THE PSYCHOMETRIC STUDY OF THE ATTACHMENT TO GOD INVENTORY AND

THE BRIEF RELIGIOUS COPING SCALE IN A TAIWANESE CHRISTIAN SAMPLE

by

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Liberty University

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ABSTRACT

THE PSYCHOMETRIC STUDY OF THE ATTACHMENT TO GOD INVENTORY AND

THE BRIEF RELIGIOUS COPING SCALEINA TAIWANESE CHRISTIAN SAMPLE

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The present study investigates the psychometric properties and factor structures of two religious instruments, the Attachment to God Inventory (AGI) and the Brief Religious Coping Scale (Brief RCOPE), when applied to a sample of Christians living in the collectivist culture of Taiwan, and the usefulness of these two instruments for this sample. Translation, back-translation, and a pilot study were conducted on the two instruments, and needed adaptations were made. Three hundred and thirty-five subjects were recruited from eleven Protestant and Catholic churches in Taipei and a series of statistical analyses was conducted on the collected data. The results were compared with data from the American samples. Correlations between the results of these two instruments and measures of depression and quality of life were also examined. Findings of the study support the usage of the Brief RCOPE (with modification) for Taiwanese Christians while results for the AGI question its factor structure and hence its utility. The findings indicated the possibility of a four-subscale AGI for the Taiwanese Christians. Nevertheless, further studies are needed to examine outcomes of this study.

DEDICATION

To God, my Lord and Savior, life giver and sustainer.

To my parents, my beloved husband, and my three lovely children — my faithful

supporters throughout the process and the source of my strength, comfort, and joy.

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CHAPTER ONE: INTRODUCTION

In the recent decades, the significance of understanding clients' spiritual and religious beliefs in therapy has raised increased interest in the field of mental health, and many spiritual and/or religious instruments were developed to measure different aspects of client spirituality (Fetzer Institute, 1999; Miller, 1999). Most of the present religious instruments, however, were developed from a Western culture perspective, mostly an individualist culture, and used samples of Western populations. Even well designed, the usefulness of these instruments can be a great concern when they are applied with populations of collectivist culture such as Taiwan and China (Gorsuch & Miller, 1999; Sim & Loh, 2003). Appropriate psychometric research is needed before these religious instruments can be put into use. Therefore, it is the intent of this study to psychometrically investigate two religious instruments, the Attachment to God Inventory (Beck & McDonalds, 2004) and the Brief Religious Coping Scale (Pargament, Smith, Koenig & Perez, 1998), for a population of collectivist culture, the Taiwanese. More specifically, the present study examines the psychometric properties of the two instruments in a Taiwanese Christian sample and evaluates their usefulness.

Background and Theoretical Considerations

A great deal of studies have substantiated the importance of integrating client spirituality into therapy (Fetzer Institute, 1999; Kahle & Robbins, 2004; Marterella & Brock, 2008; Miller, 1999; Post & Wade, 2009; Richards & Bergin, 2000). Spirituality is found to have significant impact on clients' physical health (Koening, McCullough, & Larson, 2001; Miller & Thoresen,

1999), mood state (Bishop, 2008; Braam et al., 2008; Gall, 2004; Greenway, Milne, & Clarke, 2003; Namini & Murken, 2009; Rowatt & Kirkpatrick, 2002), and quality of life (Brenna, 2001; Hsu, Krageloh, Shepherd, & Billington, 2009; Peterman, Fitchett, & Brady, 2002; Wang, Chan, Ng, & Ho, 2008; Wildes, Miller, de Majors, & Ramirez, 2009). It is encouraging to see many religious instruments have been developed to investigate this important area (Fetzer Institute, 1999; Miller, 1999). However, most of these instruments were developed by and for Westerners. The concepts behind the theoretical models and the assumptions of the population are not free from cultural biases (Gorsuch & Miller, 1999). Most Western cultures tend to be more individualistic compared to the more collectivistic nature of Eastern cultures (Hofstede, 1980; Oyserman, Coon, & Kemmelmeier, 2002). Although the globalization of the world in this century seems to shorten the distance between the West and the East, including Taiwan (Jiang, 2007), whether religious instruments developed in the Western culture can be applied to Taiwan population is still a question that demands an answer. It is of tremendous importance to study the psychometric property of existing religious instruments before they can be used on a different population.

To date, very few religious instruments have received psychometric research in Taiwan, a highly religious also collective culture country. About 85% to 95% of the Taiwanese claims to believe in a religion or the existence of a deity (Chang, 2000; Chen, 2000). In other words, only 5% to 15% of the population does not have a religion. According to the estimate of the Taiwan government, 35% of the Taiwanese reported themselves as Buddhists and 33% Taoists (United States Department of State, 2010). Among them, many considered themselves as both. What complicates the case more is that many believers of Buddhism and Taoism also believe in some form of traditional folk religion (United States Department of State, 2010). Although different

sources gave different reports, it was estimated that 68% to 80% of Taiwanese believe in one or more folk religions (Chen, 2000; United States Department of State, 2010). Therefore, believers of folk religion obviously overlap with Buddhists and Taoists. The rest of the Taiwanese believers consist of Christians (3.5% – 4.8%), Catholics (1.8% - 2.4%), and other religions (3% - 5%) (Chang, 2000; Chen, 2000). For religious population such as the Taiwanese, therapists and researchers need effective religious measures to accurately assess client spirituality. Without effective instruments to measure client spiritual and/or religious beliefs, it is hard to understand and integrate client spirituality into therapy, and to advance related academic research in Taiwan. Therefore, it is important to address this gap in the literature.

Attachment to God

Attachment theory is developed by British psychiatrist John Bowlby (1979). Through observing interactions between myriad pairs of infants and their primary caretakers, Bowlby proposes that infants form strong emotional bonds with their primary caretakers (Bowlby). Bowlby called such a bond an attachment bond or attachment, and the primary caretaker an attachment figure. Infants use an attachment figure as a secure base to explore the world and regard the attachment figure as a safe haven in times of danger and distress. Moreover, infants try to keep proximity with the attachment figure and express signs of anxiety when they are separated with the attachment figure (Anisworth, 1985). Bowlby also found that attachment styles developed in childhood would be internalized and became mental representations, called internal working models. People tend to use the same or similar internal working models in other close relationships, such as romantic relationships, throughout their lifetime. Attachment researchers later distinguished three to four different attachment styles, secure, avoidant,

resistant/ambivalent, and disorganized, by observing infants' responses to separation from mothers (Anisworth, Blehar, Waters, & Wall, 1978; Main & Solomon, 1986). Four corresponding attachment patterns for adults were also recognized: free/autonomous, dismissing, enmeshed-ambivalent, and disorganized (Main & Goldwyn, 1998). However, Brennan, Clark, and Shaver (1998) argued that two dimensions, avoidance of intimacy and anxiety about abandonment, actually underlie all attachment relationships.

Recently, researchers postulated that similar attachment behaviors and attachment styles can be also observed between people in their relationships with God. Kirkpatrick (1992, 1999) pointed out that God was often depicted as a father figure in the Bible and described as a strong protector for the believer. The relationship between God and His followers can be also characterized of the four themes of an attachment relationship, namely, God as a safe haven, God as a secure base, seeking and maintaining proximity to God, and responses of anxiety and grief to separation and loss. For example, God is pictured as the stronger and the wiser one that the believer can seek help and rely on. Prayer is obviously a direct proximity-seeking behavior and faith is a demonstration of one's felt security in God (Kirkpatrick, 1992, 1997, 1999).

Empirical evidence further substantiated Kirkpatrick's observation. Rowatt and Kirkpatrick (2002) found that anxious attachment to God was positively associated with negative effect, neuroticism, and was negatively related to positive effect. Beck and McDonald (2004) also found that both anxious and avoidant God attachment were negatively correlated with spiritual well-being and satisfaction with God. Significant correlations between individual attachment styles and other religious variables and different spiritual experiences were also detected in various other studies (Brokaw & Edwards, 1994; Granqvist, 1998; Granqvist & Kirkpatrick, 2004; Kirkpatrick, 1997, 1998, 1999, 2005; Kirkpatrick & Shaver, 1990, 1992;

Miner, 2009). Furthermore, God attachment was reported to correlate with parental attachment (Cassibba, Graqvist, Constantini, & Gatto, 2008; Granqvist, 1998; Kirkpatrick & Shaver, 1990; McDonald, Beck, Allison, & Norsworthy, 2005) and romantic attachment (Kirkpatrick, 1992, 1999; Rowatt & Kirkpatrick, 2002; Straub, 2009).

Similar evidence has also been obtained in cross-culture studies (Eurelings-Bontekoe, Steeg, & Verschuur, 2005; Miner, 2009; Proctor, Miner, McLean, Devenish, & Bonab, 2009; Shin, 2009; Sim & Loh, 2003). However, most of these cross-culture studies used European samples with few exceptions (Shin, 2009; Sim & Loh, 2003). Lack of validated instrument may be one reason attributing to the scarcity of attachment to God research among Asian population. Therefore, it is critical to psychometrically investigate a well-established instrument on attachment to God for Asian population.

