DEVELOPMENT AND EVALUATION OF RESILIENCE TRAINING MODULE: ITS EFFECT ON RESILIENCE AMONG CAREGIVERS

WAH TZE HUEY

UNIVERSITI SAINS MALAYSIA
2018

DEVELOPMENT AND EVALUATION OF RESILIENCE TRAINING MODULE: ITS EFFECT ON RESILIENCE AMONG CAREGIVERS

by

WAH TZE HUEY

Thesis submitted in fulfillment of the requirements
for the degree of
Doctor of Philosophy

September 2018

ACKNOWLEDGEMENT

This journey of PhD is definitely a challenging and rewarding process. I am truly grateful to my main supervisor Associate Professor Dr. Shahabuddin Bin Hashim for his guidance, encouragement, support and help. I would also like to thank my co supervisor Dr. Shahizan Bin Hasan, who has provided his insight and expertise. I am also indebted to Dean, Professor Dr. Hairul Nizam Ismail and Associate Professor Dr. Nor Shafrin Ahmad for their valuable comments and suggestions during this memorable journey.

This research would not be made possible without the platform that was provided by HD Training House; and its resourceful staff, Wah Joon Tong (Principal), Chan Wai Yuke (Deputy Principal), Lye Wai Men (Administrative Executive) and all the staff of HD Training House.

It will not be complete not to thank my family, my father, my mother, my sister, my brother and my daughters for their inspiration and support when I am in doubt of myself.

This learning journey is not just about academic resilience, but also psychological resilience.

TABLE OF CONTENTS

CHAPTER 2 - LITERATURE REVIEW

CHAPTER 3 - METHODOLOGY

CHAPTER 5 - DATA ANALYSIS AND RESULTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

RS -14	Resilience Scale with fourteen questionnaires

LIST OF APPENDICES

PEMBINAAN DAN PENILAIAN MODUL LATIHAN RESILIENSI: KEBERKESANANNYA TERHADAP RESILIENSI PENJAGA

ABSTRAK

Aktiviti penjagaan pesakit boleh menjadi tekanan yang membebankan jika beban peranan tersebut adalah lebih daripada yang dijangkakan. Oleh sebab resiliensi mempunyai hubungan yang positif dengan keupayaan menangani krisis kehidupan, maka usaha untuk meningkatkan resiliensi akan mempersiapkan penjaga dengan kemahiran untuk mengantasi dan mengurangkan depresi. Penjaga boleh mempelajari kemahiran resiliensi bagi membolehkan mereka mengambil langkah-langkah proaktif untuk mengelak krisis atau mengurangkan faktor-faktor risiko. Objektif kajian ini adalah untuk membina modul bagi meningkatkan kemahiran resiliensi dan menilai keberkesanan modul tersebut dalam meningkatkan resiliensi para penjaga. Model Persamaan Struktur telah menyokong rangka konseptual kajian ini, yang mana konstruk resiliensi mempunyai lima subkonstruk (penyelesaian masalah, kerohanian, kepimpinan, efikasi kendiri dan rangkaian perhubungan). Skala Resiliensi RS-14 (soal selidik yang menggunakan Skala Likert) dan journal penulisan reflektif telah digunakan untuk mengumpul data bagi mengkaji keberkesanan modul latihan. Kajian kuasi eksperimen ini, mengaplikasikan reka bentuk kaedah campuran dengan mengambil kira kedua-dua analisis data kuantitatif dan kualitatif. Kaedah pensampelan bertujuan diaplikasikan dalam kajian ini dan seratus orang penjaga telah mengambil bahagian dalam latihan resiliensi ini. Ujian t sampel berpasangan bagi skor resiliensi sebelum dan selepas latihan resiliensi menunjukkan perbezaan yang signifikan dengan $p < .05$, skor selepas latihan secara signifikannya adalah lebih tinggi berbanding skor sebelum latihan dapatan dan disokong oleh testimoni daripada para

peserta. Para peserta telah dapat meningkatkan tahap resiliensi mereka selepas tamat latihan tanpa ketinggalan dalam mana-mana subkonstruk. Walaupun dapatan analisis varians sehala antara kumpulan menunjukkan perbezaan yang signifikan dalam skor terkumpul dalam setiap subkonstruk, analisis post hoc menggunakan ujian Tukey-HSD menunjukkan bahawa perbezaan skor terkumpul antara lima subkonstruk adalah agak kecil dan tidak signifikan. Kesemua lima subkonstruk adalah penting dalam meningkatkan tahap resiliensi, dan membuktikan latihan resiliensi yang lengkap akan merangkumi kesemua lima subkonstruk terbabit. Kesimpulannya, resiliensi boleh dipelajari dan latihan resiliensi ini boleh diaplikasikan kepada kumpulan yang lebih meluas dan pelbagai.

