisher should provide information on the strengths and weaknesses of the test, the ultimate responsibility for appropriate test use lies with the test user. The user should become knowledgeable about the test and its appropriate use and also communicate this information, as appropriate, to others.



6.1 Test users should evaluate the available written documentation on the validity and reliability of tests for the specific use intended.

6.3 When a test is to be used for a purpose for which it has not been validated, or for which there is no supported claim for validity, the user is responsible for providing evidence of validity.

6.5 Test users should be alert to probable unintended consequences of test use and should attempt to avoid actions that have unintended negative consequences."

CPP shall not be responsible for the use or misuse of the materials or services licensed under this permission contract. The customer/user assumes all responsibility for use or misuse of the same. Unless expressly agreed to in writing by CPP, all materials and services are licensed without warranty, express or implied, including the implied warranties of merchantability and fitness for a particular purpose. Refund of contract fees at CPP's sole option is the sole and exclusive remedy and is in lieu of actual, consequential, or incidental damages for use or misuse of CPP materials and services and in no event shall CPP liability exceed the contract fees of license of said materials and services.

(f) **2000 copies of the translated instrument may be reproduced for a fee of \$130.00 Reproduction Fee + \$45 Processing Fee = Total \$175.00 USD.** If you wish to reproduce additional copies, contact the Licensing Department at CPP in writing regarding further permission and fee information.

(g) **Mao-Nan-Cheng**, and any and all associated entities agree that the **MBI-ES** as translated is a derivative work of the **MBI-ES** and hereby assigns all right, title, and interest in any such derivative work in perpetuity to CPP, Inc., or as directed by CPP, immediately upon completion and without further consideration.

CPP, INC.

By \_\_\_\_\_  
Authorized Representative

Date 1/22/07

I AGREE TO THE ABOVE CONDITIONS

By \_\_\_\_\_  
Mao-Nan-Cheng

By \_\_\_\_\_  
Song-Cheng Yang E.L.D.

Date 2/10/07

## **Appendix I**

### **Authorization to Use Perceived Stress Scale**

11/07/2006

Mao-Nan Cheng

■■■■■■■■■■  
■■■■■■■■■■

Dear Dr. Sheldon Cohen:

My name is Mao-Nan Cheng. I am a doctoral candidate in a Ph.D program at Lynn University in Boca Raton, Florida. My major is Global Leadership, with a specialization in educational leadership. My dissertation proposal focuses on the resource based view of teacher perceived stress and related to burnout, and the topic, *Job Stress, Self-Efficacy, Burnout and Intention to Leave among Kindergarten Teachers in Taiwan*. I plan to examine these constructs across eleven school districts in the Kaohsiung City, Taiwan. A sample of 1599 kindergarten teachers is planned.

While doing my literature search for the dissertation, I read the excellent article by you, Dr. Cohen, Dr. Kamarck and Dr. Mermelstein, "A Global Measure of Perceived Stress (1983)" *Journal of Health and Social Behavior*, 24(4).

I am writing to request permission to obtain (and purchase if necessary) the following the materials:

1. The scale measuring strategy.
2. Available psychometric reports for the above the scale, normed data, and special scoring instructions.
3. A translation of the PSS into Chinese-Taiwanese.

I am also requesting permission to reproduce the above scale and related materials in my dissertation. Furthermore, Dr. Cohen's website (<http://www.psv.cmu.edu/~scohen/scales.html>) may supply copies of the dissertation on demand and may make the dissertation accessible in electronic formats.

If you do not control the copyright on all of the above mentioned material, I would appreciate any contact information you can give me regarding the proper rights holder(s), including current address(es). Otherwise, your permission confirms that you hold the right to grant the permission requested here.



Permission includes non-exclusive world rights to translate the scales to use the material and will not limit any future publications-including future editions and revisions-by you or others authorized by you.

If permission is granted, I will include any statement of authorization for use that you request, or provide an APA note of permission to use the scale. The copyright holder will be given full credit.

