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The Effect of a Creative-Bonding Intervention on Nursing
Students' Self-Transcendence and Attitudes Toward Elders in
Taiwan

Shiue Chen

THE EFFECT OF A CREATIVE-BONDING INTERVENTION ON NURSING
STUDENTS' SELF-TRANSCENDENCE AND ATTITUDES
TOWARD ELDERS IN TAIWAN

DISSERTATION

Presented in Partial fulfillment of the
Requirements for the Degree of
Doctor of Philosophy in Nursing

Barry University

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2007

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ON NURSING STUDENTS' SELF-TRANSCENDENCE AND ATTITUDES
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DISSERTATION

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2007

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Abstract

The aged population, including elders in Taiwan, is growing worldwide. There is an increased need for nurses willing to care for elders; yet few young nurses have an interest in elder care. A quasi-experimental design was used to test the effect of an eight-week Creative-Bonding Intervention (CBI) on Taiwanese nursing students' self-transcendence and attitudes toward elders. Reed's self-transcendence theory guided the study with researcher expectation that students would have increased positive views toward elders and elder care if student self-transcendence could be stimulated. Hypotheses were that students in a CBI experimental group ($n = 100$) would have greater self-transcendence and increased positive attitudes toward elders when compared to a Friendly Visit (FV) control group ($n = 94$) and that self-transcendence and attitude scores would be positively correlated.

The researcher taught the CBI students a variety of art activities and included conversational guidelines to promote student-elder bonding in two long-term care facilities in Taiwan. Instruments were demographic data, Reed's (1991b) Self-Transcendence Scale, Hilt and Lipschultz's (1999) Revised Kogan's Attitudes towards Old People statements, and open-ended questionnaires. Data were analyzed with descriptive, ANCOVA, Pearson correlation statistics, and Cronbach's alpha reliabilities.

Both groups had a significant improvement in their attitudes toward elders ($p < .005$) and the CBI group had significantly more positive attitudes than the FV control group ($p < .05$). In the CBI group, self-transcendence was promoted but was non-significant (ns); willingness to care for elders was significant ($p < .005$). Additionally, both groups of students expressed that the CBI and FV enhanced communication with elders, lessened

the distance between generations, strengthened bonds between students and elders, and promoted students' growth. The CBI appeared to stimulate young students' self-transcendence, and changed their attitudes toward elder care.

The CBI can be used to provide an innovative approach in caring for elders and lead to a new framework for gerontological nursing education and excellence in care of elders. The CBI also can be used to build partnerships between a school of nursing and long-term care facilities to advance students' learning and promote quality of elder care.

ACKNOWLEDGEMENTS

I am deeply thankful to all of my family, friends, teachers, and colleagues, who have helped me achieve my goals. While it is impossible to name everyone, I would like to take this opportunity to thank some of the people who have helped me complete my PhD program and dissertation. I first want to acknowledge my husband and my two daughters. I could not have achieved my goal to pursue a PhD degree in the United States without their great love and support. I am grateful to my elder brothers, my sister-in-law, my elder sisters, my niece, and my neighbors. Due to their help, I was able to study abroad without distraction. I would also like to acknowledge all of my friends for their great support and caring, which has encouraged me to study harder and keep going.

I would not have been satisfied with the quality of my dissertation without the assistance of all of these people. First of all, I must express my deepest gratitude to my committee Chairperson Dr. Sandra Walsh, whose creativity, dedication, and extensive knowledge has inspired me throughout the dissertation process. Her continued instruction, encouragement, and numerous hours of editing have enhanced the quality of my dissertation and motivated my passion for research. I am also deeply grateful to my committee members Dr. Carolyn Lindgren and Dr. Dawn Broschard. They have given me great help and inspiration for the statistics, research design, and organization for my dissertation. I would also like to thank Dr. Pamela Reed for helping me clarify my research ideas as I incorporated her theory into my dissertation and thank Dr. Michael L. Hilt for giving me permission to use his revised attitude measurement.

I have enjoyed lots of caring and love from many people and I have appreciated the diverse and rich resources at Barry University. I am deeply thankful to all my professors,

including Dr. Teri Melton, Dr. Clara Wolman, Dr. Karen Morin, Dr. John Sause, and Dr. Edward Bernstein. I must express my gratitude for the support from my advisor, Dr. Jessie Colin, my friend, Dr. Ray Lee, and my classmates. All of them gave me special help and guidance when I first came to Miami. I want to thank Mr. Randall Beaver, Ms. Milady Sarria, and all my tutors in the writing center for helping me advance my English language skills. I am also grateful to Dr. Claudette Spalding, Associate Dean, and Dr. Pegge Bell, Dean, in School of Nursing, Dr. David G. Gottlieb for editing my manuscript, and the great service of the librarians at Barry University.

Special appreciation is in order for my neighbor, Dr. Der-Shin Ke; my teacher, Dr. Shwu-Jiuan Liu; my elder brother, Dr. Justin Chen; Dean of Public of Health, Dr. S. T. Wang; my friend, Ms. L. Y. Wu; and my colleagues Dr. Y. M. Leou, Dr. Y. H. Kuo, Ms. M. Y. Chang, Dr. S. M. Tsai, and Dr. M. H. Lo. All of them have facilitated my research ideas and/or reviewed the translated Mandarin Chinese instruments. I would like to express my sincerest appreciation and gratitude to Dr. Ching-Liang Shen, former president of the National Tainan Institute of Nursing (NTIN), and my professors Dr. Hsiu-Hung Wang, and Dr. Sheila Sheu in Taiwan. Their help and encouragement have facilitated my studying in the United States. I would also like to thank Dr. Wen-Kang Chen, the current president of NTIN, Dr. Hung-Pin Chen, and all my colleagues at NTIN. They have often given me a lot of encouragement. I am indebted for their great help.

I must express my deepest thanks to the following colleagues: Ms. Jiin Luan Hsieh helped me integrate the intervention research to her long-term care course and helped me make arrangements with the two long-term care facilities in my study; some of my retired colleagues worked as volunteers in the long-term care facility to help our students learn

how to communicate with elders. I am grateful to all participant students who advanced our knowledge about attitudes toward elders and self-transcendence in nursing students. I would like to thank all elders for cooperating in the students' learning as well as the presidents and staff in the two long-term care facilities. I am particularly grateful to the Lambda Chi Chapter of Sigma Theta Tau International for providing a grant which helped facilitate my research.

Throughout my experience, I have learned how powerful the family, friends, and teachers' love are in inspiring an individual to work harder and to achieve her goals. Thanks for all of your help and encouragement. My complete feelings are beyond words.

DEDICATION

I dedicate this dissertation to my elder brothers and sisters and my deceased parents. Due to their hard work, great love, and encouragement, as I am the youngest one in my family, I was able to have the opportunity to receive a high level of education, even though we grew up in the countryside. Also, because they set good examples, this led me to believe that everything is possible and to have a dream to pursue a PhD degree in the United States.

I certainly dedicate the dissertation to my husband, Da Zhuo. I would never have achieved my goal to pursue a Ph D degree in the United States without his complete and great support and help. He often calls me to offer me words of care and support. His wise words have always had a great impact on my continued study and have given me a lot of courage and strength. I also dedicate this work to my two daughters, Hsiao Ling and Hsiang Yun. You are my source of pride, hope, and satisfaction. I hope you can learn from my example and keep this saying in mind, “Nothing ventured, nothing gained.” I believe that you have ambitious goals and will make great contributions to society.

Definitely, I dedicate my dissertation to my committee Chairperson Dr. Sandra Walsh. I would not have completed this creative work without her inspiration, instruction, and her great love. She understood an international student’s needs, so she not only helped me improve my English, but also she has given me lots of encouragement and concern for my well-being. She facilitated the development of my idea for the study and also guided me to develop new ideas. She led me to conduct two pilot studies at Barry University. She also has enriched and diversified my experience in America. Her great

love furthered my learning and motivated my creativity to enhance the quality of my dissertation. I am deeply thankful for her great inspiration.

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CHAPTER ONE

Introduction

Introduction to the Problem

The number of elders is increasing, including elders in Taiwan, worldwide (U.S. Census Bureau, 2006; Young, 2003; Ministry of Interior; MOI, 2006); thus, frail elders constitute the biggest portion of patients in the health care system (Chilvers & Obe, 1997; Joy, Carte & Smith, 2000; McKinlay & Cowan, 2003; Mezey, Boltz, Esterson, & Mitty, 2005). Today's nursing students will be faced with the need to provide care to the growing communities of elders. There will be an increased need for nurses who are willing to provide holistic care to this age group, including those elders who live in long-term care facilities. Yet, researchers continue to report that nursing students and graduate nurses or health care providers have negative attitudes toward elders or lack of interest in elder care (Chen, 2006, Chung, 1997; Fagerberg, Winblad, & Ekman, 2000; Fitzgerald, Wray, Halter, Williams, & Supiano, 2003; Goebbel, 1984; Happell & Brooker, 2001; Happell, 2002; Liu, 2001; Moricillo, Smey, Pescatello, & Murphy, 2005; Moyle, 2003; Rognstad, Aasland, & Granum, 2004; Ryan & McCauley, 2004/2005; Slevin, 1991; Wells, Foreman, Gething, & Petralia, 2004).

Researchers have revealed a variety of reasons for the negative attitudes toward elders or less interest in elder care including: (1) Nursing students or nurses perceived old adults as likely to be mentally incompetent, unable to get along with others, poorly adjusted when exposed to a new situations, irritable, and likely complaining (Goebbel, 1984; Hung, 1998; Lookinland & Anson, 1995; Lookinland, Linton, & Lavender, 2002). (2) Nursing students felt that the work with elders was boring, frustrating, or that the

environment was depressing or students were hesitant to address the issues of death and dying which are more apparent in elders (Aday & Campbell, 1994; Happell, 1999; Happell & Brooker, 2001; Moyle, 2003). (3) Students viewed the work with elders as less challenging than other situations that required advanced technical skills (Happell & Brooker, 2001; Fagerberg et al., 2000; Herdman, 2002). (4) Students perceived that they lack communication skills with elders or they could not communicate well with elders or they did not have enough experience to provide holistic care to elders or considered geriatric care as more demanding than other specialty areas (Aday & Campbell, 1995; Herdman, 2002; Williams, Nowak, & Scobee, 2006; Zembrzuski, 2000). (5) The high levels of dependency of old people and the rigorous, routine nursing work had the greatest negative impact on nurses' choices to work with older adults (Fagerberg et al., 2000; Pursey & Luker, 1995). (6) Some faculty who failed to inspire students to be interested in gerontological nursing and elder care or registered nurses' negative attitudes toward elders had negative influences on students' attitudes toward elder care (Fagerberg et al., 2000; McLafferty & Morrison, 2004).

Researchers have evaluated the effect of educational programs on students' attitudes toward elders or reported multiple interventions in attempts to change students' attitudes about elders with mixed results (Aday & Campbell, 1995; Angiullo, Whitbourne, & Powers, 1996; Bernard, McAuley, Belzer, & Neal, 2003; Dellasega & Curriero, 1991; Fox & Wold., 1996; Haight, Christ, & Dias, 1994; Happell, 2002; Knapp & Stubblefield, 2000; Lin, 2000; Liu, 2001; Menz, 2003; Meshel & McGlynn, 2004; Moricello et al., 2005; Puentes & Cayer, 2001; Romack, 2004; Scott, Minichiello, & Browning, 1998; Varkey, Chutka, & Lesnick, 2006; Whitbourne, Collins, & Skultety, 2001; Williams et al., 2006).

Some studies showed that the education or intervention program did not affect students' attitude score or interest in elder care (Dellasega & Curriero, 1991; Liu, 2001; Moricillo et al., 2005; Scott et al., 1998). Other studies showed that students' knowledge about elders improved after education programs but their preferences in elder care did not change (Menz, 2003; Williams et al., 2006) and that students' career choices of working with elders remained the least popular and even declined in attractiveness during education process (Haight et al., 1994; Happell, 2002; Herdman, 2002; Lookinland & Anson, 1995).

It has been suggested that a holistic perspective toward elder care should be stressed in nursing education (Herdman, 2002; Quinn et al., 2004). It also has been argued that nursing educators should stress the development of altruistic virtues of compassion, empathy, commitment, willingness, or love in nursing students (Allmark, 1998; Amstrong, 2006; Bagshaw & Adams, 1985/1986; Birkelund, 2000; Fitzgerald & Hooft, 2000; Freshwater & Stickley, 2004; Paley, 2002; Pask, 2003, 2005; Smith & Godfrey, 2002; Wikstrom, 2001). Therefore, in order to improve attitudes toward elders and thus promote holistic nursing care, this researcher suggested that nursing educators should not only provide approaches to elder care with new knowledge and skills to students but also should promote positive attitudes toward elders by fostering the development of altruistic virtues toward elders during nursing students' educational experiences. If nursing educators can provide a learning environment with specific interventions to improve students' altruistic virtues, not only may students' attitudes toward elders change, but also perhaps these future nurses may develop an interest and desire to provide needed holistic care for this population. Especially in today's society during times when cultural values are changing (Rognstad, Nortvedt, & Aasland, 2004), the instillation of altruism in

nursing students is desirable but a challenge for nursing educators.

Self-transcendence is a quality that may be important for nursing faculty to understand and promote in nursing students (Pask, 2005). Reed (1991a) defined self-transcendence as “expansion of self-boundaries multidimensionally: inwardly, outwardly, and temporally” (p. 70) and clarified that self-transcendence is viewed as a pattern of advanced development and can occur within the context of anticipated and non-anticipated events. Reed stated that self-transcendence can be obtained regardless of age as part of the developmental maturing process. Frankl (1963, 2000) and Reed (2003) have suggested that people have a desire to find meaning in life and to reach out to others which can lead to self-transcendence. In addition, creative work was viewed as one approach to promote self-transcendence (Kovacs, 1986; Reed, 1991a; Yalom, 1982).

Scholars have suggested that people who are highly self-transcendent express altruism, gratefulness, responsibility toward others, tolerance of ambiguity, and being concerned for humanity (Frankl, 1966, 2000; Huang, 1999; Maslow, 1962, 1971; Perry, 2004; Piedmont, 1999; Reed, 2003), all of which result in benevolent actions. If nursing students have achieved higher levels of self-transcendence during the learning process, their feelings about elders may become positive and they may be more likely to be interested in providing nursing care to elders.

The Creative-Bonding Intervention (CBI) model (see Figure 1), a proposed conceptual model for the study, was developed by Chen and Walsh (2006) based on a concept analysis of self-transcendence and two pilot studies (Walsh & Chen, 2006; Chen & Walsh, 2006). The CBI model was used to explain how the CBI can influence students' self-transcendence and positive attitudes toward elders. The CBI was designed to help

students bond with elders through creative ways and help students experience inner self and meaning in life during the implementation of the CBI. Also, the bonding relationship with elders may also help the students achieve insight about life and may promote the students' self-growth. The CBI was expected to promote nursing students' self-transcendence and positive attitudes toward elders. In this study, the CBI was integrated into a required long-term care gerontological course in a nursing student population in Taiwan. This long-term care course had had a curriculum consisting mostly of in class lectures and group work based on reading assignments, with only one group that designed an activity to be delivered in a nursing home.

Background of the Study

Increased Needs and Concerns for Geriatric Nursing Care in Taiwan

The population of elders in Taiwan, similar to older populations in other advanced countries, continues to grow. In Taiwan, the number of people 65 years old and over constitutes 10 % of the total population (MOI, 2006) and is expected to increase to 23.34% by 2031 and 32.33 % by 2051 (Council for Economic Planning and Development, Taiwan, 2006). Due to changes in the Taiwanese social structure, many women now work outside the home and are unable to care for their sick, elderly family members. Therefore, when elders become dependent and need assistance, they are commonly forced to live in institutions (Chao & Roth, 2005; Lin, Wang, Chen, Wu, & Portwood, 2005). Thus, long-term care facilities have become prevalent and are increasing in Taiwan. Because of this situation, there is an increased need for future nurses who are willing to provide care to elders including those who live in long-term care facilities.

In traditional Taiwanese society, self-cultivation, self-discipline, filial piety (the

belief that adult children have an obligation to take care of aging parents and an age-based hierarchy relationship of respect for elders), and maintaining harmony in interpersonal relationships are stressed as part of Confucian philosophy (Chao & Roth, 2000, 2005; Chou, Two, & Woodard, 2005; Zhang, 2004). Thus, young persons are taught to respect their elders. Previous studies revealed that nurses felt positive about caring for elders (Cheng, Yu, Hsu, & Lin, 1996; Wei, 1995). However, the youth of today have not behaved as obediently as expected (Chou et al., 2005). Thus, the young peoples' attitudes about elders are not based on previous traditions. Hwang and Lin (2000) reported that younger nursing students had less positive attitudes toward elders than older nursing students in their study (age range = 18-43). Chen (2002) also reported college students had negative attitudes toward elders in general. Some studies showed that nursing students or health care providers who took a gerontological nursing course or gerontology course had more positive attitudes about elders than those who did not (Chen, 2006; Hwang & Lin, 2000; Lin, 2000). However, Liu's (2001) study revealed that nursing students did not have more positive attitudes toward elders after their three-week clinical experience in a nursing home than students who did not have the clinical experience.

Several studies revealed that there was a positive correlation between health care students who lived with elder family members and the students' positive attitudes toward the elders (Chen, 2006; Chung, 1997; Lin, 2000). This factor becomes significant when studying the situation in Taiwan, which has changed from an agrarian society to an industrial and technological society, and where most families have become smaller. According to the Directorate-General of Budget, Accounting and Statistics, Executive Yuan in Taiwan (2006), 44.5 % of the population lives in nuclear families while only 14.8

% lives in extended families. This has caused young people to have decreased opportunity to interact with elders (Hung, 1998). Also, the adoption of an industrial and technological society and the rapid economic growth has led to changes in values and lifestyles among generations. Elders are generally more economically and socially conservative than the younger generation (Hung, 1998; Lee, 1997; Sandel, 2004; Zhang, 2004).

Liou and Hsu (1994) found that there was poor communication between nurses and older patients. In this researcher's experience as a nurse educator in Taiwan, nursing students have often expressed difficulties communicating with elders and most of these young students have stated that they do not choose to care for elders after graduation. During this researcher's personal communication with the students, they gave several reasons they dislike working with elders, including: (1) There is a generational gap and a language barrier caused by the fact that the students do not speak Taiwanese well (Mandarin Chinese is the official language and young people often speak Mandarin Chinese). (2) Students do not know how to interact with or behave around elders because of a lack of contact and shared experience with elders. (3) It is boring to talk to elders because they always repeat the same stories about their past experiences. (4) The elders are too conservative and stick to old ways so that they often cannot accept the fashions of the young people. (5) It is not easy to understand what the elders say because some elders do not speak clearly.

Plans to Change Students' Attitudes toward Elders Worldwide

Researchers have evaluated the effect of regular educational programs or clinical programs on students' attitudes toward elders or used several approaches to change

attitudes about elders among college students by adding new knowledge or new strategies to course, or adding additional exposure to elders in hospital or community sites (Aday & Campbell, 1995; Angiullo et al., 1996; Bernard et al., 2003; Fox & Wold, 1996; Haight et al., 1994; Knapp & Stubblefield, 2000; Lin, 2000; Liu, 2001; Menz, 2003; Meshel & McGlynn, 2004; Moricillo et al., 2005; Puentes & Cayer, 2001; Romack, 2004; Scott et al., 1998; Varkey et al., 2006; Whitbourne et al., 2001). After testing these approaches, some researchers reported that students' attitudes about elders improved and/or students enjoyed the increased contact and interaction with elders (e.g., Aday & Campbell, 1995; Angiullo et al., 1996; Fox & Wold., 1996; Lin, 2000; Romack, 2004; Whitbourne et al., 2001).

However, other studies revealed conflicting results: (1) The young students (17-18 years old) who had negative attitudes toward the older people changed little after an educational program (Scott et al., 1998) or young nursing students did not have more positive attitudes toward elders after a three-week nursing home experience than students who did not have the experience (Liu, 2001). (2) Students continue to remain disinterested in elder care after the undergraduate program or interest in elder care declined during the educational process (Haight et al., 1994; Happell, 2002; Herdman, 2002). (3) Graduate nurses had more negative attitudes than student nurses about elders which seemed to suggest that nurses with more clinical experience had more negative attitudes toward elders than those with less clinical experience (Slevin, 1991). (4) Even though students had improved knowledge and attitudes toward the elders after a required geriatrics education course, the students continued to have little interest in elder clinical work after graduation (Menz, 2003) or after senior long-term care experiences, none of

students intended to pursue positions in long-term care upon graduation (Williams et al., 2006).

Several studies revealed students' attitudes toward elders may be related to differences in demographic variables of age, gender, and ethnicity (Fitzgerald et al., 2003; Lookinland & Anson, 1995; Ryan & McCauley, 2004/2005). Researchers noted in findings that negative attitudes toward elders were more likely in students who were younger than those who were older (Haight et al., 1994; Hwang & Lin, 2000; Slevin, 1991; Sheffler, 1995, 1998; Scott et al., 1998; Soderhamn, Lindencrona, & Gustavsson, 2001). Soderhamn et al. discussed that negative feelings of young people may be related to students' insufficient clinical time caring for elders. Findings in multiple studies appeared to support the idea that creative approaches to elder care to incorporate new ideas and additional interaction time with elders might promote positive attitudes toward elders in young persons.

The Need for Focus on Nurturing Altruistic Virtues

In Bagshaw and Adams's (1985/1986) study in seven nursing homes, the authors found that low levels of empathy were correlated with negative attitudes toward elders and that both of these variables were related to nurses' choice of a custodial type treatment for elders rather than individualized, holistic care. In Pask's (2003) qualitative study, using a special method designated as applied philosophy, Pask reported one nurse who stated her compassion enabled her to relieve patients' suffering. Pask (2003) and Olsen and Kunyk (2004) concluded that compassion helps people be able to be concerned for the good of others, and empathy enables people to identify sensitively with others' feelings and inner worlds. Pask argued that people's ability to have an accurate and

careful sense of others' feelings is enhanced by virtue, which can be obtained through intended learning.

Gastmans (2002), Pang et al. (2003), and Perry (2004) have suggested that if future nurses have virtuous attitudes and character, they will make the right decisions in their practice, and think about what they “. . . ought to *be*” (Pang et al., 2003, p. 305) rather than just what they “. . . ought to *do*” (Pang et al, 2003, p. 305). Lane (1987) discussed the idea that nurses can be compassionate only if they have a sense of transcendence and have feelings that they can connect with humans. Perry (2004) proposed that peoples' benevolent actions result from self-transcendence. Pask (2005) also suggested that during nursing educational process, faculty should help nurses develop self-transcendence to promote intrinsic altruistic values in nursing. However, the relationships between self-transcendence and nursing students' attitudes toward elders and an intervention or strategy which may promote self-transcendence in nursing students have not been addressed.

Significance of the Study

Significance to Nursing Education

The Creative-Bonding Intervention (CBI) to be tested in this study was designed to promote bonding relationships between students and elders. The CBI provided the opportunity for students to meet together in groups to reflect on their thoughts about elders and elder care and about what meaning nursing has for them. It has also allowed them to participate in CBI activities to learn more about themselves each other, and to implement similar activities between themselves and select elders in long-term care facilities. The researcher guided students during this process to give loving, creative, and

humanistic care to the elders. The CBI process was expected to promote the emergence of self-transcendence in students with the expectation that attitudes toward elders might concurrently improve. Therefore, a major nursing education goal of heuristic education and values to empower students to meet their potential would be addressed.

Significance to Nursing Practice

The Creative-Bonding Intervention (CBI) in this study would be expected to help nursing students build a bonding relationship with elders who live in long-term care facilities. During the CBI it was expected that activities implemented by students with elders might not only help promote holistic care but also that CBI activities students and elders have completed together might enhance the good feelings of elders and atmosphere or environment in the long-term care facilities. Thus, the elders might receive benefits from the CBI. Therefore, the study might enhance the quality of care for the elders.

The study would be expected to give students the chance to apply what they have learned during CBI activities to future practice in care of elders and provide a format to plan how to meet the needs of the elders in creative ways. Also, it was expected that both the numbers of nurses working in elder care and the quality of care in these facilities might improve. Society's expectation that humanistic and holistic care should be provided to elders would be promoted.

Significance to Nursing Research

Since Reed (2003) and others (Pincharoen, 2002; Stinson & Kirk, 2006) have called for innovative strategies to promote self-transcendence, the CBI design to promote bonding between nursing students and elders and the effects of the CBI on self-transcendence and attitudes toward elders might provide new knowledge for the

discipline of nursing. The CBI might motivate researchers to modify the CBI, to test the CBI with new populations, or to design new interventions to tap nursing students' self-transcendence and promote positive interactions between the nursing students and the elders. This study might have an impact on nursing research by utilizing the theory of self-transcendence in a new population. Additional evidence to support the theory of self-transcendence might be provided by the results of the study.

Furthermore, Reed's (1991b) Self-Transcendence Scale (STS) and the Hilt and Lipschultz's (1999) instrument, a revision of Kogan's Attitudes Toward Old People statements (RKAOP), were translated to a Mandarin Chinese version and were used with Taiwanese nursing students to measure self-transcendence and attitudes toward elders. Thus, the study expanded the theory of self-transcendence and tested two instruments in a new population in a Taiwanese culture. The study thus contributed to building knowledge in the nursing discipline in a Taiwanese nursing student population.

Significance to Policy

The study findings may lend support to promote policies that encourage partnerships between a school of nursing and long-term care facilities in Taiwan. Activities carried out in long-term care facilities between students, faculty, and elders provided a model of care that may benefit the school of nursing faculty, students, and long-term care facility residents. Also, it was expected that the school of nursing faculty may integrate similar activities into future gerontology courses to promote well-being in long-term facility residents. Thus, the students might contribute to improve the quality of care and quality of life for the long-term facility residents and the students also may advance their clinical

experiences and personal and professional growth through the close contact with the elders.

When students and faculty become involved in the care of residents, it is likely that faculty may improve their practice, and the collaborative arrangements may provide access for future research activities in the long-term care facility. Therefore, the implementation of the CBI with students in long-term care facilities may lead to new partnerships between a school of nursing and a neighborhood long-term care facility. If such activities are implemented, there may be improvements in health care longitudinally. Furthermore, due to the increased number of elders in society, the study findings may provide innovative approaches in caring for elders and lead to a new perspective toward Gerontological Nursing Care.

Purpose of the Study

The purpose of the study was to compare: (1) the level of self-transcendence and (2) the degree of attitudes toward elders in two groups of nursing students: a Creative-Bonding Intervention (CBI) experimental group and a Friendly Visit (FV) control group. The main goals of this study were to determine if the utilization of an eight-week CBI by nursing students in Taiwan would promote the students' self-transcendence and positive attitudes toward elders, and promote the students' willingness and interest in elder care.

Theoretical Framework: The Concept of Self-Transcendence

In order to acquire an in-depth and complete understanding about the concept of self-transcendence and explore how people can transcend, the researcher made effort to study the concept of self-transcendence and to develop the strategies for cultivating

people's self-transcendence. Self-transcendence has been addressed commonly in humanistic and transpersonal psychology since Frankl (1963) published *Man's Searching for Meaning* reporting his observation experience as a prisoner in Nazi concentration camps. After reviewing the historical development and the related literature of self-transcendence, Chen and Walsh (2006) conducted a concept analysis based on papers published in both nursing and non-nursing disciplines. A modified Cowles and Rodgers' (2000) method was used, which is an evolutionary perspective, and a synthesis of the meaning of the concept of self-transcendence was presented in this paper. The interpretation of data focused on attributes of self-transcendence, antecedents of self-transcendence, and consequence of self-transcendence. The relationship of antecedents, consequence of the concept, and potential strategies were proposed in the CBI model shown in Figure 1 to guide the study intervention.

Attributes of Self-transcendence

The analysis of the literature was aimed to provide a further understanding of the concept of self-transcendence based on the attributes of the concept. After a content data analysis, the concept of self-transcendence could be described as: human potential, expanding one's ordinary boundaries, surpassing one's noticed limitations, developing an integrated personality, and being dynamic and individualized.

Human potential. Scholars have agreed that people have a desire to be transcendent, even though they have unique differences. These different viewpoints about viewing self-transcendence as a human potential can be categorized as (1) searching for meaning in life and in the world (Conn, 1977, 1987, 1998; Frankl, 1963, 1966, 1984, 2000; Kovac, 1986; Noble, 1987; Reed, 2003; Yalom, 1982), (2) having the capability to expand one's

self-boundaries and perceptions of time and space (Benner, 1989; Brockelman, 2003; Coward & Reed, 1996; Ellison, 1983; Fahlberg, Wolfer, & Fahlberg, 1992; Koltko-Rivera, 2006; Lane, 1987; Loy, 1996; Nouwen, 1975; Parse, 1981; Reed, 1986b, 1991a, 2003; Roccs, 2003; Taranto, 1989; Vaughan, 1977, 1985, 1989; Walsh & Vaughan, 1993; Watson, 1988), (3) possessing self-actualization to go beyond what one used to be (Koltko-Rivera, 2006; Maslow, 1962, 1969, 1971), (4) being a true self or inner self (Conn, 1987, 1998; Lane, 1987; Reed, 1983, 1991a, 2003), and (5) being a part of personality (Cloninger, Svrakic, & Przybeck, 1993).

Expanding one's ordinary boundaries. Reed (1991a, 2003) defined self-transcendence as expanding one's boundaries inwardly through self-reflection, externally through care for others' benefit, and temporally by the way of thinking of past and future to improve the present situation. Reed's definition focuses on one's boundary. Similarly, several authors described self-transcendence as expanding ego-interest, forgetting one for others, reaching out, being able to value the good of greater groups, and going beyond what one used to be (Conn, 1998; Frankl, 1966, 2000; Maslow, 1969; Lane, 1987; Maslow, 1969; Nouwen, 1975; Wayman & Gaydos, 2005). Ellison (1983) described transcendence as "a stepping back from and moving beyond what is" (p. 331).

Surpassing one's noticed limitations. Parse (1981, 1997) stated that people obtained freedom by transcending a limited situation. Reed (1986b, 1987) explained that when people transcend themselves they have the capacity to go beyond self-limitation and the present context and learn new perspectives. Other scholars described self-transcendence as a sense of moving beyond the perceived restrictions and surpassing their limitations through an increase of self-awareness, insight, self-knowledge, and being beyond the

usual state of consciousness and having expanded awareness (Brockelman, 2002; Hanna, Giordano, Dupuy, & Puhakka, 1995; Long, 1999; Metzner, 1994; Wayman & Gaydos, 2005).

Developing an integrated personality. People with self-transcendence have been viewed as mature, and have achieved the very highest and most holistic levels of human consciousness (Fahlberg et al., 1992; Maslow, 1962, 1971; Noble, 1987; Reed, 2003). Conn (1977) viewed self-transcendence as a basic criterion of the “highest stage of moral reasoning” (p. 204). It has been proposed that people with self-transcendence demonstrate characteristics such as creative understanding, realistic judgment, generous love, gratefulness, helpfulness, being responsible and broadminded, a feeling of peace, happiness, and compassion (Noble, 1987; Piedmont, 1999; Roccs, 2003). Several authors stated that people who have self-transcendence may express altruism, concern for the benefit of larger groups, new perspective about self and the world, and protecting the environment (Frankl, 1966, 2000; Mellors, Erlen, Coontz, & Lucke, 2001; Noble, 1987; Piedmont, 1999; Schnell & Becker, 2006; Tornstam & Tornqvist, 2000; Wayman & Gaydos, 2005). Other authors stated self-transcendence is an essential component of wisdom (Le & Levenson, 2005; Loy, 1996; Reed, 2003; Taranto, 1989; Walsh & Vaughan, 1993). Other authors stated transcendence is binding separation into integration, viewing the world in a holistic way, and increasing a feeling of cosmic communion (Maslow, 1971; Metzner, 1994; Tornstam, 1994, 1996, 1997).

Being dynamic and individualized. Reed (1991a, 2003) proposed that there are interactions among a variety of individual and contextual factors that impact the development of self-transcendence. Conn (1977) argued that the first psychosocial virtue

of trust is crucial for the development of self-transcendence. Several scholars stated the development of self-transcendence requires that people be willing and make efforts to attain it and may vary related to peoples' cohort affiliation, gender, age, ethnicity, life events, occupation, and supportive help (Coward, 1990; Hanna et al., 1995; Kilpatrick, 2002; Noble, 1987; Reed, 1991abcd, 2003; Tornstam, 1994, 1996, 1997). Wayman and Gaydos (2005) viewed self-transcendence as a "fluid process" (p. 264). In their study, the participants stated that they were unable to remain transcendent all the time and they were conscious of searching for new growth.

Antecedents of Self-transcendence

Antecedents of self-transcendence can be described as: connecting to the true self, experiencing meaning in life, being immersed in human and supportive environment, realizing the totality and infinity of life, and actively finding meaning in the face of suffering.

Connecting to the true self. Conn (1987) proposed the true self strives for meaning, truth, value, and love, and self-transcendence happens during this process. Several scholars indicated that self-transcendence is a kind of self-realization (Conn, 1987; Vaughan 1977, 1985). Taranto (1989) suggested that people can perceive humans having limitations if they experience self and experience others in a compassionate manner and then they become searching meaning in life.

Experiencing meaning in life. Several authors proposed that self-transcendence can be promoted through finding meaning in life and in the world; people can move from selfness to otherness and can reach out through the meaningful work and during this process self-transcendence will be promoted (Frankl, 1963; Conn, 1977; Duyan, 1991).

Yalom (1982) proposed that people can add something valuable to others through creative work that gives meaning to life. Other scholars stated that if people look for good in the world, give compassion to others, experience a value, or participate in giving and taking something meaningful in a real community, they may demonstrate self-transcendence (Conn, 1977, 1994, 1998; Duyan, 1991; Frankl, 1963, 1966, 1984; Taranto, 1989). Vaughan (1977) proposed that peoples' self-transcendence was activated by concern for others' benefit and then they also increased wisdom and the tolerance for ambiguity. Reese and Murray's (1996) and Buchanan, Farran, and Clark's (1995) studies suggested that connecting to and helping others are components that contribute to transcendence.

Being immersed in human and supportive environment. Several authors stated that self-transcendence is prompted in a human environment and suggested the role of environment is to help people actualize their potentialities (Conn, 1998; Duyan, 1991; Maslow, 1962; Vaughan, 1977, 1985). Other scholars placed importance on the supportive context such as providing love, understanding, and encouragement for reaching self-transcendence and emphasized that people are highly interdependent and are affected by each other in the transcending process (Fahlberg et al., 1992; Walsh & Vaughan, 1980, 1993).

Realizing the totality and infinity of life. Duyan (1991) suggested that helping young generations understand they are part of the world can cultivate the characteristics of self-transcendence. Also, Loy (1996) stated that if people are able to think they are part of the world and focus on the entire universe, these thoughts will lead them to reach self-transcendence.

Actively finding meaning in the face of suffering. Many scholars suggested that people experiencing difficult situations who create meaning in the context of their experience are able to achieve self-transcendence (Acton & Wright, 2000; Coward, 1990; Frankl, 1963, 1966, 1984; Reed, 2003; Wayman & Gaydos, 2005).

Consequences of Self-transcendence

The consequence of self-transcendence could be: achieving a sense of well-being, perceiving self-growth, finding meaning and purpose in life, and maintaining health.

Achieving a sense of well-being. Several studies support Reed's middle range theory that self-transcendence was related to well-being (Chin-A-Loy & Fernsler, 1998; Coward, 1990, 1991, 1996, 2003; Reed, 1991b; Upchurch, 1999; Young & Reed, 1995).

Perceiving self-growth. Several scholars stated self-transcendence can enhance feelings of self-worth, be an insightful and possibly transformative experience, and make an important change in the individual's value system (Coward, 1990, 1993, 1994; Kovac, 1886; Noble, 1987). Experiencing personal growth and having wider perspectives toward others and things were also discussed in the literature (Chiu, 2000; Coward, 1990; Coward & Kahn, 2004; Frankl, 1969).

Perceiving meaning and purpose in life. Reed (1991c) emphasized that humans are able to find meaning in life through self-transcendence. Other scholars stated their participants found meaning and purpose in life when they had self-transcendence (Chiu, 2000; Coward, 1990; Mellors et al., 2001; Noble, 1987; Schnell & Becker, 2006).

Maintaining health. Upchurch (1999) concluded that self-transcendence helped some elders remain active even though they had health problems. Decker and Reed's (2005) study had similar findings. Buchanan et al. (1995) suggested that

self-transcendence may be an important component that prevents suicidal tendencies. Reed's (1991b) study results indicated that elders who scored high on self-transcendence had positive correlations with markers indicating health. The qualitative themes in Reed's study were corroborated in findings, which were also supported by Stinson and Kirk's (2006) findings.

Potential Strategies for Developing Self-Transcendence

From the literature review several potential strategies were revealed that might trigger people's self-transcendence, including perceiving contributions by creative work, being connected with one's own inner self, and having intended learning.

Perceiving contributions by creative work. Several authors proposed that self-transcendence can be the result of creative properties of the cognitive system and suggested educators should help people to improve their creativity, for example, teaching people to be creative through art (Emrich, 1998; Maslow, 1971; Yalom, 1982; Vaughan, 1977). Reed (1991a) stressed creativity in one's own work is one key source for finding meaning in life. Kovacs (1986) emphasized that an opportunity for humans to access their creativity to create value and meaning for the world and to shape the world and structure the human relationships can help people move from selfness to otherness. Then people can reach out through the meaningful work with greater self-transcendence to follow.

Being connected with one's own inner self. Vaughan (1977, 1985) stated that during the transcending process, the focus becomes one's inner work. Vaughan proposed people's beliefs about one's self can shape awareness and thus can direct one to self-realization and transcendence. Loy (1996) suggested that people should be more aware of their mental process because transformation happens through insight, which

occurs through self-reflection. Also, Reed (2003) stressed that journaling is one of techniques that promotes self-transcendence. Several authors suggested that meditation may be a way to reach a sense of transcendence about conscious self, and to enhance the psychological skills which can promote personal change, growth, and development. (Maslow, 1971; Hanna, et al., 1995; Metzner, 1994). Lane (1987) stated that people can find meaning in life only through introspection and reflection. Kilpatrick (2002) indicated that being connected to one's inner self occurs during the transcending process. Several findings suggested that self-reflection is a way to promote transcendence (Pincharoen, 2002; Young & Reed, 1995).

Having intended learning. Walsh and Vaughan (1993) stated that people have a potential of the mind that can be further developed through the transcending process. Walsh and Vaughan proposed six elements to be the heart of transcendence including ethical training, attention training, emotional transformation, motivation with the practice of meditation, refining awareness, and development of direct intuitive insight. Walsh and Vaughan believed training can activate one's transpersonal potential. Hanna et al. (1995) emphasized that effort or will to transcend was a main factor in transcendence and suggested that the transcending process, which consists of psychological acts, can be learned and practiced. Wasner et al. (2005) gave a three and half-day spiritual care training for palliative care professionals called, "Wisdom and Compassion in Care for the Dying", and found improvement in compassion for the dying and improved positive attitudes toward one's family and colleagues.

Theoretical Framework: Reed's Theory of Self-Transcendence

Reed (1986, 1987) explained that when people transcend themselves they activate

the capacity to go beyond self in the present context and learn new perspectives. Reed's (1991a) middle-range theory of self-transcendence was based on a synthesis of work from the theorists of Rogers, Parse, Watson, Newman, Frankl, and Maslow, and her own empirical work in elders (Reed, 1997, 2003). Reed (2003) stated that the development of her theory was impacted by: (1) the paradigm of developmental psychology through the life span, (2) Martha Rogers' ideas about the nature of change in human beings, and (3) clinical application of developmental theories in the younger generation.

Reed stated that her theory of self-transcendence is based on two main assumptions: (1) Human beings are integral with their environment and are able to expand their boundaries beyond self. This awareness may be generated in every day activity as individuals connect to their inner self and connect with others. (2) Self-transcendence is an inherent nature of humans, obtained during the developmental process. Adults are able to overcome problems which they face in the environment and transform them into the developmental energy. This ability is related to a sense of well-being. Self-transcendence has been assessed as an important developmental resource of elders (Reed, 1986a, 1989, 2003).

Reed (1991a, 2003) suggested that older people with self-transcendence focus on generativity and ego integrity and can demonstrate various viewpoints and behaviors such as sharing wisdom, integrating the physical changes of aging, and finding spiritual meaning in their life. Reed proposed that there are a variety of individual and contextual factors and their interactions that impact on the development of self-transcendence. These factors are known as age, cognitive ability, and past important life events (Reed, 2003). Reed stated that nursing interventions that sustain individual inner resource for

self-transcendence or that impact on personal and contextual factors may enhance self-transcendence and suggested several intrapersonal strategies, interpersonal strategies, and transpersonal strategies which could help promote the development of self-transcendence. Reed emphasized that nursing is not only a human science; it is also a developmental science and emphasized the importance of person-environment interactions (1983).

Reed (1986, 1989) conducted research to build the theory on healthy elders and elders hospitalized for depression and used correlational and longitudinal designs to scrutinize the nature and the relationship between self-transcendence and mental health results. Reed (1991) also developed the Self-Transcendence Scale (STS) to measure maturity obtained in the development process. Acceptable reliabilities have been reported in a number of studies and range from 0.73-0.90 (Bean & Wagner, 2006; Buchanan et al., 1995; Coward, 1991; Decker & Reed, 2005; Reed, 1989, 1991b). The theory and the STS has been tested in a series of studies, which used a variety of designs, and has been used in studies of populations of older adults, oldest-old adults, middle-age adults, adults, and nursing students (e. g., Bean & Wagner, 2006; Coward & Kahn, 2004; Decker & Reed, 2005; Kilpatrick, 2002; Nygren et al., 2005; Reed, 1986a, 1989, 1991b; Wasner et al., 2005).

Therefore, the theory of self-transcendence served as a theoretical perspective to understand how the contextual factors involved in this study and specifically during the implementation of the CBI might influence nursing students' self-transcendence. Loftus (1998) and Eifried (2003) reported that nursing students perceive their own vulnerability when they experience patients' suffering and dying; thus, a similar situation in this study

may occur to help nursing students stimulate their self-transcendence during the learning processes and may also enhance their well-being. The CBI model (Figure 1) displays the different facets within the CBI and how the CBI was expected to have an impact on nursing students' self-transcendence and attitudes toward elders.