DEVELOPMENT AND EVALUATION OF RESILIENCE TRAINING MODULE: ITS EFFECT ON RESILIENCE AMONG CAREGIVERS

ABSTRACT

Caregiving can be overwhelming if the role has demanded more than it is expected. As resilience has a positive relationship with surviving life crises, enhancing resilience will provide them with skills to cope and decrease depression. Caregivers can learn resilience skills to take proactive steps to prevent crisis or to reduce risk factors. The objectives of this study are to develop module to enhance resilient skill and evaluate the effectiveness of the module in enhancing resilience of caregivers. Structural Equation Modeling has supported the conceptual framework of this study, where the construct resilience has five subconstructs (problem solving, spirituality, leadership, self-efficacy and networking). Resilience scale RS-14 (questionnaire with Likert Scale) and reflective journaling have been used to collect data to address the effectiveness of the training module. This is a quasi experiment, applying mixed method design with both quantitative and qualitative data analysis. A purposive sampling of one hundred caregivers have participated in this resilience training. A paired sample t test of resilience score for pre and post resilience training is significantly different with $p < .05$. The post training score is significantly higher than the pre training score which is supported by testimonials of participants. The participants have improved their level of resilience after the training with no lag behind in anyone particular subconstructs. Although a one-way between-groups analysis of variance has shown a significance difference in gained score of subconstructs, the post-hoc comparison using the Tukey HSD test has indicated that the differences of gained scores among the five subconstructs were quite small and not significance. All five

subconstructs are important in raising the level of resilience, indicating a complete resilience training will encompass all five subconstructs. In conclusion, resilience can be learned, and this resilience training can be applied to wider varieties of groups.

CHAPTER 1

INTRODUCTION

1.1 Introduction

Resilience describes the ability of an individual to bounce back from adversities, learn from the experience and grow stronger (Hammond, 2008; Richardson, 2002). There are misconceptions about resilient individuals that they are superhuman, act fast, never show emotion, do not ask for help and that resilience is an innate trait. The concept of resilience actually depicts one who knows when to slow down and ask for help. It involves three domains: cognitive, affective and behaviour/psychomotor of psychological studies. Although measuring resilience is to measure the attitude (affective objectives) which is tendency of being resilience, the three domains are interrelated as one response to adversity (Henerson, Morris & Fitz-Gibbon, 1987).

There are many disruptions in life that are beyond human control, for example tsunami, accidents, crime, sickness and financial crisis. However, resilient individuals choose to face these events head-on, and overcome the adversities with courage and emotional stamina. They are not overwhelmed or defeated by set backs.

The study of resilience is both intellectually and practically challenging, but important. Issues such as the ways intrinsic and extrinsic factors impact resilience and the development of resilience changes throughout life. Research has also looked into operational definition of resilience and ways of enhancing resilience (Martin & Bateson, 1986). This testing Resilience Scale – 14 (RS-14) on a Malaysian

population is in the hope to use it as a predictive instrument and assessment tool to help build resilience for individuals.

1.2 Background of Study

1.2.1 Protective Factors

As life crises are inevitable in life, there has been an increased interest in exploring the factors that help one survive through life's tsunami and develops inner strength. Resilience is tightly linked to one's mental and physical health. It is a protective factor against depression, worry, powerlessness, post-traumatic stress disorder or other psychiatric disorder; hence reduces the associated physiological effects of becoming dysfunctional (Hasui et al, 2009; Lundman et al, 2007; Wagnild, 2011). Resilient individuals are confident and know their strengths and weakness. Past experiences enable them to persevere in downturns, and anticipate changes in life. They do not conform under pressure, but are steadfast in their belief (Richardson, 2002).

Protective factors are assets to counter the effect of risks (Wagnild, 1993). They are variables of resilience. There are researchers who have researched protective factors, for example Garmezy et al. (1984), Rutter (1979) and Sandler (2001). They focused on protective factors at the level of individual, family and community to promote resilience.

According to Constantine, Benard and Diaz (1999), protective factors can be categorized into external assets and internal assets. External assets include nurturing

relationship, high hopes and meaningful involvement from the environment of home, school and community. Internal assets include social competence, autonomy, identity and living with a purpose. Social competence skills are teamwork, communication, empathy and problem solving skills. Autonomy and identity described individual commitment to righteousness, self efficacy and self awareness. Living with a purpose is regarding positive outlook, hopeful and goal oriented. Constantine, Benard and Diaz (1999) have studied how these external and internal assets have influenced the development of adolescence. These protective factors help to meet the basic human needs; and to develop resilience against addiction to drug, alcohol and tobacco, violence, depression and school drop out. Developing skills that enhance protective factors help one to be resilience. If the caregivers learn to develop skills which promote continuity and connectedness with family, friends and community, these skills will help them to have improved networking skill. Better community support and knowledge will help caregivers to make informed decision and plan proactively. These skills will enhance protective factors that will improve resiliency of caregivers. It is the objective of this study to develop a module inclusive of such skills to increase protective factors, hence resilience of caregivers.