I would greatly appreciate your consent to my request. If you require any additional information, please do not hesitate to contact me. I can be reached at the above postal mail address, [redacted] email [redacted] [redacted] My dissertation Chair is Dr. Maureen Goldstein, who may be reached at:  
[redacted]

A duplicate copy of this request has been provided for your records. If you agree with the terms as described above, please sign the release form below and send one copy with the self-addressed return envelope I have provided.

Sincerely,

[Signature]

Permission granted for the use of the material as described above:

Yes  No

Agreed to: [redacted]

Name & Title: Sheldon Cohen, Ph.D., Professor of Psychology

Date: JAN. 24, 2007

*Department of Psychology  
Carnegie Mellon University  
5000, Forbes Avenue  
Pittsburgh, Pa 15213*

## **Appendix J**

### **Authorization of Use General Self-Efficacy Scale**

[Home](#) | [Contact Us](#) | [Future Student Resources](#) | [Current Students Resources](#) | [Faculty & Staff Resources](#)

Take Action  
 Check my Email  
 Submit a Computer Problem  
 Check my Grades  
 Check Course Schedule  
 Reserve a Library Meeting Room  
 Contact a Faculty Staff Member

News  
 University News  
 Achievement & Learning  
 Aeronautics  
 American College Dublin  
 Arts & Sciences  
 Athletics  
 Business & Management  
 Conservatory of Music  
 Education & Human Services  
 Hospitality Management  
 International Communication  
 Events  
 University Events  
 Academic Calendar  
 Lynn/PA  
 Student Life  
 Conservatory of Music

uPortal 2.4.2 - Microsoft Internet Explorer provided by Lynn University  
 File Edit View Favorites Tools Help

WELCOME TO LYNN  
 Welcome Mao-Nan Cheng

[Home](#) | [Academics](#) | [Email](#) | [My Account](#) | [Student Life](#)

E-mail

Items: 26 | 1 of 50 of 147

**Inbox (Two-Pane View)**

From	Subject	Received
Jacob (Vaccor) Wesberg		Sat 10/28/2006 11:...
Ralf Schwarzer	Re: Ask your permission	Sat 10/28/2006 3:...
postmaster@email.lynn.edu	Mail Delivery System	Fri 10/27/2006 10:3...
postmaster@email.lynn.edu	Delivery Status Notification (Bad)	Fri 10/27/2006 6:22...
postmaster@email.lynn.edu	Delivery Status Notification (Fro)	Fri 10/27/2006 2:49...
postmaster@email.lynn.edu	Delivery Status Notification (Rece)	Fri 10/27/2006 11:5...
postmaster@email.lynn.edu	Delivery Status Notification (Rece)	Fri 10/27/2006 11:5...
Jason Hughes		Thu 10/26/2006 3:0...
Mary L. Tebes	Graduate Student Survey - 2nd Round	Wed 10/25/2006 7:...
Joy Ruhl		Wed 10/25/2006 5:...
Kevin Kerr	Lynn Long Distance Service	Wed 10/25/2006 3:...
Angela Rogers	Alfonso Jov Rudniks	Tue 10/24/2006 2:0...
President	Acknowledgment of Letters / L...	Mon 10/23/2006 4:...
Tammy Swett	Reminder: IT Scheduler Update on 10/...	Fri 10/20/2006 1:41...
Matthew Rice		Fri 10/20/2006 1:06...

**Re: Ask your permission**  
 Ralf Schwarzer

Attachments can contain viruses that may harm your computer. Attachments may not display correctly.

To: Mao-Nan Cheng  
 Cc:

Attachments: [FAQ\\_GSE\\_12Oct05.pdf\(100KB\)](#) [SE\\_Scales.pdf\(127KB\)](#) [PCI Frequently Asked Questions.pdf\(68KB\)](#)

see attached

At 20:46 27.10.2006, you wrote:  
 >Dear Schwarzer:  
 >I am a Ph.D. student in Lynn University, FL,  
 >U.S.A. I would like to conduct a research about  
 >teacher burnout in Taiwan. I tried to find how  
 >to examine the relationship between teacher  
 >burnout and self-efficacy. From literature  
 >review, there is a useful instrument, "Perceived  
 >Self-Efficacy (PSE)," used for measure  
 >teacher's belief to overcome the syndrome of burnout.  
 >  
 >After consulting with my advisors, they also  
 >agree that is a good scale and will be very  
 >helpful to me. Due to these reasons, could I ask  
 >the permission to use this instrument to test  
 >the teacher's Self-Efficacy in Taiwan?  
 >  
 >I will appreciate it if you would let me know something about the above.