Religious Coping

Religions have long been used to cope with stressful life events in human history. However, the coping literature only started to pay attention the power of religion in coping over the past 15 years (Emery & Pargament, 2004). Recent studies discovered different ways of religious coping can bring different effects on one's adjustment and one's psychological well-being during stressful life events. Some practices are helpful, and some can be harmful. Researchers generally categorized coping strategies into positive and negative ones (Ano & Vasconcelles, 2005; Pargament et al., 1998). Positive coping strategies denote those practices that demonstrate the believer's benevolent attitude or appraisal toward God and the situation, and one's beneficial use of the stressor by seeking out connection with God or other people (Pargament et al., 1998).These include, believing God will use the difficult situation for a good

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purpose, or getting closer with God and other believers. Some researchers hypothesize that positive coping style implies a secure relationship or attachment with God (Cooper, Bruce, Harman, & Boccaccini, 2009; Pargament et al., 1998). On the contrary, negative coping strategies are behaviors or beliefs that think punitively or pessimistically about God and the situation or focus on the dark side of the stressful event, such as doubting God's power or believing the situation is God's punishment. Research generally found that patterns of positive religious coping are associated with better physical, psychological and social outcomes (Ano & Vasconcelles, 2005; Harrison, Koenig, Hays, Eme-Akwari, & Pargament, 2001; Koenig, McCullough, & Larson, 2001; Pargament, Koenig, & Perez, 2000; Van Dyke, Glenwick, Cecero, & Kim, 2009). In contrast, negative religious coping strategies usually are correlated with worse physical, psychological, and social outcomes (Harris et al., 2008; Hebert, Zdaniuk, Schulz, & Scheier, 2009; Lavery & O'Hea, 2010; McConnell, Pargament, Ellison, & Flannelly, 2006; Smith, McCullough, & Poll, 2003; Pargament, 2003).

Since the rise of religious coping literature, studies have been extended to include samples from religions other than Christians, such as Jews (Rosmarin, Pargament, Krumrei, & Flannely, 2009) and Muslims (Khan & Watson, 2006). Nevertheless, how religious coping methods from a collectivist culture differ from those from an individualist culture has not been investigated. In order to answer this question, instruments that effectively measure religious coping methods need to be psychometrically studied and tested on a collectivist population. The present study will begin to examine the applicability of the Brief RCOPE (Pargament et al., 1998) on Taiwanese Christians, and this will start the first step to study the religious coping styles in a collectivist culture.

Taiwanese Culture: A Collectivist Culture

Since Hofstede (1980) used the construct of individualism and collectivism to categorize cultures of different countries, this construct has been widely applied in cross-cultural studies. Individualist culture emphasizes the rights, autonomy, and needs of individuals, and considers individuals as independent unit. Collectivist culture puts group welfare above individual needs, and emphasizes members' duties and interdependence. In Hofstede's study of company workers of 40 countries, Taiwan was found to be a collectivistic country when measured by Hofstede's 32 average nation-values (Hofstede, 1980). Moreover, in a meta-analysis of 83 studies assessing individualism and collectivism in different countries, Oyserman, Coon, and Kemmelmeier (2002) consistently found that countries in East Asia with Chinese origin, including Taiwan, Hong Kong, and Mainland China, are highly collectivistic. After reviewing findings from 46 studies, William (2003) also reported that Taiwan, along with many other Asian countries, demonstrated traits of a collectivist culture. Wu and Jang (2005) used a measurement metric developed by Triandis and colleagues (Triandis, Chan, Bhawuk, Iwao, & Sinha, 1995) and found 83% of population in Taiwan held a collectivist point of view.

Hofstede proposed that Asian countries with Chinese origin are deeply influenced by the teachings of Confucius and thus place more emphasis on the welfare of the society and group than the individual (Hofstede, 1980, 1991). Several other researchers also draw the similar conclusion in their studies (Bond, 1991; Bond & Wang, 1981; William, 2003; Yamaguchi, Kuhlman,& Sugimori, 1995). Although recently a few scholars have asserted that the traditional collectivism is being rapidly replaced by individualism in contemporary Taiwan society due to its increased modernization and westernization (Zheng, 2007), the majority of the evidence from the literature still supports Taiwan as primarily a collectivist culture. How well the two

psychological instruments (AGI and Brief RCOPE) developed from an individualistic culture can be applied to the collectivist culture is the question the present study purposes to find out. Will the concept of an individual attachment relationship with God in European-American culture pose difficulties for the collectivistic Taiwanese while using the AGI (Beck & McDonald, 2004)? Will their collectivist culture influence the ways Taiwanese employ religious coping strategies and result in the Brief RCOPE (Pargament et al., 1998) being inapplicable? These are potential problems researchers need to consider when applying these two psychological instruments from an individualist culture to a collectivist one. Although the current study does not attempt to answer these questions directly and completely, the psychometric investigation of the AGI and the Brief RCOPE is the first step to answer these and other similar questions.

Purpose of the Study

The purpose of the present study is to psychometrically investigate two religious instruments, the AGI (Beck & McDonald, 2004) and the Brief RCOPE (Pargament et al., 1998), in a Taiwanese Christian sample and their applicability on this population. In order to achieve this purpose, the two instruments were translated into Chinese and the author assessed the psychometric properties and factor structure of the Chinese versions of the AGI and the Brief RCOPE. To further support the usefulness of these two instruments for the Taiwanese Christian sample, the correlations of God attachment and religious coping with other variables such as quality of life and depression were also examined.

The AGI (Beck & McDonald, 2004) measure one's attachment style with God and the Brief RCOPE (Pargament et al., 1998) assesses one's religious coping methods during stressful life events. The AGI and the Brief RCOPE were both developed by American investigators

whose cultural background was categorized as individualist by the standard of Hofstede (1980). On the contrary, Taiwan was recognized as a country with collectivist culture by many scholars (Bond, 1991; Bond & Wang, 1981; Hofstede, 1980; Hofstede, 1991; Oyserman, Coon, & Kemmelmeier, 2002; William; 2003; Wu & Jang; 2005; Yamaguchi, Kuhlman,& Sugimori, 1995), although the growing degree of modernization and the influence of globalization may weaken the country's collectivist tradition to some degree (Jiang; 2007; Zheng, 2007). Therefore, the AGI and the Brief RCOPE may or may not be suitable for the Taiwanese and may need some adaptations before they are used on this population.

In literature, God attachment and religious coping was found to be directly or indirectly associated with individual depressed mood (Beck & McDonald, 2004; Bishop, 2008; Braam et al., 2008; Cardella & Friedlander, 2004; Carleton, Esparza, Thaxter, & Grant, 2008; Hayden, Park, McQuoid, Hays, & Steffens, 2003; Hebert et al., 2009; Herrera, Herrera, Lee, Nanyonjo, Laufman, & Torres-Vigil, 2009; Rowatt & Kirkpatrick, 2002) and quality of life (Filazoglu & Griva, 2008; Koenig et al., 1998; Terakeshwar, Vanderwerker, Paulk, Pearce, Kasl, & Prigerson, 2006; Tsevat et al., 2009). Therefore, significant correlations are expected to be found between the two measures and depression and quality of life.

Research Questions

In this present study, the author attempts to investigate the following research questions:

Research Question 1: Is the AGI applicable to the present Taiwanese Christian sample? In other words, will the Chinese version of the AGI yield similar psychometric properties and factor structure as the original AGI on the American samples?

Research Question 2: Is the Brief RCOPE applicable to the present Taiwanese Christian sample? Specifically, will the Chinese version of the Brief RCOPE yield similar psychometric properties and factor structure as the original Brief RCOPE on the American samples?

Research Question 3: Will the AGI yield further evidence of applicability for the present Taiwanese Christian sample by showing significant correlations with constructs of depression and quality of life? That is, will the outcomes of the AGI scale and subscales correlate with outcomes of the Taiwanese Depression Questionnaire (TDQ: Lee, Yang, Lai, Chiu, & Chau, 2000) and outcomes of the World Health Organization Quality of Life – BREF Taiwan version (WHOQOL-BREF Taiwan version: Yao, Chung, Yu, & Wang, 2002)?

Research Question 4: Will the Brief RCOPE yield further evidence of applicability for the present Taiwanese Christian sample by showing significant correlations with constructs of depression and quality of life? In other words, will the outcomes of the Brief RCOPE scale and subscales correlate with outcomes of the TDQ and outcomes of the WHOQOL – BREF Taiwan version?

Assumptions and Limitations

The participants of this present study are limited to Taiwan's Christians. Believers of other popular religions in Taiwan, such as Buddhists and Taoists, are excluded from the sample. Since the two instruments were originally validated on U.S. populations which contain a high percentage of Christians, it is assumed that collectivist Christians in Taiwan might be closer to the United States population of individualist Christians than people of other faiths. Moreover, attachment relationship with God requires a concept of a personified God which may be inconsistent with teachings of Buddhism (Beck & McDonald, 2004; Kirkpatrick, 1999).

Taiwan's Taoism is traditionally a pantheism which believes and worships many gods. No personal relationship with deity is emphasized or encouraged in this religion. Therefore, Taiwan's Christians are considered the most appropriate sample for this study compared to the followers of other religions in Taiwan.

It is also assumed that religious beliefs of Christians in Taiwan may be similar to those of Christians in the United States. In other words, they believe in the same God and form similar ideas about God. Although influence from collectivist culture or individualist culture is put into consideration and being tested, other possible cultural variables are not considered in the current study. These variables are worthy of investigation in other studies.

Another limitation of the study is that the subjects are only drawn from churches of four Protestant denominations (i.e., Baptist, Charismatic, Presbyterian, and Lutheran) as well as from parishes of Catholic Church in Taipei. The sample is a stratified random sample. Churches from other denominations and cities are not included. Thus, the sample is not representative of all Christians in Taiwan. Moreover, the survey was voluntary; not every member of the selected churches participated in the study.