1.2.2 Risk Factors

According to Fleming and Ledogar (2008), risk is roughly equivalent to stress and adversity in the field of resilience. High risk is associated with a high degree of maladaptation to the adversity. Multiple risk factors appearing together will result in augmented effects, in comparison with when they appear in isolation (Rutter, 2000;

Sameroff and Rosenblum, 2006). Risk factors can be in the realms of economic, social, environmental, psychological or others. The interaction of risk factors and protective factors affect the adaptability of individuals to their circumstances (Fleming and Ledogar, 2008).

Hawkins, Catalano, and Miller (1992) have studied the risk factors for adolescent substance abuse. The risk factors are, "laws and norms favorable toward drug use; availability of drugs; extreme economic deprivation; neighborhood disorganization; certain physiological characteristics; early and persistent behavior problems including aggressive behavior in boys, other conduct problems, and hyperactivity in childhood and adolescence; a family history of alcoholism and parental use of illegal drugs; poor family management practices; family conflict; low bonding to family; academic failure; lack of commitment to school; early peer rejection; social influences to use drugs; alienation and rebelliousness; attitudes favorable to drug use; and the early initiation of drug use." (Hawkins, Catalano, & Miller, 1992). They posit that understanding the risk factors of substance abuse, would help society to design a more fitting substance abuse prevention program. Similarly, this concept is applicable to other current issues of society.

Life crises are not any less traumatic or stressful to resilient individuals. They experience the process of adaptation, recovering and growing. They learn to problem solve and overcome these difficulties; consequently they grow stronger and more equipped to respond to future challenges. They are not just surviving, but adversities become opportunities for them to strengthen their resiliency.

Caregiving can be stressful if the role has demanded more than it is expected. Caregivers can learn skills of resilience to take proactive steps to prevent crisis or to reduce risk factors. Establishing strong network, enable the caregivers to have time

for themselves. This personal time is important, for example health screening and immunization. If caregivers take preventative actions in managing their health, they will reduce their risk of being sick. It is one of the objectives of the module to reduce the risk factors of caregivers to reduce the frequency of crisis. Less energy is spent on crisis management, more energy can be spent on building protective factors and resiliency.

1.2.3 Resilience: trait versus learning process

Personality trait

Personality traits affect behaviours via habitual thinking patterns that results in certain emotions. These traits, for example extroversion, introversion, optimistic or pessimistic are inborn characteristics. These psychological attributes are constant and quantifiable (Wagnild, 2011). Some researchers believe resilience is innate characteristic. Personality traits are characteristics individuals are born with; cannot be learned or changed.

Connor-Smith and Flachsbart (2007) defined personality as "characteristic patterns of thoughts, feelings, and behaviors over time and across situations." Some theorists described coping as a process of personality in response to stress. Personality traits may influence his or her stress response (Connor-Smith & Flachsbart, 2007). For example, individual with extraversion (E) personality trait may seek social support during life crisis, while one with neuroticism (N) trait may response with avoidance or denial. While N trait personality is characterized with

high frequency of stress exposure and strong emotional and physiological reactivity to life challenges; a person with extraversion personality tends to have optimistic assessment of accessible coping resources, and reacts less intensely to stress (Connor-Smith & Flachsbart, 2007). Personality predispositions increase individual ability to adapt to stress (Nelson, Cooper & Jackson, 1995; Oreg, Vakola & Armenakis, 2011; See, Abdullah, Teoh & Yaacob, 2011).

Caregivers with E trait personality may seek support from family or community to reduce the risk of caregiver role strain. Their optimistic trait enables them to be resilient in this stressful role. Wills and Bantum (2012) have concluded that social support contributes to better emotional regulation (adherence to treatment and finding treasure in trials). Good self-control increases resilient trait. E individuals are more likely to seek formal or informal social supports; hence they are more likely to have better self-control and resilient in stressful situation. Optimistic individual without sufficient support, the caregivers with E trait still may be overtaken by stress. The caregivers with N trait personality may be not as optimistic as the caregivers with E trait personality. Individualized support system and therapy for caregivers with N trait and E trait can help them in coping with the caregiving role strain. Resilience module would provide skill they need to enhance, and means to enhance their competency.

Learning process

The debate of whether resilience is an inherent trait or learnt adaptation process is best clarified by Rutter (2007). He believes resilience is a response in time

of adversities. As behaviours are shaped by the environment, so is resilience. If resilience is an inherited trait, then one's responses to life are limited by this inherited resilience. It becomes a dead end, but not a learning journey. Resilience is a dynamic process resulting from individuals' interaction with their environment. According to Richardson, if one is overwhelmed by their environment, they become dysfunctional. If they merely survive this difficult experience, they have not returned to their previous level of resilience. In the situation where they recuperate back to their pre-existing resilient strength, they have not reaped the benefit of this life challenge. Life crises provide an opportunity for one to adapt, recover and grow during this hardship; subsequently strengthen their resilience as shown in figure 2.1; p. 48 (Richardson, 2002).