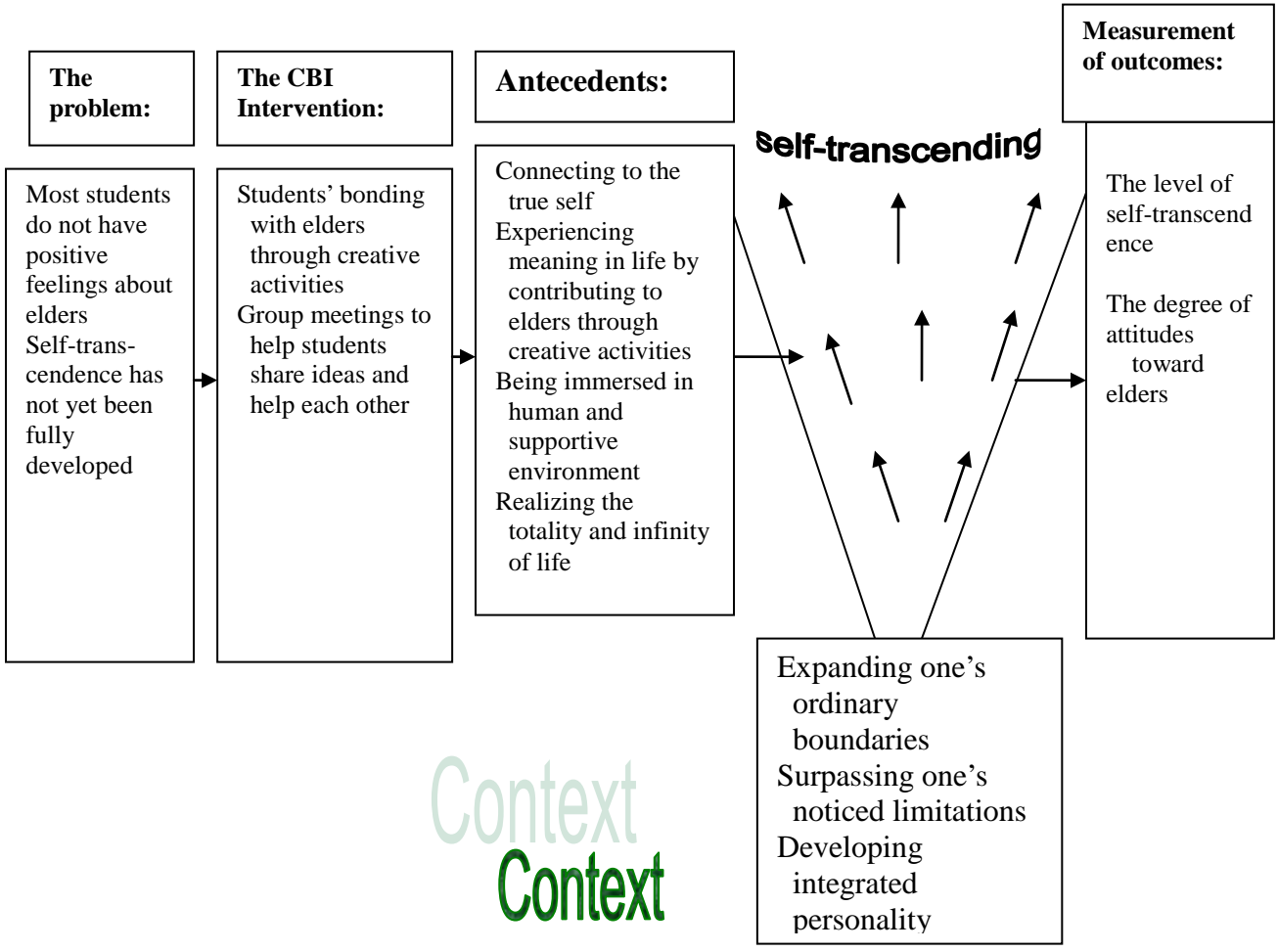


Figure 1

Chen and Walsh (2006) Creative-Bonding Intervention Model

Conceptual Framework: The Chen and Walsh Creative-Bonding Intervention Model

Based on the Chen and Walsh (2006) Creative Bonding Intervention (CBI) model (see Figure 1), the main elements within CBI in this study include: (1) The students bonded with elders by giving compassion and love to elders and making contributions to elders through creative work. (2) The students shared ideas and helped each other during group work. (3) The students connected to their inner selves by implementing self-image posters, and reflecting their feelings about elders and elder care, and meaning in nursing and in their lives. These elements are explained further as follows.

Bonding Relationships between Nursing Students and Elders

Reed (1987, 1991a, 1992, 2003) emphasized that if humans connect to their inner selves and their environment, change may happen within themselves to transform them to a higher level of development. Reed and other scholars have stated that when people give compassion and love to others, these acts help them experience self and connect to others, and may lead to self-transcendence (Noble, 1987; Reed, 2003; Walsh & Vaughan, 1993). Reed (1991c) also stated that one's contribution to others and society and one's devotion to a desired purpose are ways for people to find meaning in life. Vaughan (1977) proposed that self-transcendence was motivated by concern for others' benefit. Reese and Murray's (1996) and Buchanan et al.'s (1995) studies suggested that connecting to and helping others are components that may contribute to transcendence. Therefore, if the opportunities are provided for students to build a bonding relationship with the elders through the CBI, the students may experience meaningful feelings for elders and thus connect more meaningfully to their own inner selves. In this way, a change toward a higher level of development may occur in the students.

Elders who are confined to a nursing home often have diminished social contact with family and friends, and decreased stimulus from outside society (McGilton, 2002; Weingourt, 1998). However, human beings have the need to establish a dynamic relationship with others and to have continuity with their past (McEwen, 2005). In this situation, the elders have the needs for nurturance and support from care providers (McCormack, 2004). Yet, nurses usually are not available to provide enough individual caring for these elderly people because they are busy caring for many patients (Pursey & Luker, 1995). Due to these reasons, these elders often look for someone with whom to make a meaningful connection (Chao & Roth, 2005; Heliker, 1999; McGilton, 2002; Wilson, 1997).

Since elders need help, nursing students, during clinical experiences as part of a gerontological nursing course, have the opportunity to meet the needs of elders (Rogan & Wyllie, 2003; Weingourt, 1998). As students are guided to build a bonding relationship with these elders through the CBI, it is hoped that the students may recognize their contributions to the elders and may enjoy these experiences (Blank, Fobnson, & Shah, 2003). According to Conn (1998), people have an essential need to transcend self in relationships and to experience true love. Moreover, Conn emphasized that self-transcendence is advanced through human activities. Thus, offering such activities to nursing students to promote self-transcendence as suggested by Walsh and Chen (2006) is desirable. Also, since students lack life experience, having close contact with elders may help students appreciate life's fragility and limitations, and then they may cherish what they have, increase gratitude and self worth as well as grow personally and professionally through the experience. Therefore, a creative bonding relationship with elders may

provide the momentum for the students to move toward self-transcendence.

A genuine bonding relationship between the students and elders requires the students to provide caring and to be sensitive to the elders' expressions and to understand their life experience before a mutual interaction can happen (McGilton, 2002). Positive interactions may be enhanced by residents' story telling and students' listening to them (Jonas-Simpson, Mitchell, Fisher, Jones, & Linscott, 2006; Rogan & Wyllie, 2003). Researchers have suggested that recalling one's pleasant memories may be helpful to increase the residents' life satisfaction, self-esteem, self-transcendence, and decrease their depression (Burnside, 1990; Cook 1998, Harris, 1997; Heliker 1999, Stinson & Kirk, 2006; Wang, 2004; Wang, Hsu, & Cheng, 2005). Talking with the elders about their pleasant past events is a traditional way to help students to make connections with elders (Shellman, 2006) which may be initiated and deepened by implementing art activities together (Freshwater & Stickley, 2004; Walsh & Chen, 2006; Wikstrom, 2000). During the CBI the students were introduced to art activities combined with communication strategies to increase elders' recall of pleasant experiences. Examples included asking elders about their hobbies such as favorite colors or favorite fashions to enhance the interaction between the students and elders.

Contributing to Elders through Creative Work

Scholars have indicated that creative work can add something valuable to others and give meaning to life and thus may lead to self-transcendence (Maslow, 1971; Yalom, 1982; Reed, 1991a). Art is an expressive component that can help people access their creativity, develop their imagination, strengthen their empathy, promote caring environments, and help them understand themselves; the expression through art is beyond

words and may also promote thinking and learning by using art activity during educational pursuits (Breslin, 1996; Darbyshire, 1994; Leffers & Martins, 2004; LeVasseur, 1999; Maslow, 1971; Neubauer, 2000; Pardue, 2005; Perlstein, 1997; Wainwright & Williams, 2005; Wikstrom, 2000, 2001). Art also helps people living with chronic disease to express their feelings and increase interaction with others (Hodges, Keeley, & Grier, 2001; Predeger, 1996; Zabloutny) and may promote the expression of emotion, healing, and comfort (Driessnack, 2004; Freshwater & Stickley, 2004; Predeger, 1996; Young-Mason, 2000; Walsh, 1993; Walsh & Minor-Schork, 1997; Walsh, Martin, & Schmidt, 2004; Walsh & Weiss, 2003).

The art-activities and/or art images may trigger the elders' deep memories and allow them to recall their stories and induce inner strength and wisdom (Lane, 2005). Using visual art to promote communication (Wikstrom, 2000) may also help elders and students decrease the language barriers between elders and students (Koithan, 1996). Creative approaches that support student-elder interactions may promote additional meaning for students as well as interest in caring for elders. Evidence was provided by Walsh and Chen's (2006) pilot intervention study that positive outcomes had occurred was reflected in student comments on the final questionnaire. The participants' comments included that the art-making promoted good feelings between students and elders and that the elders enjoyed art-making. Modeled after Walsh and Chen's (2006) pilot work as well as Walsh's previous intervention studies (1993, 1994, 1995, 1997, 2003, 2004, 2005, 2007) several art activities were introduced to the students to promote creative ways to interact with elders and enhance elders' memories and caring environments. As Kovacs (1986) stated, an opportunity for humans to activate their creativity to enhance value and

meaning and to structure the human relationships can help people move from selfness to otherness.

Group Work

During the learning process, small group work was important for the students to share ideas and support each other. Duyan (1991) suggested that providing opportunity for young generations to learn how to work collaboratively is necessary for cultivating the characteristics of self-transcendence. In small groups the students were encouraged to share their experiences about how they could have a good interaction with the elders and how they could contribute to the elders. Also, the students were encouraged to share how they perceived the elders' feelings about their visits and how they interacted with them (see Table 9). McKinlay and Cowan's (2003) findings revealed that nursing students' interaction with elders was related to their perception of how others expect them to behave. During the group sharing process, the researcher expected that students would learn and realize that one is only part of the world and how it is important to cooperate with others. The students might also recognize new ways for nurses to promote excellence in elder care.

The teachers, researcher, and staff helped students to promote positive communication between students and elders. The researcher provided group meetings to teach the CBI and to discuss CBI implementation between students and elders were chosen as the method of initially introducing the CBI to students. Meetings continued throughout the CBI process with several discussion guidelines to help students reflect their thoughts about elders, themselves, and reflect on meaning of this experience.

Statement of the Problem

In Taiwan, nursing students may not have had the opportunities to develop traits of self-transcendence because college nursing students in this country are generally between 16 to 20 years old. These young nursing students may lack life experience, may not have provided contributions to others which lead to find meaning in life, and may not have had the chance to share love in a meaningful way. Also, they may be in the developmental stage of identity versus role confusion, which may contribute to their being self-absorbed (Chinen, 1986; Erikson, 1963, 1985). Thus, these young nursing students' negative feelings about elders may be caused by the lack of life experience and being self-absorbed, and thus their self-transcendence may not have been fully developed. However, elders are an ever-growing population worldwide. As scholars have pointed out that young people have the ability to expand their boundaries to care about others' perspectives and that self-transcendence may be further stimulated during adolescence (Conn, 1977; Piaget, 1963). Ho (1987) studied 873 Taiwanese college students and found that the meaning of life positively correlated with self-transcendence. Therefore, nursing students' negative feelings toward elders may be promoted by stimulating the development of self-transcendence in these young students. Additionally, self-transcendence in these young nursing students may also increase their interest in providing nursing care to elders.

Nursing educators emphasize heuristic education and value empowering students to develop their potential. Maslow (1971) suggested that education is kind of character training. Indeed, enhancing students' development is an important aspect of nursing education. It is the researcher's belief that movement toward self-transcendence in young

students is a critical and essential part of nursing students' education and this focus on self-transcendence may stimulate the altruistic traits that nurse educators want to foster in students. Thus, developing strategies to cultivate the student's self-transcendence is necessary and important. Many scholars have also suggested that there is a need to activate and develop young people's self-transcendence in today's society (Duyan, 1991; Pask, 2005; Webb & Warwick, 1999). If nursing students can interact with elders in creative ways, these students may also obtain additional insight and gain appreciation of life's fragility and limitations as they bond with elders. Even though students lack life experience, these creative bonding interactions with elders may also increase these students' life experiences and then promote their own self-growth and lead to self-transcendence.

The future population of nurses will be faced with the challenges of providing holistic care to patients and delivering care to a growing older population. Since nurses are expected to have more mature traits than other contemporaries, to have positive attitudes toward elders, and to enjoy caring for them, all these characteristics may be enhanced as self-transcendence develops. The nursing educator has an opportunity to foster nursing students' self-transcendence, to help nursing students have positive attitudes about elders, and to promote the society's expectations for quality care of elders. In particular, the younger generation does not have many opportunities to have close interaction with elders in Taiwan. Reed pointed out that it is the responsibility of nurses to make the developmental resource, self-transcendence, possible for patients (1986a, 1989, 2003). If nurses achieve self-transcendence, they may be more sensitive to patients' needs and enjoy helping these patients. Thus, it is important to design an education

program to facilitate young people's self-transcendence, especially for nursing students. It is also necessary to develop and test nursing interventions to promote self-transcendence in order to benefit people and add to the body of the nursing knowledge. However, interventions or strategies to promote self-transcendence in nursing students and then promote positive attitudes toward elders have not been explored.

Conceptual and Operational Definitions

For the purposes of this study, the following definition of terms was used:

Self-Transcendence

Conceptual definition. Self-transcendence has been defined as an expansion of one's boundaries toward the mind and spirit when thinking deeply about oneself, toward outside self by being concerned about others, toward practical affairs by perceiving one's past and future to enhance the present, and toward connecting with a power or a greater dimension. Popular words such as compassion, wisdom, and openness are used to describe a person with self-transcendence (Reed, 1991a, 2003).

Operational definition. Self-transcendence was measured by the total score on the Self-Transcendence Scale (STS). STS contains 15 items in a 4-point scale format. Scores range from low self-transcendence (score = 15) to high self-transcendence (score = 60; Reed, 1991b). In this study, self-transcendence of students was assessed by the STS.

Attitudes toward Elders

Conceptual definition. Attitudes toward elders, viewed as individual beliefs and attitudes toward elders who are 65 and over, have been defined as feelings toward elders that will influence quality of care and nurse-elder relationships (Courtney, Tong, & Walsh, 1999; Mckinlay & Cowan, 2003; Jacelon, 2002; Soderhamn et al., 2001).

Operational definition. In this study, attitudes toward elders were measured by the total score on the Revised Kogan Attitudes towards Old People (RKAOP) scale. The RKAOP, scored on a Likert format, consists of 22 items (Hilt & Lipschultz, 1999) with a range of responses from strongly disagree (1) to strongly agree (7) and reversed 1-17 statement scores. The possible total scores range from 22-154 with lower scores indicating better attitudes toward elders. In this study, student attitudes toward elders were assessed by the RKAOP.

Nursing Students

Conceptual definition. Students are those who study in a nursing program in Taiwan.

Operational definition. Nursing students are those who are in their fourth year of a 5-year college program in a National Institute of Nursing in South Taiwan. The nursing students in this study were enrolled in a required long-term care course (2 credits) in the fall semester which began in September in 2006.

Research Questions

The research study was designed to address the following questions:

1. Did nursing students who utilized the eight-week creative-bonding intervention (CBI) with elder residents exhibit higher levels of self-transcendence than those who did not utilize the eight-week CBI?
2. Did nursing students who utilized the eight-week creative-bonding intervention (CBI) exhibit more positive attitudes toward elders than those who did not utilize the eight-week CBI?
3. Was there a relationship between self-transcendence and positive attitudes toward the elders in nursing students?

Research Hypotheses

H1. Nursing students who utilized the eight-week CBI would have significantly higher scores on the self-transcendence scale (STS) when compared to those students who did not utilize the eight-week CBI.

H2. Nursing students who utilized the eight-week CBI would have significantly higher scores on the Revised Kogan Attitudes towards Old People statements (RKAOP) when compared to those students who did not utilize the eight-week CBI.

H3. There would be a positive relationship between STS and RKAOP scores in nursing students.

Assumptions of the Study

In the study, the assumptions were:

1. Student participants in the CBI group would offer the activities they have learned to elder residents of a long-term care facility.
2. Student participants would complete the instruments and would answer the questions honestly.
3. Self-transcendence is human potential and can be attained at any age.
4. The development of self-transcendence can be influenced by environment, life events, interaction with others, making contribution to people needed, and the opportunity to be creative.

Limitations of the Study

Although the study was expected to strengthen nursing educational approaches in the care of elders, to contribute to nursing students' growth, and promote excellence in gerontological nursing course, this study might also have several limitations. The first one is that it was limited to a convenience sample of nursing students; the elders that

interacted with students were at two sites only; thus, the study findings might limit the generalizability to different student and elder populations. In order to minimize these limitations, the researcher structured the intervention procedures so that the intervention protocol can be duplicated by others in different groups of students and would be transferable for student/patient interaction at different sites. Second, Reed's (1991b) self-transcendence scale (STS) and the Hilt and Lipschultz's (1999) revised Kogan's Attitudes Toward Old People statements (RKAOP), were used for the first time in a different language and different culture, so that might be a limitation. One strategy to eliminate this limitation was to determine the reliability of these translated instruments. Content validity for the Chinese version had been determined by several experts and peers who had read and evaluated the instruments. Cronbach's alpha was determined on both instruments following the implementation of this research plan. Third, individual participants could not be randomized to different groups because of class scheduling so that different classes were randomly assigned to the CBI group or FV group. The lack of randomization of individual participants to the CBI group or FV group means that the design is quasi-experimental rather than experimental as group equality on demographic variables might not be equal. For this reason, the researcher used ANCOVA statistics to control for statistical differences on the pre-test scores between the two groups.

Chapter Summary

Future nurses are needed to care for the growing elder population. During the educational process, nursing educators have the opportunity to develop and implement approaches that may promote self-transcendence and improve nursing students' attitudes about elder care. It seems important for nursing educators to develop education

interventions to tap nursing students' self-transcendence. In this study it was expected that the CBI intervention would improve the students' attitudes toward elders and might increase their interest and the desire to provide holistic care for elders and enjoy working with them.

An innovative creative-bonding intervention (CBI) approach has been described which was tested in this research. This researcher investigated the effect of the CBI on nursing students' self-transcendence and attitudes toward elders in Taiwan. In order to test the effect of this intervention, two groups, a CBI group and a friendly visit (FV) control group were compared on self-transcendence and attitudes toward elders. Both groups included the same number of hours of experiences with elders and the same amount of researcher contact. Additional specifics with details about both approaches are operationalized in Chapter three. Chapter one included the background of the study, the significance, the theoretical framework, the conceptual model for the intervention plan, the statement of the problem, conceptual and operational definitions, hypotheses, assumptions, and limitations of the study. The following chapter will include a review of literature related to nursing students' attitudes toward elders, self-transcendence, and the foundational ideas used to design the creative art activities of the CBI.

CHAPTER TWO: REVIEW OF LITERATURE

Introduction

A methodological review (Cooper, 1984; Creswell, 2003) was used for the literature review. The review focused on empirical papers (Glatthorn & Joyner, 2005) including: (1) the variables: attitudes toward elders and self-transcendence, and (2) the foundation of art activities for the creative-bonding intervention. A summary of the reviewed literature follows to provide the state of existing literature for the study.

The literature review focused on a search of the main electronic databases in the fields of nursing, medicine, psychology, sociology, and education. The following electronic databases were used: the Cumulative Index to Nursing and Allied Health Literature (CINAHL plus), EBSCO Nursing and Allied Health Collection, Medline in PubMed, Ovid, PsycINFO, Google Scholar, Humanities International Complete, Dissertation Abstracts, Eric, and Social Sciences Full Text.

In terms of the studied variable of attitudes toward elders, the key words consisted of: “attitudes toward elders (the elderly, older patients, older adults or senior adults),” “students’ attitudes toward elders,” “Kogan’s attitude toward older people scale,” “revised Kogan’s attitude toward older people scale,” and “the innovative program for the elderly,” or combined different words: “attitude,” “compassion,” “nursing student or student nurse,” “older people or elder or older adult,” “gerontological course design,” “empathy,” “baccalaureate nursing education.” Regarding the variable of self-transcendence, the key words comprised “self-transcendence,” “education and self-transcendence,” “the theory of self-transcendence,” “nursing education and spirituality,” “nursing education and caring,” “nursing students and education,”

“baccalaureate nursing education and spirituality care,” “art and self-transcendence,” “interaction and elders,” and “nursing students and elders.” In terms of the intervention, the key word were “art intervention,” “creativity,” “nursing students,” and “creative work.” The combinations of different key words were also used.

After reading the abstracts, relevant papers and books were selected. The researcher obtained the literature through libraries and interlibrary loan services. Also, key references cited in the literature were collected. The literature review focused on recent papers published during the past ten years (Glatthorn & Joyner, 2005), from 1997 to 2006, but included additional earlier literature relevant to the study.

Attitudes toward Elders

The literature review covered two areas: (1) research based on the understanding of nursing and other health care students and health care professionals’ attitudes toward elders and related factors and (2) research to evaluate the effect of regular educational programs or the effect of innovative approaches on students’ attitudes toward elders.

Research on Understanding Attitudes toward Elders and Related Factors

Research on understanding attitudes toward elders has been conducted with different approaches and conducted in different countries. Research types included quantitative and qualitative approaches or combined, mixed approaches. Tests and surveys were the common research methods for the quantitative approaches. This review begins with research conducted in the U.S. and follows by research conducted in Europe, Australia, and in Asia. In each section, quantitative approaches were presented first, followed by the combined, mixed approaches, and last, qualitative approaches. A brief summary is included for each section.

Attitudes toward Elders and Related Factors in the U.S.

Bagshaw and Adams (1985/1986) conducted a survey study to examine the relationships among the variables of empathy, attitudes, and ideological tendency toward treatment for elders. The sample included 363 part-time and full-time nursing personnel (62 registered nurses; 62 practical nurses; 239 nursing aids; mean age = 38.4) from seven nursing homes. Instruments included the Kogan Old People Scale (KPS), the Gilbert and Levinson Custodial Mental Illness Scale (CMI), and the Empathy Construct Rating Scale (ECRS).

Results showed: (1) Negative attitudes toward elders were correlated with both low levels of empathy ($p < .001$) and a higher orientation toward choice of a custodial type treatment for elders ($p < .001$); (2) The higher tendency toward custodial type treatment for elders was correlated with lower level of empathy ($p < .001$); (3) The registered nurses had significantly more empathy ($p < .001$) and less tendency toward custodial treatment and less negative attitudes than practical nurses or nursing aides did; practical nurses had significantly less custodial treatment ($p < .025$) and less negative attitudes toward elders than nursing aides did; (4) There were differences on these studied variables among nursing homes ($p < .05$). The findings revealed that both low level empathy and negative attitudes toward elders were related to nurses' choice of a custodial type treatment for elders rather than individualized, holistic care. The author argued that education and environment may be important factors for developing empathy and positive attitudes toward elders. The study suggested that educators should promote empathy in future health care providers.

Lookinland and Anson (1995) conducted a comparative-descriptive-correlational

survey study to understand which factors related to present and future health care providers' attitudes toward elders in an acute hospital. Kogan's Attitude towards Old People Scale (KOP) was distributed to 82 registered nurses (RNs) who care for elders with at least one-year clinical experience and 68 high school junior or senior students who were enrolled in a community regional occupational program (ROP). The survey return rate was 91% ($n = 62$) for the ROP group and 74% ($n = 61$) for the RNs.

Results revealed that RNs had significantly more positive attitudes toward elders than the ROP group of students. Male RNs, Asians, and Black nurses showed the most negative attitudes while American Indian and White nurses showed more positive attitudes. Senior students and those in medical-surgical units possessed the most positive attitudes while juniors and those working in critical care had the least positive attitudes. The students who were assigned to long-term care area had more negative attitudes than those assigned to acute care areas. This study's findings revealed a conflicting result with Slevin's (1991) study on the comparison of attitudes toward elders between nurses and student nurses. The limitations cited by the author were the use of a single instrument and convenience sampling. The author suggested nursing education should focus more on home health and sub-acute care nursing than acute care and put importance on caring.

Lookinland, Linton, and Lavender (2002) conducted a comparative-descriptive study in a mailed survey to a random sample ($n = 720$) of nurses from the National Black Nurses Association Membership ($N = 2293$). From 385 usable responses, select demographic variables were compared with scores from Kogan's Attitude towards Old People Scale (KOP). Female (95.6%), RNs (82.6%), and nurses who were over 40 years old (75%) were predominant in the participants. Regarding education, 35.6% had

baccalaureate degrees, and 22.3% had master's degree, and only 4.4% were students. Among these participants, 47.8% had more than 20 years clinical experience, and 39.5% working in acute-inpatient. The findings on KOP revealed positive attitudes toward elders among African-American nurses.

Findings from Lookinland et al. (2002) revealed a significantly more positive tendency among those who have master's degrees ($p = .005$) than those who did not have master's degrees. The employed registered nurses showed significantly more positive attitudes toward elders than either LVNs or retired nurses ($p = .053$). There were no significant differences among age, clinical experience, the frequency interaction with elders, the experience with type of elders, or whether or not one had taken a geriatric course in the past year. Nurses working in acute-inpatient settings showed significantly more negative attitudes than those working in chronic-community settings ($p = .011$). Among community settings such as home health and sub-acute facilities that required skills of more highly educated nurses, these nurses were more positive about elders than those who were retired, self-employed, or working for insurance companies or professional organizations. In other words, the findings revealed that the more educated nurses were, the more positive attitudes toward elders ($p = .005$) they had.

Lookinland et al. (2002) suggested that it is important to provide educational interventions to both nurses and student nurses to improve their attitudes toward elders. They also suggested that educational content should be focused on tolerance of personal habits and appearance of elders and understanding of elders' cognitive abilities. Generalization of the study outcomes seems reasonable due to the random sampling to recruit participants from a large national organization. The study provided detailed

information about African-American nurses, a sub-sample of the U. S. population, so results may not be generalizable to other groups (Caucasian, Asian, etc.)

Ryan and McCauley (2004/2005) used Kogan's Attitudes towards Old People Scale (KOP) to survey the students' attitudes toward elders and a revised version of Palmore's the Facts on Aging Quiz (FAQI) to explore students' knowledge about older people. Racially diverse baccalaureate nursing students ($n = 55$; 54 females and one male; aged 20-43) in a junior ($n = 36$) or senior ($n = 19$) level nursing course at a suburban private university participated in the study. The diverse groups of participants were predominated by white (41.8%), and African-American (30.9%). Results showed: (1) The nursing students did not have high positive attitudes and enough knowledge toward elders; senior students had a no significantly higher mean KOP score and a significantly higher FAQI correct response ($p = .01$) than juniors students; (2) Hispanic/Latino students had significantly higher scores (positive) than African-American students ($p = .04$); (3) There was a low relationship between age and KOP score ($r = .165$). The limitation was the small sample size in different ethnic groups. The authors suggested it would be helpful to provide information related to older people to nursing students and to discover and test new strategies that may change students' attitudes toward elders.

Zembrzuski's (2000) pilot study aimed to describe the retrospective views of new graduate nurses about their undergraduate gerontological nursing course and the influence on their job choice, and to determine if age influenced the job choice by four closed and two open-ended questions. A convenience sample ($n = 183$) of nurses who graduated from an associate nursing degree program during 1993-1995 was recruited. The return rate of mailed questionnaires was 49% (valid questionnaires = 90), and 90%

of participants were female. Forty-six percent of participants ($n = 41$) worked in nursing homes and 38% ($n = 34$) worked in hospitals. Among the nurses who worked in nursing homes, the reasons for choice of the work included that 34% were unable to find acute care work, 20% were willing to work with elders, and 17% lived near the nursing facility.

Of the nurses who worked in hospitals, 59% wanted to work in acute care. Nurses who did not choose to work in a nursing home (24%) expressed disinterest in working with elders. Eighteen percent expressed lack of knowledge about gerontological nursing. Of the participants, those who worked in nursing homes said they benefited from the gerontological nursing course in significantly greater numbers (84%) than those who did not have knowledge about gerontological nursing ($p < .001$). The findings were consistent with the Haight et al. (1994) study that participants' age significantly correlate to where they chose to work ($p < .01$). Senior students (30-39 in age group; $n = 43$) were more willing to work in nursing homes than students younger than this age group.

Data analysis from open-ended questions in Zembruski's (2000) study revealed that the students expressed it is important to have a clinical specialist in gerontology as a positive faculty role model during the gerontological course. The limitations of the study were a convenience sample with only one school and the response rate was 49%. The strength of the study was that the students' opinions about the gerontological course were obtained.

Jacelon (2002) conducted a grounded theory study in an acute care setting to understand how the behavior of hospital staff had an impact on the hospitalized elders. The data collection included: (1) interviewing five registered nurses with associate degrees (ADN) and one senior baccalaureate nursing student; (2) observing the staff's

behaviors; (3) having a conversation with the elders to understand their interpretation of staff behaviors. The staff behaviors were identified in two categories: attitudes and managing care. Results showed that staff attitudes influenced their behavior toward the elders. Patient-centered behaviors had a positive impact on elders' personal integrity and the feelings of being seen as an individual which is related to personal autonomy. These staff attitudes that enhanced the elders' dignity were "attentiveness, connectedness, friendliness, helpfulness, unobtrusiveness, and respectfulness" (p. 228). These attitudes led to good interaction between nurses and elders which improved the elders' feelings of value. This could be demonstrated by behaviors such as nurses sitting on the bed to talk to the elders and listening to their life stories. The staff behaviors that had an impact on elders' autonomy were "supportive scheduling, graciousness, trust, and physical care" (p. 229).

Managing care behaviors included coordinating and communicating, and effective management consisted of "organizing, providing information, and advocating for client" (p. 230) while ineffective management included "lack of arranging care, not providing information, dictating, not attending, and coercing" (p. 230). Results also showed that it is not easy for the elders to recognize nurses who cared for them and some nurses also could not state how they influence the elders' hospitalized experience. Some unique contributing activities identified by nurses were "active listening, answering questions, patience, compassion, and personal experience with the disease process" (p. 231).

The elders viewed the nurses' role as providing their medications and personal care while the nurses perceived their role as providing education and emotional support. It is easy for the elders to recognize the physician whom they described as the most important

person in the health care team. They believed that the physician controlled their discharge. The study provided detailed information about how hospital staff attitudes and behaviors influenced elders' quality care and how elders perceived nursing care.

Summary of this section. These studies in the U.S. revealed important points that nurses possessing higher levels of empathy had more positive attitudes toward elders than others and nurses' positive attitudes toward elders led to good nurse-elder interaction and enhanced elders' quality of care.

Attitudes toward Elders and Related Factors in Europe

Slevin (1991) conducted a comparative study to determine if the existence of ageism in society influenced young people's attitudes toward elders and if young women enrolled in nursing school have more positive attitudes toward elders than their contemporaries. Slevin used a convenience sample of three groups of students to describe attitudes toward elders in Northern Ireland. Participants were secondary school students including fourth and fifth year ($n = 154$; age ranged 15-17), two groups of college student nurses from a city and a rural school ($n = 85$; all were female and age ranged 17-21), and nurses from five medical geriatric units ($n = 86$; all were female with almost 69% age 20-29) were recruited. The Attitudes toward the Elderly (ATE) questionnaire, a locally designed instrument, including a caring dimension, was used.

Slevin's (1991) results revealed that the male students had significantly more negative attitudes than female students in both secondary school students (fourth and fifth grades; $p = < .01$ and $p = < .0005$ respectively); the fifth grade females were more positive than fourth grade females. Student nurses did not have more positive attitudes than others when student nurses and female secondary school students were compared.

Surprisingly, graduate nurses had significantly more negative attitudes toward elders than student nurses ($p < .01$). The author assumed that the nurses' negative attitudes may be caused by professional socialization. Limitations discussed by the author were convenience sampling and that the information was based on one small-scale. For future research, the author suggested the use of larger random samples, different attitude scales, and including qualitative information about the professional socialization process. The author also suggested that nursing care should not be limited to physical care and should promote "humanizing and caring environments" (p. 1204) in elder care.

Soderhamn et al. (2001) studied feelings about older people in first-year ($n = 86$) and third-year ($n = 65$) nursing undergraduate students and 41 experienced registered nurses (a convenience sample). They used a Swedish version of Kogan's Old People (OP) scale, divided into two parts (OP + and OP -), to measure feelings toward older people. Soderhamn et al. found that significant differences existed: (1) between the first-year and the third year students and the registered nurses ($p < .005$); (2) between the ones below 25 years ($n = 73$) and the ones over 25 years of age ($n = 119$; $p < .05$) indicating that the individuals below 25 years were more negative toward elders ($p < .05$). Soderhamn et al. explained that the first-year students had little clinical experience and thus had more negative feelings about elders than the third-year students. The authors concluded that nursing students' learning experiences from geriatric nursing faculty, clinical nurses, and early placement may influence their attitudes toward elder care and suggested to give special concern to these very young students for the care of older people.

Pursey and Luker (1995) conducted a retrospective study in northwest England to understand community nurses' experiences with elders and the reasons for nurses'

attitudes about elder care. They used a specifically designed questionnaire including open-ended questions for phase one data collection, and employed in-depth interviews for phase two. Twenty-five experienced community nurses, 62 student community nurses, and 49 practice nurses were recruited from four educational institutions. During phase two, participants consisted of registered nurses ($n = 8$), student community health nurses ($n = 8$), and experienced community health nurses ($n = 6$). A 45-minute, tape-recorded interview was conducted.

Pursey and Luker (1995) has reported that 44 participants (71%) expressed frustration resulting from the ward regulations and routines, which adversely impacted effective nursing practice. Twenty-three percent of the participants ($n = 14$) stated that establishing good relationships with the elders helped them feel that they offered good care and promoted feelings of satisfaction. Some participants expressed that they had concern for elders, but felt anxiety when they perceived that the elders were not receiving good care in the hospital environment. Pursey and Luker speculated that the high levels of dependency of old people and the rigorous nature of nursing work, which frequently involves “treating all patients the same,” (p. 551) negatively influenced nurses’ choices about working with elders rather than producing negative attitudes toward elders. Pursey and Luker also suggested that the atmosphere and structure of elder care should be changed based on available research findings. The study provided further understanding about the reasons that nurses might not choose to work with elders.

In the United Kingdom, McLafferty and Morrison (2004) conducted a qualitative study using six focus group interviews to understand participants’ attitudes toward working with elders. The focus group included two groups of nursing students ($n = 17$),

three groups of registered nurses from elder care settings and from acute settings ($n = 13$), and one group of nursing teachers ($n = 6$). The student participants were third-year nursing students enrolled in an adult program. The author analyzed data by using Tesch's (1990) Framework. Upon the data analysis, 29 categories emerged resulting in ten major themes. Of the ten themes, the five that were discussed most widely in the focus group were presented in McLafferty and Morrison's paper.

McLafferty and Morrison' (2004) results revealed that some students and registered nurses working in elder care were very positive toward elders. One student stressed that a positive attitude could influence the quality of working relationships with elders. Students also discussed that nursing and rehabilitating these elders was a challenging job. Some registered nurses felt that students were not well-prepared to care for elders. Some students stated that elders in hospitals were labeled; some people treated elders like children and called the elders "dears" (p. 450). Others labeled the elders as "cantankerous" (p.451), one teacher indicated that some nurses did not like to remember the name of the senior patients, and some students stated that some registered nurses would not laugh and joke with older patients but would with younger patients.

In terms of the learning experience of elder care, some participants pointed out that class lectures tended to focus more on the negative aspects than the normal aspects of elders. Students suggested that the teaching of caring elders should not only focus on basic care such as feeding and toileting them; registered nurses working in elder care stated that their views of elder care were influenced during their schooling and criticized their teachers' knowledge about elder care as not up-to-date. This study's findings revealed that it is important to offer an innovative approach to gerontological nursing

care.

Summary of this section. These studies in Europe showed that a more attractive gerontological nursing course design, a change of atmosphere in elder care environment, and providing individualized care to elders were important factors which could contribute to improving students' interest in elder care. Also, more help should be offered to the younger nursing students.

Attitudes toward Elders and Related Factors in Australia

In Victoria, Wells et al. (2004). used survey data from an ageism project to understand nurses' attitudes toward working with older adults by comparing nurses with other health care providers, and examined if nurses' attitudes toward elders vary by employer, gerontological education, and work setting. The survey focused on professional nurses, physicians, other professionals, direct care staff, and other service providers. Instruments used were: Palmore's Facts on Aging Quiz (FAQ), Reactions to Gething's Ageing Questionnaire (RAQ), and the Practice Costs and Rewards Questionnaire (PCRQ).

Demographic results showed that 90% of the nurses were women, 48% of them ever received training in gerontology. When nurses answered which client age group was their preference, the majority selected the young/middle-aged adults (58.5%) and only 14.4% of nurses chose older adults, which was similar to the choices by physicians. Other results revealed: (1) Nurses' knowledge of aging on FAQ was less than that of other health professional. (2) Among health professionals, nurses had the most anxiety about aging on both dimensions of fear of frailty and tedium. (3) Nurses had more positive attitudes about working with elders on "practice reward scale" than physicians ($p < .001$). (4)

When compared to physicians and other professionals, nurses more strongly held the idea of working with older adults in low esteem ($p < .001$). (5) When nurses' attitudes toward older adults was compared by employer, agency nurses had less aging knowledge and more negative bias than other nurses. (6) Nurses who took a gerontological education had more correct answers on the FAQ and significantly more likely (61%) agree that working with elders is a joy than physician (48%; $p < .001$) and more likely disagree the statement "... expensive investigations and treatment are often inappropriate" (p. 9) than other professionals ($p < .05$). (7) Nurses working in residential care were more likely to have part-time work, less knowledge about aging, more negative bias toward elders than nurses in other settings. (8) Employer and working settings were the best predictors of correct knowledge about aging.

Moyle (2003) aimed to understand BSN students' perceptions of elders and their preferences of working with elders. Moyle surveyed 103 out of a possible 206 nursing students (a convenience sample; 42, 35, and 26 in their first, second, and third years, respectively) in Brisbane through a questionnaire (consisting of eight questions and a demographic sheet) developed by the author and tested in a pilot study. The participants were comprised of 88% females and 12% males (mean age = 28, range = 18-48). Fifty-three percent of students reported that they had contact with elders by visiting their grandparents, neighbors or other relatives, but the majority ($n = 93$) only worked with elders during undergraduate field placement, with 10% working as nursing assistants in residential aged care.

The students indicated several attributes related to the indicators of elders in general such as declining mental functioning, slow speaking, and mental delusions. Forty percent

of participants stated other attributes related to elders such as grey hair, clothing, and walking aids. Ninety percent of the participants reported they would not like working with elders because they viewed elder care as a depressing area where people tend to die. Students stated that a more positive view of elder care would attract them to work with elders and provided several suggestions, such as being given a better understanding of elder care and decreasing the repetitive work. Moyle's findings contributed to a better understanding about nursing students' views toward elders and elder care and supported the idea that efforts to change the elder care model are important.

Happell (1999) aimed to understand undergraduate nursing students' preferred choices of career options after graduation and wanted a more comprehensive understanding about the career choices of nursing students from metropolitan, rural, and regional Victoria. Happell distributed questionnaires (consisting of ranking scales and four open-ended questions) to 847 undergraduate first-year nursing students enrolled in 9 of 12 universities in the area. The questionnaires were distributed during the class time and during the first three weeks of the school year. A return rate of 93% ($n = 793$) completed questionnaires was achieved.

Six hundred, sixty participants (83.2%) were female and 77% were younger than 23 years old. Seventy-percent of participants had no previous nursing experience. The results revealed that the top two career choices of the students were midwifery and working with babies and children. The reasons for these choices following graduation were that the students desired to care for children and believed they could do well in this area. Working with elders was the least popular of career choices. This broad area survey in Victoria, and the fact of that the majority of participants were under the age of 23, may provide

information about young nursing students' preferences of career choice.

Using responses from the 1999 Happell Study, Happell and Brooker (2001) used a content analysis approach to understand reasons for students' replies to open ended questions. Happell and Brooker stated that 247 students had working with elders as the least preferred choice and the reasons that they dislike working with older patients were: (1) The students felt that working with elders is "uninteresting, boring, unpleasant, or frustrating" (p. 15). (2) Students felt discomfort with elders or were hesitant to address the issues of death and dying, which are more apparent in elders. (3) They felt that it would be a depressing environment for working in elder care, they viewed the elderly clients as having negative traits, and concerns about the elders who would not recover. (4) The students assumed they would be unable to adjust well to working in this area of practice, such as not knowing how to communicate with elders. (5) They had had unpleasant past experiences with elders. (6) They preferred diversity of illness for learning and viewed the work with elders as less challenging than other situations that required advanced technical skills. The authors stated that most of the students' views of working with elders were inaccuracies and misconceptions and suggested that the role of nursing educators is important to increase students' interest in elder care.

Summary of this section. Research in Australia revealed that most nursing students or nurses had negative views toward elder care and would not like to work with elders. Thus, nursing educators should examine course content and design and consider ways to improve nurses' attitudes toward elders. Outcomes may be important to the proposed study as results from these studies suggest that health care professionals in residential care settings, such as long term care facilities, may need more assistance in developing

positive attitudes toward elders than those who work in other settings. Also, it may be important to provide an innovative approach in residential care.