Similar to the problem of studies employing self-report surveys, the present study relies on the honesty of the participants. It is assumed that the participants will give honest answers according to their best knowledge. One way to reduce this weakness is to administer a social desirability test. The current study uses the short form of the Taiwan Social Desirability Scale (TSDS: Lao & Lin, 2000) to limit the problem although it may not solve the problem completely. Due to the length of the original version of the TSDS (40 items), the short form (10 items) was adopted. However, the short form of the TSDS has not received any proper psychometric investigation or validation. Page: 11

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Also since it is a survey it only takes a picture of the sample in the present time and can be confounded by other extraneous variables. This is also a limitation of the present study

Definition of Terms

Attachment

An attachment in the present paper is defined as "a unique form of affectional bond." (Main, 1999, p. 846). This bond does not denote every affectional bond in general. An affectional bond can be called an attachment must fulfill the following conditions: 1) the bond is persistent, not transitory, 2) the bond is targeting toward a specific person, 3) the bond is emotionally important to the individual, 4) the individual wants to keep proximity to the bonding person, and 5) the individual experiences distress when separated from the bonding person (Ainsworth, 1989). In the present paper, the term attachment is mostly interchangeable with attachment relationship and attachment bond.

Attachment Figure

Attachment figure refers to the person that the individual is bonding with. For infants, it is usually, not always, the primary caretaker. In attachment theory, the attachment figure functions as a secure base and safe haven for the individual. The individual uses the attachment figure as a secure base to explore the world, and retreat to the attachment figure for safety when facing danger or in distress (Bowlby, 1969/1982, 1973, 1980). The attachment figure is not interchangeable with anyone else (Cassidy, 1999). However, it does not mean that an individual

can have only one attachment figure at a time. Also, the attachment figure does not limit to human beings. It can be a deity as illustrated in the present paper.

Attachment Relationship

In this study, attachment relationship is often used interchangeably with attachment and attachment bond. It denotes a relational tie formed between a person and his/her attachment figure. Attachment theory proposed that young children seek proximity with their primary caretakers, and they use the primary caretaker as a secure base to explore the world and retreat to the attachment figure for safety when facing threats (Bowlby, 1969/1982, 1973, 1980). The primary caretaker is called their attachment figure, and the relationship formed between the young child and the attachment figure is called attachment relationship or attachment bond. However, Bowlby alleged that one's relational pattern with primary attachment figure formed in childhood does not end there. It has a life-long impact on the person. Individuals use similar patterns of relating to interact with significant others, especially their romantic partners, throughout their life span. However, other researchers also found that there is some malleability in attachment style. Attachment style can be altered in later stage of life course (Cozolino, 2006; Lewis, 1997). Nevertheless, Fraley (2002) reported in a meta-analysis of longitudinal studies on attachment stability that attachment patterns formed in early age would have moderate influence ($p = .39$) on subsequent interactions. In other words, one's attachment style formed in infancy demonstrates a certain degree of stability throughout adulthood. In summary, attachment relationship can be formed in any stage of lifetime but the one in childhood is the most important and influential one.

Attachment to God

Attachment to God refers to the situation when one forms an attachment relationship with God and perceives God as the attachment figure. God is viewed as the safe haven and secure base for the individual and the individual engages in attachment behaviors in his/her interactions with God, such as seeking proximity and experiencing separation anxiety. However, it is argued that one can form an attachment to God only when God is considered a relational being and He is personal in nature (Beck & McDonald, 2004).

Avoidance of Intimacy with God

In the AGI, instead of four attachment styles, two dimensions of God attachment, avoidance of intimacy with God and anxiety over abandonment by God, are recognized. Avoidance of intimacy with God refers to "themes such as a need for self-reliance, a difficulty with depending upon God, and unwillingness to be emotionally intimate with God." (Beck & McDonald, 2004, p. 94). In other words, if a person scores high on the avoidance of intimacy with God measure, he/she may try to keep a distance from God, is reluctant to rely on God, and seeks autonomy.

Anxiety over Abandonment by God

When an individual demonstrates a strong tendency of anxiety over abandonment by God, he/she may be preoccupied with or anxious about his/her relationship with God. The person is overly concerned of how God views him/her, and is fearful of being abandoned by God. He/she may also engage in angry protest when God fails to meet the individual's expectation of affection, and become jealous when God seems to be closer to others. In other words, the

individual feels insecure about his/her relationship with God, and is unsure of God's trustworthiness.

Religious Coping

Religious coping is defined as "the use of religious beliefs or behaviors to facilitate problem-solving to prevent or alleviate the negative emotional consequences of stressful life circumstances." (Koenig, Pargament, & Nielsen, 1998, p. 153). Sometimes in the present study, religious coping is used alternatively with *religious coping method,* referring to how religion is employed to handle a stressful life event or deal with a problem.

Religious Coping Method

Religious coping method refers to the way one uses religion or religion-related behaviors to handle a stressful life event or deal with a problem. Researchers generally divided religious coping methods into positive ones and negative ones. *Positive religious coping methods* refer to coping strategies that assume a benevolent view of God and emphasize the bright side of the event. Positive religious coping methods include "seeking spiritual support, religious forgiveness, collaborative religious coping, spiritual connection, religious purification, benevolent religious reappraisal, and religious focus" (Pargament et al., p. 720). Individuals who use positive religious coping methods tend to have a secure relationship with God, intrinsic religiousness, and a positive worldview.

In contrast*, negative religious coping methods* refers to coping strategies that reflect a punitive or weak view of God and emphasize the dark side of the stressful event. People who employ negative religious coping methods appear to have an insecure relationship with God,

dissatisfaction with religion, and a negative worldview. Negative religious coping methods include "spiritual discontent, punishing God reappraisals, interpersonal religious discontent, demonic reappraisal, and reappraisal of God's powers (Pargament et al., 1998, p. 720).

Individualist and Collectivist Culture

Individualist culture refers to culture that puts individual needs and rights over group needs and concerns. Members of individualist culture tend to perceive individuals as unique and independent units of the society. Individualist culture emphasizes one's autonomy, personal interest, and individual achievement (Hofstede, 1991). Collectivist culture refers to culture that stresses group needs and goals above those of individual. Individual rights and needs are considered to be less important and should subordinate to the concerns of the group. In collectivist culture, society is considered to be consisted of interdependent individuals, and in-group harmony is highly regarded (Hofstede, 1991).

Christian

Christian is defined in this study as anyone who believes in the God of the Bible and accepts Jesus Christ as his/her personal Savior. The believer may be baptized but baptism is not a requirement to attend this study.

Organization of the Remaining Chapters

The remaining chapters of the study are composed of literature review (Chapter Two), methods (Chapter Three), results (Chapter Four), summary, conclusions, and recommendations (Chapter Five). Literature review further discusses the constructs the AGI (Beck & McDonald,

2004) and the Brief RCOPE (Pargament et al., 1998) aiming to measure, namely, God attachment and religious coping. Chapter Two also reviews any research on the two constructs in the Taiwanese population and different measures of the two constructs. Then the author will provide an in-depth discussion on the AGI and the Brief RCOPE and some related issues.

The method section covers the psychometric investigation process of the two instruments on Taiwanese, including development of the Chinese version of the AGI and the Brief RCOPE (translation and back translation), recruitment of the subjects, descriptions of other psychological instruments employed, and the process of data collection. In Chapter Four, the results section, a confirmatory factor analysis is applied to analyze the collected data. The psychometric data and the factor structures of the two target instruments are reported in the findings. The implications of the findings, limitations of the current study, and suggestions for further studies are stated in the last chapter.

CHAPTER TWO: LITERATURE REVIEW

This chapter will review selective literature relevant to the two religious instruments that the present study intends to psychometrically investigate, the Attachment to God Inventory (AGI: Beck & McDonald, 2004) and the Brief Religious Coping scale (Brief RCOPE: Pargament et al., 1998). For each instrument the literature review will examine the theoretical development of the construct, research on the construct in the Taiwanese population, different measures of the construct, and an in-depth study on the instrument selected for the study itself. Within the in-depth study on the AGI and the Brief RCOPE, the rationale for choosing the instruments, the current English psychometric data, any current debate on the factor structure in the English version, and the research on other cultural populations for the instruments will also be examined.

Attachment to God Inventory

Attachment Theory

Through observing interactions between mothers and children, especially the child's reaction to being separated from the mother, British psychiatrist John Bowlby (1979) postulated that a special relationship was formed between the mother and the child. He later coined this strong emotional tie "attachment." Drawing upon a wide variety of theories from different fields, including evolutionary theory, ethology, developmental psychology, cognitive science, and control system theory (Bowlby, 1969/1982), Bowlby issued his attachment theory in a series of

papers, which was later elaborated in his classic work *Attachment and Loss* (1969/1982, 1973, 1980).

Bowlby (1969/1982, 1973) proposed that infants engaged in attachment behaviors to gain proximity to their primary caregivers. When faced with danger and stress, the young child will use various ways to get attention from or get physical proximity to the caregiver. The purpose is to get protection from the caregiver. Theorizing from a revolutionary perspective, Bowlby stated that this kind of behavior will increase the safety of the youngsters and thus increase the possibility of passing down the genes.

The primary caregiver thus becomes an attachment figure for the child and the function is twofold. First, the attachment figure provides a safe haven for the child in times of danger and distress. Second, the attachment also serves as a secure base for the child to explore the world. However, the caregiver is not always in a passive role. The availability and responsiveness of the caregiver will determine the nature of the attachment relationship (Bowlby, 1973). In order to create a felt security in the child, physical proximity of the caregiver alone is not enough. The caregiver also needs to be emotionally responsive to the child. As Ainsworth and colleagues (Ainsworth, et al., 1978) later pointed out, the quality of the attachment relationship is determined by the hundreds and thousands of day-to-day interactions between the caregiver and the child; that is, the caregiver is not only accessible and available but also responsive to the needs of the child.