Albert Bandura (1986) writes that learning is the result of reciprocal interactions among the factors of individual, environment and behaviour. Individuals can learn to be more resilience from the consequences of their behaviours and environment. Adversities (environment influences) can enhance individuals' resilience or overwhelm them. This individual functioning is regulated by self-generated and external sources of influence (Hammond, 2008). Individual factors include beliefs, expectations, experience, relationships, self-perception, self regulation and personality. External sources include observational learning and perception of the environment. When individuals are able to overcome their adversities, this ability is resilience. This successful experience enables them to face future challenges, hence it enhances their resilience.

Learning strategies and skills that enhance resilience will help individuals to anticipate instead of dread disruptions in life. Although individuals' traits play a role in resilience, learning from experiencing adversity shapes one's resilience

development. As individual and environment factors impact behaviour, these factors guide one's response to adversity. For example, an introvert will be less likely to ask for help when they need to. However, they will learn to ask for help to survive through crisis. Training and experiences will help individuals to adapt to their environment. It is the intention of this research to develop a module that trains peoples to recognized their characteristics, strength and weakness; then teaching them skill to identify their time in need of help, and skill to ask for help. Since resilience can be enhanced through learning, it is realistic to develop a module to enhance resilience.

1.2.4 Context of Caregivers In Malaysia and Caregiver Education

There are many varieties of care facilities. Some of these care facilities are managed by registered nurses, but others are by non medical personnel or maids. Consequently, there are diabetic patients who has gone hypoglycemic and died unnoticed.

Most facilities do not accept bed ridden patients, because of labor shortage. Bed ridden patients are labor intensive, they required one to one ratio of caregiver to patient management. This leave family members with limited options. Left with no place to go, some families hired help to care for their loved one at home. Professional nursing care is costly, so most families end up hiring maid who are lack of qualification. If the patients need twenty four hours nursing care, at least two helpers are needed. This hired helps can be a financial burden to the family.

The cost of care varies as the skill of nursing care varies. In general, RM2000 per month can get a placement in a decent care center. The cost will add up as there

are more disabilities involve, for example, incontinence, tube feeding, immobile, rehabilitation etc. There are many local residents who cannot afford to pay RM2000 for the care. Then, they have to juggle between their work and family commitments with the tasks of caring for their loved ones.

The family members who can afford to place their loved ones in a paid facility; can feel guilty for not being able to care for their loved ones at home. They felt they have abandoned their loved ones. Society can criticize them for being unloving to their loved ones. This thinking trap can lead them to emotional distress.

Spouse or parents who suddenly falls ill from stroke, family member will be the one to care for them. Regardless of what professional these caregivers are, they can be farmers, fisherman, firefighters, accountants, engineers, lawyers, teachers and etc.; they have to learn quickly from health care providers to care for their loved ones. They are not just learning to feed and manage the patients' hygiene, but also helps to exercise the patients to regain their functioning. On top of this they need to learn enough about stroke to help make the right decision on behalf of the patients who no longer able to do so. If there are siblings or children, communication is important to connect with other family members for supports.

All these intense learning can be stressful. Although there are public talk on health topics, they are mainly problem solving oriented. Caregiver education should be not just about diseases, but also includes nursing care, prioritize tasks and commitments, discerning truth from false information, decision making and empowering family members to care for the patients. These are a few topics that the caregivers need to master in a short period of time. A holistic approach to caregiver training will provide a framework for more effective and sustainable intervention.

There are medical professional who provide the medical aspects of information. They are usually the speaker of caregiver training. These trainings are problem solving oriented. An example is a family caregiver training program, with focus on dementia by Penang Dementia Association. They have engaged a geriatrician to offer information on dementia and patient – oriented care, purposeful and meaningful engagement and communication.

There are caregiver workshops where experience caregivers share their experiences. These types of workshops are situation specific, may not be applicable to others. Caregiver education that is well rounded, for example, resilience training; is a multicomponent approach. It can enhance the resilience level of caregivers and their quality of life. Resilient caregivers will be more resourceful in tackling their challenges and help the patients to have better outlook.

1.3 Research Problem Statement

As the world population is aging, population group of age sixty five and older is increasing its number (Currie, 2012). The report from Department of Statistic Malaysia (2015), there were 356,800 people age sixty five and older. As of the year 2015, this population group has grown to 1826100. Malaysia elderly population will be more than five millions by the year 2050 (NationMaster.com). According to Malaysian Psychiatric Association (2014), 5 to 8 percent of this elderly population will have dementia. The risk of dementia is increasing over age because brain mass is decreasing in size. This aging population will need to have caregivers who are equipped with the knowledge about dementia in order to provide appropriate care for them. As the elderly population are increasing, so is caregivers.