Attitudes toward Elders and Related Factors in Asia

In Hong Kong, Lee, Wong, and Loh (2006) distributed 383 questionnaires (Palmore's Aging Quiz; PAQ) to one-year to four-year full-time BSN students ($n = 98, 76, 70, 64$ respectively) and one-year part-time post-registered nursing students ($n = 75$) to examine their knowledge and working preferences toward elders. A total of 303 questionnaires were returned and 219 valid questionnaires were analyzed (valid response rate = 57.2%). The majority of the participants (53.9%) were aged 21 to 25 followed by 28.8% who were under 20 in age. Most of the participants (87.7%) were females. Almost half of the participants (42.9%) had been living with elders and only 26.5% had the experience to care for elders.

The results revealed: (1) The four-year students had a significantly lower score on PAQ ($p < .01$) while the two-year students had the highest mean score. (2) In general, 41.1% of participants enjoyed working with elders and 38.4% hold neutral feelings, but 51.3% of four-year students did not prefer to work with elders. The authors concluded that the level of education and the gerontology program did not influence students' PAQ score and preferences for working with elders. The findings seemed to suggest that developing an innovative approach is necessary.

Tan, Zhang, and Fan (2004) examined undergraduate students' ($n = 199$) attitudes toward elders within two mainland Chinese universities. Tan et al. used a scale expressing 20 traits from a positive to negative meaning, for example "tidy-untidy," on a seven-point response. Ninety-six percent of participants were first and second year students (age =

18-26; $M = 20.4$; $SD = 1.26$) and 73.3% were female while 26.7% were male. Among these students, 46.9% were the only child in their family and 80.6% had the experience living with an elder. Most of these students (80.1%) felt that they had been closer to an older relative and 46.2% had been close to an older non-relative. Almost one-third (31.8%) stated that they had worked with an elder. The elders were categorized into four groups: (1) young-old (65-74) women, (2) young-old (65-74) men; (3) old-old (75 and over) women, and (4) old-old (75 and over) men.

The results revealed: (1) The students had more positive attitudes toward men than toward women. (2) The students viewed young-old elders more positively than old-old elders. (3) Student attitudes toward elders had a significant correlation with the students' experiences of being close to an older relative or an older non-relative. (4) These Chinese students had more positive or neutral attitudes toward elders when compared to similar studies in students in other countries.

Wei (1995) investigated nursing students' knowledge of aging and their attitudes toward elders and the relationships between these two variables. Wei developed instruments based on a literature review and mailed these instruments to a purposive sample of different levels of nursing colleges or schools located in northern, central, and southern Taiwan. The participants were senior students who had practical experiences in each school. Wei received 918 returned questionnaires (87.42% return rate). Most participants were females (97.8%) and young (69.0% aged 20 and below; 27.2% aged 21-25). The results revealed that nursing students had positive attitudes toward elders, that there was a significantly positive relationship between students' age and their level of knowledge of aging ($p < .05$), and that students' attitudes toward elders were significantly

positively related to their willingness to work with elders ($p < .05$). There were 60.7% of these participants expressed that they were willing to care for elders. Surprisingly, there were no significant relationships between students' levels of knowledge of aging and their attitudes toward elders.

In Taiwan, Cheng et al. (1996) used self-developed questionnaires to investigate public health nurses' ($n = 306$; age = 25-44) levels of knowledge for taking care of elders and their attitudes toward elders and what factors affected these nurses' ability to care for elders. Cheng et al. reported these participants had positive attitudes about caring for elders.

In Taiwan, Hwang and Lin (2000) conducted a correlation study to examine nursing students' attitudes toward death, attitudes about elders, and the relationship between the two variables in one junior college ($n = 225$; mean age = 20.9, range = 18-43). The authors developed this instrument of attitudes toward elders (51 items) by combining other attitude scales with their students' opinions about elders. The demographic data showed that 41% of participant students lived with elders for more than five years. The findings showed: (1) There was a significant relationship between age and attitudes toward elders ($r = .08$; $p = .002$) and younger nursing students had less positive attitudes toward elders than older students; (2) Nursing students who took a gerontological nursing course had more positive attitudes about elders than those who did not.

In Hong Kong, Herdman (2002) used questionnaire and interviews to examine the reasons students chose to study nursing, what specialties they preferred as career choices, what their reasons were for their preferences, and how they viewed working with senior patients. Content and discourse analysis were conducted with interview data. The

participants included nursing students ($n = 96$, 78 were female; aged from 19 to 22) who took a four-year pre-registration Bachelor of Nursing course, and qualified nurses ($n = 9$; aged from 24 to 36) who provided elder care.

The content analysis revealed: (1) Reasons for the choice of nursing included: 30% of students reporting that they did not have an interest in nursing without explanations; 25% expressing that nursing is a profession which provides chances for future success, stable employment, and good pay; 25% stating that they hope to help people; 11% stating that they entered nursing due to the reason that their entrance scores fit into nursing; five percent perceiving nursing as a challenging and exciting career; four percent expressing that nursing was their lifelong desired goal. (2) The willingness for working with older patients was that 64% of first-year students had considered working with elders but this decreased to 33% of the fourth-year students; most students stated that they might choose to work with elders in the future, but that this was not their present priority. (3) Top choices for specialty areas were A&E, management, and pediatrics, and some reasons given were having the chance to face diverse cases and learn technical skills in A&E area, feeling confident of helping children or perceiving that children need more help.

Discourse analysis revealed a complex relationship between what students' perceptions of caring for senior patients was and what specialty area they chose, which involved subjective feelings and was influenced by social-historical factors. The results showed: (1) Many students felt they did not know how to communicate with senior patients and they lacked clinical experience to work with elders and lacked the ability to care for elders' psychosocial needs. (2) Some students expressed that it is uninteresting to care for elders or they were afraid of facing the issues of suffering, sadness, and death. (3)

There was little relationship between the students' perception of caring and their choice of what kind of patients they care for. Other results from interviewing nine qualified nurses who worked in elder care were: (1) Seven of the participants perceived geriatric care as more challenging than other specialty areas and stressed that it is necessary to have more preparation and experience. (2) Most of these participants also criticized the biomedical model of nursing focused on task and suggested that it is important to emphasize providing holistic care to elders. This study revealed in details of students' perspectives about elder care and their reasons for studying nursing. Generalization of the study findings to the proposed study seems reasonable due to the cultural and demographic similarity in two groups of nursing students.

Summary of this section. The findings of research in Asia seem to suggest that the nursing educators should be aware of the young nursing students' attitudes toward elders and their perspectives about elder care. Findings also seemed to suggest that providing a well-designed gerontological nursing course coupled with innovative approaches to increase young students' interactions with elders might be effective strategies to cultivate students' positive attitudes toward elders in the Chinese culture, especially that these young people appear to have decreased chances to live with their elders in the Taiwanese society.

Summary of the Research on Understanding Attitudes toward Elders and Related Factors

The literature that was reviewed revealed a global problem that many young nursing students and nurses do not have positive feelings about elders. Researchers reported that nursing students or nurses said they would not choose to work with elders or their interest

in elder care did not improve after education programs (Lee et al., 2006; Happell, 1999, 2002; Moyle, 2003; Wells et al, 2004). Even worse, some studies showed that students' preference in elder care decreased during the educational process (Happell, 2002; Herdman, 2002). The factors that may influence the students' attitudes toward elders and their willingness to work with elders were very diverse and complicated and the findings of different studies often were in conflict. Those factors were: age, gender, religion, different cultures, educational level, the type of working place, the degree and the quality of previous experience with elders, clinical learning experiences, the educator's influence as a role model, the design of educational programs, the students' perspective about gerontological care, the structure and atmosphere in elder care, the high level of dependency of senior patients, and the social-historical context. Thus, some of this information was collected during this dissertation research to serve as the baseline information so that demographic variables between the experimental and control groups could be compared.

Several studies stressed that the nursing students perceived elder care as boring, depressing, and unattractive (Aday & Campbell, 1994; Happell & Brooker, 2001; Herdman, 2002; Moyle, 2003) and perceived elder care filled with routine work or focus on basic care (Herdman, 2002; McLafferty & Morrison, 2004; Pursey & Luker, 1995). Nursing students also perceived they lacked communication skills with elders (Aday & Campbell, 1995; Happell & Brooker, 2001; Herdman, 2002). Some studies revealed or authors suggested that attractive gerontological nursing course and positive gerontological nurse role models in this course had positively affected students' attitudes toward elders, elder care, and job choice (Happell & Brooker, 2001; Hwang & Lin, 2000;

Soderhamn et al., 2001; Zemberzuki, 2000; Wells et al., 2004).

The literature review revealed some important information, which may be helpful when a researcher hopes to change students' attitudes toward elders and elder care. Based on findings from reviewed studies, nursing educators should: (1) stress equal importance in all fields of nursing care; (2) strive to improve the image of gerontological nursing care and to create innovative gerontological nursing models that will change the atmosphere in elder care; (3) help students have more understanding about elders and learn how to communicate with them; (4) help students learn to be aware of elders' needs and be able to feel more confident of caring for elders and enjoy caring for them; and (5) understand how to eliminate ageism not only in nursing but also in the social context.

Research on Evaluation of the Effect of Educational Programs on Students' Attitudes toward Elders

Researchers have evaluated the effect of educational programs on students' attitudes toward elders and /or their preferences to choose working with elders upon graduation. The evaluated programs consisted of regular educational programs or clinical programs or innovative purpose-designed programs. The literature review about these educational programs is presented in the following section by research conducted in the U.S., followed by Australia, and last, in Asia.

Evaluation of the Effect of Educational Programs on Students' Attitudes toward Elders in the U.S.

Haight et al. (1994) used a test-retest with an experimental group design to evaluate the effect of a three-year nursing curriculum on ageism about the attitudes toward elders of baccalaureate students. The study began in the first year of the program with 118

students and 86 completed the study in the third year. However, only 57 (females = 52; males = 5) entirely finished all the questionnaires, which were based on the Kogan's Attitude towards Old People Scale and Rosencranz and McNevin's semantic differential scale. During the educational intervention, the students were introduced to: (1) aging through being exposed to well senior people on a one-to-one basis in year one; (2) a medical/surgical hospital-based course with the experience of taking care of ill elderly patients in year two; and (3) a six-hour class on the effects of caring for the critically ill elderly. Seventy percent of the 57 completers were aged 20-40 and 79% were Caucasian. The results revealed: (1) Most new graduates selected to work in surgical nursing (34%) or pediatrics (22%) while only one graduate student selected to work with elders. (2) The factors of religion, income, and gender did not influence the change scores of these participants. (3) Older students and those having grandparents as role models expressed more positive attitudes toward elder. (4) There were more positive changes in students' attitudes in year one, which slowly decreased the following year.

Haight et al. (1994) noted that the degree and the quality of previous experiences with elders had an impact on the students' attitudes toward elders. They concluded that students' experiences of caring for well elderly people had a lasting effect on their attitudes about elders and nursing education promotes positive change toward elders. However, the study results revealed that the students' positive attitudes toward elders slowly decreased by the following year when they were exposed to seriously ill elderly patients. The author suggested to have further studying of the effects of students' experiences in nursing homes.

Aday and Campbell (1995) used a pre-test and post-test design to assess the nursing

students' changes ($n = 45$, mean age = 28) in perceptions of and preferences for working with elderly people after completing a BSN program. Aday and Campbell used a slightly modified version of the Perceptions of Aging and Elderly Inventory (PAEI) and developed the Elderly Patient Care inventory (EPCI) to collect data. The gerontology program integrated the concepts of aging and the basic aspects of elderly clients into a whole nursing curriculum (lasting four semesters), and involved extended clinical experiences. The authors gave the pre-test at the beginning of the junior year and conducted the post-test near the end of the senior year. The findings showed: (1) significantly positive attitudinal changes of the post-test score on the PAEI ($p < .01$) and EPCI ($p < .01$); (2) no significant relationships between the participants' age, frequency of contact with elders, and previous work experiences with their attitudes toward elders and their perceptions of caring for elders; (3) a significant relationship ($r = .62$; $p < .001$) between PAEI and EPCI, that is, between attitudes toward elders and perceptions of caring for elders.

Some reasons offered by the students who did not want to care for elders were: "Due to my age, the elderly do not respond as well to me," "I do not feel comfortable around the elderly because I haven't had much exposure to them," "Old people seem to ramble when speaking . . . I don't understand them," "Working with the elderly is so depressing . . ." (p. 255). Other reasons given by the students who preferred to care for elders included: "I enjoy working with the elderly because they tend to be shuffled aside, yet have so much to offer and share; I enjoy working with the elderly because they can teach you things" (p. 256). Lacking a control group for comparison and eliminating the pre-test bias are limitations of this study.

In California, Fox and Wold (1996) evaluated the effect of a newly developed gerontological nursing course (lasting 15 weeks) on senior BSN students' ($n = 144$; mean age = 26.5; 86.2% were white) perceived learning and attitudes toward elders. This course included one unit theory (15 hours) and one and one half units (67 hours) of clinical experience. Instruments consisted of a researcher-designed six-item attitude questionnaire, a five-statement questionnaire for evaluation of experiences in different agencies, and three open-ended questions. The theory course was conducted as a workshop held during the first three weeks of the semester with diverse presentations of which the content focused on ageism issues, for example: love and intimacy, quality of life, and spiritual concerns. During the clinical experience, each student had opportunities to be involved in both institutional care and community settings. The students were offered chances to create their own clinical projects based on faculty guidance.

The findings revealed that the students had significant positive attitude change ($p = .000$) toward working with elders after the clinical experience. Four items showed significant improvement: (1) Perceived working with elders as rewarding ($p = .000$); (2) Felt nurses have a role in improving the elders' lives ($p = .003$); (3) Felt confident in providing care ($p = .000$); (4) Perceived gerontology nursing as appealing ($p = .000$) and several students changed their preferred career choice. Additionally, the students had more significantly positive experiences in community-based agencies than in institutional care agencies ($p = .0152$) and expressed gaining insight into the elderly and growth in providing for their care. The study revealed that a gerontological course combined with clinical experiences in a variety of settings and that providing students with opportunities to demonstrate their creativity are worthy ideas for educators. However, adding a control

group to exclude possible confounding factors is needed in future studies.

Sheffler's (1995) descriptive study tested the effect of clinical experiences on nursing students' attitudes toward elders and the relationship between students' knowledge about elders and their attitudes toward elders. Kogan's Attitude towards Old People Scale and Palmore's Facts on Aging Quiz were used for pre-test and post-test in three associate degree nursing programs (172 volunteer students). The post-test was completed immediately after the students' clinical experience ($n = 140$; aged 18-51; $M = 29.9$) with 126 females and 14 males (86 in the hospital group and 54 in the nursing home group). The majority of the students were Caucasian ($n = 133$). The results showed: (1) a significant positive change between pre-test and post-test on Kogan's Attitude Scale in hospital settings ($p < .05$) and in a nursing home setting ($p < .01$); (2) a positive correlation ($p < .01$) between attitude and knowledge; (3) older students having significantly more positive attitudes toward elders than younger students ($p < .05$). The findings suggested that students' attitudes toward older adults improved after clinical experience and were related to having more knowledge. Limitations included the design lacking a control group for comparison, the pre-test possibly impacting the post-test, and the fact that social desirability may also influence the post-test score.

Sheffler (1998) used the same instruments as in the earlier Sheffler's (1995) study to inspect BSN students' attitudes toward elders before and after a clinical experience in a nursing home, to test the relationships of attitudes toward elders between these students and their clinical instructors, and to examine the relationships between these students' attitudes toward elders and their level of knowledge about elders. Forty-two students in sophomore class received the pre-test before their gerontological nursing course or

clinical experiences in a nursing home. At the end of the semester, 35 students (mean age = 25; 30 females and 5 males) and three clinical instructors completed the post-test. The findings revealed: (1) a significant improvement on Kogan's Attitude Scale post-test ($p < .0001$); (2) a positive relationship between these students' attitudes and their faculty's attitudes toward elders ($r = .53$; $p < .01$); (3) a positive relationship between students' attitudes toward elders and their level of knowledge about elders ($p < .01$). The findings suggest that the faculty's positive attitudes toward elders and students' clinical experiences in a nursing home could positively change nursing students' attitudes toward elders. Limitations of the study are the lack of a control group to exclude the possible confounding variables and a small sample size, especially the small number for the clinical instructors.

Williams et al. (2006) used a focus group qualitative approach to describe the outcomes of a Population-Based Health Care course on senior BSN ($n = 32$) students' attitudes about elders and career intentions. Students spent increased numbers of hours in a long-term care (LTC) facility and completed a three hour, computer-based Minimum Datasets (MDS) about gerontological nursing care. The focus group findings revealed that students had positive perceptions about the experience and students indicated that it was important for nurses who working in sites such as the LTC needed a strong self-concept and good communication skills. No students in the study expressed interest in working with elders after graduation.

At the University of Massachusetts, Angiullo et al. (1996), using a quasi-experimental design, examined a program designed to promote positive attitudes toward elders by comparing three groups (a class divided to three groups based on their

assignment choice with sample sizes 22, 29, and 135) among undergraduate students who enrolled in the psychology of aging course with measurement at three time points.

Angiullo et al. also compared the experimental groups to another class of undergraduate students who enrolled in a personality course (served as a control group) with the same teacher in these two classes. In the experimental group, three assignments included: (1) 30 volunteer hours (10 hours per week) in a nursing home or congregate apartments with keeping a journal to outline the experience, (2) participation in a weekly one-hour discussion group, or (3) a life history paper written on the basis of a one to two hour interview with a senior adult and writing 10-15 pages paper on the elder's life. Data was collected at the beginning of the aging class (time 1), the end of the class (4 months later; time 2), and the next semester in a personality class (time 3) with Palmore's FAQ and Rosencranz and McNevin's the Aging Semantic Differential (ASD) and students' statements about the experience.

The results revealed: (1) A significant main effect of time ($p < .001$) indicating the all groups had more positive attitudes toward elders and improved knowledge about elders at the time two test. (2) There were no significant differences among the three groups ($p > .05$) with a slightly significant interaction effect between group and time ($p < .10$). (3) There were also no significant differences between the experimental group (combining all three groups) and the control group ($p > .05$). A content analysis of the students' journals revealed that the most frequent stated topics of voluntary students were ". . . having positive emotional experience . . . bonding closely with a resident." (p. 490) A paired t -test revealed a significant difference between the first half of all mean rating score and the second half of all mean rating score indicating that the volunteers had a

significant positive change along the course ($p < .0001$).

Limitations reported by the authors were: (1) The number of participants in each group was not equivalent because the students could not be assigned to groups by random. (2) These students' outside class experiences, which may involve in interacting with elders, could not be controlled. (3) Pre-test and post-test design may influence the effect because of practice or pre-test sensitization. (4) Social desirability may also have an impact on the results of the study. The authors stated that the education related to aging issues can lead to a positive effect on students' attitudes and knowledge toward aging, that student interaction with the elderly on a weekly basis would positively influence their attitudes and knowledge toward aging, and that the positive effect maintained four months after the class. The study also revealed that students' experiences in a long-term care facility should be emphasized by educators. Also, increasing sample size with random assignment to different groups is suggested.

Knapp and Stubblefield (2000) used a quasi-experimental design with both quantitative and qualitative measurements to evaluate the usefulness of an intergenerational service learning course design in Southeastern Oklahoma State University. The authors combined Palmore's Facts on Aging Quiz by a pre-test and post-test method to explore the undergraduate students' knowledge and perceptions of aging. The experimental group ($n = 22$) included the students taking the Psychology of Aging course which was modified to include intergenerational exchange (the traditional-age college and senior adult students studying in a partner group) and service learning to learn from class and community service activities. A control group comprised students who took a criminal justice course ($n = 22$) used for comparison in this study.

The results showed that a significantly positive change on the post-test in experimental group ($p \leq .01$) with significantly positive net scores on the traditional-age college students, but there was no significant differences between experimental and control groups.

The qualitative data corroborated the quantitative findings. Several comments given by the young students were: “I have always dreaded nursing home visits. This time was different. I looked forward to our visits . . . ,” “the class has also made me believe that just because you are older doesn’t mean that you can’t have fun anymore . . .” (p. 619). A 72-year old female wrote, “. . . if this harmonious working together of young and old can continue in this world, we are going to have some kind of wonderful place to live . . .” (p. 619). The study supported that it is essential to offer an intergenerational interaction with innovative approach. However, limitations of the study were (1) the sample size was small and (2) the lack of using statistics to adjust post-test based on the pre-test because pre-test could have had an impact on the post-test.

Whitbourne et al. (2001) used an integrative approach to an undergraduate course of psychology of aging by adding a service-learning option and evaluated the effectiveness of the approach by using open-ended student evaluations and instructor’s reflections on this approach at the University of Massachusetts. The service-learning project requirements for the students (one-credit) were that students spend 30 hours in community, keep a journal, write a five-page summary paper, participate in a weekly reflection group, and have a group presentation in class. The data were gathered over two years with 21.3% students joining this learning experience.

The service-learning sites included local nursing homes, area retirement

communities, and the local community center. Many students stated that they looked forward to their weekly visits to the different sites, and the practical experiences helped them advance their knowledge of adult development and aging. The students also said that the program provided them the chance to witness directly much of what they had read or heard about in class.

Romack (2004) developed an intergenerational service learning activity program (three days a week for eight consecutive weeks) called “Free- Wheelers” in an upper-division Motor Development lecture course to promote both the service providers and the recipients to benefit mutually. Romack recruited 22 undergraduate students (three students work with one elder) from California State University, Northridge and invited 15 nursing home residents who had higher cognition (mean age = 82.6; 13 attended the project and 11 completed it) in this study. Data was collected by the Beck Hopelessness Scale for elders and structured reflection journal for students. The finding revealed that in addition to improving the elderly residents’ fitness levels of upper body muscle, eight of 11 elderly wheelchair bound nursing home residents showed to be less hopeless on the Beck Hopelessness Scale than before the eight-week intergenerational activity program. Romack reported that the students brought recreational activities to the nursing home which facilitated social interaction between themselves and the elders and thus helped the elders decrease their feelings of loneliness and boredom.

Romack (2004) also stated that students had better comprehension and positive attitudes about aging after close contact with elderly people. Some individual students commented, “We brought some light into their day; they were smiling, laughing, and making jokes;” “anyone that is given the chance to change, no matter the age, has the

ability to do great things with the time they have left” (p. 29). This study supports the idea that offers opportunities to students to bond with elderly residents with innovative ways may help students feel that they make contributions to these elders and have more understanding about elders. However, an increase of sample size and providing statistics support are suggested.

In northeast Florida, Puentes and Cayer (2001) measured senior baccalaureate registered nurse students’ knowledge and attitudes about elders ($n = 33$; aged 20-35; $M = 27.27$; 75.8% white and 69.7% female) with a pre-experimental pre-test and post-test design. Instruments used were Palmore’s Facts on Aging Quiz (FAQ) and Kogan’s Attitudes towards Old People Scale (KAOP). Puentes and Cayer used a modified version of Feeley’s campus wellness vacation, which included two parts: a 15-hour weekly theory class followed by a 42-hour weekly series of seminars related to helping older adults maintain a healthy and active lifestyle, and focused on strengthening the students’ learning and social aspects coupled with their past experience. The authors used Malcolm Knowles’ (1980) work of adult education for a conceptual framework (as cited in Puentes & Cayer, 2001).

During the second part of the modified project, the related community experts were invited to hold seminars, and community-residing well-elderly were invited to participate in the learning activities with the registered nurse students, providing the students the chance to interact with the older adults. Most participants (75.80%) had the experience of contact with a grandparent over eight years and 75.80% of participants had less than one year of experience with elders in a nursing home setting. The results showed that post-test on FAQ was significantly higher than pre-test score ($p = .000$), post-test on KAOP was

significantly higher than pre-test score ($p = .001$), and the power for the testing changes in knowledge of older adults was .99 and changes in attitudes toward older adults was .96. The study findings suggest that interacting with elders through a structured way is possible to positively influence students' attitudes toward elders. However, limitations for the study were the lack of a control group for comparison and the lack of controlling the pre-test, which is the most common covariate (Kerlinger & Lee, 2000).

At the University of Oklahoma College of Medicine, Bernard et al. (2003) conducted a controlled, prospective longitudinal study to understand the effectiveness of an educational intervention called "The Senior Mentors Program." Bernard et al. recruited two groups of medical students: the Class of 2002 ($n = 117$) served as the intervention group and the Class of 2001 ($n = 108$) served as a control group. The students were only informed that they would be introduced to aging in general. The senior volunteer mentors were 65 and older in age and were generally movable and healthy. These elders were recruited from churches, volunteer organizations, and by oral information to meet the student at least once per semester. The student would conduct a series of structured interviews (12 hours in total) with the senior mentors based on guidelines during the first two years of medical learning. The measurements used in this study were the Aging Semantic Differential (ASD) developed by Rosencranz and McNevin to measure the stereotypes or perceptual predisposition of participants toward elders.

Bernard et al. (2003) reported that both groups of students had improvements in their post-test ASD scores, but the Class of 2002 had more significantly positive change than the Class of 2001 ($p = .002$). Bernard et al. controlled for students' sex, age, prior

experiences with elders, and prior course on aging and the improvement still existed (Model, $p = .008$; class, $p = .002$). The study revealed that helping students have individual interaction with healthy elders may help students have a more positive attitude toward elders and augment their empathy toward the elder population. Structured guidelines are good tools to assist learning. Adding a control group is a strength of the study.

Moricillo et al. (2005) conducted a quasi-experimental design with post-test only to examine the effects of a six-hour education (one credit elective course with no examination) on pre-allied health students' attitudes toward elders. Sixty-seven freshmen (mean age = 18) were randomly assigned to an intervention group ($n = 34$; 19 completed post-test) and a comparison group (wait-list; $n = 33$; 22 completed post-test) at the University of Connecticut in Storrs. The author reviewed the literature and Smey's (1984) workshop to develop the intervention program and then made a modification based on three experts' suggestions (as cited in Moricillo et al., 2005). A pilot study was conducted to understand the students' response about the content, the teaching method design, and how the intervention was delivered. Two experienced instructors, who were physical therapists and experienced in working with elders, offered the course. The intervention consisted of three phases: (1) introduction to prejudice by group activities and didactic lecture, (2) self-insight into prejudice by simulation activities, and (3) the action plan.

Three instruments used were: a survey questionnaire developed by the researcher, Kogan's Old People Scale, and Palmore's First Facts on Aging Quiz (FAQ). Of the participants, 78% were female and 78% were Caucasian. Most of the participants (73%) majored in pre-physical therapy. Eighty-three percent had never lived with an elder, but

90% had a close relationship with an elder. The results revealed: (1) The intervention group had a higher score on the knowledge quiz than the comparison group one week after intervention ($p = .001$) but not after 10 weeks ($p = .361$). (2) There was no significant difference at the one week and 10 week intervals in the comparison group ($p = 1.000$). (3) There was no difference on Kogan's scale at the one week and 10 week intervals between the two groups.

The findings showed that this educational intervention only improved students' knowledge for a short time and did not impact on the attitude score. The author suggested using an increased sample size and Solomon's Four Group design to test the effect of a short-term educational intervention. The findings suggested that providing knowledge only may not be enough to help students have a better understanding of and positive attitudes toward elders.

Varkey, Chutka, and Lesnick (2006) used a pre-test and post-intervention test design to determine if a modified aging game had any effectiveness on enhancing empathy for older patients and improving general attitudes toward elders in two classes of first-year medical students ($n = 84$) in 2002 and in 2003. The modified aging game, which took over three hours to complete, included 10-12 students and five to six facilitators and was designed to help the students realize many of the losses that the elders have faced.

The modified aging game simulates life in a semi-independent living situation, and helps participants experience both suitable and unsuitable care in a long-term care facility. Varkey et al. (2006) used the modified Maxwell and Sullivan's questionnaire, designed for this purpose, to measure the empathy and attitudes toward caring for elders and used the Aging Semantic Differential (ASD) to measure general attitudes toward elders for the

pre-intervention and post-intervention test. Open-ended questions were also used to understand the students' comments about the experience.

Varkey et al. (2006) reported: (1) Statistically significant changes occurred on six of the eight attitudes toward caring for elders ($p < .05$ to $p < .0005$), on 23 of 32 ASD questions ($p < .05$ to $p < .0005$), and on all three questions about empathy toward older patients. (2) There was no difference between pre-intervention and post-intervention by gender, age group, interest in Family/Internal Medicine, and prior geriatric experience. (3) Students had positive comments about the learning experience, such as "I have a much better understanding of what happens when you grow old" (p. 226). The findings revealed that when students have a better understanding about the elders in an empathetic manner, they may have more positive attitudes toward elders. However, the lack of a control group and lack of controlling for the pre-test may have an impact on the results of the study.

Summary of this section. These studies in the U.S. provided a reference for the gerontological course design that was designed for use in the present dissertation research study. This researcher anticipated that with faculty support and guidance students' learning experiences could be improved through pre-arranged individual interaction with elders in the long-term care environment. This researcher also anticipated that students' positive attitudes toward elders would be enhanced. Previous research findings supported the idea that a well-designed gerontology program coupled with an innovative clinical experience might help to promote positive students' attitudes toward elders as well as increase students' desire to work with elders in the future.

Evaluation of the Effect of Educational Programs on Students' Attitudes toward Elders in Australia

In Sydney, Rogan and Wyllie (2003) utilized a qualitative descriptive study with open-ended questions and focus group interviews to understand first-year BSN students' attitudes toward elders and obtained their responses on the effects of a structured educational program. The program was designed to be coupled with clinical placements in a nursing home (one day per week for six weeks followed by four continuous days). The main points of the program were: (1) Preparatory tutorials for students focused on the aging process and the students' concerns before the clinical placement. (2) Having the students interact with the same elder each week, with the students expected to focus on the person, and to increase their confidence with elder during the development of a nursing relationship with the elder. (3) Detailed and high structured clinical learning activities integrated with theoretical contents and coupled with students' reflective experiential learning. The volunteer participants ($n = 112$; 70% of the enrolled students) completed the questionnaires and 18 of them participated in the focus group. The demographic data were that the majority was female (mean age = 22.8), 43.7% were seniors, and 26.7% had worked in nursing homes before joining the program.

The qualitative data analysis used in this study was intended to capture students' perceptions of their experiences and then to develop the themes. The results revealed that the students viewed the elderly residents as unique persons with individual stories; felt good about building real relationships with the elder; realized that the elders are human beings due to getting to know them through listening to their stories and then gained a

deeper respect for the elders; felt more comfortable with these elders and had more positive attitudes toward elders through developing tolerance and understanding about elders; perceived their contributions to the elders, felt satisfied, and also experienced personal growth; and perceived their own growth in knowledge, skills, and confidence in elder care which was related to professional growth.

Happell (2002) reported results of the second phase of the 1999 Happell study, which was the post-test after the students' nursing education program, and aimed to explore the nursing students' attitudes toward elder care after the education program. The sample size declined from the beginning of 793 to 566 students at the end of the course, and 92% of 566 students returned the questionnaires ($n = 524$). The results revealed that the students' career choices of working with elders still were the least popular with a significantly declined popularity ($p < .001$) in this area during the nursing education process.

The reasons for not favoring career choices in elder care were similar to the pre-test phase except that some students stated that they had already had enough experiences working with elders in long-term care facilities or they doubted the expertise required in elder care. The strengths of the study were the large sample size from nine schools in different areas and providing a longitudinal trace data. The findings seemed to reveal that only offering regular nursing courses to young students may not help them enough to have a desire to work with elders and should be concerned for students' experiences in long-term care.

In Melbourne, Scott et al. (1998) used a quasi-experimental pre-test ($n = 155$) and post-test ($n = 129$) design study to measure the effect of an educational program on the

17-18 year-old-students' attitudes and knowledge toward aging. Instruments used were Palmore Facts on Aging Quiz (FAQ). The sample was drawn from six secondary schools (three state-run and three private) in diverse areas. The socio-demographic information and the amount of students' contact with grandparents were collected. The educational intervention was aimed at increasing the knowledge of students about the aging process, focused on biological and psychological changes and the social determinants of aging, and was delivered over nine sessions of one-hour duration in the last three weeks of a school year.

The findings showed: (1) These young students had low levels of knowledge about elders, with a mean score of 17 out of a possible score of 30 at pre-intervention test. (2) Three factors which influenced the students' pre-intervention score were the school, the amount of contact with grandparents, and the ethnic background. (3) There was slightly more knowledge related to greater contact with grandparents. (4) Students of Asian background showed the least knowledge about the aging process ($p < .05$). (5) There was no effect on post-intervention attitude score (n.s.).

Scott et al. (1998) concluded that the young students had negative attitudes toward the older people which had changed little after the traditional educational program (teaching in classroom) and suggested that it may be necessary to design an integrated approach such as including art or films throughout the education program or adding individual student-elder interaction in an intervention program to help young students have positive attitudes toward elders. Scott et al. also suggested to test by other attitude scales.

Menz (2003) used a pre-test and post-test to examine the effectiveness of the

required geriatrics education on podiatric medical students' knowledge, attitudes about elders, and their career preferences in University of Western Sydney ($n = 45$ in the pre-test; $n = 36$ in the post-test). The geriatrics education included 13 hourly lectures and tutorial sessions covering both biological and sociological aspects of the aging process. Rosencranz and McNevin' scale (Aging Semantic Differentia; ASD) was used to measure attitudes toward elders. The Australia version of Palmore's Facts on Aging Quiz I was used to assess knowledge of aging. Several statements were employed to examine the students' perception of treatment efficacy for elders, such as "a great number of older people have health problems for which podiatrists cannot give much help" (p. 125).

Before the first lecture and at the final lecture, all students were asked to fill out instruments with the requesting basic information. Questionnaires for the first test and two additional sets of statements (collecting the students' responses about their changes in perception) were used after the lecture. The Students Evaluation of Educational Quality (SEEQ) was also used to understand the students' feelings about the quality of the geriatrics course.

The results revealed that the students had significantly positive changes in knowledge of aging ($p = .04$) and attitudes toward elders ($p = .04$), but they did not change in perceptions of treatment ($p = .17$). Regarding the career preference, ten students had changes their preferred specialist area but only one planned to specialize in geriatrics. The study's findings revealed that even though the students improved their knowledge and attitudes toward the elders, they still would not prefer specializing in this area. The author explained that students lacking desire to specialize in geriatrics may be caused by lacking of promotion of geriatrics in society. Limitations reported by the author

were: no comparisons with a control group and small sample size.

Summary of the section. Findings from these multiple studies in Australia revealed that traditional education programs may be insufficient to change students' attitudes toward elders. Researches also noted that the addition of quality of interaction with elders is necessary.

Evaluation of the Effect of Educational Programs on Students' Attitudes toward Elders in Asia

In central Taiwan, Lin (2000) used a pre-test and post-test design to understand the effectiveness of a 32-hour geriatric nursing program in a 16-week period for improving students' attitudes and behavior intention toward elders by comparing two groups: one group of nursing students randomly selected among third-year nursing students ($n = 203$, final available questionnaires = 190) and one group of non-nursing students randomly selected among third-year non-nursing students ($n = 203$, final available questionnaires = 183) in one college.

Three instruments designed by the author were: (1) a questionnaire for general information; (2) attitudes toward elders' physical-psycho-social aspect scales (42 items for physical aspect, 28 items for psychological aspect, and 25 items for social aspect); and (3) a behavior intention scale (27 items). The results of the pre-test and post-test revealed that nursing students and non-nursing students had positive attitudes and behavior intention toward elders in general. There was a significant improvement on attitudes toward elders ($p < .001$) in nursing students after the program but no significant improvement in behavior intention ($p = .811$). The author explained that the nursing students had no significant improvement for intention behaviors after program may be

caused by these students who had positive intention behaviors in the beginning so that they may not change a lot after program. The factor of living with elders contributed to this improvement. Limitations for this study were the lack of controlling the impact of the pre-test on the post-test and that students in the control group and the experimental group had different course backgrounds, which could be confounding variables to influence the effect of the study.

In southern Taiwan, Liu (2001) investigated nursing students' attitudes toward elders and their willingness to work with elders. Liu used a pre-test and post-test design to determine the effects of students' three-week basic clinical experience in a nursing home on their attitudes toward elders and willingness to work with elders ($n = 111$) by comparing it to a nonequivalent control group ($n = 110$; a wait-list). The author also wanted to understand if the nursing home's environment had an influence on the students' attitudes toward elders and willingness to work with elders. The participants were second-year nursing students of a senior vocational nursing school. Instruments used were a modified version of the Cheng et al. (1996) study.

Liu (2001) reported that there was no significant difference on students' attitudes toward elders and willingness to work with elders between the experimental and control groups using the ANCOVA to control the factors of personal background and pre-test score, but there were significantly more students who reported caring for elders as their first choice upon graduation after the clinical experience than students in the control group. The author also reported that the nursing staff's positive attitudes toward elders and the nursing home having sufficient facilities and resources to provide care to the elders had a positive correlation with students' attitudes toward elders, and these factors

contributed to predictors of students' attitudes toward elders..

Summary of this section. These studies in Taiwan revealed that only providing regular clinical experience to change students' attitudes toward elders and willingness to work with elders may not be sufficient and that it may be better to evaluate the effectiveness of a gerontology course by comparing it to an equivalent control group.

Summary of Evaluation of the Effect of Educational Programs on Students' Attitudes toward Elders

Some researchers evaluated the effect of the regular educational programs (Happell, 2002; Lee et al., 2006) or other researchers reported on the effects of a classroom-based gerontology course (Lin, 2000; Menz, 2003; Moricillo et al., 2005; Scott et al., 1998). Multiple designs were used by researchers to increase student-elder interaction and to enhance students' positive attitudes toward elders (e.g., Romack, 2004; Williams et al., 2006). In these studies the most common instruments used were: (1) Palmore's (1988, 1998) Facts on Aging Quiz (FAQ) for the evaluation of knowledge related to elders (e.g., Angiullo et al., 1996; Puentes & Cayer, 2001; Menz, 2003) and (2) Kogan's (1961) Attitudes towards Old People Scale (commonly called KAOP) for examining the attitudes toward elders (e.g., Haight et al., 1994; Lookinland et al., 2002; Moricillo et al., 2003; Puentes & Cayer, 2001; Ryan & McCauley, 2004/2005).

After testing various approaches, researchers reported that the educational programs did not improve students' attitudes toward elders or interest in elder care (Happell, 2002; Lee et al., 2006; Liu, 2001; Moricillo et al., 2005; Scott et al., 1998; Williams et al., 2006). While there were positive correlations between targeted education programs and positive attitudes toward elders in students (e.g., Menz, 2003; Puentes & Cayer, 2001; Varkey et

al., 2006), some of these findings may be questionable because of a short period of time between the pre-test and post-test (Puentes & Cayer, 2001), a small sample size (Sheffler, 1998), lack of control for a covariate such as the pre-test (e.g., Aday & Campbell, 1995; Fox & Wold, 1996), the lack of a control group which could help exclude other confounding factors (e.g., Haight et al, 1994; Sheffler, 1995, 1998; Puenter & Cayer, 2001) or questionable use of the student *t*-test to compare the gain scores between pre-test and post-test which neglected the impact that the pre-test may have on the true results (Bernard et al., 2003; Egger & Miller, 1999).

Also, Mirocillo et al. (2005) acknowledged that the positive change reported in their study after one week only lasted a short time and was not sustained after 10 weeks. Additionally, some studies revealed that while students had improved scores of attitude toward elders or had positive experiences in long-term care, they still did not choose to work with elders or work in long-term care (Menz, 2003; Williams, 2006).

However, some studies revealed that the quality of increased clinical experience, the degree of the intergenerational interaction, the structured guidelines, and the encouragement of students' creativity are important factors which could contribute to improving students' attitudes toward elders (Angiullo et al., 1996; Bernard et al., 2003; Meshel & McGlynn, 2004; Knapp & Stubblefield, 2000; Puentes & Cayer, 2001; Rogan & Wyllie, 2003). The literature review also suggested that it is important to help students realize what situations the elders encounter and help them be aware of the elders' needs. Throughout the literature, there were suggestions that it is desirable to promote student understanding and empathy towards elders in order for students to have positive attitudes towards elders and future interest in elder care. The literature also stressed that we must

help students overcome the challenges they will face when they care for the elderly patients. The findings from multiple studies support the idea that in order to develop students' positive attitudes toward elders and interest in elder care, it may be important to design an innovative intervention that might be integrated in a gerontological course.

As reported in the literature, nurses' and nursing students' attitudes influenced their behaviors toward the elders, and patient-centered behaviors had a positive impact on elders' personal integrity and autonomy (Jacelon, 2002; Pursey & Lucker, 1995). Also, these positive attitudes led to good interactions between nurses and elders (McLafferty & Morrison, 2004). Therefore, it is important to cultivate the nursing students' positive attitudes toward elders. Based on the problem addressed in the literature and the studies' findings, a researcher should strive to develop an innovative intervention to help nursing students view senior patients more positively and enjoy working with these senior patients. This work could be done from a perspective of changing students' attitudes toward elders and increasing their interest in elder care by fostering the development of nursing students' self-transcendence as mentioned in the first chapter. Thus, the following literature review focuses on research which has been done based on the theory of self-transcendence.

Research Related to the Theory of Self-Transcendence

The theory of self-transcendence has been tested by: (1) Examining whether self-transcendence has been developed in general in older and young adults (Coward, 1996; Elleremann & Reed, 2001; Nygren et al., 2005; Reed, 1991b; Upchurch, 1999); (2) Examining whether participants had higher levels of self-transcendence related to well-being after going through suffering (Buchanan et al., 1995; Chin-A-Loy & Fernsler,

1998; Coward, 1990, 1991, 1993; Reed, 1986; 1989); and (3) Examining whether participants had higher levels of self-transcendence after being offered an intervention in the vulnerable and general population (Coward, 2003; Young & Reed, 1995; Stinson and Kirk, 2006; Wayman & Gaydos, 2005).

Examining Self-Transcendence in General in Older and Young Adults

Reed (1991b) used a mixed method quantitative and qualitative design to identify important patterns of self-transcendence related to emotional well-being and the relations with health symptomatology in the oldest old people. A convenience sample of 55 elders (36 females; 19 males; mean education = 13 years) aged 80 to 97 years ($M = 88$) was recruited. Quantitative results indicated that elders who scored high on self-transcendence ($M = 49.50$; $SD = 7.2$) had significant negative correlations with variables that indicate poor health and positive correlations with markers indicating health. Qualitative themes corroborated these findings. Both quantitative and qualitative results supported the need to identify important patterns of self-transcendence related to emotional well-being and the relations with health symptomatology in these elders. In quantitative data analysis, results showed Self-Transcendence Scale (STS) was negatively correlated with the Center for Epidemiological Studies-Depression scale (CESD) depression score ($r = -.33$, $p < .01$) and the Mental Health Symptomatology (MHS) health scores ($r = -.32$, $p < .01$). There were significantly positive correlations between the CESD and MHS scores ($r = .71$, $p < .001$).