Start | Proposal FOR... | Written Infor... | Document1 - ... | Current Stud... | Recommenda... | cover letter fr... | uPortal 2.4... | Document6 - ... | Document7 - ... | Document8 - ... | 11:33 AM

Sent:

Sat 10/28/2006

To:

Mao-Nan Cheng

Subject:

RE: Ask your permission

Attachments:

FAQ\_GSE\_12Oct05.pdf(100KB) SE\_Scales.pdf(127KB) PCI\_Frequently Asked Questions.pdf(68KB) TeacherBurnout\_Schwarzer-2004Aug31.pdf(254KB)

see attached

At 20:46 27.10.2006, you wrote:

>Dear Schwarzer:

>I am a Ph.D. student in Lynn University, FL,

>U.S.A. I would like to conduct a research about

>teacher burnout in Taiwan. I tried to find how

>to examine the relationship between teacher

>burnout and self-efficacy. From literature

>review, there is a useful instrument "Perceived

>Self-Efficacy (PSE)" used for measure

>teachers' belief to overcome the syndrome of burnout.

>

>After consulting with my advisors, they also

>agree that is a good scale and will be very

>helpful to me. Due to these reasons, could I ask

>the permission to use this instrument to test

>the teachers' Self-Efficacy in Taiwan?

>

>I will appreciate it if you would let me know something about the above.

>

>Thanks for your kindness!

>Best Wishes!

>

>Happy Halloween!

>

>Respectfully yours,

>

>Mao-Nan Cheng (Mark)

>

>My contact email: [REDACTED]

>

https://pop.student.tjnn.edu/exchange/PC/Cheng/Inbox/Re%3A%20ASK%20your%20permission%20... /mail/qw... - Microsoft Internet Explorer

File Edit Go To Favorites Help


Search Select 154%

Create Adobe PDF online for free

## Everything you wanted to know about the self-efficacy scale but were afraid to ask


by Ralf Schwarzer, October, 2006

The intended purpose of this FAQ is to assist the users of the scales published at the author's web pages <http://www.ralfschwarzer.de/>. Before attending to the questions below you should carefully study our web. You might have no questions any longer after reading the web pages.

 **Do I need permission to use the general perceived self-efficacy (GSE) scale?**

You do not explicitly need our permission to utilize it in your research studies. We hereby grant you permission to use and reproduce the General Self-Efficacy Scale for your study, given that appropriate recognition of the source of the scale is made in the write-up of your study. The international source is:  
Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston, *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35-37). Windsor, UK: NFER-NELSON.

The source for the German version is:  
Schwarzer, R., & Jerusalem, M. (Eds.). (1999). *Skalen zur Erfassung von Lehrer- und Schülermerkmalen: Dokumentation der psychometrischen Verfahren im Rahmen der Wissenschaftlichen Begleitung des Modellversuchs Selbstwirksame Schulen*. Berlin: Freie Universität Berlin.

 **I am not sure whether I want to measure general perceived self-efficacy (GSE) or specific health-related self-efficacy.**