The attachment relationship with the primary attachment figure formed from infancy to adolescence, according to Bowlby, will become internal working models or mental models to the individual (Bowlby, 1979). These models are used by the individual to assess self, other attachment figures, and other attachment relationships later in life. Bowlby alleged that although

internal working models are revisable with later attachment experiences to some degree, they tend to resist change throughout the individual's lifespan (Bowlby, 1979; Bretherton & Munholiand, 1999). Nevertheless, internal working models bias but do not determine appraisals of a certain attachment relationship. Attachment security is the result of interaction between internal working models and the quality of current attachment relationships (Bowlby, 1973, 1980). Yet, "profound change in a working model requires revisions in many related schemas at many levels and in many interrelated domains" (Bretherton & Munholland, 1999, p. 98).

Evidence from empirical studies seems to support this statement. In a meta-analysis of longitudinal studies on attachment, Fraley (2002) found that attachment security is moderately stable throughout the first 19 years of life, and that there is some degree of overlap (a correlation of .30) between attachment security in parental and romantic relationships. Short-term environmental factors cannot bring forth a long-term change in attachment security. To elicit an enduring change in an attachment pattern, some fundamental and stable modifications in the attachment relationships as well as in one's own psychological organization are required (Fraley, 2002).

Attachment Measurement

In order to empirically measure security of attachment, Mary Ainsworth, one of Bowlby's colleagues, developed the Infant Strange Situation (Ainsworth, 1978). During the ISS study, infants were separated from their mothers and left alone with a research staff (a stranger). Another research crew observed the infant's reaction during separation. After a short while, the mother returned and the research staff again recorded the infant's reaction upon reunion. The results were analyzed and rated according to different attachment styles. Ainsworth categorized

infant-mother attachment into three types: secure, avoidant, and anxious/ambivalent (Ainsworth, 1978). Securely attached infants feel their primary caregiver as generally accessible and responsive. They use their attachment figures as secure bases to explore the world and retreat to them when facing threat. They are confident that their attachment figures will be available when they need protection and will respond to their needs in a timely manner. Securely attached babies are easily calmed and quickly return to their play upon reunion. Babies with avoidant attachment ignored the return of their mothers in the Strange Situation. They appeared that they did not expect comfort from their attachment figures and they mainly relied on themselves to regulate their emotions. Anxiously/ambivalently attached infants continued to show signs of distress even when their mothers returned. They tended to cling to their mothers and engaged in less explorative activities. They were not easily soothed and were preoccupied with the availability of their attachment figure. A fourth type, disorganized/disoriented, was added later by Main and Solomon (1986). Infants with disorganized attachment demonstrated chaotic and disoriented behaviors in the reunion with their mothers. They seemed to have difficulties to decide whether they should go back to their mothers. They would fall down, go in circles, or even have a trance-like expression. It appeared that they wanted to approach and avoid the attachment figure at the same time. Research indicated that infants with disorganized attachment may have mothers who were abusive, had unresolved trauma, or showed frightening behaviors (Hesse, 1999; Schuengel, Bakersmans-Kranenburg, & Van Ijzendoorn, 1999). Their mothers cannot be used as a secure base to regulate fear because they are also the source of fear.

After ISS, another attachment measurement, the Adult Attachment Interview (AAI, Main & Goldwyn, 1998) was developed to measure adult attachment patterns. By asking a series of open-ended questions related to the interviewee's childhood experience and relationships with

parents, the interviewee's attachment patterns are categorized into secure/autonomous, dismissing, preoccupied, and unresolved/disorganized. The criterion for judgment is not the content per se, but the coherence of the content. The results of the AAI were found to correlate with the ISS classification of that parent's child (Hesse, 1999; van IJzendoorn, 1995). The AAI was also found to have a strong predictive power of the child's ISS classification even before the child was born (Fonagy, Steele, & Steele, 1991).

Attachment in Adult Romantic Relationships

Attachment theory was later expanded to study adult romantic relationships. Hazan and Shaver (1987) argued that romantic relationships can be conceptualized as attachment relationships. The emotional ties formed between romantic partners are similar to those of mother-infant dyads. People use their romantic partners as their secure base and safe haven, and they seek proximity with their romantic partners and experience separation anxiety when accessibility is hindered.

Based on Ainsworth's ISS classifications, Hazan and Shaver (1987) also categorized adult romantic attachment into three types: secure, avoidant, and ambivalent. The prevalence of each type among the subjects in Hazan and Shaver's study was similar to that found among infants in the SSI studies. Moreover, subjects in the three types predictably differ in their experience of romantic love as well as in their early family relationships (Hazan & Shaver, 1987).

However, Hazan and Shaver's three-classification typology became unsatisfying to some researchers. Bartholomew and colleagues later developed a four-group model of adult attachment (Bartholomew, 1990; Bartholomew & Horowitz, 1991). In their model, individual attachment pattern is viewed as the reflection of one's working models of self and others. The two

dimensions (self and others) are then dichotomized into positive and negative. Secure attachment reflects both a positive view of self and others. Preoccupied attachment is the result of negative self-view and positive view of others. Avoidant attachment is divided into two subtypes. Dismissing avoidance reflects a positive view of self and a negative view of others, and fearful avoidance reflects negative views for both self and others. Adults with dismissing avoidant attachment rely on self for emotional satisfaction and tend to deny their needs for attachment. Fearful avoidant types desire close relationships but are afraid of rejection. Bartholomew's four-group model has been found to closely converge with other self-measures based on the AAI (Bartholomew & Shaver, 1998).The two distinct types of avoidance have been supported by empirical studies (Bartholomew & Horowitz, 1991; Bartholomew & Shaver, 1998; Brennan, Clark, & Shaver, 1998).

In order to develop a common self-report measure for assessing adult romantic attachment, Brennan and colleagues (Brenna et al., 1998) tried to find the common factors beneath current attachment scales. Through a principal component analysis of 60 attachment constructs, Brennan et al. (1998) alleged that two dimensions, anxiety and avoidance, actually underlie all adult attachment styles. However, they recognized that their two-dimension concept is very similar to the one in Bartholomew's four-group model (dimensions of self and others). Moreover, based on the two higher-order scales, Brenna et al. (1998) also found four attachment groups which were consistent with Bartholomew's results. The final result of Brenna and colleagues' study (Brenna et al., 1998) is the development of the Experience in Close Relationships (ECR) scale. This two-dimension rationale was later adopted by Beck and McDonald (2004) and was applied to one's attachment relationship with God and became the theoretical basis of the AGI.

God Attachment

Kirkpatrick applied the concept of attachment to man's relationship with God or a deity. Kirkpatrick (1992, 1999) proposed that one's perceived relationship with God can be understood as a dynamic attachment process because it meets all the criteria of an attachment relationship. A personal God and a personal relationship with God are emphasized in monotheistic religions, particularly in Christianity. God is described as the heavenly Father but is often perceived as more similar to one's mother (Kirkpatrick, 1992). Believers use God as an attachment figure by seeking and maintaining proximity to God through prayer and other religious activities. Also, God is regarded as a safe haven in times of distress and trouble. The concept of an omnipresent, omniscient, and omnipotent God gives God the best qualifications for being a secure base for the believers. Kirkpatrick also alleged that the concept of faith in God resembles the felt security in attachment theory and glossolalia is similar to infant babbling (Kirkpatrick, 1999). Although Kirkpatrick acknowledged that it is hard to measure the believers' separation anxiety because God does not die or disappear, he asserted that believers do show grief or anxiety when they go through excommunication or apostasy (Kirkpatrick, 1999).

The concept of God attachment has received empirical support from many studies. For example, Rowatt and Kirkpatrick (2002) found that anxious attachment to God was positively associated with negative effect, neuroticism, and was negatively related to positive effect. Similarly, Bishop (2008) found that secure attachment was associated with less depressed mood. Beck and McDonald (2004) also found that both anxious and avoidant God attachment were negatively correlated with spiritual well-being and satisfaction with God. Kirkpatrick and colleagues detected significant correlations between individual attachment styles and religious variables such as image of God and religiousness (Kirkpatrick, 1997, 1998, 1999, 2005;

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Kirkpatrick & Shaver, 1990, 1992). Others also found associations between attachment patterns and different spiritual experiences, especially sudden religious conversion (Beck & McDonald, 2004; Brokaw & Edwards, 1994; Granqvist, 1998; Granqvist & Kirkpatrick, 2004; Miner, 2009). Insecure attachment was generally associated with sudden religious conversions, and secure attachment was associated with gradual religious change (see a meta-analysis of Granqvist & Kirkpatrick, 2004). Similar evidence has also been detected in cross-culture studies (Eurelings-Bontekoe et al., 2005; Miner, 2009; Proctor et al., 2009; Sim & Loh, 2003).

Individual differences in attachment relationships with God resulted in two different sets of findings in research. One group of studies reported that the individual pattern of attachment to God corresponds to one's attachment pattern with parents. It is called the correspondence hypothesis. Another set of findings reported that individuals who experience an insecure attachment are more likely to use God as a substitute attachment figure. It is called the compensation hypothesis.

Many studies support the correspondence hypothesis. In a newspaper survey, Kirkpatrick and Shaver (1992) found that respondents who classified themselves as securely attached are significantly more likely to report a loving and caring God image and more religious commitment than avoidant respondents. Avoidant respondents are more likely to describe themselves as agnostic. Ambivalent respondents varied across measures. Cassibba and colleagues (2008) also reported that Catholic priests and members of religious group showed a significantly higher proportion of secure attachment and a lower proportion of disorganized attachment than the worldwide norm. Several other attachment studies also supported the correspondence hypothesis (Beck & McDonald, 2004; Reinert, 2005; Rowatt & Kirkpatrick, 2002). In addition, studies viewing religious experience from an object relations theory

perspective (Hall & Brokaw, 1995; Hall, Brokaw, Edwards, & Pike, 1998) and some cross-cultural studies (Eurelings-Bontekoe et al., 2005; Miner, 2009) seemed to draw similar conclusions.