The qualitative data analysis revealed four conceptual clusters of self-transcendence: (1) Generativity referred to altruistic involvement such as helping others. (2) Introjectivity was described as the use of resources in the environment for inner-directed

activities such as lifelong learning. (3) Temporal Integration referred to how the elders view their past, present, and future to integrate the perspective into their life. (4) Body-Transcendence was defined as integration of the physical changes (such as aging or illness) into one's present life. Seventy-three percent of the participants engaged in Generativity-types of activities which correlated to their well-being. Seventy-five percent of the participants stated the introjectivity pattern relating to inner-directedness or self-directed learning; 65% of the participants expressed integrating the past into their present lives. Around 63% of participants had obvious expression of body-transcendence, described as "a flexible and positive attitude toward their physical changes of aging" (Reed, 1991b, p. 9). The study contributed to expanding the theory of self-transcendence to be examined in advanced aged people to examine the level of self-transcendence and the relationships between self-transcendence and mental health in the group of oldest-old adults. Additionally, the use of qualitative data analysis to enhance the understanding of the phenomenon of self-transcendence among the oldest-old is useful.

Coward (1996) studied the relationship of self-transcendence with variables associated with mental health in a healthy population ($n = 152$, age 19-85 with $M = 46$; 110 females; 131 white) and compared it to previous studies. Among these participants, 90% reported that they had good or very good health (mean education = 16years). Measures included Reed's (1991b) Self-Transcendence Scale (STS), Purpose-in-Life Test (PIL), Sense of Coherence Scale (SOC-13), Rosenberg's Self-Esteem Scale (SER), Self-Esteem Scale (SEG), Herth's Hope Index (HHI), Affect Balance Scale (ABS), McNair, the Profile of Mood States (POMS-Short Form), and Cognitive Well-being Scale (CWB).

Compared to previous studies about self-transcendence, there were significant differences between the younger healthy participants (mean score = 3.18; mean age = 46), and older women with advanced breast cancer (mean score = 3.35, mean age = 61; Coward, 1991) and Britt's elderly population (mean score = 3.5; age = 65-86), but there were not significant differences between this study and Reed's (1991b) advanced aged people (mean score = 3.3; mean age = 85). Mean scores of the PIF test in this study, $M = 111.3$, were similar to those in Crumbaugh described as normal persons, $M = 112.4$, but higher than Taylor's reported scores, $M = 108.7$, in 74 people with recurrent cancer and higher than Lewis's study, $M = 108.5$, in 57 adults with late-stage cancer. For the PIL, the score of above 112 suggests the existence of exact meaning and purpose for the participants. There were strong positive relations between the STS scores and the PIL scores, which measured a related concept in these two instruments.

The findings also showed an expected association between the SOC and self-transcendence and revealed a moderate or strong positive correlation between self-transcendence and several scales which assess the concept of health, including PIL, HHI, SEG, SER, and SOC and the findings explained 70% of the variance in emotional well-being. Coward (1996) found lower mean scores on the STS in the younger healthy people but higher scores than people with late-stage cancer in previous studies. Coward's findings supported the assumption that self-transcendence is obtained in the developmental process but did not support the model that the experiences of vulnerability correlate with self-transcendence.

Upchurch (1999) used the essence model, proposed by the author, as a framework to place the theory of self-transcendence in the context to explore how the

self-transcendence (ST) relate to health status (SHS), and activities of daily living (ADL) in older adults. Purposive sampling was used in the study including 88 men and women (age = 65 or older; $M = 73.4$). These persons were participants in senior-citizen and community-center organizations and most of them were widowed (mean education level = 13.2 years). Upchurch used these instruments including Reed's Self-Transcendence Scale (STS), Lawton, Moss, Fulcomer, and Kleban's Self-Rated Health Sub-index (SHS), and Lawton and Brody's Instrumental Activities of Daily Living Scale (IADL).

The findings were: (1) The mean score of the STS scale was 52 ($SD = 5.1$), the SHS was 9.9 ($SD = 1.8$), and the IADL was 25.7 ($SD = 1.7$). (2) SHS ($r = .47, p < .001$) and STS ($r = .39, p < .001$) had significant correlation with IADL. (3) SHS accounted for 22.6% of the explained variance and STS accounted for 6% of the explained variance on ADL respectively and was statistically significant ($p < .05$), and the two predictors accounted for 28% on ADL. Upchurch's (1999) work supported use of the theory of self-transcendence with elders suggesting that it is a positive developmental resource that contributes by helping some elders to remain active even though they have health problems.

According to Kuhn (1996), normal science was composed of more expression of the theory and advanced matching the facts with the theory. Few previous studies had been related to physical function. Thus, this study contributes to scientific knowledge in nursing science.

Ellermann and Reed (2001) used a convenience sample ($n = 133$; 67 women and 66 men) to assess the relationships of depression and self-transcendence and three indicators of self-transcendence in younger middle-aged adults (aged 25 – 44), and older

middle-aged adults (aged 45 - 64 years). Three indicators of self-transcendence were: successful parenting, acceptance, and spirituality. The authors reported that acceptance means that one has more understanding of oneself, has positive attitudes toward one's condition, was viewed as a trait of successful aging, and has been reported as a key theme of well-being. Instruments were Self-Transcendence Scale (STS), Center for Epidemiological Studies-Depression Scale (CES-D), and Demographic and Health-Related Questionnaire.

The findings showed that for the total sample, the mean score of STS was 49.4 ($SD = 6.0$). For the younger middle-aged group, the mean score was 47.3 ($SD = 6.4$). For the older subgroup, the mean score was 51.5 ($SD = 4.7$). The younger subgroup scored significantly higher than the older subgroup on the depression score. The self-transcendence had a significantly negative relationship with depression in the total group ($r = -.51, p < .001$) and in the younger subgroup ($r = -.68, p < .001$), while the older subgroup did not reach significant relationship ($r = -.20$).

When comparing the levels of self-transcendence to previous studies, the results showed the STS score of the younger middle-aged group was significantly lower than the older adult group in the previous studies. The study found a significantly negative relationship between depression and parenting ($r = -.23, p < .01$) and a significantly positive correlation between STS and parenting ($r = .19, p < .03$) in the total sample. Also, for the acceptance, there was a significant difference between the younger subgroup and the older subgroup ($p < .01$). There were significantly negative relationships between depression and acceptance in the younger subgroup ($r = -.47, p < .001$), the older subgroup ($r = -.42, p < .001$), and the total group ($r = -.48, p < .001$). There was no

significant relationship between spirituality and depression, but for spirituality, there was a significantly positive relationship between spirituality and self-transcendence in the total sample ($r = .41, p < .001$) and in the younger subgroup ($r = .44, p < .001$).

The study also showed that the women's score of 12.8 on CES-D was significantly higher ($p < .05$) than the men's score of 9.4 on CES-D. Men's score on depression showing significant correlations with each variable were as follows: self-transcendence was $r = -.62, p < .001$; acceptance was $r = -.56, p < .001$; parenting was $r = -.34, p < .01$; and spirituality was $r = -.25, p < .05$. For women and men, the score of the significant correlations of depression with each variable were as follows: self-transcendence was $r = -.52, p < .001$; acceptance was $r = -.46, p < .001$. The findings revealed that there were significantly negative correlations between self-transcendence and depression across all groups.

The study findings revealed lower self-transcendence scores in the younger population, but supported the model of the theory that self-transcendence is positively related to well-being. The study discovered parenting, self-acceptance, and spirituality as the indicators of self-transcendence in middle-aged adults and also had significantly negative relationship between self-acceptance and level of depression in the group. Thus, the study contributes to advance the understanding about the theory of self-transcendence. However, using one-item to measure acceptance and spirituality may limit the results.

Pincharoen (2002) used a literary analysis with a hermeneutic approach to explore the experience of transcendence through elders' reflection on growing old and aimed to provide the findings for helping nurses to facilitate the experience of transcendence in their patients. The data analysis from four stories revealed: (1) Life events motivated

self-reflection which led to transcendence such as growing old, retirement, and moving to a nursing home. (2) The self-reflection itself led to transcendence such as raising questions and looking for answers, gaining insight and increasing consciousness, and self-understanding. (3) Inwardly, patterns of transcendence began to emerge through self-reflection such as descriptions of peacefulness, becoming one's authentic self, gratefulness and appreciation. (4) Outwardly, patterns of transcendence through self-reflection were described such as elders shared self-discovery with others, being silent to relieve others, and contributing to family matters. (5) Temporally, patterns of transcendence through self-reflection were described such as that the perceived life is mysterious and unknown, discovery through struggle, and fluctuations of feelings. (6) Journal writing served as a method of self-reflection and entries into the journals indicated self-understanding, noticing self-change, relieving pain, sharing own thoughts and feelings in a soothing place. These findings contribute to a better understanding of transcendence and to realize that self-reflection is a way to promote transcendence.

In northern Sweden, Nygren et al. (2005) studied self-transcendence, resilience, sense of coherence, and purpose in life and compared these variables to perceived physical and mental health in 125 elders, 85 years old or older. The instruments included the Resilience Scale (RS), the Sense of Coherence Scale (SOC), the Purpose in Life Test (PIL), and STS. The SF-36 Health Survey was used as dependent variables including two parts: the SF-36 physical component summary (SF-36 PCS) and SF-36 mental component summary (SF-36 MCS). The results revealed: (1) Men had significantly higher scores on PIL than women ($p < .02$). (2) Significant correlations ($p < .05$ to $.01$) were showed between the score on RS, SOC, PIL, STS and SF-36MCS scores. (3) Only

PIL score had a significant correlation with SF-36 PCS. (4) There were significant relationships between the scores on RS, SOC, PIL, STS, and SF-36 MCS for women but no significant relationships between the scores on RS, SOC, PIL, STS, and SF-36 PCS for women and men. (5) There were no significant relationships between SF-36 MCS and SF-36 PCS; (6) RS, SOC, PIL, and STS explained 19% of the variance in mental health for the whole group and only 6% for men, but had a significantly explained 30% of variance for women ($p < .005$). (7) PIL had a significant impact on mental health. The author concluded that the concepts of RS, SOC, PIL, and STS have similar denotations and described these variables as inner strength. The findings suggest that it is necessary to promote self-transcendence in people, especially in nursing students which may facilitate their personal and professional growth.

Decker and Reed (2005) examined developmental factors (integrated moral reasoning, self-transcendence, past experience with life-threatening illness, and age) and contextual factors (education level, gender, ethnicity, current health status, and completion of a living will) to better understand the correlations among these factors and the aggressiveness in treatment that the community-dwelling elders ($n = 210$; age 60 and older) desired at the end of life (EOL). Instruments consisted of: (1) the Modified Defining Issues Test (referred to as the Moral Reasoning measure); (2) Self-transcendence Scale (STS); (3) the Desired End-of-Life Treatment scale (referred to as the Desired EOL); and (4) the Demographic/Health-Related Questionnaire containing the remaining developmental and contextual variables.

The findings revealed self-transcendence did not have a significant relationship with the level of aggressiveness of EOL, but had a positive relationship to the integrated moral

reasoning level ($r = .26, p < .01$) and a negative relationship with self-reported ratings of health ($r = .39, p < .01$). The findings lent support to the idea that self-transcendence helps elders maintain health and is related to high levels of cognitive development.

Examining Self-Transcendence in Vulnerable Adults

Buchanan et al.'s (1995) pilot study, using a correlational descriptive design, aimed to examine the relationships between suicidal thought and self-transcendence in 35 hospitalized older adults (57% females and 43% males; age = 65 to 90 with $M = 73$). Data collection included STS scores and a single interview with two open-ended questions: "Who is most meaningful to you now? And what is most meaningful in your life now" (p. 32)? The findings showed: (1) There was a negative relationship between self-transcendence and a wish for death ($r = -.55, p < .001$). (2) Individuals who do not have suicidal thoughts had a significantly higher STS score than those who wished to die ($p < .0014$). (3) When people had the idea of suicidal thoughts, they had difficulty talking about what was meaningful in their life. Adding the open-ended questions supplemented the understanding from the measurement. The findings supported the ideas that self-transcendence is a positive developmental resource in elders. Small sample size is the limitation of the study.

Coward (1990) used a phenomenological approach to explore the lived experience of self-transcendence in five women with Stage IV breast cancer. For her participants, she referred to self-transcendence as an "experience of a sense of well-being, purpose in life, and interconnectedness with others" (p. 163). Based on the study findings, Coward described self-transcendence as the abilities of people to care about others without losing the self, to have more understanding about oneself and broaden one's perspective, and to

learn new ways and find purposes to help themselves to accept painful life situations.

The findings also revealed that the participants experienced self-transcendence after they made a conscious effort such as by learning new ways to help others, learning to enjoy others' help, and learning to face their illness in a different way. The participants expressed their feelings about the process as: increasing self-worth, increasing a sense of healing, having pleasurable physical feelings, feeling a strong connectedness to others and nature, finding new purpose to enjoy performing their duties and providing help to those who needed it. The findings of this qualitative study provided more understanding of the concept of self-transcendence.

Following the qualitative study, Coward (1991) examined relationships among self-transcendence, emotional well-being, and illness distress, using a cross-sectional correlational design, in a convenience sample of women with breast cancer ($n = 107$; age = 29-86). Coward found: (1) There were no relationships between age and self-transcendence or affective and cognitive well-being. (2) Self-transcendence had a direct effect on emotional well-being ($\beta = 0.69$). (3) Self-transcendence had an indirect effect on perceived illness distress through its effect on emotional well-being in these women. This study's findings supported the assumption of the theory that self-transcendence can be obtained regardless of age.

Coward and Lewis (1993) conducted a phenomenologic study in gay men with AIDS ($n = 8$, age = 32- 48) to understand the structure of self-transcendence. The authors synthesized nine themes into the fundamental structures of self-transcendence in these participants: a *dialectic* or *tension*. The dialectic implied between isolation and connectedness and between hanging on and letting go. The tension occurred between

giving up and maintaining hope. The participants expressed that the feeling of connectedness brings a new purpose in life and then increases the sense of self-worth and inner peace. The authors found that the participants' experiences were related to Frankl's descriptions of self-transcendence and consistent with Reed's propositions in the theory of self-transcendence. Coward's (1994) report of meaning and purpose in the lives of persons (10 men and 10 women) with AIDS were part of Coward's (1993) study and had the same results as the Coward (1993) study.

Mellors and Riley (1997) conducted a cross-sectional study to examine the relationships between self-transcendence and quality of life in HIV-positive participants (a convenience sample) who were in different disease stages which were clinical category A ($n = 13$), B ($n = 10$), and C ($n = 23$). Instruments used were: Reed's (1991b) Self-transcendence Scale (STS) and Ferrans and Powers' (1992) Quality of Life Index (QLI; as cited in Mellors & Riley, 1997). The results revealed that self-transcendence mean scores were 3.07 ($SD = .47$) for the total group and Participants in Clinical Category C had the lowest score (2.97). For the total group, the mean QLI was 19.14 ($SD = 4.78$) and participants in Clinical Category C had the lowest score (16.73). There was a significant moderate positive relationship between STS and QLI in participants who were Clinical Category C ($r = .54, p < .01$) and for the total group ($r = .46, p < .01$). The findings also supported the model of the theory that people go through suffering enhance their self-transcendence and self-transcendence is important resource to help people overcome their serious situations. Therefore, developing self-transcendence is important in human beings.

In 2005, Wayman and Gaydos used a heuristic research design to examine the

participants' experiences ($n = 4$) of self-transcending through suffering based on interviews. The themes, participants' experiences of self-transcendence, were: (1) Turning point, which was a movement toward change. (2) Change, which came out of a new perspective resulting in a larger self than previous one, valuing life, coherence of self, and a sense of wholeness. (3) Gratitude, which represented a feeling of thankfulness of the learned lesson from the suffering experience. (4) Humility, which indicated the participants who stated that they were unable to remain transcendent all the time, and they were conscious of searching for new growth. (5) An elemental experience, which was illuminated by participants using specific metaphors to give meaning to their stories. This study revealed that people can achieve self-transcendence after going through suffering, but it is an ongoing learning process.

Examining Self-Transcendence in Vulnerable Adults with Intervention

Chin-A-Loy and Fernsler (1998) employed self-transcendence as a theoretical framework in their descriptive pilot study to explore self-transcendence in 23 men (age = 60 to 84; $M = 69$) from three prostate cancer support groups. The findings revealed a high score on STS with mean score of 50.07 ($SD = 4.01$) and the author concluded that the findings supported Reed's (1991a) points that connecting to others or environment and sharing experiences with others can lead to expanding self-boundaries.

Coward (2003) used a quasi-experimental design to understand the difference in measurement of the structured self-transcendence and well-being scale over time between two groups: women who were newly diagnosed with breast cancer participated in a support group ($n = 22$) and those who had the same diagnosis but did not participate in a support group ($n = 17$). Instruments used were similar to Coward' (1996) study. The

support group included eight sessions. The findings revealed that the experimental group got higher post-test scores (T2) than pre-test (T1), which successfully supported the intervention (support group). The findings gave support to the theory of self-transcendence. Similarly, Young and Reed (1995) also found that self-transcendence can be facilitated through group psychotherapy.

Coward (2004) used a qualitative approach (using Colaizzi's phenomenologic approach to analyze narrative data) to follow up on a group of women with breast cancer ($n = 10$; age = 40-71, $M = 54.5$) to understand their spiritual disequilibrium and how they solve this disequilibrium. These women were recruited from participants in Coward's (2003) study (five in the support group and five in the control group). Coward reported few differences in the study themes between these women who attended in the support group and those who were not. Themes were described in three time points: Time of diagnosis, four to seven months post-diagnosis, and 14-18 months post-diagnosis. At the time of diagnosis, these women were afraid of dying and felt alone so they tried to obtain information and support from others and adjust their life values and strive to help others for maintaining their self-identity. At four to seven months post-diagnosis (most participants had completed breast cancer treatment), these women were less afraid of the disease due to returning to work and receiving support from others and change in themselves, but they also were afraid of recurrence. At 14-18 months post-diagnosis, these women perceived different self-identity from their previous self and strive to maintain spiritual balance through connecting to their inner self and others and faith to have a hope for the future. The findings revealed that these women in tough situations maintained their spiritual equilibrium through self-transcending process over time.

Young and Reed (1995) aimed to assess older depressed out-patients' perceptions of the effectiveness of insight-oriented group psychotherapy combining reminiscing in self-transcendence and understanding the dominant patterns of self-transcendence ($n = 6$, aged 53 to 79). A qualitative study with a one-hour interview focused on participants' reflection on any changes they had during the group therapy, and a matrix data analysis was utilized.

The results showed that the participants perceived self-affirmation, creativity/hobbies, self-enrichment, and self-esteem inwardly; perceived bonding, self-disclosure, helping others, and learning through others outwardly; perceived acceptance of past, focus on present, and acceptance of unsolvable life issues through temporal integration. The findings revealed that self-reflection is a way to facilitate self-transcendence.

Examining Self-Transcendence in General Adults with Intervention

Wasner et al.'s study offered three and half-day spiritual care training for palliative care professionals ($n = 63$) to examine the effects with pre-test and post-test and a later test after six-month training. The majority of participants were women (91%) and average age was 49. The course "Wisdom and Compassion in Care for the Dying" was aimed to help participants be able to identify the different aspects of suffering and give effective response. Instruments used were: Functional Assessment of Chronic Illness Therapy-Spiritual Well-being (FACIT-Sp), Self-transcendence Scale (STS), Idler Index of Religiosity (IIR), and Numeric rating scale (NRS).

The findings revealed significant positive changes in single attitudes toward palliative care and in the total attitudinal scores. There were positive improvements in compassion for the dying on the test after training and after six months ($p = .002$ and p

= .025) and compassion for oneself ($p < .001$ and $p = .013$), positive attitude toward one's family on the test after training and after six months ($p = .001$ and $p = .031$), and satisfaction with work on the test after training and after six months ($p < .001$ and $p < .039$). The STS was significantly improved after training but not after six months (the mean score: pre-test was 48.5, after training was 50.4, six months later was 49.3). The overall attitudinal scores had no significant correlation with the spiritual subscale of the FACIT-Sp and STS. The study findings also revealed a positive relationship between STS and compassion. However, the short interval of time between pre-test and first post-test and the lack of a control group for comparison may have had an impact on the evaluation of the effect.

Stinson and Kirk (2006) examined the effect of a group reminiscence intervention on depression and self-transcendence of older women (living in an assisted living facility). The authors compared two groups with repeated measures at three time points (at baseline, three weeks, six weeks). The total of 24 participants was equally randomly assigned to an experimental group (age = 72-96) and a control group (age = 72-90). The group reminiscence intervention lasted six weeks with twice weekly one-hour session. The instruments were Geriatric Depression Scale (GDS) and STS. The results revealed no significant increase on STS score and a decrease on GDS score at three time points in the entire group but no statistically significant differences on STS and GDS score between the two groups. The findings showed significantly negative correlation between STS and GDS score at three weeks but no significance at baseline and at six weeks. The study revealed that developing interventions to enhance self-transcendence in elders may decrease depression.

Examining Self-Transcendence in Nursing Faculty and Nursing Students

Kilpatrick (2002) aimed to understand the development of spirituality in female nursing students and nursing faculty by studying the correlations among three concepts of spiritual perspective, self-transcendence, and spiritual well-being with a descriptive correlational design. The participants were 294 nursing students with mean age of 29 ($SD = 8.68$) and 161 nursing faculty with mean age of 50 ($SD = 8.27$) from 25 ADN and BSN nursing programs in 16 states of America. Three scales were: (1) Spiritual Perspective Scale (SPS) developed by Reed (1986), (2) Self-Transcendence Scale (STS), and (3) JAREL Spiritual Well-being Scale (JAREL).

The average scores of students on SPS, STS, and JAREL were 48.36 ($SD = 9.9$), 49.01 ($SD = 4.78$), and 106.39 ($SD = 11.93$) respectively and demonstrated the three concepts had significant positive correlations to each other. Regarding the faculty, the means on SPS, STS, and JAREL were 50.30 ($SD = 9.33$), 51.05 ($SD = 4.35$), and 111.20 ($SD = 10.43$) and also significantly positively correlated to each other.

The findings showed significant positive relationships between age and STS and between age and spiritual well-being in whole group but not in either group alone. The authors suggested that people should understand their transcending process interconnected to their inner selves, connected to other human beings, life events, the environment, and a larger power such as the universe or God. This study expanded the knowledge of using the theory to a new population and provides the information for understanding the level of self-transcendence in nursing students and faculty. The findings also supported Reed's (2003) assumption that the development of self-transcendence is not absolutely related to advanced age.

Summary of Research Related to the theory of Self-Transcendence

The theory of self-transcendence has been tested in these reviewed studies, and most studies focused on participants who were older adults or were facing serious disease. Recent studies have gone beyond the initial focus on the elderly and have expanded to nurses, nursing faculty, and nursing students (Kilpatrick, 2002). The findings have supported the model of the theory which linked self-transcendence to well-being (Coward, 1990; Ellermann & Reed, 2001; Pincharoen, 2002) and given support to Reed's (1991b, 2003) assumption that people can achieve self-transcendence regardless of age (Coward, 1991; Kilpatrick, 2002). These studies also revealed that self-transcendence was a developmental resource that could help people cope with difficult situations (Coward, 2004; Mellorse & Riley, 1997) and enhance people's compassion and inner strength (Nygren et al., 2005; Wasner et al., 2005). Thus, these findings revealed the importance of enhancing people's self-transcendence and the need to develop interventions to promote people's self-transcendence.

In these studies participants reported they achieved self-transcendence after going through suffering (Coward, 1996; Wayman & Gaydos, 2005). Reed pointed out that it is the responsibility of nurses to help patients tap into the developmental resource if possible (Reed, 1986, 1989, 2003). On the other hand, if nurses could achieve self-transcendence; they might be more sensitive to perceive patients' needs, see the value in nursing, and enjoy helping their patients (Chiang, Chen, & Tasi, 2003; Pask, 2005). Thus, if educators can help nursing students move towards self-transcendence during their learning process, the students may achieve self-transcendence earlier than their natural developmental process. Also, nursing students realized their own vulnerability

during their encounter with patients' suffering and dying (Eifried, 2003; Loftus, 1998). Thus, helping nursing students stimulate their self-transcendence during their learning processes; this may also enhance students' well-being.

Some studies showed that connecting to and helping others can lead to expanding self-boundaries (Chin-A-Y & Fernsler, 1998; Coward, 2005) and life events can motivate self-reflection which may lead to transcendence (Pincharoen, 2002). Moreover, if people can gain insight to life to help them realize life's fragility, this recognition may promote altruistic values. Thus, to design an education program to promote nursing students bonding with elders with emphasis on the relationships between students and elders, may not only help students gain additional insight about life but also may motivate students' to self-reflect about life. An approach to strengthen bonding between students and elders may be a way to facilitate the development of these young nursing students' self-transcendence.

Strategies to promote nursing students' self-transcendence have not been addressed in the literature. Therefore, this researcher has focused on developing an intervention to promote self-transcendence and positive attitudes toward elders in young nursing students and to test the effectiveness of the intervention in order to fill in the gap of knowledge in this area and add to the body of nursing knowledge. Creative work is one component which can help people move towards self-transcendence and art is a way to access people's creativity as previously discussed in chapter one. The following literature review focuses on art activities used in this study.

*The Foundation of the Art Activities for the Creative-Bonding Intervention
Research on Art Interventions*

Walsh (1993) used a pre-test and two time post-test design with hospitalized suicidal adolescents ($n = 39$) to understand their self-esteem, future time perspective, and depression after art future-image intervention (AFI). This purposive sample was recruited from one 16-bed adolescent unit in a hospital in the southeastern U. S. and was divided into an intervention group ($n = 21$) and a comparison group ($n = 18$) who received three-hour informal activities in the gymnasium only (called attention placebo; A/P). The AFI began with the data collection done with A/P group. The AFI consisted of two 90-minute meetings in the small group for these suicidal adolescents to create a future self-image. Instruments included: (1) Self-Esteem Inventory (SEI) used to measure evaluative attitudes toward the self, (2) Future Time Perspective (FTP) Inventory, and (3) Beck Depression Inventory (BDI). The results showed that both post-test score on SEI, FTP, and BDI had been improved with no significant differences between groups, but scores on the FTP and BDI in the experimental group had more improvement over time than the A/P group.

The qualitative data collected on the intervention group, during the follow-up home visit, showed that the intervention had a positive impact on the participants and promoted family interaction; examples were “I think making the poster of me as a vet . . . makes me happy . . . it is in my room where I can see it every day,” “I have always said I would be a doctor because my parents wanted me to be one . . . I made the poster of myself as a dress designer . . . They told me maybe I might need to think more about what I want to be, not what they want me to be” (p. 116).

Walsh and Minor-Schork (1997) aimed to explore what the suicidal adolescents perceived about themselves before and after they participated in a future image

intervention (AFI) and what meaning of tasks they realized during the intervention. The researchers conducted an interview with those adolescent patients who reached the research criteria and agreed to join the study within 48 hours after intervention ($n = 11$) and a follow-up interview two months after discharge ($n = 6$) based on interview guidelines. Before data collection, the researchers offered a two-hour AFI workshop to nine nurse staff to train these nurses to be able to help implement the intervention. All adolescent patients (age 13-18) in the ten-bed psychiatric unit at a university medical center were encouraged to participate in the weekly AFI group which was led by the trained staff.

The AFI group work began with a discussion about the adolescents' future occupations and life dreams, and then these adolescents created a future self-image. The results revealed six themes: "compliant irritation, humor reappearing, identity search, rekindling dreams, regaining control or regaining self confidence, and pleasant anticipation" (p. 23). From these themes, Walsh and Minor-Schork suggested that the art intervention helped adolescents to connect to their inner selves and promoted positive interaction with others.

Walsh and Webb-Corbett (1995) reported that the art future-image intervention (AFI) study was conducted to help postpartum rural adolescents to envisage their future goals. The designed procedure included the following steps: (1) A faculty and a nursing student contacted the potential participants at the time of 12-24 hours after the young women delivered. (2) The researcher interviewed the participants about their future goals. (3) Photos were taken of the participants and their infants and the participants made their future image using the provided career "body image." (4) The nursing student discussed

with the participants how they could meet their career goals. Nine hospitalized mothers participated in the study including eight African Americans and one White (age 17-24; $M = 20$), and they talked about their dreams and the problems they might meet while working on their posters. Some examples reported by the students were: "I think I would be great as a worker in a day care center. I've always liked to baby-sit," "Maybe I can make it happen" (p. 278). These comments demonstrated that when participants constructed a future image poster, this poster may have helped them think of themselves and their future; thus this approach may promote self-acknowledgement and have an impact on one's inner self as well as promote self-growth.

Walsh and Hardin (1994) used the art future image intervention (AFI) to encourage adolescents ($n = 158$) to think about their ideal future goals and career choices, and the AFI was expected to enhance these adolescents' positive identities and improve their self-efficacy. The researchers collected information by qualitative data based on the participants' answers to the provided questions and a 13-item Self-Efficacy Scale (SES). The AFI was delivered to all sophomores in School A and freshmen in School B, which were two South Carolina high schools, and classes were divided into the intervention group and the control group by random. The 17 counselors had wide clinical experience and the majority of them were registered nurses. These counselors received a three-hour training course before delivering the AFI.

The AFI group had a small group type which was audiotaped (8-12 students with two counselors), and large group type which was videotaped (all groups and counselors together). The results revealed the top three career choices were a professional athlete, lawyer, and computer technician. Students had a positive evaluation about AFI with 94%

in School A and 90% in School B. In total, 59% of the adolescents rated the small group as “excellent” and 43% rated the large group as “excellent.” The self-efficacy scores decreased from time one to time two in both intervention and control group with no significant change by time interaction ($p = .35$) and no significant differences between School A and School B. For the decrease in mean self-efficacy scores, the researchers suggested that it may be better to measure the effect after a longer time period or use another protocol that stresses self-efficacy. Based on the adolescents’ comments, the art intervention is a way to promote group interaction and enhance self-expression.

Walsh and Weiss (2003) aimed to explain the performance of and to preliminarily evaluate delivering bedside an “Art Infusion” intervention to patients’ family caregivers and patients who were diagnosed with cancer while patients were given treatment at inpatient and outpatient sites in a southeastern, regional, comprehensive cancer center. The authors trained volunteers who were professional artists and art students and who were undergraduate and graduate nursing students by offering a three-hour workshop to help them deliver the art activities to patients who were terminally ill along with their families. The training team leader gave possible situations that volunteers may meet when they visited the cancer patients and their family caregivers and offered a role-playing session to help these volunteers practice and discuss how to deal with the difficulties they may encounter, and then showed five Art Infusion activities by presentation in a computer-assisted design.

After the presentation, trainees were offered chances to practice each activity. In order for the volunteers to cooperate with each other based on individual different talents, a nurse and artist team would deliver the intervention. The Art Infusion activities were

created to help individuals have the creative experience, promote caregivers and patients' positive feelings on something, and promote interaction between family caregivers and patients. A stocked "ArtKart" was designed to provide a central location for art supplies and to deliver Art Infusion supplies to family caregivers and patients at bedside by the intervention team, and a menu for the art activities was also provided.

The authors reported, based on their field notes, that they had met with a total of 215 patients and their family caregivers from the time the intervention started, and they stated that art performing was helpful and feasible and helped these participants decrease anxiety. The participants also stated they enjoyed creating the art work. The authors reported that the possibility to continue providing the activity was related to the resources of the artist and the volunteers. Therefore, it may be valuable if students can learn the similar intervention activities and deliver the intervention to benefit patients. Such activities would be likely to promote the interaction between students and patients and might be especially valuable to improve the interaction between students and elders in long-term care facilities.

Walsh, Martin, and Schmidt (2004), using a quasi-experimental pre-test and post-test method, focused on measuring the efficacy of a creative-arts intervention (CAI) on cancer patients and their family caregivers' stress, anxiety, and emotions and hoped to provide quantitative data for understanding the effects of these subjects' participation in art-related activities. Family caregivers ($n = 40$; mean age = 51.47) were mostly women (75%). These family caregivers participated in the study while their family (cancer patients) receiving inpatient and outpatient treatment in a major South Florida comprehensive cancer treatment center over six months.

Data collection based on four questionnaires included: (1) Demographic data; (2) Mini Profile of Mood States (Mini-POMS) used to examine mood and provide a score for total mood disturbance; (3) Beck Anxiety Inventory (BAI); (4) The Derogatis Affects Balance Scale (DABS) for detecting negative and positive affect. The results revealed: (1) Post-CAI scores had a significant decrease on stress scores ($p = .001$), and on anxiety scores ($p < .001$). (2) Had a significant increase on DABS scores ($p < .001$) indicating positive change.

The authors reported that the results showed a large effect for all variables. The author stated that the most popular two activities were silk projects and monoprints and the activities helped the caregivers laugh and joke with humorous response and distanced the attention from the burden of cancer diagnosis. The authors expected that the nurses were willing to support the art activity, especially in residential facilities, and suggested expanding the approach to different populations and settings.

Walsh, Chang, Schmidt, and Yoepp (2005) recruited a group of BSN in an educational nature class, using a quasi-experimental design with pre-test and post-test (length = two weeks), to explore the effects of the creative arts intervention on the students' stress, anxiety, and emotion with comparison between an experimental group ($n = 16$) and comparison group ($n = 14$). The creative arts intervention was comprised of four creative arts activities, including monoprints (an abstract image could be made for a greeting card), future self-image poster, a mandala activity completed in a small group, and a silk art project completed in a large group. Data were collected by a demographic form, a Mini-profile of Mental States (POMS), a Beck Anxiety Inventory (BAI), and the Derogatis Affects Balance Scale (DABS).

The results revealed: (1) the experimental group had significant less stress ($p = .003$), less anxiety ($p = .003$), and positive emotions ($p = .001$). Students' responses were that participating in the art intervention research helped them understand research design and increased their passion about research. Students showed interested in the art project and also felt that the activity helped them learn about the research process and also decreased their stress at the same time. This intervention was a creative teaching method, but it may also have had a Hawthorne effect and the short interval between pre-test and post-test may also influence the post-test results.

Walsh, Radcliffe, Castillo, Kumar, and Broschard (2007) conducted a pilot study, using a quasi-experimental pre-test and post-test design, to examine the effects of Art-Making Classes (AMC) for family caregivers ($n = 69$) who were responsible to care of the patients with cancer. Measurements were Beck Anxiety Inventory (BAI) used to measure anxiety and salivary cortisol test used as an indicator of stress to understand participants' stress levels. The researchers reported that monoprints and ribbon gems were two of the most popular art activities in the AMC. Monoprints often were used to create an abstract image with different colors and then designed to be a greeting card. Ribbon gems could be used to hang on the wall in the patients' room or used to decorate in any places the participants chose.

Walsh et al. (2007) reported that there was a significant decrease in the participants' anxiety after AMC using a paired- t test ($p < .01$); there was no significant decrease in the participants' stress by a paired- t test, but stress was significantly lowered if changes were measured as either an increase or decrease when examined by chi-square ($p < .005$).

*Summary of the Research on the Foundation of the Art Activities for the
Creative-Bonding Intervention*

Based on the findings of those studies that were reviewed, art has been shown to help people activate their creativity. An art intervention used to help young students implement their future self-image poster in a peer group could help the students think of themselves and their future and could enhance their self-expression and promote students' interaction with peers and others. Thus this art intervention may promote students' self-acknowledgement and then may promote their self-growth (Walsh, 1993; Walsh & Hardin, 1994; Walsh & Minor-Schork, 1997; Walsh & Webb-Corbett, 1995). Monoprint and Ribbon Gems are simple art activities that are popular with participants (Walsh et al., 2005, 2007). Thus, these art activities described as most successful in the Walsh studies were used to increase students' imagination and fun and were implemented between students and elders to enhance interaction between them.

It was expected that students would connect to their inner selves and connect to elders by contributing to these elders through these creative activities, and during these art activities students would bond with the elders. Thus, as the students helped elders feel better through these intervention activities, it was expected that students would perceive their creative contributions with elders. Therefore, it was expected that the creative-bonding intervention would help students move toward self-transcendence. As a result, students' attitudes would become more positive toward elders during the creative bonding interactions and, eventually, students would have a more positive view toward elder care.

CHAPTER THREE

Methods

Introduction

Before carrying out the final dissertation study, the researcher conducted two pilot studies to determine the feasibility of the intervention process and the use of the measurement instruments. The results of those two pilot studies were used to refine the intervention. The reports of these instruments used and pilot studies are presented first in this chapter. The second part of this chapter contains the report of the final dissertation study including the design, participants and settings, and procedures employed.

Instruments

Demographic Data Instrument/Questionnaire

Based on literature review in Chapter two, the demographic data included age in years, gender, religious affiliations, family structure type, the previous interaction experience with elders, the status of living with grandparents or other elders, the experience of working with elders. In order to further the researcher's understanding of the students' experience with elders and to increase the researcher's knowledge about students' views of nursing, several open-ended questions and rating scales about nursing as a career choices and problems encountered with elders were added to testing packets as follows: (1) difficulties the students faced when they interacted with elders; (2) the decision-making process students used when they decided to study nursing, the reasons for their decisions, and if the students enjoyed studying nursing; (3) what age group of clients the student would choose to work with after graduation, and (4) the level of students' willingness to care for elders. Options for religious affiliations included: Folk

religion (the blend of early folk tradition, native Taoism, and Buddhism), Buddhism, Christianity, no religion, and other. Options for family type items consisted of nuclear family, extended family, and other. This questionnaire is shown in Appendix A.

Self-Transcendence Scale

In order to assess the level of developmental maturity of nursing students and understand whether there were differences in self-transcendence between the CBI and FV student groups both before and following the CBI and FV, one of the instruments selected for this study was the Self-Transcendence Scale (STS; Appendix B).

The STS was developed by Reed (1991b, 2003) and was used to measure maturity obtained in the development process, which reflects an extension of self-boundaries intrapersonally, interpersonally, and temporally. The STS is composed of 15 self-report items and the response is a 4-point scale from “1” representing “not at all” to “4” for “very much”; thus, each item scores from 1 to 4. The last item is an opposite statement, so the score is reversed from “not at all” for 4 to “very much” for 1. The total score is derived from calculating each score of all items, and the possible range is from 15 to 60. The reliability, reported in Reed’s study estimated by Cronbach’s alpha, was above .93 in 1989 and was .80 in 1991 (Reed, 1989; 1991b). Also, other researchers reported the Cronbach’s alpha in their studies was .70 - .94 (Buchanan, et al., 1995; Coward, 1991, 1996; 1998; Decker & Reed, 2005; Nygren et al., 2005).

For content validity, Reed (1989) mentioned her broad theoretical and empirical literature review on adult development to derive the items on the scale. The construct validity has been supported by those participants who stated these items were pertinent to their life’s experiences and rated a high score, a mean of 2.7 of a possible 3.0, to each

item of STS (Reed, 1991b). In Coward's (1990) phenomenological study, the participants' statements also provided construct validity support. The instrument has been used in a study of the population of older adults, oldest-old adults, middle-age adults, adults, and nursing students (Bean & Wagner, 2006; Buchanan et al., 1995; Chin-A-Loy & Fernsler, 1998; Coward, 1990, 1991, 1996, 2003; Decker & Reed, 2005; Ellermann & Reed, 2001; Kilpatrick, 2002; Mellors, Riley, & Erlen, 1997; Nygren et al., 2005; Ramer et al., 2006; Reed, 1986, 1989, 1991b; Stinson & Kirk, 2006; Upchurch, 1999; Walker, 1995; Wasner et al., 2005).

Reed's self-transcendence scale did not have a Chinese counterpart. The researcher obtained permission from Dr. Reed and translated this instrument to a Mandarin Chinese version, which was used with Taiwanese nursing students (Appendix G). During the translation process, the cross-cultural equivalence was considered. In order to build the conceptual equivalence in the new population (Hwang, Nochajski, Linn, & Wu, 2004), some steps were important, including translation and back-translation, and confirming with bilingual experts and colleagues for the content validity and the cultural adaptation. The Mandarin Chinese version was used in this study and the psychometric properties of the translated form were built reliability and validity in the new population during the implementation of the study (Chou, Jiann-Chyun, & Chu, 2002; Hwang et al., 2004). The Mandarin Chinese version is shown in Appendix C.

Attitude toward Elders Scale

Kogan (1961) developed the Attitudes toward Old People Scale. This instrument is a 34-item self-administrated scale with 17 matched positive-negative pairs. The scale items cover the stereotypes about old people and several issues such as residential patterns, the

experiences of vague feelings and discomfort with older adults, interpersonal relationships among aged generations, dependency, cognitive style and capacity, personal appearance, and personality. Kogan reported odd-even Spearman-Brown reliability coefficients between 0.73 and 0.83 for the negative scale and between 0.66 and 0.77 for the positive scale. Kogan also established construct and criterion validity with three group samples. Soderhamn et al. (2000) translated and tested Cronbach's alpha coefficient 0.79 for their Swedish version with a convenience sample of 319 students and different health-care professionals. Kogan's Attitudes toward Old People Scale has been widely used for measuring nursing student attitudes toward the elderly (e.g., Haight et al., 1994; Lookinland & Anson, 1995; Soderhamn et al., 2001; Lookinland et al., 2002; Ryan & McCauley, 2004/2005).

Hilt and Lipschultz (1999) determined that Kogan's scale included too many items and the language used on statements in the scale was from 1961; therefore, Hilt and Lipschultz (1999) revised Kogan's Scale from 34 items to 22 items and scored it with a Likert format from strongly disagree (1) to strongly agree (7) and reversed 1-17 statement scores. The possible total scores range from 22-154 and lower scores indicate more positive attitudes than higher scores. Hilt and Lipschultz stated the revised version had a strong correlation with the original version and the reliability coefficient of alpha for the producer group was .79, for the general manager group was .46, and for the news directors was .65. Thus, the self-administrated Revised Kogan's Attitudes toward Old People statements (RKAOP) was used in the study. The reliability for using the scale in nursing students has been supported by pilot studies (Walsh, Chen, Hacker, & Broschard, 2007; Chen & Walsh, 2006) in two groups of BSN students ($n = 22$; $n = 45$) in America

for the pre-test was Alpha = .753 - .799 and the post-test was .772-.847. This English version is shown in Appendix D.