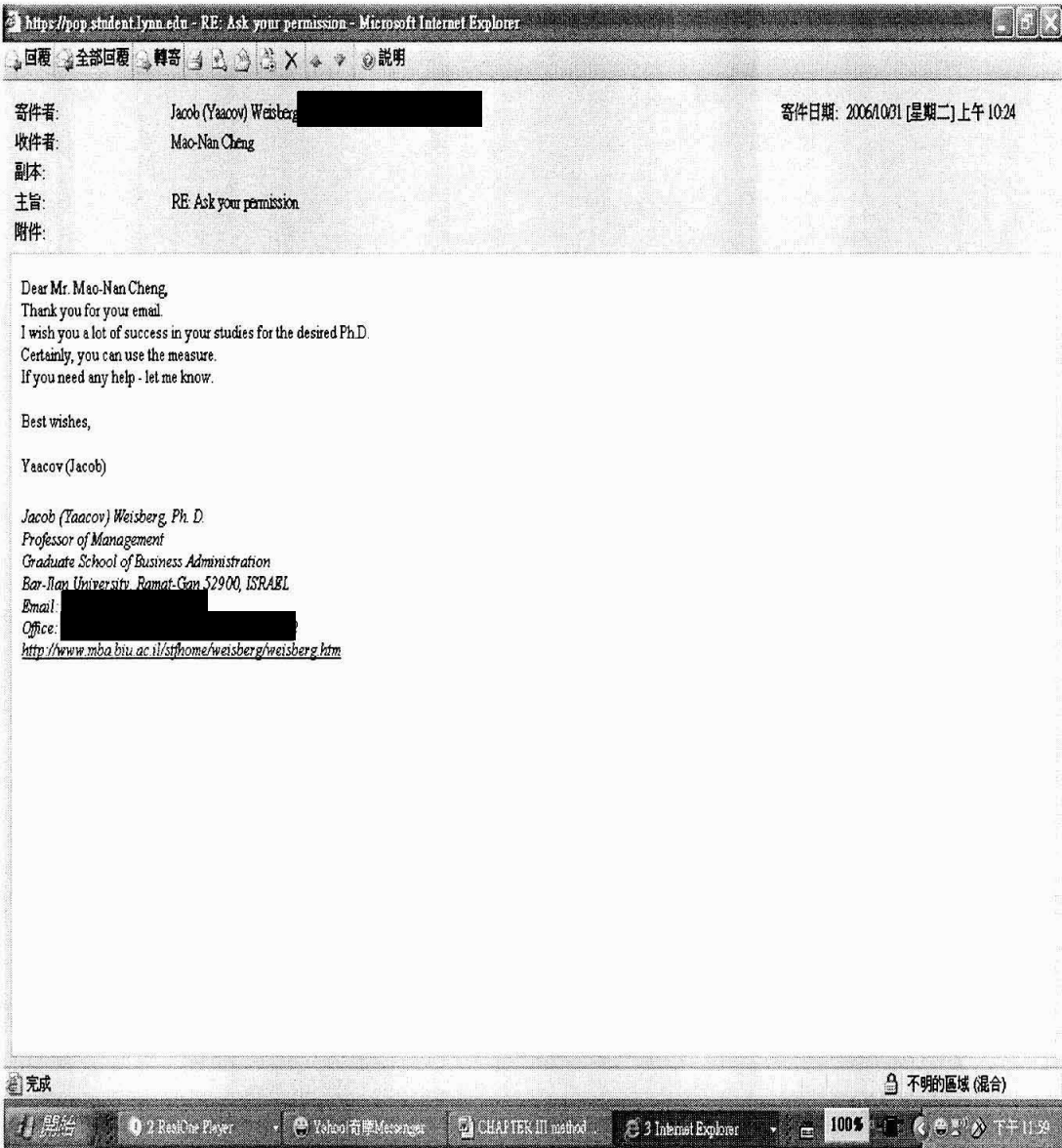
1 of 6

Done

Start Proposal F... Writen In... Document... Current St... Recomme... cover k... uPortal 2... Document... Document... Document... Document... https://p... 11:42 AM

## **Appendix K**

### **Authorization of Use Intention to Leave Scale**



Sent:

Tue 10/31/2006

To:

Mao-Nan Cheng

Subject:

RE: Ask your permission

Dear Mr. Mao-Nan Cheng,

Thank you for your email.

I wish you a lot of success in your studies for the desired Ph.D.

Certainly, you can use the measure.

If you need any help - let me know.