On the other hand, compensation hypothesis was also supported by the literature. Several studies found that individuals with insecure attachment are more likely than their counterparts to report having a sudden religious conversion (Granqvist, 1998; Kirkpatrick, 1997; Kirkpatrick, 1999; Kirkpatrick & Shaver, 1990). Moreover, in a longitudinal study, Kirkpatrick (1997) found that insecure women are more likely to report having found a new relationship with God than secure women. Kirkpatrick (1998) and Granqvist (2002) later also obtained similar results in their longitudinal studies. Participants with insecure attachment histories tended to report more positive religious change than secure participants.

Nevertheless, mixed results of correspondence hypothesis and compensation hypothesis have also been reported by a number of studies (Granqvist, 1998, 2002; Granqvist & Hagekull, 2000; Granqvist & Kirkpatrick, 2004; Kirkpatrick & Shaver, 1992; Reinert, 2005). The mixed results of research led the investigators proposing different models of correspondence and compensation to integrate these findings. For example, Granqvist & Hagekull (1999) proposed a "socialized correspondence" and "emotional compensation" model. They argued that individuals with secure attachment history tend to have religious beliefs corresponding to their parent's religious beliefs. However, for individuals with insecure attachment histories, religion is used to regulate affect and compensate emotional deficit. Kirkpatrick (1998), Beck and MacDonald (2004) also argued for the consistency of the correspondence and compensation hypotheses. They suggested that insecure individuals, due to their emotional deficit, are easily attracted to a secure attachment figure such as God. Yet, once they enter the relationship, negative internal

working models will be at work and they begin to demonstrate a similar attachment pattern as the one with their parents.

God Attachment among Asians

As research on attachment to God flourished in the West, very few similar studies have been done in the East. After searching various library databases, including the Academic Search Complete (EbscoHost), Academic OneFile, ProQuest Dissertation and Theses database (PQDT), and Taiwan Digital Meta-Library, using search terms "God attachment", "attachment to God", and "religious attachment", the author only found a few studies on attachment to God in the Asian population. Among them, only one study (Sim & Loh, 2003) was done in Asia and used the Asian population living in Asia. The other studies used Asian Americans (Shin, 2009) or Asian participants residing in a Western country (Joung, 2006). Many of these subjects were second- or third-generation Asians. The degree of acculturation should be very high and the collectivist nature of these samples is really questionable.

Sim and Loh (2003) did an attachment to God study on the Singaporeans. The purpose of that study was to develop a God attachment measure. The results of their study will be described in the Measures of God Attachment section below. Another study by Shin (2009) examined the association between parental attachment and attachment to God or relationship with God among 206 Korean-American and 95 Chinese-American college students. These Asian Americans were born and raised in the United States. The research findings indicated that participants who had a secure attachment to their parents also demonstrated a secure and stable relationship with God. On the contrary, students who portrayed an insecure parental attachment often exhibited an insecure and unstable relationship with God. This study also found that students who were

securely attached to their parents showed less disappointment with God and more awareness of God, and desired to worship and serve God more than the insecurely attached students (Shin, 2009).

Using attachment theory as a conceptual framework, Joung (2006) explored the faith development of ten Korean women in England through a qualitative approach. The study found that participants' image of parents corresponded with their image of God. Those who had a positive parental image usually held a similar image of God. Those who had a negative image of parents tended to maintain a negative view toward God. Nevertheless, women who were deprived of parental love sometimes projected an idealized image of God that was opposite to their parental image. Joung (2006) also found that the women's self-image was a reflection of their view of parental care in childhood, and in turn influenced their ways of relating to others and God.

Based on the participants' images of self and God, Joung (2006) distinguished three styles of God attachment: avoidance/distance, anxiety/ambivalence, and security/interdependence. These categories obviously resembled Kirkpatrick and Shaver's (1992) categories (see a review of Kirkpatrick and Shaver's study in the next section, Measures of God Attachment). Women with avoidant attachment held a depersonalized view of God and depicted God as unavailable and distant. Women with anxious attachment felt insecure in both their human close relationships and their relationship with God. They showed extremely strong desire for intimacy and resulted in being clinging and nagging. Their views of God were often "dual or split" (Joung, 2006, p. 152). God was described as both fearful and benevolent, or the one who tests people yet also resolves any problems. For women with secure God attachment, they demonstrated spiritual maturity by being happy and content in their relationship with God. They

perceived God as loving and caring, and His goodness and fairness were believed to extend to everyone.

To date, no research on God attachment has ever been done among the Taiwanese population or used a Taiwanese sample, and very few studies of God attachment have been done on samples of collectivist culture. One of the reasons may be the lack of measuring instrument. It is indeed a research area that needs to be cultivated.

Measures of God Attachment

Although attachment theory was only applied to the area of religion in the recent two decades, several measures have been developed to assess God attachment. The first measure was created by Kirkpatrick and Shaver (1992), modeled after Hazan and Shaver's (1987) measure of adult romantic attachment. It was a self-report, force-choice, categorical measure. It is composed of three paragraph depicting three types of attachment relationship with God: secure, avoidant, and anxious/ambivalent. The respondents were asked to classify themselves according to the descriptions. This kind of categorical measure, however, has some validity and psychometric problems as pointed out by some researchers (Fraley & Waller, 1998; Hazan & Shaver, 1987; Rowatt & Kirkpatrick, 2002; Simpson, Rholes, & Nelligan, 1992).

One of the problems is that categorical measure cannot assess the extent the respondent identifies with each classification. Individuals in the same category may be very different in terms of their degree of agreeing with a certain category. It is possible that a person may identify him/herself with part of the descriptions of a category but not all. However, he/she is forced to choose among one of the three paragraphs.

Another problem is that the data obtained from categorical measure pose serious limitations on the statistical analyses that can be done. Therefore, the kinds of research questions the investigators can address are constrained (Fraley & Waller, 1998). Fraley and Waller further pointed out that when a dimensional construct is measured categorically, the whole validity and reliability of the measurement is in peril. That is, a continuous variable or reality is forced to be dichotomized or divided into distinct categories. Not only is the measure inappropriate for the construct (a problem of validity), the results will be predictably unstable (a problem of reliability). This will also undermine the statistical power of the research (Fraley & Waller, 1998). Today, more and more investigators recognize attachment security as a continuous variable and a dimensional construct (Fraley & Waller, 1998). A dimensional measurement was required to measure individual attachment relationships.

Due to problems with categorical measures, Rowatt and Kirkpatrick (2002) later refined the measure in Kirkpatrick and Shaver's (1992) study and developed a dimensional attachment to God scale. They converted phrases in the three paragraphs in the original study into 22 scale items. Each item was rated on a 7-point Likert scale with 1 representing "not at all characteristic of me" and 7 representing "very characteristic of me". After a series of psychometric analyses to ensure the validity and reliability of the items, nine items were left to form the final items for the Attachment to God Scale (AGS: Rowatt & Kirkpatrick, 2002). Two subscales/dimensions emerged from these items through exploratory component analysis. One was the avoidance dimension, containing six items. Another was the anxiety dimension, consisting of three items. Each item had a factor loading of .74 or higher.

The AGS demonstrated good internal consistency (Cronbach's alpha coefficients were .92 for Avoidance and .80 for Anxiety). The AGS also had good construct validity. Both

subscales have been shown to effectively evaluate conceptually and empirically distinct aspects of religiosity. After controlling for several related concepts such as intrinsic religiousness, doctrinal orthodoxy, loving images of God, and social desirability, the two dimensions still emerge as significant predictors of several affect and personality variables (Rowatt & Kirkpatrick, 2002).

Also unsatisfied with Kirkpatrick and Shaver's (1992) categorical measure of attachment to God, Sim and Loh (2003) developed a quantitative measure of attachment to God. This measure was based on the four characteristics of an attachment relationship with God, namely, God as a safe haven, God as a secure base for exploration, seeking proximity to God, and responses of anxiety and grief to separation and loss. For each aspect, four items were created, with a total item of 16 for the entire measure. Each item was rated on a six-point Likert scale (1 = strongly disagree, 6 = strongly agree). The measure showed excellent internal consistency. Cronbach's alpha for the whole measure was .99. Cronbach's alpha coefficients for the four aspects ranged from .96 to .97. However, only one factor emerged from Sim and Loh's attachment to God measure through the principal components analysis. The factor solely accounted for 86% of the variance. All 16 items had loadings of .88 or higher on this one factor. The authors did not name this factor. They concluded that the one factor result may indicate that God attachment is actually a unitary construct expressed in four different aspects (Sim & Loh, 2003).

In addition to its internal properties, Sim and Loh (2003) also used two approaches to validate the instrument. One was a religiosity-contrast perspective. The other was a person-contrast perspective. For the religiosity-contrast perspective, attachment to God was contrasted to the belief and practice aspects of religiosity to evaluate its distinctiveness. The results showed

that God attachment can be differentiated from religious belief and practice. In the person-contrast perspective assessment, attachment to God was compared with attachment to father and attachment to mother. Once again, attachment to God can be distinguished from attachment to father and mother.

To examine the utility (incremental validity) of this instrument, Sim and Loh also checked the correlations between God attachment and four other variables on the basis of their theoretical relationships with the four aspects of God attachment. These four variables were optimism, satisfaction, self-esteem, and negative affect. The statistical findings indicated that only optimism was positively related to God attachment. No significant correlations were found between God attachment and the other three variables.