The researcher received permission from the authors for modification and translation in a Mandarin Chinese version (see Appendix G). In order to use the measurement in Taiwanese students, the researcher had followed important needed steps and during the translation process considered the semantics, content, and conceptual equivalence between two language versions (Gilmer et al., 1995; Hwang et al., 2004; Jones & Kay, 1999).Mallinckrodt & Wang, 2004). These steps included: (1) considered the culture to modify the scale; and (2) translated and back-translating the scale by bilingual and culturally sensitive persons. In the current study the use of both the STS and RKAOP instruments were: (1) built content validity of the Chinese version by a couple of bilingual experts who are familiar in the related fields; and (2) built reliability and face validity in the population of Taiwanese students. The Mandarin Chinese version of RKAOP is shown in Appendix E.

Post-test questionnaire

In addition to using the STS and RKAOP measurements to assess students' changes after implement of the interventions, several open-ended questions and rating scales were included with the post-tests to increase the researcher's understanding of the students' experiences during implementation of the CBI and obtain students' responses to and evaluation of the usefulness of the CBI (see Appendix F)

Pilot Study One for the Dissertation Research

Design and Procedure

The first pilot intervention study entitled "A Comparison of Two Interventions to

Promote Nursing Students' Self-transcendence and Attitudes toward the Elderly" was presented in a conference by Walsh and Chen (2006). A quasi-experimental pre-test and post-test design (Shadish, Cook, & Campbell, 2002) was used to test the effect of a four-week creative art-making social bonding intervention (CASBI) versus a four-week friendly visit (FV) on nursing students' self-transcendence and attitudes toward the elderly. A convenience sample of 28 Bachelor of Science (BSN) senior students was recruited during a required "Care of the Older Adult" course in a university school of nursing in the Southeastern United States in 2005. During this course, students received an additional one hour of academic credit for working at senior community centers where students had opportunities for interactions with elders. Students were assigned to a CASBI group ($n = 16$) or FV group ($n = 12$) after the pre-test. Student assignment to different groups was by convenience based on students' previous assignment to community centers.

The study was reviewed and approved by the university's Institutional Review Board (IRB). In order to help students feel free to refuse participating in the study and keep their anonymity, using a cover letter that did not require the student participants' signature was approved by the IRB. Researchers explained the study to the students and distributed a cover letter that assured their anonymity. Students were assured that non-participation would not affect their grades nor have any adverse impact on their coursework. Pre-intervention data was collected at pre-arranged times outside of formal class meetings followed one week later by either a one-hour CASBI or one-hour FV session. Pre-tests collected included (1) a demographic questionnaire, (2) a 15-item Self-Transcendence Scale (STS; Reed, 1991b, 2003), and (3) a 22-item Revised Kogan's

Attitudes Towards Old People statements (RKAOP; Hilt & Lipschultz, 1999). The post-test consisted of the STS and RKAOP and a post-test questionnaire asking what students learned and felt about each intervention and occurred after implementation with elders in sites where students already had clinical placement. The STS reliability in the current pilot study on the pre-test was alpha 0.582 and post-test was 0.697. The RKAOP reliability in the current pilot study on the pre-test was alpha 0.80 and post-test was 0.85.

Intervention

The CASBI was designed to be implemented during four weekly one to two hour interactions between the nursing student and elders. Students were asked to use these approaches to enhance their communication with community dwelling elders and instructed to take personal art packets that contained supplies and instructions for different activities to their respective clinical sites to use art-making activities with elders. These CASBI activities were previously tested and were designed to enhance communication between the student/teacher and elder/learner (Walsh, 1993; Walsh et al., 2005; Walsh & Hardin, 1994; Walsh et al., 2004; Walsh & Minor-Schork, 1997; Walsh & Webb-Corbett, 1995; Walsh & Weiss, 2003). Students were encouraged to choose one or more of these activities and to talk with elders about their creations after activity completion (See Appendix J for descriptions of activities and supplies needed).

The FV also consisted of four weekly one to two hour interactions between the nursing students and elders. The researchers introduced the FV and provided suggestions, useful tips, and interview guidelines which could be used to promote elder recall of memories (see Table 2 for suggested ideas or materials, questions, and tips). The

interview questions were expected to provide an environment to promote student attention (listening) and a structure to assist students in evoking memories in elders. Questions and ideas were designed from a review of literature including using materials such as old songs, pictures, magazines, newspapers, and other memorabilia to provide a stimulus for conversation (Burnside, 1990; Cook 1998, Harris, 1997; Heliker, 1999; Stinson & Kirk, 2006; Wang, 2004; Wang, Hsu, & Cheng, 2005).

Data Analysis

Data analysis was conducted by SPSS 14.0 for Windows. Descriptive statistics were used for socio-demographic variables. ANCOVA was used to compare group differences. The Pearson correlation was used to describe the relationship between STS and RKAOP.

Pilot Study One: Results

Description of the Sample

Twenty-two students completed both pre-tests and post-tests for a completion rate of 78%. All completers were female and there were 11 students in the CASBI group and in the FV group respectively. Groups were similar on demographic characteristics, except that the frequency of previous interaction with elders was 9.40 ($SD = 11.43$) in the FV group and 13.18 ($SD = 13.33$) in the CASBI group in days per month. The previous clinical mean hours in the FV group were 20.27 ($SD = 7.51$) and in the CASBI group were 27.00 ($SD = 5.60$). In the CASBI group, the majority of students were Afro-American (72.72%), while in the FV group one-half of the students were Hispanic (54.54%).

The Findings

Because pre-test differences between groups ($p = .03$) were observed on RKAOP,

ANCOVA was used to analyze pre-post test changes. Results showed no significant difference in the post-test scores between the two intervention (CASBI vs. FV) groups. However, both groups had improved scores on the post-test of STS and RKAOP, with greater changes on RKAOP. Unexpected findings were the FV group with significant positive changes on RKAOP ($p = .029$) between pre-test and post-tests. It is important to note that low RKAOP scores are positive attitudes toward elders (see Table 3). According to the RKAOP high scores (indicating a poor attitude) on the pre-tests, the FV group attitudes about elders were considerably worse than the CASBI group attitudes initially.

On pre-tests there was a significant negative correlation, $r = -.54$ ($p = .01$), between pre-STS and pre-RKAOP. High scores on STS indicate high self-transcendence and low scores on RKAOP indicate positive attitudes; therefore, the negative correlation indicated that a high level self-transcendence was correlated with more positive attitudes toward elders.

Hypothesis

The research hypothesis, “Students who participate in the CASBI will have greater self-transcendence and more positive attitudes toward elders than students who participate in a Friendly Visit (FV) intervention,” was not statistically supported. However, comments on students’ post-test questionnaires reflected students’ and elders’ positive response to the CASBI. Examples of comments are described in the following paragraph and Table 3.

Students’ comments

During the introductory CASBI session, one student excitedly expressed, “One elderly lady who is my neighbor often talks to me and asks me for attention. I am always

unsure what to do or say; now I know something to suggest and can offer these art activities to help us communicate.” Students’ comments on the final questionnaire revealed that both CASBI and FV approaches initiated interactions and promoted positive communication between nursing students and elders. CASBI participants wrote: “I felt the elderly would like to be occupied by doing something creative,” “It was great because it gave me direction on how to interact with the elders,” “The art activity was very fun and a stress-reliever,” “I felt like I made a good intervention to someone’s life,” “My feelings are speechless--very happy that I have taught them today,” “It makes the elderly feel alive and gives meaning to their life,” “Art is helpful to initiate conversations about elders’ past, family, etc.”

FV participants also reported positive feelings: “The elderly enjoyed talking about themselves,” “It was a great experience and I enjoyed listening to their life stories,” “I felt good and that I was helping the elderly in some way by just giving them attention.”

Pilot Study One: Discussion

Even though the data showed no significant difference between two groups of BSN students on attitudes and self-transcendence scores following implementation of the CASBI, this pilot study still revealed useful information as there were changes in expected directions on STS and RKAOP in both groups. Students volunteered, verbally and in writing, positive evaluative comments on the post-test questionnaires about both approaches. In Herdman’s (2002) study, nurses stated that learning communication skills with elders is important for providing holistic care. Several studies revealed that a more positive view of elder care or improving the depressing ward atmosphere might promote interest for students to consider future elder care (Herdman, 2002; Moyle, 2003). Happell

and Brooker (2001) also reported that students perceived working with elders is “uninteresting, boring, unpleasant . . .” (p. 15). Thus, the approaches may provide a model for educators to solicit student interest for elder care and advance students’ communication with elders during nursing school and beyond. Students’ comments also provided new information about implementation of the CASBI as they expressed appreciation for the knowledge about simple, creative activities or novel ways to initiate communication with elders.

The greater improvement of self-transcendence score in the FV when compared to the CASBI group scores was puzzling but may be due to the high self-transcendence scores of the CASBI group initially. Another explanation may be some students in the CASBI group did not implement the intervention carefully. Additional supervision of students when they are implementing art activities and prior completion of activities in a workshop may also enhance outcomes in future studies. Since previous investigations have suggested that art is a way to promote the expression of emotion and comfort, and provide connectedness between persons (Driessnack, 2004; Walsh et al., 2004; Zablontny, 2006), it appears that a combined CASBI or FV may provide a stronger intervention.

When comparing the nursing students’ mean STS scores (pre-test CASBI = 50.91; post-test CASBI = 51.18 and pre-test FV 47.90; post-test FV 50.00; see Table 3) to Upchurch’s (1999) and Reed’s (1991b) study (the elders’ mean STS scores were 52 and 49.50 in each study), the pilot study findings seem to offer support for Reed’s theory that people of all ages have developmental capacity for self-transcendence. Conn (1977) also suggested that adolescence is a time for stimulating their self-transcendence as scores in both groups improved during the course of the study. Furthermore, the pre-test scores

revealed that the students who had a higher level of self-transcendence had more positive attitudes toward elders. Therefore, the study of self-transcendence in nursing students should be continued.

Findings that the CASBI group had better pre-test STS and RKAOP scores than the FV group may have been influenced by several moderator variables. The CASBI group reported previous higher interaction frequency with elders and more clinical hours with elderly patients prior to the introduction of the intervention. Different cultural backgrounds of the student groups were noted as the CASBI group was predominantly Afro-American and the FV group was predominantly Hispanic. Cultural influences have also been reported to influence perceptions about elders (Ryan & McCauley, 2004/2005).

Results showed those CASBI students who reported more time with elders than FV students had more positive feelings toward elders. The findings supported the work of Tan, Zhang, and Fans (2004), who reported that student attitudes toward elders had a significant correlation with the students' closeness to an older relative or an older non-relative. Because of the small sample size in both CASBI and FV groups, the differences in exposure time with elders, and the cultural differences between these groups, further research is needed. Happell (2002) concluded that students' future career choices were not influenced by an education program, as work with elders remained the least popular. Thus, the researcher suggests that educational programs alone or traditional educational programs may not suffice but if students are offered new ways to communicate with elders and cultivate their altruistic virtue, students' future career choices may be changed.

Although most of the students had positive feelings about conducting the art

activities with elders, two students reported difficulties with CASBI implementation and stated, “The elders did not participate so much because they were afraid of getting the paint on their clothes,” “At first, it was hard to convince them that this was a good experience; I had to explain about the activities and repeat it many times,” “Some elders were not interested in coloring because of their routines.” One CASBI packet was returned by a student with no supplies used which indicated that this student never implemented the CASBI with anyone. Thus, art supplies should be equipped in the study sites and supervise closely for the correct delivery of the CASBI.

Recommendation for the Future Study

If faculty can provide methods to engage students and create excitement about student-elder interactions, students may change feelings about care for elders. Such creative approaches that enhance student-elder interactions and help students learn more life experience from the elders may also promote additional growth and stimulate students’ self-transcendence. The CASBI and FV offered students alternatives and structure to begin and continue interactions with elders. Recommendations for the future study are: (1) to test the combined CASBI and FV with a larger sample with the addition of a control group, (2) to “require” and closely supervise Walsh’s self-portrait art-activity (Walsh et al., 2004) between students and elders, and 3) to extend the CASBI implementation to in-patient facilities.

These ideas are that such approaches should be valuable in nursing homes where residents often are institution-bound and look for someone to talk to them. Then the students may make more contributions to the elders during the time when students implement the art activities with the elders. Also, the art work may also enhance the

atmosphere of the clinical environment when the art work was used to decorate the elders' room. Regarding the self-image portrait, when students help elders create their self-portrait, this activity can promote elders recall memories about their past life and then increase the interaction between the students and the elders. Students will also be required to create their own self-portrait during CASBI training, as this activity may impact on students' inner self (Horneffer, 2006) and promote self-transcendence. Also, as Loftus (1998) stated that caring is a kind of love which involved offering self, nursing faculty may suggest that students share their self-portraits to initiate conversation between themselves and elders and then the students may also experience providing humanity nursing care.

Table 1

CASBI Activities and Examples of Students' Responses

Type of activity	Description	Students' comments—direct quotes
1. Monoprints for greeting cards, postcards, bookmarks, and small abstract paintings	A monoprint design is created when a person drops 3 or 4 hues of liquid watercolors on a flat surface (plastic, plexiglass, even a cookie sheet) and presses the paper on top of the drops. After drying, designs can be decorated with yarn, glitter, and images outlined with pen and ink	<p>“It was a pleasure. . . we made a bookmark and a postcard. I also talked to the elderly about what they should do during the day so they do not get bored.”</p> <p>“The elderly created thank you cards and ribbon gems. They were very active and found the interaction fun.”</p> <p>“I showed an elder how to make his own postcard. It was</p>

2. Ribbon Gems	These “hangings” are made from old greeting cards, different pieces of construction paper, or leftover watercolor paintings. Four-five double images are glued in a row back to back on ribbons. A top loop of ribbon provides a hangar to hang on a nail or from an IV pole or wheelchair.	interesting and we learned a lot from it.” “We did a painting by doing a color collage and framed it and placed it in his room. “It makes the elderly feel alive and gives meaning to their life.” “I learned how to relax and teach others to relax.” “I learned that the elderly like to do art activities and like to do different things.”
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Table 2

Suggested Ideas/Materials, Interview Guidelines, Useful tips, and Students' Response

Contents of suggestions	Description	Students' comments
Ideas/materials are used to promote memories and communication	<ol style="list-style-type: none"> 1. Joyful life stories and experiences. 2. Pleasant relationships-relatives, friends, neighbors, pets, etc. 3. Personal important events such as the elder's birthday, graduation, significant relationships, wedding, births of their children, etc. 4. Past pleasant activities such as holidays, traveling experiences, food preparation, family reunions, etc. 5. Fashions of yesterday and hobbies such as music, movies, books, sports, and old clothes-can use old magazines, old song, or pictures to prompt discussions. 6. Public topics such as elections, history, and politics-can use old newspapers and/or advertisements to prompt discussions. 	<p>“The elderly enjoyed talking about themselves. They felt good when I listened.”</p> <p>“It was a great experience and I enjoyed listening to their life stories.”</p> <p>“My feelings are the elderly love to talk about this past experiences.”</p> <p>“I learned that many elders lack people to talk to and interact with, I believe this would help with depression.”</p>
Interview guidelines are used to help the elders express themselves	<ol style="list-style-type: none"> 1. Could you tell me about 	

yourself?

2. Can you tell me about your family?
3. What about those relationships in your past were particularly meaningful to you?
4. Can you tell me about your wedding? (if married; if a person's spouse has recently died, you may want to wait on this)
5. Can you tell me about your children? (If the person has children).

Useful tips

1. Interact with the elders in an empathetic manner.
 2. Assess whether the length of the interaction is suitable based on the elders' response and attention.
 3. Monitor any unusual behaviors and have a plan to report anything that worries you.
 4. Ask open-ended questions to encourage the elders express themselves.
 5. Use communication skills such as focusing, reflecting, and restating to promote the interaction.
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6. Use direct questions to refocus back to important events if the elders go off the point.
 7. Think about how you will handle the situation if discussion of past events evokes sad memories.
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Table 3

Comparison of STS and RKAOP between FV group ($n = 11$) and CASBI group ($n = 11$)

	FV group				CASBI group			
	Pre-test		Post-test		Pre-test		Post-test	
	M	SD	M	SD	M	SD	M	SD
STS	47.91	4.68	50.00	4.22	50.91	2.26	51.18	4.87
RKAOP	80.73*	11.48	70.09*	16.79	68.45	13.43	64.91	16.83

Note. * $p < .05$

Pilot Study Two for the Dissertation Research

Design and Procedure

Based on experience from pilot study one, Chen and Walsh (unpublished manuscript) conducted the pilot study two “The Effect of a Creative-Bonding Intervention on Nursing Students’ Self-transcendence and Attitudes toward Elders” in a nursing home. This study used a quasi-experimental design with two groups of BSN students, a control group ($n = 19$) and an experimental group ($n = 26$). Two groups of Bachelor of Science (BSN) senior students were recruited in 2006. The course was the same as pilot study one and lasted a four week period. Group one students interacted with elders in community centers or day care centers based on the ordinary arrangement where the students were not given specific directions for the intervention. Thus, group one students served as a control group and the researchers gave the pre-test during the first class and the post-test at the final class (students had finished their clinical experience) as agreed by the teachers in charge of the course. The amount of time to be spent in community elder care centers was based on the course requirement and was similar to experimental group, but the student practicing in community elder care centers was not monitored by the researchers.

Group two students enrolled in the same required course for a subsequent four week period and served as the experimental group. The researcher gave the pre-test at the first class before clinical hours began. Then the students were arranged and divided into Tuesday group (12 students) and Wednesday group (16 students) to a nursing home based on the students’ schedule. The two researchers went to the nursing home both Tuesday and Wednesday working together with students and taking field notes. The students spent five hours in the nursing home one day per week for four weeks.

Intervention and Implementation of the CBI Process (nursing home site)

Following the institutional orientation with tapes, the researchers explained the CBI and showed the students several self-image examples. Then the researchers told the students they could design their future image and could bring this activity to introduce themselves to the elders and help them make a self-image if the elders wanted to do the activity. These students were also given handouts introducing several materials and communication suggestions which could be used for recalling the elders' pleasant events (see Table 2). The manager-clinical educator gave a guided campus tour and then she introduced the students to the elder she had chosen for each student interaction. Each student stayed with the elder to get to know him or her. Later, students came back to the conference room to finish their self-image project and discussed their questions and feelings for the first time. When students designed their self-image portrait, they talked and laughed together and showed excitement about the activity.

The second week the researchers also met with the students in the conference room first and distributed the art stuff to different tables that different groups of students could use for art work. The principal researcher shared the idea how she has integrated art in her nursing work. The students were encouraged to write down what their feelings are when they work with the elders using the art project and to write the stories they have learned from the elders. Then the researcher showed how to make a monoprint art activity by dropping several colors onto a piece of glass and then pressed a heavy piece of watercolor paper to mix the colors. It came out as an abstract image.

These students were encouraged to design the monoprint art activity on their own and practice to make a picture. They were also encouraged to try adding several colors to

decorate it after they made an abstract picture and they could “mount” the painting inside one of the pre-cut mats. Then the students could share their work with their elders and try to interact with them in creative ways, such as asking the elders, “Do you like this image? Can we make this together? What color do you like?” Students might ask their elder, “What do you see?” after they made an abstract image to encourage the conversation and then talk about the elders’ hobby and previous pleasant events.

During the third week, the researcher demonstrated to the students how to make a ribbon gem with several images for the students to choose. The students were taught to select any kind of image by cutting from old magazines or advertising and were encouraged to design the images by themselves. The students demonstrated diverse designs for the ribbon gems such as a big hand, big heart, big flower, and butterfly. The students then were encouraged to think about what they could do for the elders during their last week of visit and what gift of the art project they could give to the elders that may be good as a remembrance.

The students brought their art projects to visit their individual elders. The researchers also went to several units to visit the elders and also observed how the students interacted with the elders and checked if they needed any help. Then the students came back to the conference room and talked about what they did with the elders and stated how they enjoyed the art project and how the elders liked it.

The last week the researchers began by telling the students examples about how they could use the art project to promote the elders’ pleasant stories. Before the end of the clinical session, the researchers asked the students to give feedback about what they felt during accomplishing the art project with elders. After the end of the clinical session, the

students filled in the post-test questionnaires during their last class time.

Instruments

The socio-demographic questionnaire, Reed's (1991b) Self-Transcendence Scale (STS), Hilt and Lipschultz's (1999) Revised Kogan's Attitudes toward Old People statements (RKAOP) which were the same as pilot one study, and a revised post-test questionnaire were used. The Cronbach's alpha on STS for pre-test was .741 and for post-test was .734 in the pilot study two. Cronbach's alpha on RKAOP for pre-test was .753 and for post-test was .772.

Data analysis

Data analysis was conducted by SPSS 14.0 for Windows. Descriptive statistics were used for demographic variables. ANCOVA was used to compare group differences. The Pearson correlation was used to describe the relationship between STS and RKAOP.

Pilot Study Two: Results

Description of the Sample

Forty-five students completed both pre-tests and post-tests. The completion rate was 100%. The demographic data showed that the majority of participant students were female in the experimental group and the control group. Groups were some differences on demographic characteristics. In the experimental group, the 42.30 % of students were living with parents and the 23.10 % of students were living with spouse, while in the control group only 15.80 % of the students were living with parents and 15.80 % were living with spouse. The previous clinical mean hours in the experimental group were 10.52 ($SD = 20.30$), while in the control group were 3.16 ($SD = 13.76$). Regarding the ethnic background, 32% of students were Afro-American in the experimental group; while 10.5% of students were Black in the control group (others were similar).

The Findings

There were no significant differences on pre-test scores between groups on the STS and RKAOP. The experimental group had higher levels of self-transcendence scores (50.92; $SD = 4.00$) than the control group (48.53; $SD = 5.69$) with no significant differences between the two groups ($p = .183$). The experimental group had lower scores on RKAOP (64.38; $SD = 10.52$) than the control group (68.32; $SD = 11.88$) with no significant difference between the two groups ($p = .586$) indicating that the experimental group had a better attitude about elders on the pre-test (see Table 4).

The ANCOVA results showed no significant differences on post-test scores of STS and RKAOP between the two groups.

Hypothesis

The research hypothesis, “Students who participate in the experimental group will have greater self-transcendence and more positive attitudes toward elders than students who were in the control group,” was not statistically supported. Similar to pilot study one, comments on students’ post-test questionnaires revealed students’ and elders’ positive responses to the CBI and they enjoyed the art intervention. The researchers also recognized that the elders benefited from the art intervention. Students’ feedbacks and elders’ responses are described in the following paragraph.

Students and Elders’ Feedback toward the CBI

During the art introduction session, these students made a lot of different designs with lots of laughter and shared their creative images with each other. When students made their future self-image portrait, they laughed and showed interest in this activity. These students enjoyed designing different beautiful pictures and some of them almost

forgot that they had the responsibility to interact with elders with the art projects.

One time the researchers went with two students to visit an elder at her bedside. The elder was on the phone and asked us for a pen in an impatient way and knocked on the table because we could not find a pen quickly. After she finished the phone call, the researcher showed her a monoprint picture and invited her to make one. Then the researchers showed her how to make it and encouraged her to do it. The elder revealed a friendly smile when she looked at the abstract image she did. Her emotion really changed dramatically when she conducted the art activity. It was amazing to see how the art project was helpful in the nurse-patient interaction and soothed the annoyed patient.

After the students shared the art project with the elders, one student stated, “My elder did art with us and then shared her family history. She made two cards for her grandchildren and . . . then she put the art work in the memory box . . . when she was encouraged she talked . . .” Another pair of students shared, “Our elder was willing to do some art work . . . at first she was very quiet and shy but . . . she began to open up . . . very friendly. We filled her memory box with her art work.” Some students said they enjoyed the art project and their elders also enjoyed it, and stated that it was a way to give the elders more control over their activities.

Other comments provided on the post-questionnaire were: “During my experiences of doing art with the elderly...they were so excited to do our activities and expressed their gratitude in the time we spent with them,” “I had a great time. I learned that something as simple as art can cheer someone’s spirits significantly.” One student shared in his journal, “. . . to describe the feeling I get when I finish working with the elderly patient: fulfillment . . . I feel I had a certain connection with them with the art project . . .

I have been able to raise their spirits”

Although most students stated that they enjoyed bring the art activities to interact with the elders, several problems appeared during the study. One student said the elders living in the nursing home have had lots of activities, so the art project has to compete with other activities for the attention of the elders. The researchers also have found the problem that this project may be more helpful for elders who are bound in beds because they should have someone to work with them at the bedside or in a long-term facility where there are fewer structured activities in place.

Pilot Study Two: Discussion

The results that showed no significance between the experimental and control groups were not surprising because most of the students in the experimental group did not build a bonding relationship with their elders nor did they feel they had made contributions to the elders. There were several problems during the delivery of the interventions which were then addressed when planning for the methods of the dissertation. First, the students spent lots of time conducting the art project with their peer groups in the conference room even though the researchers reminded them to visit their elders the students did not want to stop their own art activity.

For the dissertation plan, the researcher introduced the art project to students on a separate day and well before the students delivered the CBI or FV to elders at the long-term care facilities. During this research’s dissertation research the researcher conducted the intervention workshop in the students’ classroom because it should be a big place for 50 students who could conduct the art activities together in the team work. For the future if a nursing school can provide an enough space to equip the art supplies

and provide tables for practicing the art activities, it may be valuable for students because not only can students use this space to learn and practice the art activities, but also can the students use the activities to help them relieve stress as nursing students reported in the Walsh et al. (2005) study.

Another problem in this pilot study was that the study nursing home had a tight activity schedule for the elders; thus, the students had to compete for the elders' time and attention; therefore, the students did not really have structured time to bond with the elders nor did they feel they contributed to these elders with the creative intervention. Due to these results, the researcher selected two long-term care facilities for her dissertation where residents had few or no structured activities. For the dissertation the researcher also confirmed schedules of elders prior to student visitation and selected elders for participation that would be available and likely to need students' assistance.

Third, the four week time frame allotted for the pilot work may not have been enough for students to bond with elders, especially since many times there were conflicts between the students' and the elders' schedules. In the pilot work, the students in the control group did spend more time with their elders when compared to the experimental group in this study based on the students' comments on the post-test questionnaire. It is important to help students have enough time to interact with the elders during each visit. Findings that the most frequent topics stated by the voluntary students were “. . . having positive emotional experience . . . bonding closely with a resident.” (p. 490; Angiullo et al., 1996)

Both pilot studies had similar findings as increased time with elders and different cultures appeared to have an impact on the students' self-transcendence and attitudes

toward elders. In the second pilot study, the experimental group of students had a higher level of pre-test score on STS and more positive attitudes toward elders than those in the control group and these students in the experimental group had more previous clinical hours than students in the control group. Also, in the experimental group 32% of students were Afro-American, while 10.5% of students were Afro-American in the control group. Several studies also have found that increased clinical hours may have positive impact on students' attitudes toward elders (Fox & Wold, 1996; Sheffler, 1995; Soderhamn et al., 2001). However, Haight et al. (1994) found the students had a positive change in year 1 but slowly decreased the following year. Happell (2002) reported that the students' preference of career choices of working with elders had a significant decline during the nursing education process. Thus, it may be important to increase clinical hours with innovative ways to help students increase interest in elder care. Based on the findings related to culture, it should be noticed when the researcher conducted the study in different cultures.

Completion of the self-portrait art-activity by students and elders may help students connect to their inner selves (Horneffer, 2006) and help students build a bonding relationship with the elders. However, many students in this pilot study chose not to implement the self-image portrait with their elders due to the problems related to time and schedules as discussed earlier. Recommendations that were considered for the dissertation included: (1) prolonging the delivery of the intervention to more than four weeks; (2) having more structure for delivering the interventions with larger numbers of students; (3) structuring the art-making with conversation guidelines to be used for helping elders recall past pleasant events and improve interaction between the students

and the elders; (4) arranging enough time in nursing homes where have fewer structural activities for the students to build a meaningful relationships with elders and to provide more contributions to them; (5) integrating the intervention into a related gerontological course before students' clinical practice then students may advance their clinical practice experience by using the art activities to interact with the elders.

Pilot Study Two: Conclusion

There is an increased need for nurses who are willing to care for a growing elder population. Even though the two pilot studies were limited to a small sample size, and did not have significances between two groups, CBI students' comments and the elders' responses provided support that the introduction of creative art activities to the nursing students is valuable. The art intervention not only can help the students enhance a bonding relationship with the elders to help them make more contributions through the creative way, but also can help students get insight to life and promote the students' growth. Then the students may develop an altruistic view of elders and become more positive view about elder care. Also, student comments following both pilot studies supported that the CBI with conversation guidelines may help students convey loving, creative, and humanistic care to the elders. This approach may then provide an additional approach to promote students' self-transcendence Therefore, during the researcher's dissertation the CBI was delivered with a structured conversation guideline in two long-term care facilities where students did not have to compete with other activities of elders. During the dissertation the researcher tested further the theory of self-transcendence and used the CBI model which she expected would promote self-transcendence and positive attitudes toward elders in nursing students. Results from

both pilot studies suggested that further research in nursing education and practice or other health care professions is needed.

Table 4

Comparison of STS and RKAOP between the Control group ($n = 11$) and Experimental group ($n = 26$)

	Control group				Experimental group			
	Pre-test		Post-test		Pre-test		Post-test	
	M	SD	M	SD	M	SD	M	SD
STS	48.53	5.69	51.21	3.97	50.92	4.00	51.92	5.13
RKAOP	68.32	11.88	66.37	12.39	64.38	10.52	61.84	12.92
The willingness of caring for elders	6.06	1.92	8.11	1.44	7.96	2.13	8.05	1.86

Design of the Dissertation Study

The researcher used a quasi-experimental pre-test and post-test design (see Table 5) to determine the effect of the Creative-Bonding Intervention (CBI) on nursing students' self-transcendence and attitudes toward elders. According to Kerlinger and Lee (2000), if the expectation of a true experimental design is compromised in any way, an intervention study should be designated as a quasi-experimental design. Even though the CBI was an intervention, and the CBI was compared to a FV (control) group, true randomization was not possible; therefore, the design used was quasi-experimental. The primary research methods used were tests and measurements; open-ended questions and field notes made were used as additional methods to understand students' experiences and responses about the intervention (Glatthorn & Joyner, 2005). The level of self-transcendence of nursing students and their attitudes toward elders were compared between two groups, an experimental group that participated in the CBI, and a Friendly Visit (FV) control group that conducted friendly visits with elders (talking and listening to elders without art activities). In order to prevent contamination between student groups and elders, the researcher assigned CBI student groups and FV student groups to elders residing on different wards or different floors with the same type of elders divided between CBI and FV students.

Table 5 *

Quasi-experimental Design with two Groups ($N = 196$; CBI = 100; FV = 96)

Group	O ¹ (Pre-test)	X (Intervention)	O ² (Post-test)
One, Experimental, CBI	Socio-Demographic questionnaire; STS; RKAOP	X = eight-week CBI = Class, art-activity participation, group work and long-term care experience with elders by art activities.	Post-test questionnaire; STS; RKAOP
Two, Control, FV	Socio-Demographic questionnaire; STS; RKAOP	X = eight-week F V = Class, group work, and long-term care experience with elders without art activities.	Post-test questionnaire; STS; RKAOP

Note. STS = Self-Transcendence Scale; RKAOP = Revised Kogan Attitude toward Older People Scale. CBI = Creative-Bonding Intervention; FV = Friendly Visit

* A detailed CBI and FV intervention plan, and group work plan is shown in Tables 6, 7, and 10.

Participants and Settings

One nursing school and two long-term care facilities were utilized by the researcher as a matter of convenience, as the researcher had access to Associate Degree nursing students in a five-year junior college and to elders in two long-term care facilities.

Nursing School

The research was conducted in a national institute of nursing, which is a five-year junior nursing college located in Southern Taiwan. In Taiwan, students complete their mandatory studies at around 16 years of age. At this time students may choose to study

nursing. The educational plan for nursing students that is currently available in Taiwan is a five-year “junior college” program, which in the U.S. would be roughly equivalent to the last three years of high school plus two years of community college. There are four graduating classes (about 50 students in each class) each year for the 5-year junior college in this school. In total, there are 18 weeks in each semester with one week for mid-term examination and one week for final examination for the curriculum schedule in Taiwan. The school focuses on educating the students to qualify as excellent clinical nurses.

Inclusion Criteria for Nursing Students

The participants for this study included all the fourth year nursing students of the five-year junior college program (196 students distributed into four classes with the number 50, 50, 47, 49 in each class; age = 18 or 19 years old). These nursing students took a required long-term care course in the fall semester, which began September, 11, 2006. The creative-bonding intervention (CBI) and friendly visit (FV) intervention were part of the course assignment as agreed upon previously by the teacher Ms. Hsieh and a teaching director in the school.

Long-Term Care Facility

The researcher arranged for two groups (four classes) of senior nursing students to interact with elders in two long-term care facilities (called long-term care facility A and B). Long-term care facility A is Catholic-based. A nun, called the President, directs this facility. This long-term care facility provides about 110 beds for elders who lack family and who are poor. There are licensed nurses, assistant nurses, social workers, consultants, and dietitians taking care of these elders. Long-term care facility B is a private long-term

care facility managed by a doctor, titled President (a nurse, titled Director, in charge of the wards older residents living there). This long term care facility provides 150 beds for elders who are dependent. Licensed nurses, assistant nurses, social workers, dietitians, and nursing students provide care to these elders.

Prior to implementation of this study, the researcher obtained permission for the study from the presidents of the two long-term care facilities (See supportive letters in Appendix H) and went to the two long-term care facilities to become familiar with these elders and explained the intervention to the elderly residents. Then the researcher invited those who were 65 and over, who could communicate with others, and who liked to work with students to participate in the intervention. As is the case for any clinical assignment, any elders expressing a desire not to be assigned to a student pair were eliminated from the assignment. Elders were not a part of the research protocol. There were 48 elders in the long-term care facility A and 49 elders in the long-term care facility B who participated in interacting with the students.

Power and Sample Size

This study examined the difference between two groups. Due to the small numbers of students in the pilot studies and the use of convenience samples from a different culture than the students in this dissertation study, the researcher did not calculate the effect size based on the two pilot studies. Gillis and Jackson (2002) suggested that the realistic expectation of the effect size for nursing studies is .20 to .40. The researcher set the effect size for .25 in the dissertation study. When one uses ANCOVA in this study, when alpha is .05 and power = .80 and effect size = .25, and two groups were compared, the sample size needed for each group is 64 (Cohen, 1988). In this study, 100 students in

CBI group and 94 students in FV group completed the pre-test and post-test and thus the G power is one.

Ethical Considerations

The ethical procedures were considered carefully. The study was reviewed and approved by Barry University's Institutional Review Board (IRB). This researcher requested an exempt review because the study was conducted in commonly accepted educational settings, was part of an ongoing course, and promoted the education of students during a regularly scheduled course. The researcher gave a cover letter to the students and explained the purpose of the study, possible benefits, and risks to them. Then the researcher invited the students to participate in the study. Students were informed that information on all data collected would remain anonymous. The researcher explained that the clinical work and the intervention would be considered as part of the course assignment, but they could refuse to complete the research instruments and therefore would not be considered research participants.

All students received research packets and students indicated their participation when they had completed packets (with anonymous I. D. numbers chosen by students and non-participants returned blank instruments but no students returned blank questionnaires). Students were also being assured that non-participation would not affect their grades nor had any adverse impact on their coursework. The course teacher was not present during any recruiting procedures. This researcher was not part of any grading process. All of these procedures were explained verbally to all student groups and were written in the cover letter (see Appendix I) which was included in the sample packet of research instruments.

There are no known risks related to students' participation in this study. Students'

participation in this study might promote their knowledge about elders, long-term care, self-transcendence, and further our knowledge about attitudes toward elders and self-transcendence in nursing students. The CBI might provide the students with new ideas about interactions with elders. Raw data were kept in a safe place and only the researcher and the chair of the researcher's dissertation and the researcher's committee members (Dr. Broschard and Dr. Lindgren) have access to the data. The data will be stored for five years and coded by identification numbers that students chose themselves.

The findings were presented in an aggregate form and were expected to be used for presentation and publication to promote scientific knowledge in nursing. To control for researcher presence, the researcher spent equal amounts of time per week with CBI and FV groups during the eight-week implementation of the intervention. Students in the FV group were wait-listed for the CBI and were given the opportunity to learn the CBI art activities in a workshop conducted by the researcher after post-tests. These students had been administered CBI during an arranged time with handouts and art supplies.

Procedures

Based on experiences and findings from the two pilot studies, the researcher conducted the dissertation research during an eight-week plan, integrated the intervention into a long-term care course, and compared the levels of self-transcendence and attitudes toward elders between two groups, an experimental (CBI) and a control (FV) group in Taiwanese nursing students. The procedures were as follows.

The president of the college of nursing, the director of teaching affairs and the teacher in charge of the long-term care course were contacted to discuss these ideas and the researcher received permission to recruit the students for the study and to carry out

this study as described (see supportive letters in Appendix H). The researcher discussed the details of the plan with the teacher in charge of the long-term care course. After the approval of Barry University's Institutional Review Board (IRB), the researcher implemented the protocol with nursing students in Taiwan. The procedure to protect students has been explained earlier in this chapter.

Before class began, the researcher scheduled a time (during the registration day agreed upon by the students) to explain the research study in each class and gave a cover letter to the students inviting them to participate in the study. The researcher gave pre-tests packets to all students (participant students selected their own ID number) and students who agree to participate in the research study returned completed packets and those who did not want to participate returned packets with information not completed.

After pre-tests, the researcher randomized the four classes of students into two groups, an experimental group (CBI) and a control group (FV), interacting with elders as part of the course assignments. The CBI and FV groups were randomly assigned to two long-term care facilities where each student pair spent two hours every week for six weeks with an assigned elder. Thus, 97 students went to long-term care facility A, and 99 students went to long-term care facility B every week during different schedule time for six weeks (see Tables 8 and 9 for a weekly plan for each class). After delivering either the CBI or FV intervention, all students received the post-test using the same ID as they had used on their pre-test. If students forgot their pre-test number, the researcher provided students with a list of numbers as a reminder and all students that were available to complete post-tests were able to identify their original ID numbers.

The Intervention

The Creative-Bonding Intervention (CBI) utilized a variety of art activities to promote interaction between nursing students and elders. Students were encouraged to use elements of the CBI and activities completed to help elders recall fond memories of their lives and to share such pleasant stories with the students. During CBI, the students were: (1) introduced to art activities based on suggestions in Appendix J, (2) were shown examples of each activity, (3) were given the opportunity to complete the art activities themselves, and (4) were introduced how to use these art activities to promote elders' good memories of their lives. Table 2 lists interview questions that were expected to provide an environment to promote student attention, listening, and a structure to assist students in evoking memories in elders. These questions were designed from a review of reminiscence and life review literature (Burnside, 1990; Cook, 1998; Harris, 1997; Heliker, 1999, Stinson & Kirk, 2006; Wang, 2004; Wang, Hsu, & Cheng, 2005).

Initially, students made an ideal self-image poster for their nursing career that they eventually would share with their team members in class at the end of the study. These posters were completed during the six-person first group meeting which promoted cooperation and sharing ideas with each other (see Tables 6, 7, and 10 group discussion outlines). Students were then asked to complete similar activities with elders in the long term care facility to promote student-elder bonding (see Table 6). Other art activities were introduced in a similar manner either during group meetings or during other class time. It was expected that the CBI activities would provide a bridge to enhance communication between the student pairs and the assigned elder. The researcher also suggested that the art activities students used might promote good feelings that are important and

meaningful in the lives of the elders. The CBI outcomes, that is, the art objects created, would also demonstrate visually what students might have contributed to the elders. The art would also be displayed during the class presentation and would serve as an example of an innovative way for students to learn each other.

Students were encouraged to exhibit the art project results on the elders' bedside walls which were expected to promote additional communication between the elders and others who viewed these art creations as well as improve the atmosphere in the elder's room. Throughout the project it was expected that the various activities between students and elders and between students during small group work would help students to share ideas and experiences and that students' self-transcendence and attitudes toward elders might be affected during these processes.

From suggestions and results of the pilot work, the CBI tested in this dissertation was extended (from four weeks to eight weeks) and implemented in eight weeks. The CBI plan is shown in Table 6. The FV plan in which students communicated with elders without art activities is shown in Table 7.