One type of dementia is associated with aging, hence it is also called senile dementia (Iwasaki, Y., Mori, K., Ito, M., Tatsumi, S., Mimuro, M. & Yoshida, M., 2013). There is the phrase of senior moment which describes time when one becomes forgetful. According to Zgola (1987) dementia is associated with loosing one's cognitive ability, hence it is society stigma to label one with dementia. Dementia is a taboo subject such that people are not willing to share about this unwelcome news when their loved ones is diagnosed with dementia. Most of the family tend to limit social interaction for dementia patients to preserve their patient's dignity. Family members want extended family and friends to remember who their loved ones are before dementia. As dementia patients have difficulty followed conversation, they may not response appropriately. Some family members may feel embarrass of the patients inability. Not accepting who the patients have become, meaning the family members are in denial of the disease and not able to seek the necessary help they need to cope with their loved ones with dementia. This caregiving role strain is not limited to patients with dementia, but also stroke, Parkinson's Disease, Amyotrophic Lateral Sclerosis and other disabled patients (Jeong, Jeong, Kim & Kim, 2015; Kim & Bae, 2015; Weisser, Bristowe & Jackson, 2015). The study of Wah's research team (2014) regarding local caregivers role strain is congruent with literature review findings.

Lack of knowledge about the disease will hinder caregivers from obtaining the necessary medical and nursing care that will slow down the progression of the disease. Sindhu, Erna and Daisy (2015) have iterated knowledge deficit about dementia will cause frustration for the caregivers, for example, taking diminishing social skill of dementia patients personally. Caregivers may take the inappropriate behaviours as reflections of the patients' feelings towards them. This can fuel

resentment inside caregivers. Informative caregiver education can help caregivers to attain positive attitude and to increase their caring ability for their patients (Sun, Chiang, Lin & Chen, 2013).

According to Zgola (1987) inadequate social support can increase caregivers' burden. Lack of adult day care for dementia patients leaves caregivers stranded for respite options. Insufficient financial resources limit their ability to hire necessary help to provide safe care for their loved ones. These are some of the contributing factors towards caregiver role strain. If needed support is provided as iterated by Aoun, Toye, Deas, Howting, Ewing, Grande and Stajduhar (2015); caregiver centered intervention has helped in providing better care for the patients and reduced caregivers' burden.

In the study of Kobos and Imiela (2015) have iterated the higher level of caregivers' education, lower the caregiver burden. Knowledge deficit will lead to poor decision making and inefficient problem solving. One will lose confident in the long run and decrease self-efficacy. Acceptance of one's fate is part of leadership training that empowers one to face one's challenge. Developing social support and seeking help are networking skills which will lighten caregiver role strain (Garcia, Budó, Schwartz, Simon & Silva, 2015). In face of adversity, one's faith will provide the needed strength for inner peace. Individuals with strong faith will perceive adversity as an opportunity from God to develop their spirituality. They are more ready to accept this misfortune, to seek information about the disease or illness, and to ask for necessary helps.

A caregiver training program should be holistic, in order to be effective and long lasting. Training program that is problem solving oriented, can only solve certain issues and not the others. Problem solving, self-efficacy, leadership,

networking and spirituality are the core modules of resilience training for caregivers (Blacksher, Maree, Schrandt, Soderquist, Steffensmeier & St. Peter, 2015; Harrison & Rouse, 2015; Leon, Winskell, McFarland & del Rio, 2015; Redden & Lundeen, 2015; Sandhu, Hosang & Madsen, 2015). The training provide skills to be more resourceful in problem solving in which build self-confident, hence self-efficacy (Awwad, Asha, & Jado, 2014; Najjar, Lyman & Miehl, 2015; Pomeroy & Clark, 2015; Welsh et al., 2015). The empowerment of caregivers with the skill to share the knowledge of disease process, will help to increase awareness and remove stigma of the disease. Networking skills will help caregivers to tap into the community resources to adapt to their new role (Landau, 2010; Reivich, Seligman & McBride, 2011). Faith will enable one to perceive adversity from a positive outlook which is part of spiritual growth (Baker, 2009; Fisher, 2009; Francis, 2009; Pargament, 2009; Piedmont, 2009). Consequently, resilience training reduces the risk of depression and suicidality. Resilient caregivers can adapt, recover and learn from their experiences.

The proposed resilience training approach has designed its subconstructs such that it can be evaluated before and after the training to measure the learning progress. Since quantitative measurement itself is not suffice in measuring the incorporation of the newly learned material, qualitative measurement is used to complement the finding (Gay, Mills & Airasian, 2011). The goal of this unique approach is to benefit individuals with various levels of resilience.