Sim and Loh's (2003) study is the only God attachment study in collectivist culture the author has found so far. The participants were recruited from a public university in Singapore. Sim and Loh claimed that they purposely selected undergraduates because the diverse philosophical perspectives college students often encounter. Their study is also part of a larger project examining developmental issues of Singaporean late adolescents. Although the collectivist culture of the participants was not the focus of Sim and Loh, the similarities and differences between their participants and those in the current study are worth noting.

Similar to the present study, most of the participants in Sim and Loh's (2003) study were Chinese (87%) in race. Yet the religions of the participants in Sim and Loh's study were very diverse and different from the present study. Only 25% of the participants in their study were Christians; the rest were Buddhists (21%), had no or multiple affiliations (33%), or were from other religions (21%, Muslim, Hindus, or believers of other faiths). Based on Cassidy's view that "[a] person can be attached to a person who is not in turn attached to him or her" (Cassidy, 1999,

p. 12), Sim and Loh alleged that "the belief systems of many religions, in which God is often an impersonal and distant being or 'force'" can also be used by the believer to form an attachment relationship (Sim & Loh, 2003, p. 375). Nonetheless, since the concept of God can be very different for the participants due to their diverse religious background, this can pose a concern to the validity of this study. In review of the literature, God attachment measures or other religious measures were usually first tested on participants with same religions (Beck & McDonald, 2004; Khan & Watson, 2006; Pargament, et al., 1998; Proctor, et al., 2009; Rowatt & Kirkpatrick, 2002) to reduce the possibilities of compound variables. It may not be wise to validate a new religious instrument on participants with diverse religious background, especially when the concepts of the major religious construct are not consistent among the participants.

All these above attachment to God instruments are self-report measures. They rely on the honest report of the respondents without further "in vivo" evidence to support the results. To solve the problems with self-report measures, Proctor, Miner, McLean, Devenish, and Bonab (2009) developed a God Attachment Interview Schedule (GAIS). The GAIS (Proctor et al., 2009) is a semi-structured interview that obtains an autobiographic narrative of the respondent's present and past experiences with God. The recorded narratives are analyzed through a template which classifies attachment patterns to God into three categories: secure-autonomous, insecure-anxious/ preoccupied, and insecure-dismissing, based on a developmental attachment perspective (George & West, 1999). For each type of attachment, a set of relational markers are developed and are used to identify evidence of participants' attachment classifications. However, the GAIS is still in its initial stage of development and needs further research to validate its usefulness and to refine the scale (Proctor, et al., 2009). Moreover, the GAIS is not suitable for studies with

large samples due to its more qualitative approach. It also takes more time to train people to administer the instrument.

Attachment to God Inventory

Seeing the lack of psychometrically sound instrument to measure attachment to God and its impact on the advance of research, Beck and McDonald (2004) created the AGI. The AGI (Beck & McDonald, 2004) is a two-dimensional self-report measure modeled after the Experience in Close Relationships (ECR) scale (Brennan et al., 1998). In ECR scale, Avoidance of Intimacy and Anxiety about Abandonment are the two underlying dimensions. Although AGS (Rowatt & Kirkpatrick, 2002) also used the same two dimensions as its subscales, items in each dimension are obviously out of balance. Six items fall into the Avoidance subscale, and only three items are in the Anxiety subscale. Moreover, the total item number in the AGS may be too small to accurately assess the respondents' attachment patterns. Only nine items are left out of the original 22 items to form the final scale.

Another serious problem with the AGS is the way the items are generated. The initial item pool of the AGS is converted from the three paragraphs of Kirkpatrick and Shaver's (1992) measure of God attachment. Only 22 items were generated through this process. The three paragraphs are definitely a very limited source to compose the initial pool. Finding the final items from the three paragraphs thus can be a very ineffective and probably an invalid way to generate an instrument that measures a complex construct such as God attachment.

On the contrary, the AGI (Beck & McDonald, 2004) obtained its initial item pool using themes for the Avoidance and Anxiety dimensions. For the Avoidance dimension, themes like difficulty depending on God, unwillingness to be intimate with God, and need for self-reliance

were used to generate the items. For the Anxiety dimension, themes of angry protest, preoccupations with the relationships, fears of being abandoned by God, anxiety over one's lovability, and jealousy over God's differential treatment of others were used. This process resulted in an initial item pool of 70 items. From these 70 items, 28 items were chosen as the final version of AGI, 14 for the Avoidance subscale and 14 for the Anxiety subscale. The two dimensions had an equal number of items.

In selecting the final items of the AGI (Beck & McDonald, 2004), four criteria were considered: factor structure, internal consistency, minimal shared variance between subscales, and theoretical consideration. The dominant factor loadings must be equal to or larger than .40, and the cross factor loadings must be equal to or smaller than .25. For internal consistency, Cronbach's alpha must be larger than .80. For the shared variance between subscales, r^2 must be smaller than .10. Finally, for the theoretical consideration, each subscale must have balanced content and the items in each subscale must match the themes of the subscale.

The AGI (Beck & McDonald, 2004) was first tested on a large college sample to investigate its factor structure and psychometric property. Five hundred seven graduate and undergraduate students were included in the initial study. A series of principal components analyses were applied and two factors were found to best fit the data. Factor 1, labeled "Avoidance", accounted for 23.2% of the variance. Factor 2, labeled "Anxiety", explained 13.9% of the variance. The two factors shared only 6.1% of their variance ($r = .248$, $r^2 = .06$). The two subscales also showed good internal consistency (Cronbach's alphas were .86 for Avoidance and .84 for Anxiety). Each item had a factor loading of .43 or larger.

The AGI (Beck & McDonald, 2004) was also tested on two other samples, one college sample and one community sample, in the original multiple-sample study to replicate the

psychometric properties. In both samples, the results of the factor analysis indicated a two-factor structure as the best fit for the data. However, in both replicated samples Anxiety became factor 1 and accounted for more of the variance than Avoidance. Two items (item 14 and 16) which loaded with the Avoidance subscale for the first sample had higher loadings on the Anxiety subscale for the other two samples. Therefore, Beck and McDonald (2004) suggested that future studies may consider deleting these two items when they administer the AGI (Beck & McDonald, 2004). Nevertheless, the overall factor structure of the AGI exhibited satisfactory stability in the replication study. The AGI also showed good internal consistency for the replicated samples and samples in later studies (Beck, 2006a, 2006b; Cooper, et al., 2009; McDonald et al., 2005), with alpha coefficients higher than .80 each time for each subscale. However, none of these later studies took out item 14 and16 as Beck and McDonald (2004) recommended, including studies done by Beck or McDonald (Beck, 2006a, 2006b; McDonald et al., 2005) . Therefore, the current study will also include item 14 and 16 in the survey following the original study.

All of the existing AGI studies were done in the United States, and mostly used a sample of college students. According to the author's knowledge, the AGI has never been applied on any other cultural populations. The present study will be the first cross-cultural study for the AGI and also the first time to test the AGI on a collectivist culture.

<div align="center">**Brief Religious Coping Scale**</div>

Religious Coping

In literature, religious coping was generally defined as "the use of religious beliefs or behaviors to facilitate problem-solving to prevent or alleviate the negative emotional

consequences of stressful life circumstances." (Koenig et al., 1998, p. 153). Religion being used as one way of coping by individuals facing stressful life events has raised increasing interest in the field of mental health in the past two decades. Although the prevalence and population norms of religious coping have varied with characteristics of the sample and of the stressor indicated, evidence from empirical studies has proven that religious coping is a widely employed coping strategy for various groups in a number of situations. For example, religion is used to cope with stress from illness (Alferi, Culver, Carver, Arena, & Antoni, 1999; Hebert, Zdaniuk, Schulz, & Scheier, 2009; Koenig, 1998; Lavery & O'Hea, 2010; Koenig et al., 1995; Pargament et al., 1998), trauma (Bradley, Schwartz, & Kaslow, 2005; Fallot & Heckman, 2005; Harris et al., 2008; Pargament et al., 1998; Schuster et al., 2001), and bereavement (Anderson, Marwit, Vandenberg, & Chibnall, 2005; Murphy & Johnson, 2003). Religion is also found as a commonly applied coping method during stressful events for the elderly (Emery & Pargament, 2004; Koenig, 1998; Pargament, Koenig, Tarakeshwar, & Hahn, 2004), young adults (Phillips & Stein, 2007), college students (Merrill, Read, & LeCheminant, 2009; Pargament, et al., 1998); adolescents (Brechting, & Giancola, 2006; Dew et al., 2010; Szewczyk & Weinmuller, 2005; van Dyke et al., 2009), and even children (Benore, Pargament, & Pendleton, 2008; Zehnder, Prchal, Vollrath, & Landolt, 2006). Moreover, evidence from studies indicated that religious coping is associated with depressive mood (Braam et al., 2008; Carleton et al., 2008; Hayden et al., 2003; Hebert et al., 2009; Herrera et al., 2009), quality of life (Filazoglu & Griva, 2008; Koenig, 1998; Terakeshwar et al., 2006; Tsevat et al., 2009), substance use (Brechting & Gaincola, 2006), and parental functioning (Schottenbauer, Spernak, & Hellstrom, 2007; Dumas & Nissley-Tsiopinis, 2006).

Although most studies found religious coping associated with more positive outcomes, some researchers found religious coping bringing negative impact on the participants'

adjustment to stressful events. Still others found no relationship between religious coping and the outcomes of stressful events. For example, in a literature review of the relationship between religious coping and illness adjustment on cancer patients by Thune-Boyle, Stygall, Keshtgar, and Newman (2006), seven studies found a positive relationship, four studies found a negative relationship, and seven studies found no relationship. One reason for the mixed results in the literature was that religious coping is a multidimensional construct, and different studies often measures different aspects of religious coping through different approaches. Lavery and O'Hea (2010) pointed out that in Thune-Boyle et al.'s review only three out of 17 studies had employed measures that specifically examined religious coping. Some studies used one single subscale to measure religious coping. Thune-Boyle and associates (Thune-Boyle et al., 2006) also noted that many investigators tended to overlook the negative aspects of religious coping.