Table 6

CBI Plan (Week # 1-8 in left column)

Phase	Times and Remark	Specific Plan
Pre-orientation Phase: Pre-test and Introduction	After randomization, prepared students for the CBI work (before class began).	<p>(1) Students in each class were divided into pairs to work with one elder, and these pairs were combined to form groups of six students (a team) that participated in team group work</p> <p>(2) Students in each class were randomized into two parts, one part was going to long-term care facility A and another part was going to long-term care facility B.</p> <p>(3) The researcher showed self-image posters to students and instructed them to think about what ideal self-image they have in nursing career and to prepare materials and photographs that were helpful for making a future ideal self-image poster for the first class meeting.</p> <p>Students also were encouraged to:</p> <p>(4) Collect materials which would promote elders' pleasant experiences and were advised to think about what experiences they had with elders.</p> <p>(5) Think about how the elders like to talk about their pleasant experiences and stories, and how these ideas could be used to help the elders feel better and what the students could learn from the elders' experiences.</p> <p>(6) Share ideas with their team members about the group discussion guidelines outside the class time.</p>
1 Orientation Phase	1. Art workshop was offered to students in the first class meeting and team members worked together. (class time; in class)	<p>(1) The researcher and an assistant instructed students on how to make an ideal self-image poster, and the researcher also provided materials and "body images" for students' selection.</p> <p>(2) Provided time for students to create and discuss their ideal self-image poster in nursing career in the teams and to share "who they are now," and "who they hope to be in the future," and "what some things are meaningful in their life."</p> <p>(3) Then the students were encouraged to discuss</p>

2-5 Implement- ation Phase of Intervention	2. Orientated students to the long-term care facility and to know their elder. (two hour class time in long-term care facility)	how to help elders make a dream self-image poster. (4) Students shared their experiences about elders with team members and were encouraged to share how to use an art project to promote elders' pleasant stories and how they could add something valuable to these elders. (5) Students were informed where they could get on bus going to the long-term care facility A and B based on what they had been assigned for the second class time (the researcher arranged the transportation bus to take all students to each long-term care facility).
	3. Interacted with elders by sharing and making a self-image poster and using the self-image poster to talk about the elder's pleasant experience. (two hour class time in long-term care facility)	(1) Students were orientated to the long-term care facility. (2) Pairs were assigned an elder (3) Pairs introduced themselves to elders (4) Students shared their self-image poster with elders and got to know their elders by asking about the elder's experiences in their childhood, such as "what's fun?" "What's dream he or she had?" and invited the elder to make a self-image poster together. (1) Students helped the elder make a self-image poster in the long-term care facility art class or bed-side and talked to them about their dreams, personal history such as birthday and graduation, and. pleasant relationships such as relatives, neighbors, friends, colleagues, pets, etc. (2) Students were encouraged to contact the elder's family or friends to encourage them to bring some photographs or any materials which could be included on the poster to promote pleasant experiences. (3) Students were introduced to monoprints and were encouraged to create different images with team members.
	4. Interacted with elders by making a self-image poster and monoprints to share about their hobbies and favorite things. (two hour class time in long-term care facility)	(1) Students could ask elders about their favorite colors and helped the elder make a monoprint. (2) Then students could use monoprints to talk about the elders' favorite colors, images, hobbies such as paintings, movies, books, sports, old songs

		(3) Introduced ribbon gems to students and encouraged them to collect from magazines or to design different images with team members and brought to their elders.
	5. Interacted with elders by making ribbon gems and talking about favorite activities. (two hour class time in long-term care facility)	(1) Students could ask elders what image the elders like (2) Then the students and their elder could listen to old songs and made ribbon gems together and talked about the elders' favorite activities such as festivals, holidays, and travels-could also used other suitable materials to initiate the conversation.
6-7 Termination Phase of Intervention	6. Prepared for ending by helping their elders getting to know each other. (students' volunteer time in long-term care facility)	Pairs brought their elders to talk together and to share their self-images poster, and talked about their past pleasant events, and listened to old songs.
	7. Happy ending: listened to old songs and shared cake and their art work together (Students' volunteer time in long-term care facility)	(1) Pairs brought their elders to talk together, to share their monoprints and ribbon gems, listened to old songs, and enjoyed cake. Then said good bye. (2) Students could use these art work to decorate the elder's room
8 Presentation	Group presentation in class (class time; in class)	Group presentation: Each group presented their ideal self-image, experience of interaction with elders, what they had learned from the elders, feelings of being in the long-term care facility, and what meaning they define for nursing, and what they had learned each other in the group work..
9 Post-test	Arranged a time agreed by students outside the class time	Gave post-test.

Table 7

FV Plan (Week # 1-8 in left column)

Phase	Times and Remark	Specific Plan
Pre-orientation Phase: Pre-test and Introduction	After randomization, prepared students for the FV work (before class began).	<p>(1) Students in each class were divided into pairs to work with one elder, and these pairs were combined to form groups of six students (a team) that participated in team group work</p> <p>(2) Students in each class were randomized into two parts, one part was going to long-term care facility A and another group was going to long-term care facility B.</p> <p>Students were encouraged to:</p> <p>(3) Think about what ideal self-image they have in nursing career and shared with team members.</p> <p>(4) Collect materials which would promote elders' pleasant experience and were advised to think about what experiences they had with elders.</p> <p>(5) Think about how the elders like to talk about their pleasant experiences and stories, and how these ideas could be used to help the elders feel better and what the students could learn from the elders' experiences.</p> <p>(6) Share ideas with their team members about the group discussion guidelines outside the class time.</p>
1 Orientation Phase	1. Shared ideas in the first class meeting and team members worked together. (class time; in class)	<p>(1) The researcher and an assistant instructed students to share what ideal self-image they have with team member.</p> <p>(2) Provided time for students to discuss their ideal self-image in the teams and share "who they are now," and "that they really hope to be in the future," and "what some things are meaningful in their life."</p> <p>(3) Then the students were encouraged to discuss how to help elders share their dream with the students.</p> <p>(4) Students shared their experiences and feelings about elders with team members and were encouraged to share how to use useful materials to promote elders' pleasant stories and how they</p>

2-5 Implementat ion Phase of Intervention	2. Orientated students to the long-term care facility and to know their elders. (two hour class time in long-term care facility)	could add something valuable to these elders. (5) Students were informed where they could get on bus going to the long-term care facility A and B based on what they had been assigned for the second class time (the researcher arranged the transportation bus for all students to long-term care facility).
	3. Interacted with elders by sharing and talking about the elder's pleasant experience. (two hour class time in long-term care facility)	(1) Students were orientated to the long-term care facility. (2) Pairs were assigned an elder (3) Pairs introduced themselves to elders (4) Students got to know their elder by asking about the elder's experiences in their childhood, such as "what's fun?" "What's dream he or she had?" (1) Students talked to the elder about their dreams, personal history such as birthday and graduation, and. pleasant relationships such as relatives, neighbors, friends, colleagues, pets, etc. (2) Students were encouraged to contact the elder's family or friends to encourage them to bring some photographs or any materials which could be used to promote pleasant experiences.
	4. Interacted with elders by sharing about their hobbies and favorite things. (two hour class time in long-term care facility)	(1) Students could ask elders about their favorite colors and pictures. (2) Students could talk about the elders' favorite colors, images, hobbies such as paintings, movies, books, sports, old songs (3) Advised students to collect old magazines or newspapers which could be as a tool to promote conversation.
	5. Interacted with elders by talking about favorite activities. (two hour class time in long-term care facility)	(1) Students could ask elders what pictures the elders like (2) Students and their elders could listen to old songs and talked about the elders' favorite activities such as festivals, holidays, and travels-could also use other suitable materials to initiate the conversion.
6-7 Termination Phase of	6. Prepared for ending by helping their elders getting to know each other.	Pairs brought their elders to talk together and to share their past pleasant events and experiences, and listened to old songs together.

Intervention	(students' volunteer time in long-term care facility)	
	7. Happy ending: listened to old songs and shared cake and their experiences together (Students' volunteer time in long-term care facility)	Pairs brought their elders to talk together, share their experiences, listen to old songs, and enjoy cake. Then said good bye.
8 Presentation	Group presentation in class (class time; in class)	Group presentation: Each group presented their ideal self-image, experience of interaction with elders, what they had learned from the elders, feelings of being in the long-term care facility, what meaning they define for nursing, and what they had learned each other in the group work.
9 Post-test	Arranged a time agreed by students outside the class time	Gave post-test.

Table 8

Weekly Time Plan for the CBI Group

CBI Experimental Group (100 students)			
Class 1 (50 students; Time 1)			
Long-term care facility A		Long-term care facility B	
12 students with 6 elders: Assistant 1 give support	14 students with 6 elders: Assistant 2 give support	12 students with 6 elders: Assistant 3 give support	12 students with 7 elders: Assistant 4 give support
Class 2 (50 students; Time 2)			
Long-term care facility A		Long-term care facility B	
12 students with 6 elders: Assistant 1 give support	12 students with 6 elders: Assistant 2 give support	12 students with 6 elders: Assistant 3 give support	14 students with 7 elders: Assistant 4 give support

Table 9
Weekly Time Plan for the FV Group

FV control group (96 students)			
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Class 3 (47 students; Time 3)			
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Long-term care facility A		Long-term care facility B	
12 students with 6 elders: Assistant 1 give support	11 students with 7 elders: Assistant 2 give support	12 students with 6 elders: Assistant 3 give support	12 students with 7 elders: Assistant 4 give support

Class 4 (49 students; Time 4)			
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Long-term care facility A		Long-term care facility B	
12 students with 6 elders: Assistant 1 give support	12 students with 7 elders: Assistant 2 give support	12 students with 6 elders: Assistant 3 give support	13 students with 7 elders: Assistant 4 give support

Table 10

Team Discussion Guidelines for CBI and FV Group (six students)

Phase	Times and Remark	Specific Plan and suggested discussing topic
1. Orient ation	1 Team group work in class	As CBI and FV plan (See table 6 and 7)
2-5 Imple mentat ion Phase	2 Team group work in the long-term care facility or outside of class.	(1) Imagine one day if you get older and become dependent, living in a long-term care facility; what kind of help would you hope for from others? (2) What can you do to help elders enjoy life while they are confined to a long-term care facility? (3) How can you contribute to elders by creative work? (4) How can you help each other to improve interacting with elders and speaking in Taiwanese?
	3 Team group work in the long-term care facility or outside of class.	(1) What losses do these elders face? (2) What are the elders' needs while they are living in a long-term care facility? (3) What difficulties you have faced during the interaction with elders and how to improve the interactions with them? (4) What are better ways to talk and listen to elders?
	4 Team group work in the long-term care facility or outside of class.	(1) Does caring for the elders have any particular meaning to you? (2) Do you think you add something valuable to the elders and yourself during your visits with elders? If yes, what is for this? (4) What meaning does nursing have for you?
	5 Team group work in the long-term care facility or outside of class.	(1) What do you perceive about the elders' feelings while you interact with them? (2) What are your feelings as you care for the elders? (3) Do you notice any changes in yourself during the process?
6-8	6-7 Team group work in long-term	6-7

Termin	care facility	Prepare for presentations in class.
nation	(students did the group work each	
Phase	week after interacting with elders)	
	8 Team group presentation in class	Presentation and giving feedback to other teams.

Data Analysis

The Statistical Package for the Social Science (SPSS) version 13.0 for Windows was utilized for the quantitative data analysis. A significance level (alpha) of $p = .05$ was used. Univariate analyses were used for checking the data before performing the advanced analyses, which examined the distribution and variability of the data to examine the data and describe the sample. The outliers and missing data were examined and dealt with carefully. Examining if the data distribution fit in with the assumptions of the selected statistics was the first important step (Mertler & Vannatta, 2005; Munro, 2005).

Reliability and Validity

A Mandarin Chinese version of Reed's (1991b) Self-Transcendence Scale (STS) and the Hilt and Lipschultz's (1999) revised Kogan's Attitudes Towards Old People statements (RKAOP), were used for the study. Before conducting this study, STS and Hilt and RKAOP were translated into Mandarin Chinese by the researcher and another Taiwanese bilingual expert and then back-translated by other bilingual experts. Then the two Mandarin Chinese instruments were evaluated by five Taiwanese experts who are familiar with Taiwanese culture, gerontology, and the concept of self-transcendence for the content validity and also by several students for face validity. During the verification procedures, editorial changes were made and then the two instruments were back-translated again. The final version was forwarded to Barry University's Institutional Review Board (IRB). A Mandarin Chinese version of Reed's (1991b) STS and the Hilt and Lipschultz's (1999) RKAOP were used for the first time with nursing students to understand their self-transcendence and attitudes toward elders in Taiwan. Therefore, internal consistency for these two measurements was conducted for the first time in a

Taiwanese nursing student population.

Descriptive Analysis

Descriptive statistics were used to describe the socio-demographic data of participants and the distribution of scores of measurement. The information included frequency, percentages, central tendency (i.e., means, medians), and measures of variability (i.e., range, standard deviation).

Correlation Analysis

Pearson correlation statistics were used to examine the relationships between self-transcendence and attitudes towards elders.

Group Comparison Statistics

The statistics methods used were based on the level of measurement and distributions of variables. Chi-square tests were used to test whether there were differences among socio-demographic variables (nominal-level data; i.e., religious affiliation, and family structure type) and independent *t* test was used to test continuous variables between two groups. McNemar tests were used for the nominal data and Paired-Samples *t* tests was used for the continuous variables. To Test the effectiveness of the CBI intervention, ANCOVA was used for H1 and H2 to understand if there were any differences between the mean score of self-transcendence and attitude toward the elders between two groups after the intervention (groups were randomly assigned by class unit). Pre-test differences were controlled for when examining the post-test scores and this was done by using ANCOVA. Since previous elderly contact may be a confounding variable, it was measured. If there were differences between two groups, differences were controlled statistically.

CHAPTER FOUR

Findings of the Inquiry

Introduction

As discussed in chapter one, the population of elders continues to grow worldwide (U.S. Census Bureau, 2006), including increased numbers of elders in Taiwan (MOI, 2006; Council for Economic Planning and Development, Taiwan, 2006). Future nurses are faced with challenges of caring for these elders, yet few young nurses choose to work with elders. The purpose of the quasi-experimental pre-test and post-test study was to examine the effect of a Creative-Bonding Intervention (CBI) on nursing students' self-transcendence and attitudes toward elders in Taiwan and compared the CBI student group with a Friendly Visit (FV) control student group.

Data obtained included: (1) the socio-demographic questionnaire; (2) the Chinese version of Reed's (1991b) Self-Transcendence Scale (STS); (3) the Chinese version of Hilt and Lipschultz's (1999) revised Kogan's Attitudes towards Old People (RKAOP) statements; (4) the post-test questionnaire.

The results of data analyses presented in this chapter begin with a report of preliminary data analysis. This is followed by a report of the reliability and validity of the Mandarin Chinese version of the Reed' (1991b) STS and Lipschultz's (1999) RKAOP. Then the descriptive results about answers to questions that were included on the socio-demographic questionnaire, STS, and RKAOP are presented. These additional questions were asked both pre-delivery and post-delivery of the CBI or the FV intervention. The descriptive data analysis is followed by statistical data analysis discussion which is presented related to the three research hypotheses. The statistical data

analysis was conducted to determine the effects of the CBI and FV intervention.

Preliminary Data Analysis

One hundred ninety-six students enrolled in a long-term care course participated in the study. In the CBI group all students ($n = 100$) completed the post-tests, and in the FV group 94 students completed the post-tests. Two students from the FV group did not complete the study as one student quit school and one student's post-test was not returned.

Before conducting advanced statistics, all raw data were examined using the descriptive statistics to check the accuracy of the data and to assess if the data distribution fit the assumptions of statistics used (Mertler & Vannatta, 2005; Munro, 2005). After assessing the variability, the symmetry, and using the box plot to explore the data, the results showed that several kurtosis coefficients were more than two. For normal distribution the kurtosis coefficients should close to zero but can range between -1 and +1 (Mertler & Vannatta, 2005). Several extreme data distributed in both groups might be the cause of high value of kurtosis; thus, the researcher recoded several of the highest extreme values to the next-highest extreme values as suggested by Mertler and Vannatta (2005) and Munro (2005). Following the recoded data, the data were explored again. The kurtosis coefficients all ranged between -1 and +1, which indicated a more normal distribution (Mertler & Vannatta, 2005).

After managing the data, the researcher re-ran the statistics and compared the results between the original data and the transformed data. While the significant values had a minor change, the transformation data did not change the findings. Therefore the results of the transformed data are presented.

A chi-square test was used to examine whether the students in these two groups differed significantly in religious affiliations, family structure, interaction experience with elders, the decision making process for studying nursing, and their satisfaction with studying nursing. An independent *t* test was used to test if there were significant differences on STS, RKAOP, and the level of willingness to care for elders before delivering the intervention in two groups. The results showed no significant differences between the two groups on the demographic data and the baseline dependent variables of STS and RKAOP.

Reliability and Validity of the Measurements

Following the STS and RKAOP were completed by 196 Taiwanese nursing students. The Cronbach's alpha of the Mandarin Chinese STS pre-test was .791 and the Guttman Split-Half Coefficient was .714. The Cronbach's alpha for the Mandarin Chinese RKAOP pre-test was .858 and the Guttman Split-Half Coefficient was .773. The STS and RKAOP post-test was conducted with 194 students. The post-test results showed that Cronbach's alpha was .775 and Guttman Split-Half Coefficient was .652 for the STS, and the Cronbach's alpha was .877 and the Guttman Split-Half Coefficient was .812 for the RKAOP.

Descriptive Results

Demographic Characteristics of the Sample

All participants were unmarried females (the school only recruits female students), and all were 18 or 19 years old. For religious affiliation, the majority of students reported folk religion (49 % in CBI group and 47.9 % in FV group) followed by no religion in both groups (see Table 1). When students were asked to choose one family structure type

that they have had for the longest time, the majority of students chose living with parents only (76% in the CBI group and 84.4% in the FV group; see Table 11).

Table 11
Demographic Characteristics of the CBI and the FV groups

	CBI group (<i>n</i> =100)		FV group (<i>n</i> = 96)	
	Frequency	Percentage	Frequency	Percentage
Age				
18	68	68.0	66	68.8
19	32	32.0	30	31.3
Gender				
Female (all unmarried)	100	100.0	96	100.0
Religious Affiliations				
Folk religion	49	49.0	46	47.9
Buddhism	10	10.0	9	9.4
Christianity	10	10.0	9	9.3
No religion	25	25.0	28	29.2
Other	6	6.0	4	4.1
Family structure type				
Live with parents only	76	76.0	81	84.4
Live with parents and grandparents	23	23.0	13	13.5
Other	1	1.0	2	2.1

Note. Chi-square showed no significant difference between two groups.

More than 88.5% of students in both groups had had experience interacting with elders. When students were asked if they had lived with elders more students in the CBI group (70%) had lived with elders than students in the FV group (61.1%). However, the FV group students had lived longer with elders (mean = 99.7 months; median = 84 months) when compared to the CBI group (mean = 72.7 months; median = 36 months; See Table 12). If the students lived with elders, only 51.7 % in the CBI group and 43.1% in the FV group reported that their interaction frequency was “every day.” When the students did not live with elders, only 25.5% in the CBI group and 27.3% in the FV group reported that they visited their elders every week.

At the school where the students were enrolled and where this study was conducted, students were encouraged to work with elders as a part-time job or as a volunteer in the study school. Sixty-six percent of students in the CBI group and 56.2% of students in the FV group reported that they had worked with elders. In the groups that had worked with elders the amount of time both groups worked with elders was similar (CBI group mean = 8.95; median four weeks and FV group mean = 9.78; median four weeks; see Table 12).

Table 12 Comparison of the CBI and FV Groups of Interaction Experience with Elders

	CBI group		FV group	
	Frequency	Percentage	Frequency	Percentage
Have you have chances Interacting with elders?	<i>n</i> = 100		<i>n</i> = 96	
No	10	10.0	11	11.5
Yes	90	90.0	85	88.5
Have you ever lived with grandparents or other elders?	<i>n</i> = 100		<i>n</i> = 95	
No	30	30.0	37	38.9
Yes	70	70.0	58	61.1
	Median (range)		Median (range)	
Length of living with elders (months)	36 (0-227)		84(0-234)	
	<i>M (SD)</i>		<i>M (SD)</i>	
Length of living with elders (months)	72.73 (85.60)		99.73 (85.64)	
Interaction Frequency	<i>n</i> = 60		<i>n</i> = 51	
Every day	31	51.7	22	43.1
Several times per week	19	31.7	21	41.2
Several times per month	6	10.0	3	5.9
Several times per year	4	6.7	5	9.8

Table 12 (Continued)

	CBI group		FV group	
	Frequency	Percentage	Frequency	Percentage
Visit frequency if not living with elders	<i>n</i> = 47		<i>n</i> = 55	
Several times per week	12	25.5	15	27.3
Several times per month	17	36.2	28	50.9
Several times per year	18	38.3	12	21.8
Have you ever had a part-time job or volunteer position looking after elders				
No	34	34.0	42	43.8
Yes	66	66.0	54	56.2
	Median (range); <i>M</i> (<i>SD</i>)		Median (range); <i>M</i> (<i>SD</i>)	
Length of living with elders (months)	36 (0-227); 72.73 (85.60)		84 (0-234); 99.73 (85.64)	
	Median (range); <i>M</i> (<i>SD</i>)		Median (range); <i>M</i> (<i>SD</i>)	
Length of working with elders (weeks)	4 (0-144); 8.95 (19.28)		4 (0-96); 9.78 (16.99)	

Note. Chi-square and independent *t* test showed no significant difference between two groups.

When students were asked if they made the decision to study nursing by themselves, 54% of students in the CBI group and 60.4% of students in the FV group chose “yes” (see Table 13). Forty percent in The CBI group and 39.6% in the FV group followed others’ suggestions. Students were asked, “What reasons supported your decision to study nursing?” Several reasons reported were: “I can gain medical knowledge and also can take care of my family and help others,” “It is easy to find a job,” “It was my dream when I was a child,” “I learned from a TV report that the professional knowledge can help me save people’s lives when accidents or disasters happen,” “I hope to learn a skill that can make money quickly,” “My mathematics is not good and the nursing field does not require in-depth mathematics,” “I did not enjoy studying in high school, so I selected a nursing college.”

Table 13

Comparison of the CBI and the FV Group of Students’ Decision to Study Nursing

	CBI group (<i>n</i> =100)		FV group (<i>n</i> =96)	
	Frequency	Percentage	Frequency	Percentage
Made own decision				
No	46	46.0 %	38	39.6 %
Yes	54	54.0%	58	60.4 %

Satisfaction about Nursing in the CBI and FV group between Pre-test and Post-test

More than 68% of students indicated on the pre-test that they enjoyed nursing. This increased to more than 73% on the post-test for both groups; twenty-five students in the CBI group indicated that they did not enjoy nursing on the pre-test and that decreased to 16 students on the post-test. In the FV group, 26 students expressed on the pre-test that they did not enjoy nursing and that decreased to 19 students on the post-test; the improved percentage was 9% for the CBI group and 7% for the FV group. The students who expressed that they did not know if they enjoyed nursing or they stated that they were between “yes” and “no” were classified to “other” and that number increased from 3 to 9 in the CBI group and from 4 to 6 in the FV group on the post-test (see Table 14).

When the students reported they did not enjoy nursing, they were asked, “Can you provide the reasons and how we can help you?” The students gave several reasons, including: “I feel nursing is hard work and the nursing work is needed in shifts,” “Most people do not respect nursing staff and the working environments are not good in Taiwan,” “I feel it is a heavy burden because nurses are responsible for patients’ lives,” “I realize that I am not interested in nursing.” “I am worried that I do not have enough patience and carefulness to take care of patients,” “What we had to learn was too much and there were too many assignments that decreased my interest,” “Nursing work is stressful.” Some students who stated what help they needed offered these suggestions: “Teach me how to face the elders and the head nurses,” “Provide me with more clinical knowledge and experiences,” “Teach me how to release stress,” “Help me improve my English,” “Help me improve my confidence and achievements,” “Help me find interest in nursing,” “Have more patience to teach and help me.”

Table 14

Comparison of Satisfaction about Nursing of the CBI and the FV Group between Pre-test and Post-test

	CBI group (<i>n</i> =100)		FV group (<i>n</i> =96; 94)	
	Pre-test Frequency (%)	Post-test Frequency (%)	Pre-test Frequency (%)	Post-test Frequency (%)
Enjoy nursing				
No	25 (25.0)	16 (16.0)	26 (27.1)	19 (20.2)
Yes	72 (72.0)	75 (75.0)	66 (68.8)	69 (73.4)
Other	3 (3.0)	9 (9.0)	4 (2.2)	6 (6.4)

When students selected which age group was their first preference of patients they would prefer to care for after they graduated, the majority of them chose “ between 18 to 64 years” followed by ” below 18” in both groups. Only 3 students in the CBI group and 6 students in the FV group chose “65 and older” on the pre-test. This number on the post-test increased to 20 for the CBI group and 12 for the FV group. The improvement percentage was 17% in CBI group and 6.5% in FV group. The CBI group had a significant improvement ($p = .005$) than the FV group. (see Table 15). The students were asked to provide reasons for their choices. Several reasons for choosing the clients aging from 18 to 64 years were: “It is easier to communicate with people in this age group than other age groups so that I can understand their needs,” “I feel comfortable interacting with people in this age group because we have more similar educational backgrounds, life experiences, values, lifestyles, and topics to talk about than other age groups,” “It is more challenging to look after people of this age because I can learn more from the diverse problems and it is also a great achievement to help them because they are in the golden age,” “The abilities for self-control and rationality in this age group are better than in the others.”

Regarding the second preference choice of patients below 18, the reported reasons consisted of: “I like children and am glad to interact with them,” “It is easy to communicate with children because they are simpler than others,” “I could make more contributions to children because they may improve more than others and they are at an impressionable stage,” “Children are more interesting than other age groups,” “I like new life and dislike the issues of death and separation.” The reasons for students that chose the patients 65 and older reasons were: “The elderly population is growing,” “Old people

need more help than others,” “I enjoyed looking after elders because they have a lot of life experience to share with me.”

Table 15

Comparison of First Choice of Age Group to Care for of the CBI and FV Group between Pre-test and Post-test

	CBI group ($n = 100; 100$)		FV group ($n = 96; 94$)	
	Pre-test Frequency (%)	Post-test Frequency (%)	Pre-test Frequency (%)	Post-test Frequency (%)
Preferred age group				
Below 18	36 (36.0)	31 (31.0)	30 (31.3)	32(34.0)
Between 18-64	59 (59.0)	46 (46.0)	56 (58.3)	49(52.1)
65 and over	3* (3.0)	20* (20.0)	6 (6.3)	12(12.8)
other	2 (2.0)	3 (3.0)	4 (4.2)	1 (1.1)

Note. * $p = .005$

Most students expressed that they had communication problems with elders and some students indicated that they had negative feelings about elders. These concerns were reported in the questions on the pre-test and post-tests demographic data sheets. These items were added to provide further understanding about students' preferences in caring for specific age groups.

The majority of students focused on their communication problems with elders. Students often stated they could not communicate well with elders and the reasons reported include: "A lot of elders only speak Taiwanese so I cannot understand what they said because I cannot understand Taiwanese well," "I often could not understand what the elders said because I did not have the same life experiences as them," "I often could not find topics to talk about with elders," "Some elders had heavy accents so it is difficult to understand them," "Some elders had hearing problems or could not speak clearly because they were weak or sick," "Some elders were very quiet and I did not know how to understand them," "Some elders are very fierce so I am afraid of talking to them," "I do not know how to interact with elders," "I was worried that I could not understand elders because of the language barriers." Other reasons were: "Sometimes I had conflicts with elders because of difference in values and ideas," "I do not like elders because they were set on the old ways," "Elders liked to repeat the same things many times," "The elders like to focus on past experiences but I am not familiar with these things," "It is not easy to be trusted by them." "Some elders do not appreciate people's care."

Some students also expressed that they hoped to get the following help when they learned about gerontology nursing or long-term care: "Teach me how to create topics to talk to elders," "Help me have more opportunities to interact with elders and understand

them,” “Help me learn to speak Taiwanese,” “Teach me how to interact and communicate with elders,” “Provide me with the knowledge and skills of how to handle the situation when the elders are confused.”

Students’ scores on the STS, RKAOP, and ratings of willingness to care for elders were reported in terms of means, standard deviations, range of scores, and possible scores (see Table 16). STS scores showed a minor increase after the 8-week intervention for the CBI group and a minor decrease for the FV group (original data showed in Table 16 and transformed data showed in Table 17). Low RKAOP scores indicate better attitudes toward elders. Students had a positive change of mean score on RKAOP; the change was -8.50 for the CBI group and -4.54 for the FV group (original data showed in Table 16 and transformed data showed in Table 17). The students were asked to rate a score between 0-10 to provide their willingness to care of elders. The CBI group had a significant positive change $t(99) = -3.463, p = .001$ on the post-test than the FV group (mean gain 0.65 for the CBI and 0.19 for the FV group; see Table 16)

Table 16
 Comparison of Means, Standard Deviations, and Range of Scores on STS, RKAOP, and Willingness to care for Elders in the CBI and FV group (Original Data for STS and RKAOP)

	Pre-test ($n = 196$)			Post-test ($n = 194$)		
	<i>M</i>	<i>SD</i>	Range	<i>M</i>	<i>SD</i>	Range
CBI group						
STS	42.87	6.24	19-57 (15-60)	43.84	5.62	29-57 (15-60)
RKAOP	77.25	12.95	45-113 (22-154)	68.75	12.40	43-99 (22-154)
Willingness about caring for elders	5.41	1.58	1-10 (0-10)	6.06*	1.97	2-10 (0-10)
FV group						
STS	43.42	4.82	32-56 (15-60)	42.90	4.53	24-55
RKAOP	75.83	14.58	39-132 (22-154)	71.30	15.06	42-140
Willingness about caring for elders	5.82	1.73	0-9 (0-10)	6.01	1.86	0-10 (0-10)

Note. * $p = .001$

Table 17

Comparison of Means, Standard Deviations, and Range of Scores on STS, RKAOP in the CBI and FV Group (Transformed Data)

	Pre-test ($n = 196$)			Post-test ($n = 194$)		
	<i>M</i>	<i>SD</i>	Range	<i>M</i>	<i>SD</i>	Range
CBI group						
TSTS	43.02	5.76	28-57	43.84	5.62	29-57
TRKAOP	77.25	12.95	45-113	68.75	12.40	43-99
FV group						
TSTS	43.42	4.82	32-56	42.95	4.37	28-55
TRKAOP	75.66	13.98	39-115	71.12	14.31	42-123

During the time of this project, several students asked if they were allowed to be at the long-term care facility in addition to the scheduled times. The researcher told all students in both groups that they were allowed and encouraged to be at the facilities if they wanted to spend additional time with their assigned elders. Thus, students were asked the question on the post-test “In addition to the planned time, did you go to the facility for extra-time? No ___ Yes ___” and “If yes, how many extra times did you go to the long-term care facility?” The results showed that 45 students in the CBI group reported they made extra visits and 23 students in the FV group reported extra visits. Chi-square showed the CBI group had spent significantly more extra time than the FV group ($p = .002$) for these visits that were completely voluntary and not required a part of the research or as part of their class. On the post-test, the students were asked to give a score between 0-10 to express how helpful and meaningful they found the intervention. The mean scores were more than 7.16 in both groups (see Table 18).

Table 18
Comparison of the CBI and the FV Group of Intervention Evaluation Using Score (0-10; 0 = least; 10 = most) and the Number of Extra Visits

	CBI group ($n = 100$; 100)	FV group ($n = 94$; 93)
Helpful (M and SD)	7.16 (1.84)	7.67 (1.75)
Meaningful (M and SD)	7.32 (1.36)	7.34 (1.75)
Number of Extra visits*	45*	23
Number of no extra visits	55	70

Note. * $p = .002$

Results of Research Hypotheses Testing

Hypothesis One

Research hypothesis one states that nursing students who utilized the eight-week CBI would have significantly higher scores on the self-transcendence scale (STS) when compared to those students who did not utilize the eight-week CBI. Since there were no significant differences between the CBI (experimental group) and FV (control group) group on the baseline information, only the pre-test score of STS was considered as a covariate. The original pre-test score was labeled “PreSTS” and the post-test score was labeled “PostSTS.” As previously discussed data screening led to transform *PreSTS* to *TPreSTS*, *PostSTS* to *TPostSTS* so that several outliers in both groups were recorded to close to normal distribution (Munro, 2005).

Before conducting the statistics, the potential violations of ANCOVA assumptions were examined. The Levene’s test of equality of error variances revealed equal variance between groups with $F(1, 192) = 2.630, p = .107$. The homogeneity of regression slopes indicated no significant interaction between the intervention and the pre-test score with $F(1, 190) = 1.190, p = .277$. The assumptions were met, thus ANCOVA was conducted.

The pre-test score, *TPreSTS*, was significantly related to post-test score *TPostSTS* ($F = 61.876, p = .000$) and the Eta Squared score indicated that 26.4% of the variance in the posttest could be predicted from the pretest. The total amount of variation to be explained was 4936.83 (*Corrected Total*), of which the experimental manipulation accounted for 1332.84 units, whilst 3603.99 were not explained. The main effect for the intervention was $F(1, 191) = 3.258, p = .073$ (original data was .061), *partial Eta Squared* = .017. The ANCOVA indicated no significant difference between the mean

post-test scores between the CBI group ($M = 43.95$) and the FV group ($M = 42.83$) based on the intervention when the means were adjusted using the pretest as a covariate; thus, the hypothesis one was not supported. Eta squared indicated that the intervention accounted for 1.7 % of the variance in the STS post-test scores (see Table 19). The adjusted and unadjusted group means are shown in Table 21.

Hypothesis Two

Research hypothesis two states that nursing students who utilized the eight-week CBI would have significantly higher scores on the Revised Kogan Attitudes towards Old People statements (RKAOP) when compared to those students who did not utilize the eight-week CBI. The pre-test score of attitudes toward elders (labeled “RKAOP1”) was considered as a covariate. The post-test score of attitudes toward elders was labeled “RKAOP2.” Data screening showed that one outlier on pre-test and post-test in the FV group might influence the true effect; thus, the *RKAOP1* was recoded to *TRKAOP1*, and *RKAOP2* was recorded to *TRKAOP2* to replace the largest score with a next-highest score (Munro, 2005).

ANCOVA assumptions were examined before conducting the statistics. The Levene’s test of equality of error variances revealed equal variance between groups with $F(1, 192) = .136, p = .713$. The homogeneity of regression slopes indicated no significant interaction between intervention and RKAOP1, $F(1, 190) = .035, p = .851$.

With the assumptions met, ANCOVA was conducted. The pre-test score, *TRKAOP1*, was significantly related to post-test score, *TRKAOP2* ($F = 72.19, p = .000$), and the Eta Squared score indicated that the posttest could be predicted from the pretest with 27.5% of the variance. The total amount of variation to be explained was 34547.94 (*Corrected*

Total), of which the experimental manipulation accounted for 9743.68 units, whilst 24804.26 were not explained. The results showed $F(1, 191) = 3.909, p = .049$ (original data was .043), *partial Eta Squared* = .020. Thus, hypothesis two was supported due to a significant difference in the post-test scores between the two groups. The Eta squared indicated that intervention by itself accounted for only 2.0 % of the overall variances on the post-test scores (see Table 21).

Hypothesis Three

Research hypothesis three states that there would be a positive relationship between STS and RKAOP scores in nursing students. The results showed that there were significant negative correlations on pre-test and post-test score between STS (a higher score means high levels of self-transcendence) and RKAOP (a lower score means more positive attitudes toward elders). The findings were $r = -.31 (p = .01)$ for the pre-test between STS and RKAOP. The negative values of r indicate that as the values of one variable increased, the values of the other variable decreased (a high level self-transcendence was correlated with more positive attitudes toward elders). Following the intervention, the post-test of STS and RKAOP showed that the correlation was $r = -.27 (p = .01)$; see Table 22). Therefore, hypothesis three was supported. The students' self-transcendence was positively related to their attitudes toward elders.

Table 19

ANCOVA Self-transcendence Summary Table

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Corrected Model	1332.84	2	666.42	35.32	.000	.270
TPreSTS	1294.18	1	1294.18	68.59	.000	.264
Group	61.48	1	61.48	3.258	.073	.017
Error	3603.99	191	18.87			
Corrected Total	4936.83	193				

Table 20

ANCOVA Attitudes toward Elders Summary Table

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Corrected Model	9743.68	2	4871.84	37.52	.000	.282
TRKAOP1	9472.20	1	9472.20	72.94	.000	.276
Group	507.70	1	507.70	3.91	.049	.020
Error	24804.26	191	129.86			
Corrected Total	34547.94	193				

Table 21

Adjusted and Unadjusted Group Means

		Adjusted M	Unadjusted M
TPostSTS			
	CBI group	43.95	43.84
	FV group	42.83	42.95
TRKAOP2			
	CBI group	68.33	68.75
	FV group	71.57	71.12

Table 22

Bivariate Correlations between STS and RKAOP on Pre-test and Post-Test (transformed data)

	TPreSTS	TRKAOP1	TPostSTS	TRKAOP2
TPreSTS	1	-.31**	-	
TRKAOP1	-.31**	1	-	
TPosSTS			1	-.27**
TRKAOP2			-.27**	1

Note. ** Correlation is significant at the 0.01 level (1-tailed).

Participants' Responses to Group Presentations and Open-Ended Questions

To promote knowledge, the student groups discussed their experiences in class. Several open-ended questions were also included on the post-test, and students were encouraged to discuss their individual feelings and experiences about the CBI and FV interventions.

The first open-ended question was, "Please describe your feelings about the future ideal self-image, how it impacted on you, and how it promoted the interaction between you and the elders." In the CBI group students demonstrated their ideal self-image designs during the presentation and expressed how they hoped to achieve them. Most students reported on the post-test that they became excited about the future ideal self-image activity and had a great feeling of achievement when they finished the poster design. Some examples of what the students said were: "It is amazing because I felt my poster is very special, so I could not wait to introduce my poster to others," "In the beginning I had no idea how to complete the poster, but after I figured it out and finished it I had a great achievement and hope I can stick to my ideal future image," "It is a wonderful feeling that I can express what I want for the future in a small paper, and it really stimulates me to think about my future," "I put the famous old Taitai hospital on my poster to express I will always work in a big hospital to learn more and help more patients," "My poster really had a great impact on me that I felt I will strive to achieve it because of the blueprint for my future," "It really initiated the interaction between the elder and I . . .my elder was interested in my poster, so we had many topics to talk about," "When my elder saw my self-poster, she encouraged me to reach it and shared her stories . . .," "I like the self-image design because it really is a good way to promote communication between the elder and students;

it is especially suitable for improving the interaction between people different generations,” “I was worried how to talk to our elder, but when I introduced myself with my self-portrait, my elder began to talk when she was a child” (see Appendix K)

For the future ideal self-image activity in the FV group, the students only were encouraged to talk to their team members by words. Therefore, the FV group students presented in class without a poster design. Students expressed their own ideal future plans during the presentation through speaking. Examples were: “I really hope to be a good nurse and hope to keep in mind that helping others is the happy foundation,” “I hope I am a nurse with much patience and get respect from others,” One student said that she hoped to learn from Ms. Chang, a nurse model in Taiwan who strived to take care of elders and eliminate some traditional bad ideas that hurt elders and patients in an island area.

The second open question was, “Please describe your experience with the elders during delivering the intervention and illustrate it with your activities.” The CBI group students had a lot of positive comments about the self-image poster for the elders. Some students stated, “The self-image poster activity with the elders helped us to better understand about the elders and improve our interaction and relationships,” “Our elder likes animals, so we collected many kinds of animal pictures to talk to her and decorated on her self-portrait... we also collect an old house picture to put on her self-portrait because she missed her home,” “Our elder did not like to interact with us . . . we gave her the self-portrait and Ribbon Gems which we designed for her, she felt happy and then changed her attitudes toward us, so the art activities are good ways . . . ,” “We led our elder (a man) to recall his past experiences and dreams because we hoped to have a great design for him . . . he really felt happy and often looked at his poster, and we felt satisfied

for this.” One pair of students said, “Our elder’s eye-sight was weak, so we collected brightly color pictures and worked together with her to design her image poster . . . she also taught us to speak Taiwanese during the interaction process . . . she liked her image poster very much.” Another pair of students stated: “We brought our own self-image poster to the bed-side to talk to our elder . . . we had a better understanding about him from the interaction for the poster design and from the Monoprints” Other pair of students stated, “We helped our elders select bright color for the Monoprints and Ribbon Gem, and she enjoyed these activities and also taught us speaking Taiwanese when we selected the color or fruits . . . ,” “Our elder enjoyed playing with the colors to make Monoprints, so we help him drop the watercolors on the glass” “Our elder was a farmer and won in a farming competition, so we designed this image for her and she was very happy.” Most students said the art work displayed in the elders’ rooms after completion added color and depicted the personality of the elder contributed positively to the elder’s room atmosphere. These art works also may have increased the elder’s perceptual stimuli (see Appendices L and M).

In the FV group, one group of students said, “We talked to our elder about festivals and favorite foods,” We discussed about her travel experiences because she traveled to many countries.” The students expressed that the action helped them understand the elder very much and promote their communication. One pair of student stated, “We talked about her children . . . she lived in the institution because she was sick and cried . . . we touch her shoulder and gave caring...then we had a close relationship” Another pair of students said, “Our elder had many complaints in the beginning . . . We brought old songs and an instrument to his bed-side... He enjoyed very much . . . he always smiled

and never complained again . . . We felt a sense of achievement.” Other students said that they brought their team members’ elders to interact together and these elders enjoyed talking each other. These students stated that they felt the FV was a good activity.

The students were also invited to provide additional feedbacks concerning both approaches (CBI and FV): “Please state what you have learned while you delivered this intervention.” Students in both groups expressed that they had learned a lot from each approach. Some students had similar comments and stated, “I used to be afraid of talking to elders, but during this time I overcame these feelings and I learned how to create topics to talk to elders and how to interact with them.” Some students said, “I learned a lot of life experiences from the elder and learned how to speak Taiwanese with the elders,” “I realized that the elders needed young people’s care and respect.” Some students stressed, “When I realized that if I were willing to listen to the elders, there would be less of a generation gap between us.” Some students stated, “I learned how to provide care to elders . . . I felt I had grown a lot because I also changed my attitudes toward my own grandparents.” However, several students stated, “Our elders did not have a good response to our activity, so we felt frustrated.”

Another open-ended question was, “Please describe what difficulties you faced during this long-term care facility experience.” Most students stated that they did not have any problems and they liked the interventions. Several students stated, “Our elders often forgot who we were when we visited them and we had to introduce ourselves again and again.” Some students expressed, “Our elders were not willing to talk about themselves in the beginning, so we struggled to promote the interaction.” Some students stated, “We felt the space limitation in the long-term care facility, so we could not have

more outside activities with our elders.” Other students stated, “Sometimes we got interrupted when we wanted to conduct the activity with the elders.” Other comments were: “Our elders could not concentrate on the activities because of the physical weaknesses,” “Our elders did not enjoy the art activity, so we have to figure out other activities to interact with the elders,” “Our elders were indifferent and refused to answer open questions.”

Most students said both approaches were helpful, so they did not have any suggestions when they were asked, “What are your suggestions for improving the intervention?” Only several students had comments for this question. Some suggestions were as follows: “Six weeks were too short, so I suggest we should have a longer time to interact with the elders,” “Our class time was close to lunch time so that it limited our interaction with the elders. I hope the arranged time should not close to the lunch or dinner time when planning the intervention next time.” One pair of students stated, “Our elder had little response to our visits and activities, so we felt frustrated about this . . . I hoped that the elders should be screened more carefully.”