Semi structured interviews were performed to explore the risk factors and the needs of the caregivers as illustrated in figure 3.2 (p. 73). Semistructure interview will be further elaborated in section 3.4.3 (p. 81). The goal of the interviews were to find out the problems that impacts the caregivers and look for solutions that would help improve their quality of life. A literature review was performed in search of

established resilience studies and caregiver role strain of dementia patients. These interview and literature review were to establish the need of resilience training for the caregivers (Appendix E). This need analysis (further elaborated on p. 86) tool is the reason to develop the training module, R Factor Tool for caregivers. The importance of this module is to provide skills that will enhance caregivers' resilience to ensure successful management of their lives.

In summary, the problem statement for this research, there is no sustainable and effective intervention for caregivers to maintain quality of life, mental and physical health for themselves and their patients. Current caregiver training program is problem solving oriented. Existing resilience trainings are lack of theoretical and conceptual framework. The post training results are testimonies, lack of quantification.

1.4 Research Objectives

This social issue of the aging population is important because it is our culture to take care of our elderly. Taking care of loved ones who have gradually lost their function and identity can be a challenging task. If the ideal and real personality traits of the family become overwhelming incongruent, this life crisis may lead to impaired family function and strain on the caregiving role. Therefore, it is pertinent to enhance resilience of caregivers, so that affected party can plan ahead and seek help.

The resilience training will teach participants ways that they can improve their skill in self-reflection, self-regulation, identify situations that beyond their control, flexibility in problem solving, individualized strategies and promote effective communication. The participants will learn to identify the trigger of events,

analyze their thought patterns to be productive or counterproductive which can lead to positive reaction or emotionally drained response respectively.

The desired outcome is improved resilience of participants and improved quality of life for caregivers. The participants will be able to identify the activating events (challenges), detect thought patterns (productive versus counterproductive), and problem solve accordingly. They are willing to seek and offer help to each other. The graduates of this training can further be taught to train other community groups. The ultimate goal is a more cohesive community that is sensitive to others' need.

In conclusion, the training module is built on these core characteristics of resilience. It hopes to improve caregivers' adaptation to adversity and quality of life for a sustainable future. Health economic benefits such as reduced the health care costs are possible by empowering the caregivers to work and care for their loved ones thus, reducing financial burden for the caregivers. A resilience caregiver would problem solve efficiently and maximize the patient's independent daily living and cognitive function; and indirectly help slow down progression of disease. The bed ridden stage can therefore be delayed further. Caregivers equipped with resilience skills may be able to engage proactive strategies to minimize the risk of falls and take preventative action that reduces the need of acute care. Building the resilience of caregivers can therefore help countries to reduce health economic costs. Countries which have implemented these strategies of building resilience would keep the health care costs manageable and sustain the economic growth.

The objectives of this study are to

1) Developing module to enhance resilient skill.
2) Evaluate the effectiveness of the module in enhancing resiliency.

1.5 Research Questions and Hypotheses

The research questions (Q) and hypotheses (H) of this study have been formulated from the problem statement and study objective. Adversity such as caring for loved ones who suffer dementia can be stressful to the family members. Enhancing resilience core through training can help one to better face trials of life (Wagnild, 2011). It is the goal of this study to develop a training program to enhance one's protective factors to triumph during adversity.

There is a need for resiliency in any age group. As life span increases, society is facing an aging population and one of the major aging problems is dementia. Caregivers of dementia patients, patients with disability or children who need help with their daily living activities, are usually family members who have to juggle work, family commitments and caring for the patients. The caregivers themselves are at risk of depression, suicide and abusing their patients. As resilience has a positive relationship with surviving life crises, enhancing resilience will provide them with skills to cope and decrease depression. Interviews were conducted on five careers of dementia patients. The results have highlighted a need for resilience training for caregivers (Wah, Shahizan and Shahabuddin, 2014).

This study used null hypotheses to answer the research questions by choosing the right psychological measuring tool and data analysis. Null hypotheses (H_0), are hypotheses researchers try to reject. H_0 depict relation or difference between variables that will be disproved (Gay, Mills & Airasian, 2011).

The research design of this study is to answer the following questions (table 1; p. 18).

Q 1: Does the theoretical based training module supported by the empirical data?

Q 2: Has improvement in resilience reflective in the resilience score?

Q 3: Has improvement in resilience reflective in problem solving, spirituality, leadership, self-efficacy and networking?

Q 4: Has improvement in resilience lag in anyone particular subconstructs?

Q 5: Which submodule has the most gain in resilience score after intervention?

Research Hypotheses

H_0 1: There is no significant discrepancy between the theoretical model and the data.

H_0 2: There is no significant difference in the mean of resilience score between pre-test and post-test of the subjects.

H_0 3: There is no significant difference in the mean of resilience score between pre-test and post-test of the subconstructs.