Indeed, when religious coping is differentiated into positive and negative coping strategies, the relationships between religious coping and various variables becomes less ambiguous. Positive coping strategies refers to those practices that demonstrate the believer's benevolent attitude or appraisal toward God and the situation, and one's beneficial use of the stressor by seeking out connection with God or other people (Pargament et al., 1998). These include believing God will use the difficult situation for a good purpose or getting closer with God and other believers. Some researchers hypothesize that positive coping style implies a secure relationship or attachment with God (Pargament et al., 1998; Cooper et al., 2009). Negative coping strategies are behaviors or beliefs that think punitively or pessimistically about God and the situation or focus on the dark side of the stressful event, such as doubting God's power or believing the situation as God's punishment.

In a literature review of religious coping by Harrison and colleagues (2001), positive religious coping is found to associate with less depressive symptoms, anxiety, and mortality, and higher degree of life satisfaction, quality of life, and self-esteem. On the contrary, negative religious coping is typically found to relate to more depressive symptoms, anxiety, posttraumatic stress, mortality rate, and negative health outcome. Similar results are also reported by another review of Ano and Vasconcelles (2005) from a different perspective. In their meta-analysis of 49 religious coping studies, Ano and Vasconcelles examined the association between religious coping and psychological adjustment by synthesizing these studies quantitatively and evaluating the efficacy of situation-specific religious coping methods (e.g., positive and negative religious coping strategies) for the participants. The study found that positive religious coping strategies are positively related to positive psychological adjustment and negatively related to negative psychological adjustment. Negative coping strategies are found to have a positive association with negative psychological adjustment to stress. However, no relationship was found between negative coping strategies and positive psychological adjustment. In other words, individuals who used more positive religious coping such as seeking spiritual support or spiritual forgiveness experienced more positive affect and less negative affect (i.e., depression and anxiety).Individuals who used more negative religious coping such as punishing God appraisal would experience more negative affect such as depression and anxiety. However, individuals who use negative coping strategies can still demonstrate positive psychological adjustment or experienced stress-related growth.

Religious Coping among the Taiwanese Population

Religion has been an important part of life for the Taiwanese. Only 5% to 15% of the population claims that they do not have a religion (Chen, 2000). Among them, 35% of the Taiwanese reported themselves as Buddhists and 33% Taoists. However, many Taiwanese considered themselves as both Buddhist and Taoist. What complicates the case more is that many believers of Buddhism and Taoism also believe in some form of traditional folk religion. It is estimated that 68% to 80% of Taiwanese believe in one or more folk religions (Chen, 2000; United States Department of State, 2010). In addition, the rest of the Taiwanese consist of Christians (3.5% – 4.8%), Catholics (1.8% - 2.4%), and other religions(3% - 5%) (Chang, 2000; Chen, 2000).

Religion is also an important way of coping for many Taiwanese. In the development of the Collectivist Coping Style Inventory (CCSI), Religion-Spirituality was recognized as one of the most important coping strategies by the Taiwanese participants (Heppner, Lee, Wang, Park, & Wang, 2006). Almost 40% of the participants (n = 1,156) reported employing religion to cope with stressful or traumatic life events, and found religion to be "a little" or "a moderate amount of help". Items from the Religion-Spirituality scale in CCSI (Heppner et al., 2006) included "Found comfort from my religion or spirituality" and "Found guidance from my religion".

In a study of the religious activities of inpatients and their family visitors, Tzeng and Yin (2008) also found that the majority of the participants utilized religion to cope with their problems. In their study, 76.2% of the participants (n = 1,031) prayed to their god(s) for help, and 57.4% of them attended a church/temple service. Patients reported higher frequencies of offering prayer and attending a worship service compared to their family visitors. Moreover, those patients who had a longer hospital stay reported engaging in more religious activities than

other participants. It is possible that sickness and having a longer hospital stay contributed to the increased participation of religious activities. Similarly, in a qualitative research of the recovery experiences of adult heart transplant recipients in Taiwan, religion was recognized as one of the most frequently used coping strategies by the participants (Lin, Wang, Chang, & Shih, 2010). Half of the participants (n = 10) reported requesting religious support in all stages; religious persons were recognized as important helping resources for the participants across all stages.

Religious coping was also found helpful by caretakers of children with autism in Taiwan (Hu, 2008). Caregivers who employed religious coping reported higher levels of life satisfaction and less psychological distress. Results obtained by another study of cancer patients (Chien, 2009) were consistent with Hu's (2008) conclusions. Chien (2009) found that participants who were more religious (i.e., engaging in more religious activities) and who held a more positive attitude toward their religion had better quality of life and reported a higher degree of life satisfaction.

Although the above studies shed some light on the significance of religious coping for the Taiwanese, they did not specify how religion had been applied to coping. In one qualitative study (Huang, Hung, Sun, Lin, & Chen, 2009), answers pertaining to the "how" question were presented more clearly. In this study of the caregiving experiences of family members of a person with long-term schizophrenia, religious coping emerged as one of the themes in the coping strategies of the caregivers. Participants reported coping the burdens of caring by asking for help and directions from their god(s), worshipping their god(s), consulting a "dang-gi" (a shaman), and used herbal medicine prescribed by a "dang-gi" (Huang et al., 2009). A "dang-gi" was believed by the believers to have the ability to communicate with the deities, and the herbal

medicine given by a "dan-gi" was believed to have the power to heal the sickness or expel the evil spirits or the curse from the evil spirits on the patient.

In the existing literature among the Taiwanese, Kuo and Ma's (2002) research is the only one reporting a mixed result regarding the relationship between religion and stressful event. Kuo and Ma (2002) studied the correlations between symptom distress and coping strategies among Taiwanese patients with lung cancer. Consistent with the findings in the West, Kuo and Ma (2002) reported that women sought spiritual help significantly more than men during their sickness. However, they did not find a correlation between individual religious faith and psychological distress. Kuo and Ma (2002) suggested the lack of correlation may be due to the small number of women in their sample (n = 13, 17.8%), which makes the detection of small statistical differences difficult.

Unfortunately, all of the current studies in Taiwan, except Chien's (2009) study, do not focus on religious coping alone, but take religion as part of the coping strategies employed by individuals and include only limited items in religious coping subscale. Moreover, most of the studies, including Chien's (2009) research, considered only the general religiousness or religious orientation, instead of focusing on specific religious coping strategies or patterns. For example, Kuo and Ma (2002) used the Coping Strategies Scale (CSS, Chiu, 1987) to measure the participants' coping. The CSC (Chiu, 1987) was originally developed and translated from the Jalowiec Coping Scale (Jalowiec & Power, 1981), which includes 15 problem-focused and 25 emotion-focused coping behaviors. Religious coping is regarded as part of the coping strategies. In Lin et al.'s (2010) study, religious coping was also considered as one kind of coping strategies.

Taking the importance of religion for the Taiwan population and the impact on their daily lives, the topic of religious coping definitely deserves more attention and sophisticated research.

As mentioned earlier, the lack of a valid and reliable assessing tool may contribute to the under-research of religious coping in Taiwan. Therefore, it is imperative to have psychometrically sound instruments on this topic available for this population.

Measures of Religious Coping

In the past, measures of religious coping tended to be ambiguous and oversimplified. Studies sometimes used single-item measures to assess one's religiosity or religious involvement, and the results often reflected the respondents' religious disposition in general, not how religious coping was applied to crises in particular (McIntosh, Silver, & Wortman, 1993; Ross, 1990). With the growth of literature, measurement of religious coping has improved in precision and in variety. Psychometric investigations of religious coping instruments helped to increase the validity and reliability of these measures. Moreover, different types of religious coping instruments were developed to measure different aspects of the construct with more specificity.

Pargament (1999) listed five approaches most often used by researchers to measure religious coping: the indicators approach, the overall approach, the general coping approach, the specific religious methods approach, and the patterns of religious coping approach. The indicators approach uses global religious items such as frequency of church attendance or frequency of prayer to measure religious coping. For example, Merrill et al. (2009) included a 10-item instrument, the Santa Clara Strength of Religious Faith questionnaire (SCSORF, Plante & Boccaccini, 1997), in their study of 742 college students to measure the impact of religiosity on the outcomes associated with stress. The SCSORF (Plante & Boccaccini, 1997) assesses a person's general religiousness by asking respondents to rate statements such as "I consider myself active in my faith or church" and "I pray daily" on a 4-point Likert scale (1 = Strongly

disagree to 4 = Strongly agree). The results found that higher level of religiosity is related to less negative outcomes and more positive outcomes. Although the indicator approach can help detect whether there is an association between religion and outcomes of stressful events, the investigators cannot be sure how much religion is actually utilized by the participants to cope with the stressors and how much the correlation found can be explained by the religious behaviors or beliefs.

The overall approach evaluates the overall extent of one's religious involvement during the stressful event. Religious Coping Index (RCI: Koenig et al., 1992) fits well into this category. The RCI contains three items, each worth 10 points. The first item is an open-ended question regarding the coping behavior the respondent felt was most helpful in general. The second item asks the respondent to rate how helpful religious beliefs or activities have been in coping on a zero ("not much or not at all") to 10 ("the most important thing that keeps me going") visual analog scale. For item three, the interviewer has a discussion with the participant about how helpful religion has been during stressful events. Based on this discussion and the subject's further elaboration on his/her answers to item one and two, the interviewer rates the participant's religious coping on a scale of 0 to 10. The RCI has an inter-rater reliability of .81. Koenig (1995) used the RCI to assess the religious characteristics of older inmates. As a result, 32% of the participants reported that religion was the most important way of coping they employed in prison. Although the overall approach evaluates how much religion is used in coping, it does not tell the investigators specifically what religious coping methods the participants actually employed.