Chapter Summary

This chapter has demonstrated the study findings which included (1) demographic characteristics of the participants, baseline measurement, and measurement after intervention in two groups; (2) the testing of three research hypotheses using ANCOVA and Pearson correlation; and (3) participants’ responses on open questionnaires. Hypotheses testing were conducted to determine whether the nursing students who delivered the eight-week CBI had significantly higher level post-test scores on the STS and RKAOP than those students who delivered the FV. The main goal of the study was to

identify if the CBI promoted self-transcendence and changed the students' attitudes toward elders.

Research hypothesis one was not supported. The students in CBI group had a better score on STS than students in FV group but there was no significant difference between two groups. Research hypothesis two was supported as students had significantly lower scores on the post-test RKAOP ($p = .049$) in CBI group than students in FV group. Research hypothesis three was supported that there was a positive relationship between STS and RKAOP in the nursing students ($r = -.31, p = .01$ for the pre-test; $r = -.27, p = .01$ for the post-test).

Open-ended questions and rating scales added additional information about the CBI and FV approaches. The findings demonstrated that most of students in this study enjoyed the interventions and had a good interaction and communication with the elders in both CBI and FV groups. Students in the CBI group made extra visits that were not required to interact and complete art activities with elders. This unexpected finding that came from student requests in both groups who asked if they might spend extra time with elders supported that the CBI approach promoted communication with elders and provided a method to bond with elders. The number of visits in the CBI group were significantly greater ($p = .002$) than the FV group. The FV group of students also made extra visits with elders and indicated they enjoyed talking to the elders and found useful methods as pictures or old songs to initiate communication. A more detailed summary and discussion of the results are presented in the following chapter.

CHAPTER FIVE

Discussion and Conclusion of the Inquiry

Introduction

The final chapter is to present a summary of the study, a summary of the findings, a discussion of the findings of this study, and a discussion of the implications of these findings. Strengths and limitations of the study are identified, and recommendations for the future study are provided.

Summary of the Study

The population of elders in Taiwan continues to grow (MOI, 2006; Council for Economic Planning and Development, Taiwan, 2006), which increases the need for future nurses who are willing to care for elders. From the personal experience of this researcher, most young nursing students today do not have an interest in caring for elders in Taiwan. Hwang and Lin (2000) have also noted that younger nursing students had less positive attitudes toward elders than older students in their study (age range = 18-43).

The purpose of this quasi-experimental pre-test and post-test study was to compare: (1) the level of self-transcendence and (2) the degree of attitudes toward elders in a Creative-Bonding Intervention (CBI) experimental group and a Friendly Visit (FV) control group of Taiwanese nursing students. The main goals were to determine if the utilization of an eight-week CBI would promote the students' self-transcendence and positive attitudes toward elders

One hundred ninety-six students participated in the study. These students were all fourth year nursing students enrolled in a five-year junior college program located in southern Taiwan. The 196 students (age 18 or 19) had already been distributed into four

classes due to their class assignment. All these students were enrolled in a required long-term care course in the fall semester, 2006. The research was completed in cooperation with the teacher of the long-term care course and 194 students completed the study.

The theoretical framework for the study was the theory of self-transcendence. Reed (1987, 1991a, 1999b, 2003) believed that people are open dynamic systems with flexible self-boundaries and discussed that persons have the capacity to go beyond the self and become self-transcendent during human developmental process. Reed discussed that self-transcendence may vary along with development and life events and is also influenced by environment. Reed (1991a, 1992, 2003) also stated that as humans connect to their inner self and their environment, change can occur within themselves and transform them to a higher level of development.

Based on a concept analysis of self-transcendence and two pilot studies, Chen and Walsh (2006) developed the CBI model (see Figure 1) to demonstrate the different facets within the CBI and how the CBI might have an impact on nursing students' self-transcendence and attitudes toward elders. In the present study the CBI (an experimental group) participants used the suggested creative CBI activities with structured communication guidelines to interact with elders and the FV (a control group) participants conducted the suggested structured communication guidelines with elders (the same as CBI without art activities).

The focus of the CBI was to help the students: (1) build a bonding relationship with elders through creative art activities, (2) contribute to elders through the interaction with creative ways, and (3) share experiences during students' group meetings and class

presentation. After pre-tests, students were randomly assigned to two groups, an experimental group (CBI; $n = 100$) and a control group (FV; $n = 96$) by the class unit. Then the CBI and FV group of students were randomly assigned to either long-term facility A or long-term facility B.

The Mandarin Chinese version of Reed's (1991b) Self-Transcendence Scale (STS) and Hilt and Lipschultz's (1999) Revised Kogan Attitude toward Older People Scale (RKAOP) were used to measure the participants' changes between pre-test and post-test measurements. Because the researcher believes that students' experiences can not be understood by numbers (Berg, 2004), the researcher also added several open-ended questions to the pre-test and post-test questionnaire packet to explore further the students' feelings about elders and obtain feedback about the intervention. The researcher also made field notes during the time she spent in the long-term care facilities, in student discussion groups, and in classroom presentations. This additional information supplemented quantitative findings and provided additional in-depth understanding about the students during course of the study.

Summary of the Findings

The results revealed that nursing students in the experimental eight-week CBI group did not have significantly higher scores on the post-test self-transcendence (STS) measurement than those students who were in the control FV group. The nursing students in the experimental eight-week CBI group had significantly more positive attitudes about the elders ($p < .05$) than those students who were in the control FV group. There was a significant correlation between self-transcendence and attitudes on the pre-tests and post-tests; thus, the nursing students who had a higher level of self-transcendence had

significantly more positive attitudes toward elders (pre-test $r = -.31, p = .01$; post-test $r = -.27, p = .01$).

The qualitative and quantitative additions on open-ended questions and rating responses provided information to illuminate the main research hypotheses. Major highlights were: (1) Students were enthusiastic and excited about the CBI self-portrait of themselves and the self-portrait they helped elders to construct. (2) The students felt the self-portrait facilitated their thoughts about their future and was a good tool to initiate interaction between themselves and elders. (3) The students indicated the Monoprint art activity and Ribbon Gems activity not only increased the interaction between themselves and elders, but also increased elders' perceptual stimulation and the elder's room atmosphere when these art works were used to decorate the elders' room. (4) The students had increased interest about interaction with elders and increased interest in caring for elders in both groups after the interventions. Students expressed their desire to provide innovative approaches with faculty assistance. They also desired to increase their knowledge about ways to communicate with elders which in turn promoted their increased interest in elder care. The findings of this study suggest that the CBI with supportive help is useful to develop young students' self-transcendence and positive attitudes toward elders.

Discussion of the Findings

Hypothesis one: Nursing students who utilized the eight-week CBI would have significantly higher scores on the self-transcendence scale (STS) when compared to those students who did not utilize the eight-week CBI.

The study findings do not support hypothesis one. However, the students in the CBI group did have a higher score than students in the FV group and the statistics did approach significance at a p value of 0.073. Also, the students in the CBI group had a significantly more positive relationship between STS and RKAOP on the post-test than pre-test (pre-test $r = -.132$; post-test $r = -.355$, $p = .01$). Moreover, most students in the CBI group voluntarily expressed by written words and in informal conversation among themselves and with the researcher that they have grown a lot during the CBI intervention. The positive response and changes discussed by CBI group participants may indicate that developmental changes occurred as a result of students' connection with their inner-selves and connection with the environment (Reed, 1987, 1991a, 1992, 2003). These results offered additional support for Reed's theory. Since Reed (1991a, 1999b, 2003) believed that people are open dynamic systems with flexible self-boundaries that vary along with development and life events, the creative approach of the CBI may have capitalized on the flexible self-boundaries of young Taiwanese nursing students.

In addition, self-transcendence is a developmental trait, and the young students are in the developmental stage of identity versus role confusion (Chinen, 1986; Erikson, 1963, 1985). Therefore, even though hypothesis one was not supported statistically, the results in this study suggested that although students' self-transcendence may not be significantly changed during an eight-week period of time, the self-transcendence process

may have been initiated and accelerated, as evidenced by the students' own words and the p value of .073 which approached significance. Students repeatedly expressed their feelings of increased self-confidence and comfort with their role with elders, as they stated repeatedly in the final class presentation. Students' replies on the post-test open-ended questions revealed a great feeling about the interaction experience with elders and about what they have contributed to the elders during the interventions. Frankl (1963, 1966, 1985, 2000) stated that people can find meaning in their life by taking a purposeful action for the world, or experiencing a value such as goodness. Kovac (1986) and Reed (1991c) also supported this idea. Chao and Roth (2005), Heliker (1999), McGilton (2002), and Wilson's (1997) have suggested that elders who live in a long-term facility often look for someone with whom to make a meaningful connection. Indeed, most students felt that they had made a positive contribution to the elders when they recognized how much most elders enjoyed their visits. The positive response of the elders also contributed to the students' feelings that this experience was meaningful.

Other scholars have discussed that self-transcendence could be induced through creative work, aesthetic experience, and a positive work environment (Kinjerski, 2004; Kilpatrick, 2002). Maslow (1971) and Yalom (1982) have stated that creative work can add something valuable to others and can give meaning to life and that these situations may lead to self-transcendence. It was most apparent that most students in the CBI group felt the art project was quite successful in promoting positive communication, lessening the distance between them and the elders, and helping them contribute to the elders. Thus, the researcher assumed since the findings did not support the hypothesis, a variety of reasons including the very nature of the concept of self-transcendence might explain the

lack of significant change in the self-transcendence variable. It appeared that the CBI may have stimulated students' self-transcendence ($p = .073$). It is worthy noting that many students in the FV group, even though they had a minor decrease on the STS post-test score, also reported self-growth after the intervention during their group presentations. Thus, the researcher believes that the self-transcendence theory was supported and believes the CBI is a useful approach to stimulate students' self-transcendence, but the improved self-transcendence might not have been demonstrated on the Self-Transcendence Scale (STS) during the eight-week period of time when the study was conducted.

Other scholars have suggested that young people are able to expand their boundaries to care about others' perspectives and that self-transcendence may begin to flourish during adolescence (Conn, 1977; Piaget, 1963). Conn (1987) stated that true self strives for meaning, value, and love, and self-transcendence happens during this process. The current study supports Conn's ideas. Most students stated that they learned a lot from the elders and they realized that they should care for their family and their grandparents more because love is important. This supports Reed's (2003) belief that self-transcendence is a trait of developmental maturity and her belief that people with this trait have increased sensitivity toward the environment and a broader view toward life.

Findings in this study were that young Taiwanese nursing students (mean age = 18.3) had lower mean STS scores than adults in other studies (Kilpatrick, 2002; Wasner et al, 2005), which supports findings from Reed and others' studies about older adults (Reed, 1991b; Upchurch, 1999) that self-transcendence is obtained during the developmental process. In Kilpatrick's (2002) study, the nursing students' mean age was 29 which were

considerably higher than the mean age of 18.3 for students in this study. Thus, the students' low STS scores in this study may be caused by the students' young age, lack of life experience, and the early developmental stage. Yet students in the CBI group did have increased self-transcendence after the eight-week CBI. Additionally, in response to open-ended questions, most of these students reported that they had personal growth during the time of implementing the intervention. Thus, for those students who may have been moving toward self-transcendence, the CBI may have helped them to continue to develop a higher level of self-transcendence than others. Also, students in this study who had a higher level of self-transcendence had more positive attitudes toward elders. Self-transcendence and positive attitudes were positively correlated. Thus, the CBI may be a valuable tool to cultivate young nursing students' self-transcendence.

Wasner et al. (2005) reported that the STS was significantly improved in a middle age (mean age = 49) group of palliative care professionals ($n = 63$) after three and a half-day spiritual care training. Yet this improvement was not sustained after six months. Thus, the significant improvement in Wasner et al. between pre-test and post-test measurement may have related to the short interval time between testing. Since the intervention in this current study lasted eight weeks, the researcher suggests that the gains, even though small, might be sustained over a longer period of time. Since the CBI length of time was eight weeks, a follow-up study examining the longitudinal effects is suggested to determine long-term effects after the CBI.

Most students in this study were pleased with their ideal self-image poster and expressed additional enthusiasm for their future nursing careers. Students demonstrated their poster in the class presentation and reported that they especially enjoyed the poster

activity. Some students stated that they became excited about the future ideal self-image activity and had a great feeling of achievement when they finished the poster. Some students stated, “In the beginning I had no idea how to complete the poster, but after I figured it out and finished it I had a great achievement and hope I can stick to my ideal future image,” “It is a wonderful feeling that I can express what I want for the future in a small paper, and it really stimulates me to think about my future,” “My poster really had a great impact on me that I felt I will strive to achieve it because of the blueprint for my future.” The findings were similar to Walsh and Minor-Schork’s (1997) findings in that some themes were: “identity searches, rekindling dreams, regaining control or regaining self confidence . . .” (p. 23). Therefore, the ideal self-image poster activity may help the students connect to their inner self and to experience the true self; thus, it may be a way to tap young students’ self-transcendence.

Furthermore, students sharing their poster with elders and helping elders to make a poster of them appeared to be a way to help students build a bonding relationship with the elders. Students expressed that the self-image poster was a wonderful tool to initiate the interaction between them and the elders. Some students stated, “It really initiated the interaction between the elder and me . . . my elder was interested in my poster, so we had many topics to talk about,” “When my elder saw my self-image poster, she encouraged me to reach my goals and then she began to share her stories,” “I like the self-image design because it really is a good way to promote communication between the elder and students; it is especially suitable for improving the interaction between generations.” In Aday and Campbell’s (1995) study, students stated the reasons that they did not like to care for elders were: “due to my age, the elderly do not respond as well to me; I do not

feel comfortable around the elderly because I haven't had much exposure to them." (p. 255). Therefore, using the ideal self-image design for the study of self-transcendence in nursing students should be continued.

Hypothesis Two: Nursing students who utilized the eight-week CBI would have significantly higher scores on the Revised Kogan Attitudes towards Old People statements (RKAOP) when compared to those students who did not utilize the eight-week.

The study findings support research hypothesis two that nursing students who utilized the eight-week CBI would have significantly higher scores on the post-test RKAOP when compared to those students who did not utilize the eight-week CBI. However, the effect size was small (2 %). The small effect size to distinguish the differences between the CBI and FV groups may be the reason that both of the CBI ($p = .000$).and FV ($p = .003$) groups of students had a significant positive change on post-test RKAOP when compared to the pre-test.

Also, most students stated the interventions were helpful and meaningful. On the post intervention questionnaire students indicated how helpful (0-10) and meaningful (0-10) they found the intervention, and the mean score was more than 7.16 for each question in both groups. Students felt that they had a better understanding about elders and learned about life experiences from them as indicated in their final presentation and responses to the open questions. Most students also stated that they realized that they had incorrect impressions about elders and appreciated both approaches (the CBI and FV). These students expressed that the elders enjoyed the young peoples' respect and company and that the elders enjoyed talking to young people.

Important findings in the current study were that the nursing students in the CBI

group not only had a significant positive change in their attitudes toward elders when compared to the FV group but also that students in the CBI group had a significant change ($p = .001$) in their willingness to work with elders. Moreover, as had been done in Happell's (2002) work, students were asked at the pre-test and post-test about their preferences to work with certain age groups (from birth to elders) following graduation. On post-test questions some students changed their choice of preferred age group after the intervention to the preferred age group as "65 and older." The improvement percentage was 17% in CBI group and 6.5% in FV group and the CBI group had a significant improvement ($p = .005$) than the FV group. Furthermore, it appeared that the CBI increased students' interest in interacting with elders when compared to students in the FV group. For example, the CBI group of students had significantly more extra, un-required visits than the FV group ($p = .002$) during implementation of the intervention.

If students are offered the new and creative ways to communicate with elders, along with a focus on the development of students' self-transcendence, students' future career choices to work with elders may change. These findings in this study are more positive than those previously reported in the literature. Scott et al. (1998) and Moricillo et al. (2005) found that an educational program did not promote young students' positive attitudes toward elders. Happell (2002) concluded that student's future career choices were not influenced by an education program, as work with elders remained the least popular. Menz (2003) reported that students had significantly positive changes in knowledge and attitudes toward elders, but they did not change in perceptions of treatment in elders and only one student planned to specialize in geriatrics. In Taiwan,

Liu (2001) reported that in a group of students who received additional exposure to elders during a three-week clinical nursing home experience there were no significant changes in students' attitudes or willingness to work with elders when compared to a control group who had no additional exposure to elders.

The findings of this study supported the work of Tan, Zhang, and Fans (2004) and Lin (2000), who found that student attitudes toward elders had a significant correlation with the students' closeness to an older relative or an older non-relative. The findings also supported several other studies (Bernard et al., 2003; Knapp & Stubblefield, 2000; Meshel & McGlynn, 2004; Rogan & Wyllie, 2003; Romack, 2004) that showed students had positive attitudes about elders after individualized contact with elderly people for a period of time. The CBI approach not only helped the students to increase their time with elders but also helped the students find innovative and creative ways to communicate with elders, initiate their interaction, and shorten the generation gaps between the students and the elders. Furthermore, the CBI experience helped the students build a bonding relationship through the creative work. The CBI may have provided the students with a mechanism to cultivate their self-transcendence that in turn may have helped the students increase their motivation to care for elders. Students in both groups expressed that they had learned a lot from each approach and indicated their positive feelings about the interventions. Several examples are as follows.

Some students stated, "I used to be afraid of talking to elders, but during this time I overcame these feelings and I learned how to create topics to talk to elders and how to interact with them." This is similar to Knapp and Stubblefield's (2000) findings in that one student stated, "I have always dreaded nursing home visits. This time was different. I

looked forward to our visits since we had a positive purpose . . .” (p. 619). Other comments in this current study were: “I learned a lot of life experiences from the elders and learned how to speak Taiwanese with the elders . . . I realized that the elders needed young people’s care and respect,” “I realized that if I was willing to listen to the elder, there would be less of a generation gaps between us,” “I learned how to provide care to elders,” “I felt that I had grown a lot, and that I also changed attitudes toward my own grandparents.”

In Herdman’s (2002) study, participant nurses stated that learning communication skills with elders and understanding them are important for providing holistic care to elders. Happell and Brooker (2001) investigated students’ reasons for the least preferred choice for elder care and some reasons were that the students did not know how to communicate with elders and they had unpleasant past experience with elders. In the current study, students’ comments provided support about implementation of the CBI as they expressed appreciation for the creative activities to initiate communication with elders. Some students also expressed, “I have learned how to create topics to talk about with elders,” “We helped elders make the Monoprints and this activity helped us feel closer to our elder and improved our communication even though we had a big age gap,” “Our elder was interested in Ribbon Gems, so we created a rabbit image for her and hung this on her bed-side wall . . . Our elder was very happy, so this made us have such good feelings,” “The Monoprints increased our abilities of imagination and it really improved our interactions with our elders and we had fun.”

In this study students created their own self-poster before they contacted the elders. Then the students brought their self-poster to introduce themselves to the elders. After the

students knew the elder, they helped the elders to recall their memories about their past life. As part of this interaction process the CBI students helped the elder create the elders' self-portrait during the interaction process. Students reported that sharing their self-portraits with the elders or making Monoprints and Ribbon Gems with elders were excellent ways to initiate conversation between themselves and elders. The study findings supported the idea that art is a way to promote the expression of feelings and provide connectedness between persons (Driessnack, 2004; Walsh et al., 2004, 2007; Zablony, 2006). Most students enjoyed the CBI art activities and had positive comments about these activities. One pair of students stated, "We led the elder to recall his past experiences and dreams and then we had a great design for him...he really felt happy and often looked at the poster," "We helped our elder select bright colors for the Monoprints and the Ribbon Gems, and she enjoyed these activities and also taught us to speak Taiwanese when we did the activities with her." Participants in Pursey and Luker's (1995) study expressed that when they established good relationships with the elders, they perceived that they offered good care and had a sense of increased satisfaction. Some participants also expressed that the rigorous structure concerning nurse-patient interaction often taught in nursing, such as "treating all patients the same" (p. 551) adversely influenced nurses' interest in elder care. Therefore, introducing the CBI approach to students, not only may help students learn how to build a good relationship with elders, but also may change students' perspective toward elder care and then may promote students' interest in elder care.

Most students in the FV group also felt they had good interactions with the elders. Several pairs of students' comments were: "We talked to the elder about festivals and

favorite foods. We also talked about her travel experiences because she traveled to many countries and the conversation helped us understand her very much and promote our communication,” “Our elder (“Mr. Chang”) had many complaints in the beginning. We brought old songs and a percussion instrument to his bed-side and he enjoyed very much. After that he always smiled and never complained about others. We felt a sense of achievement.” One patient’s family member who was visiting often in this room told the researcher, “The intervention is so wonderful; you see Mr. Chang had a bad temper before, but he changed a lot after your students visited him. He always smiles now and is happy; your intervention should be longer.” It should be noted that the use of songs and percussion instruments was a creative approach that improved student-elder communication with this challenging patient. Therefore, educators may want to try to motivate students to use creative non-traditional approaches when students deliver care, especially in challenging situations. The results revealed that the structured CBI and FV were valuable to help the students connect to the elders and helpful to bridge the gaps between different generations. Thus, both the interventions were useful to help the young students develop positive attitudes toward elders and elder care.

Several studies revealed that a more positive view of elder care and the improvement of the depressing ward atmosphere might promote student interest in caring for elders in the future (Herdman, 2002; Moyle, 2003). Happell and Brooker (2001) reported that students perceived working with elders as “uninteresting, boring, unpleasant . . .” (p. 15). In Herdman’s (2002) study, some participant nurses criticized the biomedical model of nursing that focuses on tasks and suggested that it is important to provide holistic care to elders. In McLafferty and Morrison’ (2004) study, students

expected that care for elders should not only focus on basic care such as feeding and toileting them. Slevin (1991) suggested nursing work should go beyond physical care to provide humanitarian care. Students' comments in the current study support the idea that the CBI improved the depressing atmosphere of an elder's room or the living facility. Thus, CBI activities that are integrated into gerontological nursing course may promote the attractiveness of gerontological nursing as a career choice in students' professional futures. McLafferty and Morrison' (2004) found that the views about elder care were influenced during the school education.

The findings suggest that both approaches helped the nursing students communicate with elders and fostered positive feelings toward elders but the CBI had a greater effect than the FV. It should be noted that using the group discussion and class presentation in both groups to encourage students to share their experiences as a part of the intervention may not only help students learn creative ways from others, but also motivate students to improve their communication skills and enhance their positive feelings toward elders. As Duyan (1991) suggested, to help the young generations develop self-transcendence, it is necessary to foster collaboration so that young people may recognize that one is only part of the world and how it is important to cooperate with others. Also, as Walsh and Vaughan (1993) and Hanna et al. (1995) stated, intended learning can activate transpersonal potentials. Effort and willingness to learn were main factors in achieving greater self-transcendence (Coward, 1990). During the implementation of the intervention process, students were encouraged to think of elders' situation, shared their experiences about how they had improved or might improve interactions with the elders, and how they continued to make contributions to promote elder well-being. When

students shared experiences in the group work, the students said they were inspired to feel positively toward elders and wanted to create new ways to promote excellence in elder care. Group meetings, as part of the CBI and FV interventions, may also have enhanced the improved score on students' self-transcendence and attitudes toward elders.

In this study, over half (61.1%) of students had prior experiences living with elders. Also, since students at this Taiwanese college were encouraged to work with elders as a part-time job or as a volunteer, 61.2% of students in whole group reported that they had worked with elders. Even though most students indicated at least some interaction experience with elders, most students reported on the pre-test questionnaire that they had communication problems with elders. Students said they often could not find topics to talk with elders or they had language barriers with elders. The language barrier problem is based on the fact that Mandarin Chinese is the official language in Taiwan and the Taiwan education system. On the pre-test questionnaire answers to open-ended questions and informal discussions clarified that most of these young students did not feel conformable with elders. Some students also were fearful of elders. This group of young students needed guidance to provide them with new skills to communicate with elders.

Although most of the students had positive feelings about implementing the art activities with elders, it should be noted that several students stated that their elders did not have a good response to these activities, so students felt frustrated. Other difficulties students faced during the time of implementing the intervention were: (1) Some elders could not concentrate on the activities because of the physical weaknesses; (2) Some elders did not enjoy the art activity, so they had to figure out ways/methods to interact with the elders; (3) Some elders were indifferent and refused to communicate with

students initially. In spite of these barriers, the CBI art activities provided structured communication guidelines and appeared to be a good model for future communications with hard to approach populations.

Faculty have the opportunity to involve students and elders with similar intervention approaches in the future to promote successful delivery of interventions and to provide the opportunity for students to consider elder care upon graduation. As faculty build partnerships with long-term care facilities, the researcher, faculty, and long term care staff working in collaboration is needed. Also, the educators' passion and the atmosphere within the long-term care facility are additional factors that might impact on the cultivation of students' self-transcendence and attitudes toward elders. Therefore, providing an appropriate learning environment is also important and necessary before conducting similar interventions. Moreover, students' feelings about the elders and future attitudes about care for the elders were also influenced by the elders' response to the students. Educators should select any long-term care facility carefully and should visit the elders to invite them to join the intervention before assigning any elders to the students. It also appeared that the researcher's contact with elders prior to the student-elder assignment may have motivated elders to share life experiences with students during later conversation.

Hypothesis Three: There would be a positive relationship between STS and RKAOP score in the nursing students.

Research hypothesis three was supported by the study findings. Scholars have discussed that people with self-transcendence are mature, altruistic, grateful, mindful, and concerned for the benefit of mankind (Frankl, 1966, 2000; Huang, 1999; Maslow, 1962,

1971; Piedmont, 1999; Reed, 2003). The findings support the idea that students who have higher levels of self-transcendence have more positive attitudes toward elders. The findings also support Sawyer, Strauss, and Yan's (2005) findings that participants who had higher scores on self-transcendence showed more positive attitudes towards people who were different from them. However, the significant correlation reported in this study is not strong for the whole group (pre-test $r = -.31$, $p = .01$; post-test $r = -.27$, $p = .01$) as lower score on the attitude scale indicates more positive attitudes toward elders. The deduction of the correlation on the post-tests can be explained because these young students did not increase scores on the STS post-tests (self-transcendence) but did improve RKAKOP (attitude) scores on the RKAOP post-test (see Table 17).

When examining the correlation between STS and RKAOP in each group, the students in the CBI group had a significantly more positive relationship between STS and RKAOP on the post-test than pre-test (pre-test $r = -.132$; post-test $r = -.355$, $p = .01$). However, the correlation between STS and RKAOP decreased on post-test score in the FV group (pre-test $r = -.52$, $p = .01$; post-test $r = -.13$). Several students reported in the post-test open-ended questionnaires that they were enthusiastic about working with elders in the beginning, but they decreased the passion toward elders due to their elders' lack of response to them. These findings were similar to the Haight et al. (1994) study that found students had positive attitudes toward elders when they cared for well elderly people, but students' positive attitudes decreased when they were exposed to ill, seriously elderly patients. So that Lookinland et al (2002) suggested that the educational programs should help students tolerate elders' personal habits and understand their cognitive abilities. We cannot know if the results would have been different if these FV students had been in the

CBI group. Therefore, further studies should be conducted to determine the relationship between students' self-transcendence and attitudes towards elders.

Reed stated that self-transcendence is not necessarily related to advanced age but assumed that self-transcendence may be stimulated by some life events (1991a; 1991b). As mentioned earlier, that these students did not change to high level of self-transcendence in the short time may be caused by the nature of self-transcendence. Therefore, since there were changes that approached significance ($p = .07$) in the CBI group, the researcher believes the students' self-transcendence was stimulated during the CBI activities and may continue to grow. If faculty can facilitate self-transcendence in young students, these students may reach a high level of self-transcendence earlier than expected during the usual course of development. Also, nursing students may be more likely to be interested in providing nursing care to elders and more likely to help others as expected by the society if they have increased their self-transcendence during the learning process.

Implications of the Study for Nursing Knowledge

Nursing Education

The Creative-Bonding Intervention (CBI) provided the opportunity for students to meet together in groups to reflect on their thoughts about elder care, to participate in CBI activities, to learn more about themselves and one another, and to implement similar activities between themselves and selected elders. The CBI also has helped students convey loving, creative, and humanistic care to the elders in two long-term care facilities. The CBI promoted student-elder bonding in two long-term care facilities. The study's findings supported that students' self-transcendence might have been stimulated because

students' self-transcendence scores increased. Students expressed that they felt they had achieved personal growth as a result of their experiences during this research. Moreover, student attitudes toward elders and their willingness to care for elders significantly improved.

Therefore, the findings suggested that the CBI could be used in other nursing schools to reach a major nursing education goal of heuristic education and provide an intervention to empower students to meet their potential. Also, the CBI may be especially helpful in promoting excellence in gerontological nursing courses. Such approaches could be integrated into the nursing curriculum to help students have more interest and willingness to care for the growing population of elders worldwide.

Nursing Practice

The findings supported that the CBI in this study helped nursing students build a bonding relationship with elders who live in long-term care facilities. During the CBI the activities implemented by students with elders not only helped promote holistic care but CBI activities that students and elders completed together enhanced the good feelings of elders and improved the atmosphere/environment of the surroundings of the elders living in the long-term facilities. Thus, the elders received benefits from the CBI. Therefore, similar approaches may be useful to enhance the quality of care for elders.

The study helped students to apply what they had learned during CBI activities to their practice in care of elders and helped the students better understand the elders. Therefore, the study also provided a format to plan how to meet the needs of the elders in creative ways for the future nurses. Nursing students' self-transcendence was promoted and positive attitudes toward the elders significantly improved; thus, numbers of future

nurses that work in long-term care may increase and the quality of care in these facilities may also improve if the students that participated in this project transfer these ideas to their future nursing practice. Therefore, the CBI may be useful to reach society's expectation that humanistic and holistic care should be provided to elders.

Nursing Research

This study extended the theory of self-transcendence as it was used in Taiwanese nursing students for the first time. The findings provided additional evidence to support the theory of self-transcendence. The findings supported that there is a positive correlation between self-transcendence and nursing students' attitudes toward elders. Also, the CBI helped students bond with elders with new understanding. Students also contributed to elders' well-being. Findings suggested that the CBI might be modified and tested with new populations. The CBI may be a model for others to consider creative approaches to tap nursing students' self-transcendence, promote positive interactions, and provide a sense of well-being between the nursing students and the elders. During the implementation of these research activities, there were benefits to both elders and nursing students. The study offered new approaches to fill the knowledge gap regarding how to tap students' self-transcendence and promote positive attitudes toward elders.

Additionally, a Mandarin Chinese version of Reed's 15-item Self-Transcendence Scale (STS) and the Hilt and Lipschultz's (1999) 22-item instrument, a revision of Kogan's Attitudes Toward Old People statements (RKAOP), can be used with additional Taiwanese populations to understand Taiwanese self-transcendence and attitudes toward elders.

Policy

The study findings suggested that building partnerships between a school of nursing and long-term care facilities to advance students' learning and promote quality of elder care are important. Activities carried out in long-term care facilities between students, faculty, and elders can provide a model of care to benefit the school of nursing faculty, students, and long-term care facility residents. Also, the findings suggested that school of nursing faculty can integrate similar activities into future gerontology courses. While carrying out the CBI activities, the students can also promote well-being for elders who lived in long-term care facility. Thus, the students can contribute to improve the quality of care and quality of life for the long-term facility residents and the students also can advance their clinical experiences and personal and professional growth through the close contact with the elders.

When students and faculty become involved in the care of residents, it is likely that faculty will improve their practice, and the collaborative arrangements will provide access for future research activities in the long-term care facility. If long-term care facilities are close proximity to a school of nursing, the researcher suggests that relationships between the school of nursing and such a facility be fostered. The activities that were part of the study may be included in long term goals for such facilities. Due to the increased number of elders that are among our most vulnerable populations in society, the study findings provided innovative approaches to care for elders and a model to include in gerontological nursing care.

Strengths and Limitations of the Study

Strengths of the Study

1. The sample size was sufficient for the statistics used and the findings are supported by the power of one (Erdfelder, Faul, & Buchner, 1996). According to Shadish, Cook, and Campbell (2002), since the use of large sample size can increase power, so that the large numbers and power of one are strengths.

2. The researcher spent a lot of time in the field to observe how the elders and students perceived the CBI and if the CBI had an impact on them. Thus, the findings including quantitative and qualitative information provided a deep understanding about elders' and students' responses during the CBI.

3. A conceptual model was used to plan the CBI. This framework for this model (See Figure 1, Chapter 1), was based on a concept analysis of self-transcendence. The model was refined during two pilot studies. Also structured group procedures were provided to participant Taiwanese nursing students to help them implement the CBI and FV group activities. The intervention plan was based on Burns and Grove's (2001) suggestions about intervention research implementation.

Limitations of the Study

1. The participating students were recruited in only one nursing school in Taiwan and all the participants were female and young students; the elders that interacted with students assigned at two long-term care facilities only; thus, the study findings may limit the generalizability to other populations and sites. Further research in different schools with different nursing student participants and in different cultures are needed.

2. The researcher structured and described the CBI and FV procedure to allow for

others to duplicate the intervention protocol in different groups of students. However, differences in students' potential for creativity, elders' cognition and response, and expense of art supplies may contribute to different implementation of the intervention and the subsequent findings.

3. The Mandarin Chinese version of the Self-Transcendence Scale (STS; Reed, 1991b) and Lipschultz's (1999) Revised Kogan's Attitudes toward Old People (RKAOP) statements were used for the first time in Taiwanese culture. It could be strength because increase knowledge, but it could also be a limitation. Even though the Cronbach's alpha was .791 and .775 for the Mandarin Chinese STS and was .858 and .877 for the Mandarin Chinese RKAOP on the pre-test and post-test, more studies with the STS and RKAOP in Taiwanese culture are desired.

4. Students were randomly assigned to the CBI and FV group based on the class unit, so that different class atmospheres in each class that could not be controlled by the researcher may be a confounding variable. Shadish et al. (2002) suggested that if the assignment is based on aggregates, it is better to increase the number of aggregates. However, because this current dissertation study was integrated in a gerontological long-term care course and there were only four classes of students enrolled in this course, this researcher had no ability to increase the number of aggregates.

5. Social desirability responses on instruments may also be a possible concern because students may have answered what they thought were the desired response to items and want to "please" the instructor.

6. Students in the CBI and FV groups their classes were separated on different floors and students had different schedule for their courses in each class. Also, the students in

the CBI group were advised not to share their experience about CBI with students in the FV group until after post-test. However, there may be possible that contamination between the two groups occurred.

Recommendations for the Future Study

Since the CBI was studied and the Mandarin Chinese version of Reed's (1991b) STS and the Hilt and Lipschultz's (1999) RKAOP were tested the first time in Taiwan, additional research seems to be needed. Several recommendations for the future study are to: 1) test the CBI with an additional no treatment control group, 2) test the CBI using a longitudinal design to understand the long-term effects on students' future career choices, 3) strengthen the effects of the CBI by allowing additional time to practice in group meetings and collecting several examples of self-portraits as a reference for the students, 4) evaluate the intervention by additional qualitative research methods such as interview with students and elders; 5) test the use of simple art activities such as Monoprints and Ribbon Gems with elders who have reduced cognition; include students in the study design to record what elders response and what students' feelings are about elder care, 6) conduct qualitative research to identify patterns of self-transcendence in young nursing students; 7) test the Mandarin Chinese version of STS and RKAOP in Taiwanese population in different age groups to understand Taiwanese self-transcendence and attitudes toward elders; compare these results with people in other cultures.

Conclusion

There is an increased need for nurses who are willing to care for a growing elder population. The study's findings not only contributed evidence in relation to STS and attitudes toward elders about young nursing students in Taiwan, but also provided new knowledge related to designing the CBI model to tap students' STS and change their

attitudes toward elders. If faculty can provide methods to engage students and create excitement about student-elder interactions, students may change feelings about care for elders and may also plan for careers in gerontological care. Art is an expressive component that can help people access their creativity. Introducing the CBI to nursing students may assist students “to integrate the arts into a holistic, caring practice” (Lane 2006, p. 74). Such creative approaches that enhance student-elder interactions can also promote additional growth and stimulate students’ self-transcendence.

If self-transcendence of young nursing students can be stimulated, students may reach a high level of self-transcendence early in their natural development process. Also, as is an expectation of society, nursing students may increase their interest in providing nursing care to a wider range of people including elders. The CBI and FV offered students alternatives and structure to begin and continue interactions with elders. Further studies are needed to promote art in nursing, to provide more evidence for such innovative approaches in gerontological courses, and to enhance the development of self-transcendence in young nursing students.

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APPENDICES

Appendix A
Demographic Data Questionnaire

Give a number by yourself _____ Importantly, keep the same number with post-tests.
Please complete information. Thank you very much.

Socio-Demographic Questionnaire

1. In what year were you born? _____ (it will be computed to be age in years)

2. Religious affiliations (Mark X beside the one that best describes you)
Folk Religion _____ Buddhism _____ Christianity _____ No religious affiliation _____
Other _____ name your religion here _____

3. Family structure type: (Mark X beside the one that you have lived the longest time)
Live with parents only: _____ (Nuclear family)
Live with parents and grandparents: _____ (Extended family) Other: _____

4. Have you had the chance of interacting with any elders (65 years old and over)
No: _____ Yes: _____ If yes, please answer 5-7.

5. Have you ever lived with grandparents or other elder relatives? No: _____ Yes: _____
If yes, how long have you ever lived with the elders in total? _____ Years _____
months.
How often you interact with the elders? Every day _____ several times per week _____
several times per month _____ several times per year _____

6. When you do not live with your grandparents or other elders, how often you visit them:
every day _____ several times per week _____ several times per month _____
several times per year _____

7. Have you ever had a part-time job or volunteer position to look after elders? No: _____
Yes: _____ If yes, please state how long you looked after them: _____ months or _____
weeks or _____ days

8. Please describe your experiences or difficulties you faced when you interacted with
elders _____

9. Did you make a decision to study in nursing school by yourself? Yes: _____ No: _____.
If no, who gave you the suggestions? _____ What reasons supported your decision to
study nursing? _____

10. Have you enjoyed studying in nursing? Yes: _____ No: _____ . If no, can you provide
the reasons and how can we help you? _____

11. Based on career choice, which age group is your first choice in the future? (1) Below 18 years old _____ (2) between 18 to 64 years old _____ (3) 65 and over years old _____
Please give your reasons: _____

12. Please rate your willingness to take care of elders after you graduate from school.
Circle a score from 1-10 with 10 being the most willing and 1 being the least willing
0 1 2 3 4 5 6 7 8 9 10

Appendix B

Self-Transcendence Scale (STS)

Self-Transcendence Scale

Give a number by yourself_____ Importantly, keep the same number for pre and post-tests.

DIRECTIONS: Please indicate the extent to which each item below describes you. There are no right or wrong answers. I am interested in your frank opinion. As you respond to each item, think of how you see yourself at this time of your life. Circle the number that is the best response for you.

	Not	Very	Some	Very -	
	At all	little	what	much	
<i>At this time of my life, I see myself as:</i>					
1. Having hobbies or interests I can enjoy.	1	2	3	4	
2. Accepting myself as I grow older now.	1	2	3	4	
3. Being involved with other people or my community when possible.	1	2	3	4	
4. Adjusting well to my present life situation.	1	2	3	4	
5. Adjusting to the changes in my physical abilities.	1	2	3	4	
6. Sharing my wisdom or experience with others.	1	2	3	4	
7. Finding meaning in my past experiences.	1	2	3	4	
8. Helping younger people or others in some way	1	2	3	4	
9. Having an interest in continuing to learn about things.	1	2	3	4	
10. Putting aside some things that I once thought were so important.	1	2	3	4	
11. Accepting death as a part of life.	1	2	3	4	
12. Finding meaning in my spiritual beliefs.	1	2	3	4	
13. Letting others help me when I may need it.	1	2	3	4	
14. Enjoying my pace of life.	1	2	3	4	
15. Dwelling on my past unmet dreams or goals.	1	2	3	4	

Thank you very much for completing these questions. Do you have any comments?

Appendix C

Chinese Version of STS

自我超越問卷 請於空白處填上與你前測問卷相同的ID碼_____

回答說明：當你看到每個題目時，請依照你目前所感受到的自己，圈選最適合描述你自己的號碼。你的回答沒有對與錯，所以請依照**真實的你**加以圈選，謝謝你。

對於我生命歷程的此時，我認為自己： 完全不同意 一點點同意 同意 非常同意

1. 有我喜愛的嗜好與興趣 1 2 3 4
2. 隨著年齡增長，現在能接受自己 1 2 3 4
3. 可能的話，會盡量參與他人或社區的活動 1 2 3 4
4. 對目前的生活狀況適應良好 1 2 3 4
5. 能適應 (因年紀增長) 體能的改變 1 2 3 4
6. 能與他人分享我的智慧或經驗 1 2 3 4
7. 能夠從過去的經驗找到它的意義 1 2 3 4
8. 會盡量嘗試去幫助年輕人或有需要幫助者 1 2 3 4
9. 有興趣不斷的學習種種事物 1 2 3 4
10. 某些過去曾認為很重要的事現在可以不那麼在意 1 2 3 4
11. 能接受死亡是生命的一部份 1 2 3 4
12. 可以從我精神信仰(靈性)中找到生命的意義 1 2 3 4
13. 當我有需要時，我會接受他人的幫助 1 2 3 4
14. 喜歡自己的生活步調 1 2 3 4
15. 會老是想著過去未達成的夢想或目標 1 2 3 4

非常謝謝你完成這份問卷，請問你對這份問卷有何意見?

Appendix D

Revised Kogan's Attitudes towards Old People statements (RKAOP)

Give a number by yourself_____ Importantly, keep the same number for pre and post-tests.

REVISED KOGAN'S ATTITUDES TOWARD OLD PEOPLE SCALE

Directions: Circle the LETTER on the scale following each statement, according to the following key, that is closest to your opinion of old people.