Best wishes,

Yaacov (Jacob)

*Jacob (Yaacov) Weisberg, Ph. D.*

*Professor of Management*

*Graduate School of Business Administration*

*Bar-Ilan University, Ramat-Gan 52900, ISRAEL*

*Email:* [REDACTED]

<http://www.mba.biu.ac.il/stfhome/weisberg/weisberg.htm>



**Appendix L**

**Permission Letter from the Child Welfare Center of Social Affairs Bureau,**

**Kaohsiung City Government**

**HELLO, MAO-NAN:**

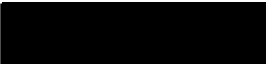
I am excited about your academic endeavor. You are right now a candidacy in doctoral program of the Lynn University, FL, U.S.A. Congratulations!

You have the permission authorized by the Child Welfare Center of Social Affairs Bureau, Kaohsiung City Government and you can proceed with your study for the kindergarten teachers in Kaohsiung city, Taiwan. In addition, a list of schools and teachers in kindergartens in Kaohsiung city for the 2006 to 2007 school year will be supplied for you.

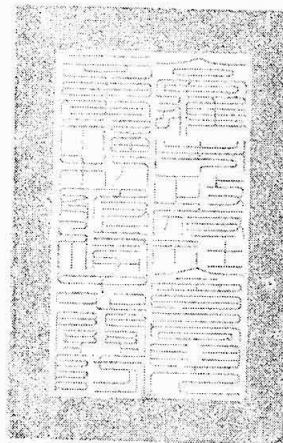
I hope all will go well. If I can be of any assistance, please let me know.

I would welcome a summary of your results when you are finished.

All the best,



*Po Ing Tsai, M.D.*  
Director  
Child Welfare Center  
Social Affairs Bureau  
Kaohsiung City Government  
775, Jiouru 1st Rd.,  
Kaohsiung 807,  
Taiwan R.O.C.  
Tel: [REDACTED]  
E-mail: [REDACTED]



**Appendix M**

**Cover Letter from the Child Welfare Center of Social Affairs Bureau,  
Kaohsiung City Government**

**To Whom It May Concern:**

Mr. Mao-Nan Cheng is working on his Ph.D. program of the Lynn University, FL, U.S.A.

Currently, he is working on his dissertation entitled, Job Stress, Self-Efficacy, Burnout, and Intention to Leave among Kindergarten Teachers in Taiwan.

Your participation in this study will gain insight into factors that have a positive and negative effect on teacher burnout and intention to leave.

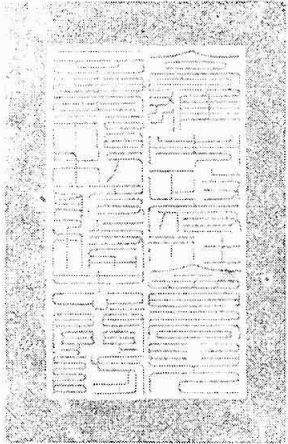
The final results may be published in a journal, however confidentiality will remain. The data will be only available to the principal investigator (Mao-Nan Cheng) and his major advisor (Maureen Goldstein).

Please accept my sincerely recommendation and appreciate your help and support of this academic endeavor.

Yours truly,



*Po Ing Tsai, M.D*  
Director  
Child Welfare Center  
Social Affairs Bureau  
Kaohsiung City Government  
775, Jiouru 1st Rd.,  
Kaohsiung 807,  
Taiwan R.O.C.  
Tel: [Redacted]  
E-mail: [Redacted]



**Appendix N**

**Recommendation Letter Sample**

Dear Sir,

Mr. Mao-Nan Cheng is working on his Ph.D. program in our department of Education,  
Educational Leadership at Lynn University.

Currently, he is working on his dissertation entitled, Job Stress, Self-Efficacy, Burnout,  
and Intention to Leave Among Kindergarten Teachers in Taiwan. To collect his data he  
is visiting Kaohsiung City, Taiwan in March 2007.

Any help given to him to collect the necessary data will be much appreciated.

Mao-Nan is a very good student and your country rightfully can be proud of him.

Please accept my sincerely appreciation in advance for your help and support of this  
academic endeavor.

Yours truly,



Maureen Goldstein, Ph.D.  
Dissertation Committee Advisor  
Lynn University  
3601 N. Military Trail  
Boca Raton, FL 33431-5598  
Work Phone: [REDACTED]  
Work E- [REDACTED]

660 V1 17423  
02/09/09 39800 SEL: 