H_0 4: There is no significant difference among the mean of gained scores of the five subconstructs.

Table 1.0
Problem Statement, Research objective (RO), Research Question (RQ) and Research Hypothesis (RH)

Problem Statement	RO	RQ	RH
1. Current caregiver training program is problem solving oriented, lack of holistic approach. 2. Incomplete resilience theories. 3. No conceptual framework of resilience construct. 4. Lack of quantification of post intervention. 5. No contextual validity and reliability.	1. Developing "Resilience 4 U: R Factor tool"	Q 1: Does the theoretical based training module supported by the empirical data?	H_0 1: There is no significant discrepancy between the theoretical model and the data.
	2.Evaluating the effective-ness of "Resilience 4 U: R Factor tool"	Q 2: Has improvement in resilience reflected in the resilience score?	H_0 2: There is no significant difference in the mean of resilience score between pre-test and post-test of the subjects.
		Q 3: Has improvement in resilience reflected in problem solving, spirituality, leadership, self-efficacy and networking?	
		Q.4: Has improvement in resilience lag in anyone particular subconstructs?	H_0 3: There is no significant difference in the mean of resilience score between pre-test and post-test of the subconstructs.
		Q 5: Which submodule has the most gain in resilience score after intervention?	H_0 4: There is no significant difference among the mean of gained scores of the five subconstructs.

1.6 Rationale of Study

The reason this study is being carried out is to prevent the caregivers from depression, suicidal and poor health. The better mental and physical health of family caregivers will help improve the mental and physical health of their relatives (patients).

First rationale of this study is to prevent mental health of caregivers from deterioration, but nurture their mentality to optimize their functioning. This is in line with Kim and Bae (2015) study of caregiver burden for neuropsychiatric patients, severe neuropsychotic symptoms can cause distress in their caregivers. According to Sun, Chiamg, Lin and Chen (2013) psychoeducation can help improve caregivers' caring ability and positive attitude towards theirs patients. Caregiver education can improve caregivers' mental health and relieves caregiver burden.

The second rationale is the prevention of caregivers' physical health deterioration. As depicted in Zygola (1987) (p. 85), "Mrs. A.'s husband, works full time in a local factory. He has had two heart attacks and suffers from Crohn's disease and arthritis. These chronic ailment limit his tolerance or emotional stress." Zygola (1987) learned that Mr. A is ignorant about Alzheimer's disease. After she has explained the organic aspect of Alzheimer's disease, then Mr. A can link his spouse's behavior to specific area of the disease. This caregiver education has helped him to understand that his wife's behavior were not a reflection of her feelings toward him. This relieves Mr. A. from emotional distress that is detrimental to his chronic illness. Caregiver education will help caregiver to deliver effective care and to reduce caregiver burden, hence to reduce deterioration of caregivers' health (Chiai, Wu & Hsiao, 2015).

The third rationale for this study is to provide better patient outcome. This is in line with Chiao, Wu and Hsiao (2015) who have proposed that caregiver education not only will help caregiver to deliver effective care, to reduce caregiver burden and to prevent deterioration of caregivers' health; it will also slow down progression of disease in patients and improved patients' functioning. An educated caregiver regarding his or her patients' ailment, can make an informed choice in daily

caregiving challenges. This more effective caregiving will prevent further deterioration of patient's health (Chiao, Wu and Hsiao, 2015).

The fourth rationale of more resilient caregivers will be able to manage their patients' emotional aspect more successfully. This is in line with Sun, Chiang, Lin and Chen (2013), caregiving education can improve caregivers' caring ability and positive attitude towards theirs patients. As a result, not only reduced caregiving burden and improved caregivers' health; the patients' affective aspect will be more stable which will lead to better mental health.

The intention of this study is to provide a learning tool for caregivers to be more resilience. A physically and mentally fit caregiver can provide better care for their patients. Effective caregiving will improve both physical and mental health of patients. This will improve quality of life for caregivers and their patients.

1.7 Significance of Study

The finding of this research could serve as a foundation for future research in the field of education, medicine and nursing. The information could help educators and health care providers to improve their students' or clients' education. More resilient individuals are less likely to be depressed or to attempt suicide. They will have better mental health. Health care providers can incorporate resilience training in their health teaching to the patients and their caregivers. More resilient caregivers can manage the caregiving of their patients more efficiently, slow the progression of the disease, and reduce acute health care costs and financial burden individually and to the country as a whole.

As resilience helps people to survive through crises, developing resilience training would decrease the risk of depression, substance abuse or suicide. Through this study, the researchers would like to enhance individuals' resilience; furthermore inspiring individuals to become part of the resilient network for others. A resilient society is the pillar for a sustainable future.