Key:

Strongly Disagree Slightly Neutral Slightly Agree Strongly
Disagree Disagree Agree Agree
A..... B..... C..... D..... E..... F..... G

1. The elderly have the same faults as anybody else.
A..... B..... C..... D..... E..... F..... G
2. The elderlys' accounts of their past experiences are interesting
A..... B..... C..... D..... E..... F..... G
3. Most elderly keep a clean home
A..... B..... C..... D..... E..... F..... G
4. Most elderly seem to be quite clean in their personal appearance
A..... B..... C..... D..... E..... F..... G
5. Most elderly would work as long as possible rather than be dependent
A..... B..... C..... D..... E..... F..... G
6. People grow wiser with the coming of old age
A..... B..... C..... D..... E..... F..... G
7. Most elderly are very different from one another.
A..... B..... C..... D..... E..... F..... G
8. Most elderly are cheerful, agreeable, and good humored
A..... B..... C..... D..... E..... F..... G
9. Most elderly respect the privacy of others
A..... B..... C..... D..... E..... F..... G
10. Most elderly are very relaxing to be with
A..... B..... C..... D..... E..... F..... G
11. A nice residential neighborhood has a number of elderly living in it
A..... B..... C..... D..... E..... F..... G
12. Most elderly are as easy to understand as younger people
A..... B..... C..... D..... E..... F..... G
13. Most elderly can adjust when the situation demands it
A..... B..... C..... D..... E..... F..... G
14. The elderly have too little power in business and politics.
A..... B..... C..... D..... E..... F..... G

A FEW MORE ITEMS—GO ON TO PAGE 2.

The directions and key are repeated below.

Directions: Circle the LETTER on the scale following each statement, according to the following key, that is closest to your opinion of old people.

Key:

Strongly Disagree Slightly Neutral Slightly Agree Strongly
Disagree Disagree Agree Agree

A..... B.....C..... D.....E.....F.....G

15. Most elderly need no more love and reassurance than anyone else.

A..... B.....C..... D.....E.....F.....G

16. It would be better if most elderly lived in residential units that also housed younger people

A..... B.....C..... D.....E.....F.....G

17. The elderly seldom complain about the behavior of younger people

A..... B.....C..... D.....E.....F.....G

18. It is foolish to claim that wisdom comes with old age

A..... B.....C..... D.....E.....F.....G

19. Most elderly bore others by talking about the "good old days"

A..... B.....C..... D.....E.....F.....G

20. Most elderly spend too much time prying into the affairs of others

A..... B.....C..... D.....E.....F.....G

21. Most elderly let their homes become shabby and unattractive

A..... B.....C..... D.....E.....F.....G

22. If the elderly expect to be liked, they should eliminate their irritating faults

A..... B.....C..... D.....E.....F.....G

Appendix E

Chinese Version of RKAOP

老人態度問卷

填答說明:請閱讀下列問題，從問題下方的答案，圈選出最適合你對老年人的看法，答案範圍由(A)非常不同意到(G)非常同意。

非常不 不同意 稍微 沒意見 稍微 同意 非常
同意 不同意 同意 同意
A..... B..... C..... D..... E..... F..... G

1. 老年人和其他人一樣都會有缺點。
A..... B..... C..... D..... E..... F..... G
2. 老年人講述他們過去的經驗是很有趣的。
A..... B..... C..... D..... E..... F..... G
3. 大部分的老年人把住家維持得很乾淨。
A..... B..... C..... D..... E..... F..... G
4. 大部份的老年人看起來乾淨整潔。
A..... B..... C..... D..... E..... F..... G
5. 大部份的老年人儘可能繼續工作，而不喜歡成為依賴者。
A..... B..... C..... D..... E..... F..... G
6. 隨著老年的到來，人會更有智慧。
A..... B..... C..... D..... E..... F..... G
7. 大部份的老年人是每一個都不一樣的。
A..... B..... C..... D..... E..... F..... G
8. 大部份的老年人都是爽朗的、令人感到愉快的，且富有幽默感的。
A..... B..... C..... D..... E..... F..... G
9. 大部份的老年人都會尊重他人的隱私。
A..... B..... C..... D..... E..... F..... G
10. 大部分的老年人與他們相處讓人感覺輕鬆自在。
A..... B..... C..... D..... E..... F..... G
11. 一個好的居住社區，通常是有許多老年人住在裡面。
A..... B..... C..... D..... E..... F..... G
12. 大部分的老年人跟年輕人一樣，容易被了解。
A..... B..... C..... D..... E..... F..... G
13. 當環境需要時，大部分的老年人能調整自己去適應。
A..... B..... C..... D..... E..... F..... G
14. 老年人在商場與政壇上沒什麼權力。
A..... B..... C..... D..... E..... F..... G
15. 大部份的老年人並沒有比其他人需要更多的愛和再保證。
A..... B..... C..... D..... E..... F..... G
16. 如果老年人住的地方也有年輕人同住，會比較好。
A..... B..... C..... D..... E..... F..... G

請繼續填答下一頁

非常不 不同意 稍微 沒意見 稍微 同意 非常
同意 不同意 同意 同意
A..... B..... C..... D..... E..... F..... G

17. 老年人很少抱怨年輕人的行為。
A..... B..... C..... D..... E..... F..... G

18. 認為年紀變老就會較有智慧的說法是很愚蠢的。
A..... B..... C..... D..... E..... F..... G

19. 大部分的老年人讓他人覺得無聊是因為喜歡談過去的好時光。
A..... B..... C..... D..... E..... F..... G

20. 大部分的老年人花太多時間去探聽別人的閒事
A..... B..... C..... D..... E..... F..... G

21. 大部分的老年人讓他的住家變得拉邇、不吸引人。
A..... B..... C..... D..... E..... F..... G

22. 假如老年人希望被喜歡，他們應該去除那些討人厭的毛病。
A..... B..... C..... D..... E..... F..... ..G

非常謝謝你完成這份問卷，請問你對這份問卷有何意見？

Appendix F

Post-test Questionnaire

Post-test questionnaire Give the same number with pre-test_____

Please complete information. Thank you very much.

1. You were going to long-tern care facility A__ or long-tern care facility B
2. In addition to the planned time, did you go there by extra-time? No__ Yes
If yes, how many extra times did you go to the long-tern care facility?
How many hours in total did you interact with the elder
3. Please describe your feelings about the future ideal self-image design or the discussion about your self-image, how it impact on you, and how it promote the interaction between you and the elder ?
4. Please describe your experience with the elders during delivering the intervention and illustrate it with your activities

5. How helpful did you feel this intervention was to facilitate interaction with elders? Circle a score from 0-10 (10 being the most helpful and 1 the least helpful)?
0 1 2 3 4 5 6 7 8 9 10
Please describe how it was helpful:
6. Please state what you have learned while you deliver this intervention
7. Please describe what difficulties you faced during this long-term care facility experience?
8. What are your suggestions for improving the intervention?
9. How the interaction with elder meaningful to you? Circle a score from 1-10 (10 being the most meaningful and 1 being the least meaningful) 0 1 2 3 4 5 6 7 8 9 10
Please describe how it was meaningful
10. Based on career choice, which age group is your first choice in the future? Below 18 years old__ between 18 to 64 years old__65 and over years old__Please give your reasons:
11. Please rate your willingness to take care of elders after you graduate from school. Circle a score from 1-10 with 10 being the most willing and 1 being the least willing
0 1 2 3 4 5 6 7 8 9 10
- 12 Have you enjoyed studying in nursing? Yes: __No: __. whatever you choose, can you describe what you think for this

Appendix G

Permission to Use Measurement

Dear Dr. Reed,

Thank you for your response. I am interested in using your Self-Transcendence Scale in my pilot study at Barry University. The topic of the pilot study is "Student Nurses Activities with Elders in a Community Healthcare Facility: A pilot study to compare students' self-transcendence and their attitude toward the elders with a Creative Arts Social Bonding Intervention (CASBI) and a Friendly Visit (FV)." I also am interested in translating the scale into a Chinese version and building the reliability and validity in a Taiwanese student nurse population.

I am asking your permission to use your Self-Transcendence Scale on a population of undergraduate student nurses at Barry University and in a Taiwan nursing college. I have gotten some information about the reliability and validity of the scale and the theory through 1986 to 2005 in published articles; see the attached file. I am wondering if you have any more current information or a reference list of recent studies that have used your scale. Would it be possible to ask your help in sending the information to me?

I am in the process of conducting a pilot study with IRB documents. Following my pilot work, I plan to modify my dissertation proposal and return to Taiwan to collect data. Thank you for your kind attention

Sincerely,
Shiue Chen

STS Request Form

I, Shiue Chen, request permission to copy the Self-Transcendence Scale (STS) for use in my pilot study titled Student Nurses Activities with Elders in a Community Healthcare Facility: A Pilot Study to Compare students' self-transcendence and their attitude toward the elders with a Creative Arts Social Bonding Intervention (CASBI) and a Friendly Visit (FV) and in my dissertation titled , The effect of two different interventions on self-transcendence in nursing students and their attitudes toward elders and the response of elderly people living in nursing homes in Taiwan.

In exchange for this permission, I agree to submit to Dr. Reed Items 1 and 2 below, and 3 if available:

1. An abstract of my study purpose and findings, which includes the range of STS scores and the mean STS score in my group of participants, and correlations between the STS scale scores and other measures used in my study. (This will be used by Dr. Reed to assess construct validity).
2. The reliability coefficient as computed on the scale from my sample (Cronbach's alpha).
3. A computer print out or file listing the STS data on each subject, along with my data coding dictionary *as available*.

Any other information or findings that could be helpful in assessing the reliability or validity of the instrument would be greatly appreciated (e.g. problems with items, comments from participants, other findings).

These data will be used to establish a normative data base for clinical populations. No other use will be made of the data submitted. Credit will be given to me in reports of normative statistics that make use of the data I submitted for pooled analyses.

Date: 09/13/05

Name: Shiue Chen

Position: a nursing doctoral student

Address: 11950 N. E. 2nd Ave. Apartment 312, North Miami, Florida 33161-6168

Email address: shiue@mail.ntin.edu.tw ; chens1@bucmail.barry.edu

Permission is hereby granted to copy the STS for use in the research described above.

Pamela G. Reed, PhD, MSN, FAAN

Date: _____

Please email this completed form to Dr. Pamela Reed at preed@nursing.arizona.edu and keep a copy for your files.

[Dear Shiue Chen](#)

I am sorry but I just found your email! I wondered if I had responded to you about your study? Thank you for sending the Permission Form. You are welcome to use the STS for your study. I look forward to answering questions you may have along the way. Your study title sounds very interesting - a new area of research with the Chinese population! I hope your pilot study was successful!

Thank you,
Pam

Pamela G. Reed, PhD, MSN, RN, FAAN Professor

University of Arizona College of Nursing

1305 N. Martin St.

Tucson, AZ 85721-0203

preed@nursing.arizona.edu

Dear Dr. Hilt,

I am a nursing doctoral student from Taiwan studying at Barry University, Miami. My professor is Dr. Sandra Walsh. I am interested in using your revised Kogan scale: The Attitudes Toward Older Adults, in my pilot study at Barry University. The topic of the pilot study is "Student Nurses Activities with Elders in a Community Healthcare Facility: A Pilot Study to compare students' self-transcendence and their attitude toward the elders with a Creative Arts Social Bonding Intervention (CASBI) and a Friendly Visit (FV). I also am interested in translating the scale into a Chinese version and building the reliability and validity in a Taiwanese student nurse population. Has your revised scale been translated into a Chinese version or used in Taiwan?

I am asking your permission to use your scale of attitudes toward older adults on a population of undergraduate student nurses at Barry University and in a Taiwan nursing college. I have gotten some information about the reliability and validity of the scale for the original version, but I did not find this information related to the revised version. May I have the reference list of any other studies that have used your scale for reference?

I am in the process of conducting a pilot study with IRB documents. Following my pilot work, I plan to modify my dissertation proposal and return to Taiwan to collect data. I can be reached at :

Shiue Chen
11950 NE 2nd Ave
Apt 312
North Miami, Floria 33161-6168
Home: telephone number 305-759-1845
E-mail: shiue@mail.ntin.edu.tw
Chens1@bucmail.barry.edu

Thank you for your kind attention

Sincerely,
Shiue Chen

You have permission to use the scale. I do not have a list of other studies that have used the revision, and I am not aware if it has been translated into Chinese.

Good luck on your research. I would be interested in learned the results of your studies.

Michael L. Hilt, Ph.D.
Professor & Graduate Program Chair
School of Communication
College of Communication, Fine Arts and Media
University of Nebraska at Omaha
Co-editor, Studies in Media & Information Literacy Education
Arts & Sciences Hall, Room 140-B
Omaha, NE 68182
VOICE: 402-554-4855
FAX: 402-554-3836
E-MAIL: mhilt@mail.unomaha.edu

Appendix H

Support Letters from the Institute of Nursing and Long-term care Facilities

June 6, 2006

Committee Members
Institutional Review Board
Barry University

Dear Committee Members:

I have read Ms. Chen's proposal, "The Effect of a Creative-Bonding Intervention on Nursing Students' Self-Transcendence and Attitudes towards Elders in Taiwan". This research will be integrated in the long term care course with portions of her plan to include students' visits with elders in a long-term care facility. The research will compare two groups of students who participate in 1) classroom instruction plus a Creative-Bonding Intervention (CBI) with elders 2) classroom instruction plus friendly visits with elders. I am fully supportive of Ms. Chen's efforts to implement this project with the fourth year nursing students who take the long-term care course to offer students having individual interaction with elders in a long-term care facility with an innovative approach. I support this plan which focuses on promoting students' knowledge about elders, long-term care, and hope to improve students' interaction with elders and further our knowledge about attitudes towards elders and self-transcendence in nursing students as the aged population is growing.

I have been informed that there will be no adverse effects on students' grade if they choose not to participate in the research because their teacher (Ms. Hsieh) will not know if the students do not participate as research subjects. Results of the study will be presented to faculty and students and students will have the opportunity to implement the innovative activities with elders in the future.

Please contact me if I can be of further assistance.

Sincerely,

Director Hung-Pin Chen
National Tainan Institute of Nursing
78 Min-Tsu Rd. Sec. 2 Tainan, 700, Taiwan
Phone 011-886-2110515
E-mail: hpchen@mail.ntin.edu.tw

July 28, 2006
Committee Members
Institutional Review Board
Barry University

Dear Committee Members:

I have communicated with Ms. Chen and Dr. Walsh (Ms. Chen's dissertation chair) to plan Ms. Chen's work with our students to promote excellence in elder care. I am in charge of the long term care course where Ms. Chen hopes to recruit nursing students to participate. I understand that Ms. Chen's research is titled, "The Effect of a Creative-Bonding Intervention on Nursing Students' Self-Transcendence and Attitudes towards Elders in Taiwan." The clinical work Ms. Chen is proposing for her dissertation will become part of the regular assignment during this long-term care course and students will be completely free to decide if they want to participate in the research component. All students, as part of the course, will be required to complete the clinical assignments but will not be required to complete the questionnaires and instruments that are part of her dissertation research. Regular class activities will include random assignment (by classes) into two groups. One group of students will participate in classroom instruction plus a Creative-Bonding Intervention (CBI) (art-activities) with elders and another group will participate in classroom instruction plus Friendly Visits (FV) with elders.

I will not have knowledge of student's participation in the research portion of this project and their decision to participate or not to participate in the research portion will not affect their final grade. Student participation in the completion of research instruments will be anonymous because Ms. Chen has devised a system for students to put their own numbers on the data so that students who complete research instruments will not even be known to Ms. Chen.

Until now the long-term care curriculum consisted mostly of in class lectures and group work based on reading assignments, with only one group participating in designing an activity to be delivered in a nursing home. I agree that if we provide the opportunity for students to have increased individual interaction with elders in a long-term care facility, it may promote students' knowledge about elders, long-term care, and may improve students' interaction with and understanding about elders. Moreover, information gained from students who decide to participate in the study may further our knowledge about attitudes towards elders and self-transcendence in nursing students.

I am excited that the implementation of these activities in the long-term care course. I will continue to work with Ms. Chen and Dr. Walsh to help them implement this research. Please contact me if I can be of further assistance.

Sincerely,

Jiin Luan Hsieh

National Tainan Institute of Nursing

78 Min-Tsu Rd. Sec. 2 Tainan, 700, Taiwan

Phone 011-886-2110456 e-mail: hsieh@mail.ntin.edu.tw

June 6, 2006

Committee Members
Institutional Review Board
Barry University

Dear Committee Members:

I have worked with Ms. Chen and Dr. Walsh (Ms. Chen's dissertation chair) to plan for the nursing students of National Tainan Institute of Nursing to have individual interactions with elders in our nursing home when the students take the long-term care course. I understand that the research is titled, "The Effect of a Creative-Bonding Intervention on Nursing Students' Self-Transcendence and Attitudes Towards Elders in Taiwan" and the research will compare two groups of students who participate in 1) classroom instruction plus a Creative-Bonding Intervention (CBI) with elders 2) classroom instruction plus friendly visits with elders. I am hopeful that the implementation of the CBI will give students' an innovative tool to assist them to become better acquainted with elders and that they will learn to enjoy working with our growing population of elders. I am fully supportive of Ms. Chen's efforts to implement this project with students as they interact with elders in our nursing home. I understand Ms. Chen's work focuses on student outcomes and there will be no testing of elders and elders are not part of the research protocol.

I will continue to work with Ms. Chen and Dr. Walsh to help them implement this research approach during the students' visits with elders in our nursing home. Please contact me if I can be of further assistance.

Sincerely,

President Yu Pin Hsu
Jin Sheng Nursing Home
904 Chong ShanSouth Rd. Yong Kong City, Tainan 710, Taiwan
Phone 011-886-2338420 ext. 69
E-mail: joyupin@hotmail.com

July 28, 2006

Committee Members
Institutional Review Board
Barry University

Dear Committee Members:

I have worked with Ms. Chen and Dr. Walsh (Ms. Chen's dissertation chair) to plan for the nursing students of National Tainan Institute of Nursing to have individual interactions with elders in our long-term care facility when the students take the long-term care course. I understand that the research is titled, "The Effect of a Creative-Bonding Intervention on Nursing Students' Self-Transcendence and Attitudes Towards Elders in Taiwan" and the research will compare two groups of students who participate in 1) classroom instruction plus a Creative-Bonding Intervention (CBI) with elders 2) classroom instruction plus friendly visits with elders. I am hopeful that the implementation of the CBI will give students' an innovative tool to assist them to become better acquainted with elders and that they will learn to enjoy working with our growing population of elders. I am fully supportive of Ms. Chen's efforts to implement this project with students as they interact with elders in our long-term care facility. I understand Ms. Chen's work focuses on student outcomes and there will be no testing of elders and elders are not part of the research protocol.

I will continue to work with Ms. Chen and Dr. Walsh to help them implement this research approach during the students' visits with elders in our long-term care facility. Please contact me if I can be of further assistance.

Sincerely,

President Tsia
Miraculous Medal Hospice
530 Jin-Hua Rd. Sec. 1, Tainan, Taiwan.
Phone 011-886-2635206 ext. 260
E-mail: dc.hospice@msa.hinet.net

Appendix I

IRB Approval Cover Letter (English and Chinese version)



Barry University

Institutional Review Board
Office of the Provost and Senior Vice President
for Academic Affairs

11300 NORTHEAST SECOND AVENUE
MIAMI SHORES, FLORIDA 33161-66

Direct (305) 899-3000

Fax (305) 899-3000

Research with Human Subjects
Protocol Review

To: Shiue Chen
From: Doreen C. Parkhurst, M.D., FACEP
Chair, Institutional Review Board

Date: August 8, 2006

Protocol Number: 06-08-06
Protocol Title: The Effect of a Creative-Bonding Intervention on Nursing Students' Self-Transcendence and Attitudes Toward Elders in Taiwan

Dear Ms. Chen:

The Board has accepted your protocol to be exempt from further review and you may proceed with data collection. Enclosed is the stamped Consent Cover Letter indicating that the IRB has reviewed and accepted your protocol. Please use this form when collecting your data.

If there are changes to your protocol in the future, please notify the Board. Please refer to the Protocol Number when you write.

Regards,

Doreen C. Parkhurst, M.D., FACEP
Chair, Institutional Review Board
Assistant Dean, SGMS &
Program Director, PA Program
Barry University
Box SGMS
11300 NE 2 Avenue
Miami Shores, FL 33161

cc: Faculty Sponsor

If you have any questions, please contact Nildy Polanco at 305-899-3020

Note: The investigator will be solely responsible and strictly accountable for any deviation from or failure to follow the research protocol as approved and will hold Barry University harmless from all claims against it arising from said deviation or failure.

Barry University/The National Tainan Institute of Nursing 060806

Cover Letter

Dear Potential Research Participant (students in long-term care course):

Your participation in a research study is requested. This study is being conducted by Shiue Chen, a doctoral student at Barry University School of Nursing in America. Ms. Chen is seeking information that will be useful in nursing education, nursing practice, and long term care. The aims of the research are to understand attitudes toward elders and self-transcendence in nursing students. This study will compare two groups of students who participate in 1) classroom instruction plus a Creative-Bonding Intervention (CBI) with elders or 2) classroom instruction plus a Friendly Visit (FV) with elders. We anticipate the number of participants to be 100 students per group. Each group will come from a separate class. Four classes are being used in the study, two classes will comprise the CBI group and two classes will comprise FV group.

The orders of the following procedures will be used:

- (1) Participants will choose their own ID number.
- (2) Participant complete the pre-test questionnaires using their own ID number before the class begins.
- (3) Random assignment to CBI or FV group will be done by class units.
- (4) The CBI and FV activities are completed during 8 weeks of experience in classroom and clinical time with elders.
- (5) Post test questionnaires are completed with participants using their own ID number and that ID number corresponds to the ID number used in the pre-test (The researcher, Ms Chen, will provide a list of the ID numbers so each participant can recognize and retrieve their chosen number for the post-test).

If you decide to participate, you will be asked to complete: (1) a socio-demographic questionnaire (pre-test) about your background, (2) a 15-item Self-Transcendence Scale (STS) (pre-post tests) which asks you about your developmental maturity, (3) a 22-item revision of Kogan's Attitudes toward Old People statements (RKATOP) (pre-post tests) which asks about your attitudes toward elders, and (4) a post-test questionnaire which asks your feelings and suggestions about your experience with elders. It is anticipated that it will take you 25 minutes each time to complete the information described above.

Your consent to be a research participant is strictly voluntary. If you choose not to participate in the research, simply return the blank questionnaires in the envelope provided to you and there will be no adverse effects on your grade in the course. Your teacher (Ms. Hsieh) will not know if you do not participate as a research subject and your grades will not be affected by your participation or non-participation. You will be expected as part of your course to spend required time (12 hours in a nursing home) with the elders and 4 hours in class for discussion and presentation (to report your experiences with elders) as part of the long-term care course. During this project Ms. Chen and an assistant will instruct you about implementation of the CBI or the FV depending on your group assignment. Two weeks (four hours) of the time spent in the CBI or FV activities can be counted as part of your volunteer time requirement as encouraged by your college.

There are no known risks to you related to your participation in this study. Your participation in this study may promote your knowledge about elders, long-term care, and further our knowledge about attitudes towards elders and self-transcendence in nursing students. Benefits may include your knowledge of specific CBI activities. Following post-tests, if you are in the FV group, you will have the opportunity to participate in a 3 hour voluntary CBI workshop to participate in the CBI activities.

As a research participant, information you provide will be anonymous, that is, the information you provide (data sheet, STS, and RKATOP) will not be linked to your name as you will choose your own ID. number to place on these materials. Data will be kept in a locked file in the researcher's office. Results will be reported in aggregate (using statistical procedures) at professional conferences and in professional publications. If you have any questions or concerns regarding the study or your participation in the study, you may contact Shiue Chen at (06)2005654 or 0921511371 or Dr. Sandra Walsh, Ms. Chen's dissertation chair, at 305-899-3810 (USA) or the Barry Institutional Review Board (IRB) contact, Ms. Nildy Polanco at 305-899-3020 (USA). Thank you for your participation.

Sincerely,

Shiue Chen

Shiue Chen

Sandra M. Walsh

Sandra M. Walsh, RN, PhD

IRB

Date: _____

Signature: _____

8/8/06

D. Paulhurst

親愛的同學們：

這封信是希望能邀請正在修長期照護課程的妳們參加一個有關老年人的研究。此份研究主持人是目前正在美國 Barry university 攻讀博士學位的陳雪老師。本研究目的是要了解護理學生對老年人的態度和自我超越的情形。此研究將比較兩組學生執行不同護理措施的結果：一組是課室教學加上學生以創意的藝術與老年人互動以引發談話主題(CBI組)，另一組是課室教學加上學生純以談話與傾聽與老年人互動 (FV組)。每一組將由兩個班級組成且期望每一組有 100 人左右。

同學參與本研究的程序如下：

- (1) 在課程開始前完成前測問卷。
- (2) 在研究問卷上填寫自己選擇的 ID 識別碼。
- (3) 填寫完前測問卷將以隨機分配方式將四班分成 CBI 組和 FV 組。
- (4) CBI 組和 FV 組活動將執行 8 週，包含有課室活動及在長期照護機構與老年人互動的經驗。
- (5) 8 週後將填寫後測問卷，且請你填上與前測問卷相同的 ID 識別碼(我會整理這些 ID 識別碼供您辨認何者是您的號碼)。

參加本研究，我將邀請你填寫以下問卷：(1) 基本資料問卷表(前測)(2) 15 題的自我超越問卷表(前後測)(3) 22 題的對老人態度問卷表(前後測)(4) 一份問你對這 8 週的經驗感受及建議的後測問卷表。每次填寫問卷大約花你 25 分鐘左右。你可以自由選擇是否參加這個研究，如果你不願意參加本研究就交回空白的問卷即可，並不會對你長期照護的成績造成任何影響，因為只有你知道自己的編碼，謝老師不會知道空白問卷是那一位同學的。這 8 週的討論及與老年人互動經驗是本課程一部分，其中第一週於課室中討論，第八週於課室發表您參與本計劃的心得與成果，第二至第七週你需到長期照護機構與老年人互動，但是其中第六及第七週需用你課餘的時間到長期照護機構，這個時間可以給你學校所鼓勵的志工證明，所以你至少有 4 小時的志工時間與老年人互動(當然歡迎超過 4 小時)。在這 8 週中研究者及研究助理將指導你如何執行 CBI 或 FV 的活動。

參加本研究對你並無已知的不良影響，相對的反而可以增進你對老年人的認識，提升你的長期照護知識，學習 CBI 的活動和幫助我們了解護理學生對老年人的態度及自我超越的情形。如果你是分配至 FV 組，做完後測問卷後，我會與你們討論安排一大約 3 小時適合你們的課餘時間，讓你們有機會學習 CBI 活動。

因為問卷上的識別碼是自己選用的，別人不會知道，所以你所填的資訊完全是無記名的。所有問卷會被妥善保存，研究結果只會以統計分析後整合形式發表在專業研討會及專業期刊上。如果你對此研究或是參與研究有任何疑問，可打此電話 2005654 或 0921511371 找研究者或打美國 305-899-3810 找 Sandra Walsh 博士(此研究的指導教授)或打美國 305-899-3020 找研究倫理委員會(IRB) Nildy Polanco 女士。

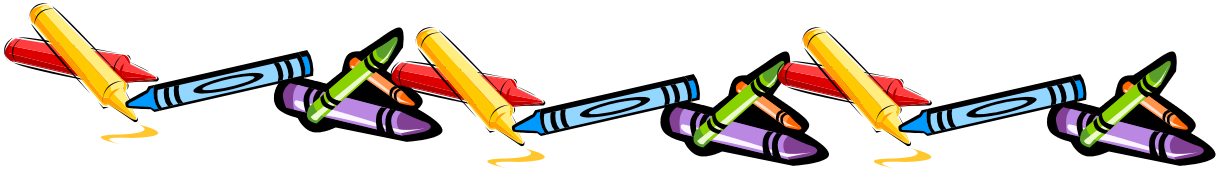
謝謝妳參與本研究。

研究者 陳雪及 Sandra Walsh 博士敬上 09/11/06

I've read through both the English and Chinese version of the 1/2

Appendix J

The Description of the Art Activities



Creative-Bonding Intervention

Shiue Chen, RN, MSN, doctoral student



Three art activities are described that were used in Ms. Chen's dissertation. Any person can implement these activities. Art knowledge is not needed—only enthusiasm for the activity. If you try any activity with others, be sure to complete the activity yourself first. Most supplies can be ordered from mail order art supply stores or are available in crafts/art stores.

Activity #1. Self-image "Portrait". Make a self-image poster that depicts you doing something foolish or something real. This activity has been used with children and adults of all ages. This project requires at least 30 minutes. You may want to make several images of yourself or, with permission, make a poster of someone else.

Activity #2. Monoprint Art. Choose your favorite colors to make abstract designs using watercolors. Very quick and easy. Try it!!! You will want to make several once you begin.

Activity #3. Ribbon Gems. These can be made from discarded watercolor paintings or from any type of colorful thick paper with images (old greeting cards/magazine covers). They are great mini wall hangings or work well hanging from Intravenous Fluid poles in the hospital.

Activity #1. Self-image “Portrait”

Have you ever wanted to be a ballet dancer or famous pianist? With this reflective activity you can be that person. You simply take a photograph and put whatever body (can be cut from newspaper or magazine or from a packet of images you can obtain from Dr. Walsh) beneath the head cut from your photo. As a base for your image, use a thick piece of colored or white paper. Glue your face from the photo on top of the body. Embellish your portrait with additional cutouts from magazines. This self-portrait could be displayed on your refrigerator, framed, or given as a gift.

Supplies and directions:

1. A photograph—head shot—Dr. Walsh continues to use an instant camera but you may want to take digital pictures, have participants bring their own or whatever is feasible for the situation and population. Cut out the “head” leaving a portion of the neck to place inside the neck of the body image.
2. Scissors
3. A body image drawn by the person, cut out from a magazine, or obtained from Dr. Walsh’s workbook of images (swalsh@mail.barry.edu) with 60+ examples of males and females in apparel depicting various professions
4. One piece of 8 ½ X 11 poster board or thick colored piece of paper
5. Crayons, magic markers, or paint
6. Glue stick or Elmer’s craft glue.
7. Other items as desired from magazines, scrapbook stores, whatever you can find to embellish the image.

Decorate the poster board (colored paper) as you wish and include items from scrapbook stores or magazine cut-outs. These items reflect the person’s interests.

Activity #2. Monoprint

Expression through color

Supplies needed and directions:

1. Cover –ups/aprons for participants as colors are very staining.
2. Precut mats to “frame” your monoprint. These can be purchased at crafts/arts stores.
3. Heavy pieces of watercolor paper (140 pound is good) or heavy stock paper that is cut slightly larger than the mats. The monoprints will be framed in the mats.
4. Masking tape to tape the monoprints in the mat.
5. Several bottles of liquid watercolors. Choose 5-8 vivid colors. Liquid watercolors (such as Dr. Ph Martin’s—there are several brands) can be bought in crafts/arts stores. We suggest that you do NOT purchase black or brown as these colors dominate and do not produce pleasing results. Some brands are quite expensive (cost \$3-\$ per small bottle) but will last a long time.
6. If you want to make an image or write a name on the monoprint, do so BEFORE you apply the colors. Use a white crayon or maskoid resist (and let dry) to block out a name or image. For example, you could write someone’s name or draw a valentine or a tree image with a white crayon OR paint the image with watercolor maskoid resist. This resist and a frisket tool to remove the resist after you have created the monoprint can be purchased at crafts/arts stores. Let the resist dry (will take about 30 minutes) before you press the paper onto the colors
7. Have the participant choose 3 or 4 favorite colors *
8. Drop colors from droppers onto a piece of glass or Plexiglas or any type flat washable surface –such as a cookie sheet
9. Mash the precut paper down on top of colors and let dry before you place in the mat.
10. If you used the maskoid resist, then remove with the frisket tool after the monoprint is completely dry.
11. Cut four pieces of masking tape.
12. “Mount” painting inside one of the precut mats

Magic!!!! You have created a "monoprint" original painting.

*Hint: Mixing 4 or more colors may end up as brown or black.

Activity 3. “Ribbon Gems”

These “Gems” are great to give as mini wall hangings. They are effective as a bright spot in a patient’s room and work well hanging from patient’s I. V. Poles.

Directions.

1. Use a stencil you make of any image you like. Trace the object X2 on paper that has something painted or drawn on it (can be various abstract colors, or Dr. Walsh uses discarded watercolor paintings).
2. Use thick paper. Walsh’s “abstract designs” are from discarded paintings (thick paper and colorful) are good but any thick paper with colorful objects would work. You can use leftover monoprints that you didn’t like, or covers from magazines (putting the stencil over segments of the cover) that makes an abstract design on the image.
3. Decorate the images with glitter, more paint, and pieces of construction paper. Be sure to let both images dry if you use paint or glitter before you start gluing the two images together.
4. Cut a thin ribbon to several feet long. Make a loop at the top to use later for hanging.
5. Put stenciled images back to back gluing together with the ribbon sandwiched between the images. Continue on down the ribbon with several images—at least 5-6. See example in picture.
6. Use clips, clothespins, paper clips to hold in place until images are stuck to the ribbon.
7. Hang where a something bright is needed. Patient’s I.V. poles are a good spot.

We hope that you will try one or more of these projects. Please contact Dr. Walsh via e-mail swalsh@mail.barry.edu should you have any questions about the instructions in this booklet.

Appendix K

Examples of Self-image Poster



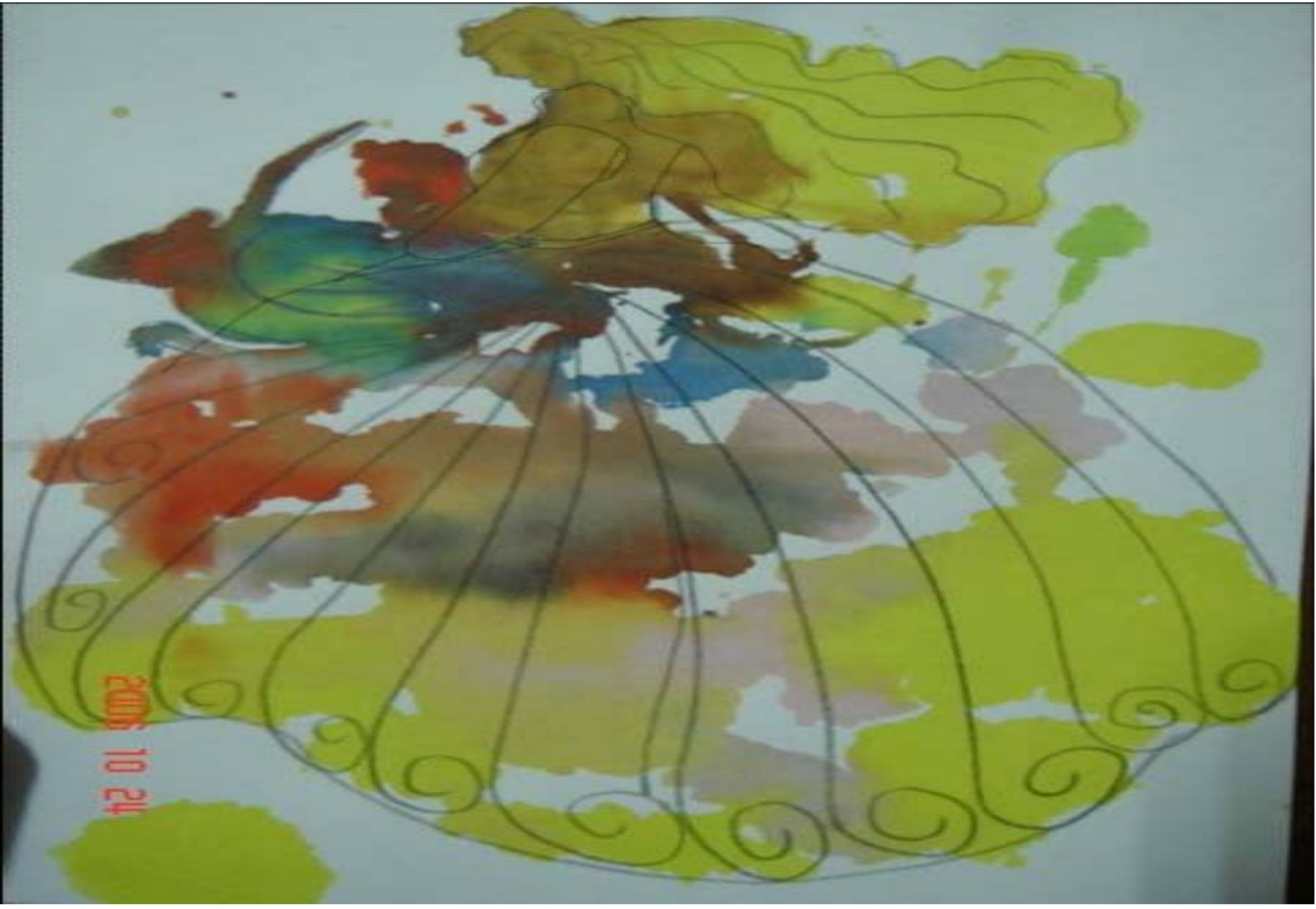
“士”再進一步的更
博 士 的 更 西
士 博 自 己
不 是 寫 西

捐錢請意善機構
做“大愛”



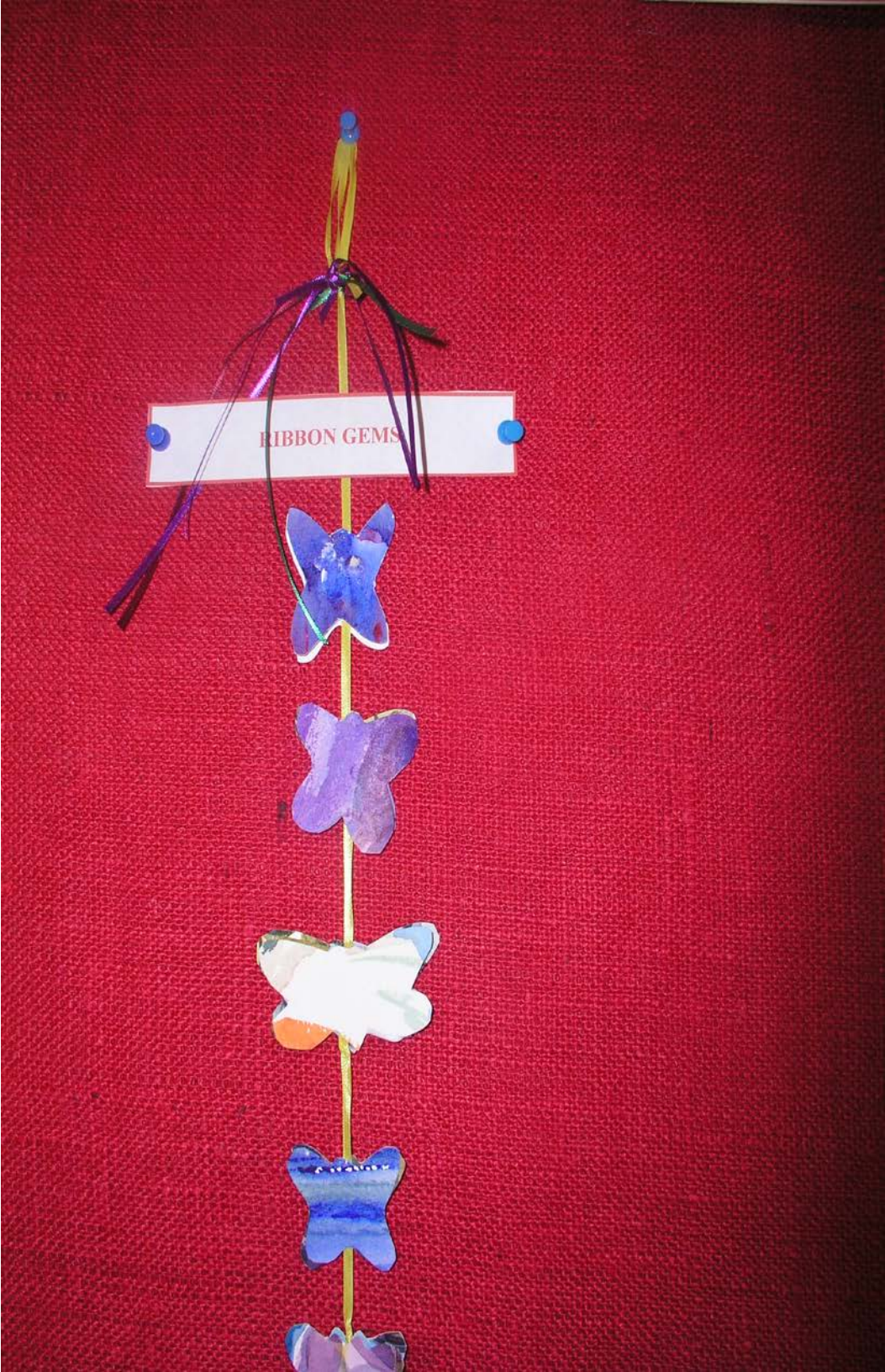
Appendix L

Examples of Monoprints



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Appendix M
Examples of Ribbon Gems



Appendix N

Human Participant Protections Education for Research Completion Certificate

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Human Participant Protections Education for Research

Completion Certificate

This is to certify that

Shiue Chen

has completed the **Human Participants Protection Education for Research Teams** online course, sponsored by the National Institutes of Health (NIH), on 05/30/2006.

This course included the following:

- key historical events and current issues that impact guidelines and legislation on human participant protection in research.
- ethical principles and guidelines that should assist in resolving the ethical issues inherent in the conduct of research with human participants.
- the use of key ethical principles and federal regulations to protect human participants at various stages in the research process.
- a description of guidelines for the protection of special populations in research.
- a definition of informed consent and components necessary for a valid consent.
- a description of the role of the IRB in the research process.
- the roles, responsibilities, and interactions of federal agencies, institutions, and researchers in conducting research with human participants.

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Appendix O

Vita

VITA

July 7, 1956	Born-Tainan county, Taiwan
1977	ASN, National Taipei College of Nursing, Taiwan
1977-1980	Nursing educators, Minhui and Tzuhui vocational nursing high school, Taiwan
1981-2001	Nursing and clinical educators, National Tainain vocational nursing high school, Taiwan
1993	BSN, Kaohsiung Medical University, Taiwan
1996	MSN, Kaohsiung Medical University, Taiwan
2002-now	Lecturer, National Tainan Institute of Nursing, Tainan, Taiwan
2004-Present	Doctoral student, School of Nursing, Barry University, Miami Shores, FL

PUBLICATIONS

Liu, S. J., Chen, S., Ho, H. J., Shen, C. L., Hsieh, C. L., & Chen, A.C. (2003).

Academic-practical cooperation and long-term care. *The Journal of Long-Term Care (Taiwan)*, 7(2), 89-102.