Crisis management has extended into bringing awareness of resilience training for individuals and community. The training of resilience has been chiefly in the segments of education, psychosocial and medical world. Its application is usually in behavioral science, which draws the attention of educators and mental health professionals. Small and medium businesses have hardly pay attention to the issue of resilience. According to Elmaliach (2013), there are gaps for needed support for small and medium businesses to cope with calamity. During disaster, it is vital for business continuity in order for community to regain its normal function. Businesses coping resources include rehabilitation and development program for employers and employees.

Lahad, Shacham and Ayalon (2013) proposed establishment of Resiliency Center for a more thorough approach to benefit a community. The goal of Resiliency Center is to promote community cohesion and networking; a proactive approach to face community adversities. This community Resilience Center is to recruit individuals of various ages, people in business, school, security or other sectors; to enhance resilience of community. Its proactive approach includes developing local leadership, training and preparing a community for disaster. During catastrophe, it is a crisis center for logistic, information, mental and physical health, and family networking support. It also can provide short term guidance and intervention during disasters.

This research has provided a five components training approach to improve resilience of caregivers, instead of the problem solving oriented caregiver training that is widely available. This five components training approach is composed of not just improving the skill in problem solving, but also helps one to develop their potential in the realm of spirituality, networking, leadership and self – efficacy.

This five components resilience training approach is theoretical base and is also being supported by empirical data. The theoretical framework for this research is a synthesis of three theories, Richardson (2002) p. 48, Hammond (2008) p. 49 and Wagnild (2011) p. 50. The resilience theory for this research (p. 51) is inclusive of learning process, protective factors and risk factors. It is a more comprehensive theory to explain resilience.

This research has also contributed to the conceptual framework of resilience. The conceptual framework (p. 55) depicts the relationships between the dependent variable resilience and its independent variables. This theoretical model from literature review is not significantly different from the measured model. It is supported by empirical data. This is an acceptable model for theory of resilience.

Methodological aspect, this research has quantified the improvement of resilience. It has shown that resilience can be enhanced significantly through training. Furthermore, the grand testimonies of participants have elaborated how they are benefited from the research. Its mixed method of quantitative and qualitative approaches have shown the resilience enhancement is substantial and how it is improved.

The contextual aspect of research, the validity and reliability of the training module is being proven with empirical results in chapter five and chapter six. This training module is suitable to use for local caregivers, and it has successfully raised

the resilience level of the participants. The goal of this training is to help caregiver manage their stress, improve quality of life and maintain good physical and mental health for themselves and their patients. This training module can be a framework for future caregiver training for effective and sustainable intervention.

1.8 Limitations

This research has its limitations. First, the sample selection was not random. A purposive sampling method was used to conduct the survey. This weakness may affect the generalization of the research conclusions. Second, there is no control group for this study because it is the nature of this study, pre and post intervention evaluation. This intervention and outcome type of quasi experiments without control group is widely used in medical informatics literature (Harris et al, 2006). As in the study of Tenhula, Nezu, Nezu, Stewart, Miller, Steele and Karlin (2014), there is no control group because of the nature of the program as demonstrated.

The willingness of the caregivers to participate in the training program limits the number of samples. Most caregivers have to juggle work, family commitments and caregiving so may have a lack of time and energy to participate. A lack of resources to help arrange for the care of their loved ones, have prevented them from participate in the training.

The nature of the organization this study is using Chinese as their teaching medium. Therefore, this study is language specific, but not race specific. The facilitators are fluent in Bahasa Malaysia, and ready to do interpretation as needed.

1.9 Definition of terms

Conceptual Definition of Resilience

According to Fleming and Ledogar (2008) the concept of resilience has changed over time from being born resilient to becoming a process and a life skill that can be learned. It is the outcome of positive adaptation to the adverse environment. Resiliency is competency that depicts how one adapts or bounces back from adversities and grows from experience (Reivich, Seligman & McBride, 2011).

Operational Definition of Resilience

The operational definition of resilience for this study is based on the score from RS-14 (Wagnild, 2011). A score of eighty two and above reflects individuals with high degree of resiliency. A score between seventy four and eighty one are rated as moderate degree of resilience. A score of seventy three or lower is considered to indicate a low degree of resilience.

Conceptual Definition of Caregivers

Caregivers are individuals, usually family member of patients, for example spouse, siblings or children who take care of the young, old or impaired. They can also be paid professional, for example nurses or maid who involve in taking care of the patients. These patients can no longer carry out their daily living functions independently. They need help in feeding, going to the bathroom, keeping medical follow up and others.

Operational Definition of Caregivers

In this study, caregivers are individuals who help their loved ones who are dependent on others in their daily function, for example feeding, bathing, going to toilet etc. Their patients are regardless of age and not limit to any illness or disabilities. These caregivers are the participants of this study. They are family members who become caregivers as occasions call for.

Conceptual Definition of Problem Solving

Problem solving is the process of gathering information and making decision (Reivich, Seligman & McBride, 2011).