The general coping approach usually considers religious coping as part of an overall coping strategy and includes several questions of religious coping within the general coping strategies. Lazarus and Folkman (1984) include two religious items under the Positive

Reappraisal subscale in their Ways of Coping Scale. The Jalowiec Coping Scale (Jalowiec & Power, 1981) mentioned earlier also falls into this category. The general coping approach is obviously inadequate in assessing individual religious coping behaviors. Moreover, it is not clear how helpful religious coping is compared to other types of coping.

The specific religious methods approach measures the specific ways an individual uses religion to cope with stressful events. Within this category, several instruments have been developed. One of the most widely used is the Religious Problem Solving scale (RPS) developed by Pargament and colleagues (1988). The RPS differentiated individual religious coping into three distinctive styles of problem solving: the self-directing approach, the deferring approach, and the collaborative approach. The three styles are also the three subscales of the PRS. Each subscale contains 12 items. In self-directing approach, people tend to depend upon selves to solve the problem rather than upon God. In the deferring approach, individuals hold God responsible for solving the problem and become very passive. For those who use the collaborative approach, the person and God work together to solve the problem. The PRS also has a short form in which each subscale consists of six items. The PRS has gained empirical support from the original study. A number of studies also proved that the three styles of religious coping were associated with different levels of personal and social competence, physical and mental health, and different kinds of religious beliefs and practices (Hathaway & Pargament, 1990; Pargament et al., 1990; Pargament et al., 1988; see also a review in Pargament, 1997).

Another widely used measure in the specific religious methods approach is the Religious Coping Activities scale (RCA: Pargament et al., 1990). Unlike the PRS (Pargement et al., 1998), which was developed out of a theoretical base, the development of RCA took an inductive approach. The original items of the RCA were generated through a review of the literature and

interviews with 586 clergies and individuals from 10 Midwestern churches. Through factor analysis, the final RCA contains 31 items and includes a wider range of religious coping methods people employ to cope with stressful events. The 31 items are divides into six subscales, Spiritually Based, Good Deeds, Discontent, Religious Support, Plead, and Religious Avoidance. People who use the Spiritually Based coping tend to have a positive view of God and the faith, and use their religion as a source of strength to cope with their problems. Examples from this subscale are "realizing that God was trying to strengthen me" and "used my faith to help me decide how to cope with the situation". Individuals employing the Good Deeds coping try to cope with the stressor through engaging in religious rituals or performing religion-approved behaviors. Items within this category include "participated in church groups" and "tried to be less sinful". The Discontent coping refers to behaviors or attitude that has a negative view toward God or the faith, such as "felt angry with or distant from God" and "questioned my religious beliefs and faith". The Religious Support coping tends to seek help from clergy or other members of the faith. People who use the Plead coping strategy likes to bargain with God or ask for God's direct intervention. Item examples are "asked for a miracle" and "bargained with God to make things better". Lastly, the Religious Avoidance coping utilizes religion as ways of escaping the realities. Typical items include "prayed or read the Bible to keep my mind off of my problems" and "focused on the world-to-come rather than the problems of this world".

The RCA (Pargament et al., 1990) demonstrates good internal consistency and validity. The Cronbach alphas for each subscale are .92 (Spiritually Based), .82 (Good Deeds), .68 (Discontent), .78 (Religious Support), .61 (Plead), and .61 (Religious Avoidance). The RCA scales are found to be not redundant with nonreligious coping measures and global religious measures (Pargament et al., 1990; Pargament 1997). The RCA scales are also found to be

significantly associated with affect, depression, anxiety, mental status, mental health, event-related outcome, and religious outcome in many studies (see a review in Pargament, 1997).

To date, the most comprehensive measure of religious coping is the RCOPE developed by Pargament, Koenig, and Perez (2000). The RCOPE (Pargament et al., 2000) also uses the specific religious methods approach. It is theoretically based and functionally oriented. Pargament et al. recognized five major functions of religion: Meaning, control, comfort/spirituality, intimacy/spirituality, and life transformation. Based on these five religious functions, 21 subscales of religious coping methods were generated. Each subscale contains 5 items rated on a 4-point Likert scale ranging from 0 (not at all) to 3 (a great deal). There are 105 items in total. The RCOPE items were first tested on a sample of 540 college students and yielded 17 factors after an exploratory factor analysis. The 17 subscales accounted for 62.7% of the variance and are consistent with the original 21 factor solution. Some of the original 21 subscales loaded on the same factors and were combined together. Five items were dropped due to insufficient factor loadings. One hundred items were reserved and constituted the final version of the RCOPE. The 17 subscales were Benevolent Religious Reappraisal, Punishing God Reappraisal, Demonic Reappraisal, Reappraisal of God's Powers, Collaborative Religious Coping, Active Religious Surrender, Passive Religious Deferral, Pleading for Direct Intercession, Religious Focus, Religious Purification/Forgiveness, Spiritual Connection, Spiritual Discontent, Making Religious Boundaries, Seeking Support from Clergy/Members, Religious Helping, Interpersonal Religious Discontent, and Religious Direction/Conversion.

The RCOPE (Pargament et al., 2000) showed good internal consistency. Cronbach alpha was .78 or higher for all the subscales except the Making the Religious Boundaries subscale (alpha = .61). The RCOPE subscales were found to be significantly correlated with the stress-

related growth, religious outcomes, emotional distress, and physical health. For example, greater levels of stress-related growth were tied to greater use of most of the religious methods. Poor physical health was found to be associated with lower levels of Collaborative Religious coping (Pargament et al., 2000).

Although the specific religious coping method approach can help investigators understand what and how individuals employ religion in coping in a more specific and detailed way, this approach has its shortcoming. Ironically, the strength of this approach is its weakness. The specificity and comprehensiveness of this type of measure often make instruments lengthy and unfit for large-scale surveys. Therefore, researchers sometimes choose to focus on only one or two subscales among the entire measure of their studies.

Finally, the patterns of religious coping approach try to find patterns from various religious coping methods that show close correlations such as positive religious coping or negative religious coping. One of the most widely used instruments within this category is Pargament and colleagues' (1998) Brief RCOPE. The Brief RCOPE (Pargament et al., 1998) will be discussed in a greater detail in the next section of this chapter. Another measure using this approach is the Ways of Religious Coping Scale (WORCS) developed by Boudreaux, Catz, Ryan, Amaral-Melendez, and Brantley (1995). The instrument consists of 40 items and two subscales. The first subscale involves Internal/Private factor of personal religious coping methods and contains 15 items. They are primarily cognitive coping strategies in nature, including praying and confessing to God. This factor explains 44.6% of the variance. Another subscale is External/Social factor and is basically composed of behavioral coping strategies such as getting support from a church or talking to clergy. There are 10 items in this subscale and they accounted for 10.3% of the variance. Each item in both subscales has a factor loading of .56 or

higher. The WORCS (Boudreaux et al., 1995) also exhibits satisfactory reliability, construct validity, and discriminatory validity. Cronbach alphas were .95 for the entire scale, .97 for the Internal/Private scale, and .93 for the External/Social scale. High to moderate correlations were found between the WORCS (Boudreaux et al., 1995) and several other measures, including the subscales of the RCA (Pargament et al., 1990). However, the WORCS is not theoretically based and is not widely applied in research. Therefore, it lacks empirical data on the relationships between the scales and stress-related outcome variables.

Brief Religious Coping Scale

The Brief Religious Coping Scale (Brief RCOPE: Pargament et al., 1998) is one of the most widely used religious coping instruments in research today. It is a simplified version of the long-form RCOPE (Pargament et al., 2000; Pargament et al., 1998) which contains 21 5-item subscales. The RCOPE (Pargament et al., 2000) is a comprehensive but lengthy instrument. Its length makes it unfit for larger surveys and clinical use. As a result, the 14-item Brief RCOPE is developed to compensate for the weakness of the RCOPE.

As mentioned earlier, the RCOPE (Pargament et al., 2000) is a measure adopting the specific religious methods approach. Its emphasis is on the depth of the religious coping methods. However, the result is often seeing the trees but failing to see the forest. On the other hand, the Brief RCOPE (Pargament et al., 1998) is a measure focusing on the patterns of religious coping instead of the specific religious coping methods in detail. This approach sees the intercorrelations between different religious coping methods and groups them into general patterns. Therefore, the emphasis is on the breadth rather than the depth. The patterns of religious coping approach in general, and the Brief RCOPE in specific, provide a new tool to integrate the seemingly

contradictory findings in religious coping literature. It helps researchers understand why religion is beneficial to some but detrimental to others, and how individuals use religion as coping in different patterns.

The Brief RCOPE (Pargament et al., 1998) is composed of two subscales, a Positive Religious Coping scale and a Negative one. The Positive scale includes seeking spiritual support, religious forgiveness, collaborative religious coping, spiritual connection, religious purification, benevolent religious appraisal and religious focus. The Negative Religious Coping methods include spiritual discontent, punishing God reappraisals, interpersonal religious discontent, demonic reappraisal, and reappraisal of God's power. Pargament and colleagues (1998) proposed that the positive religious coping entails "a sense of spirituality, a secure relationship with God, a belief that there is meaning to be found in life, and a sense of spiritual connectedness with others" (Pargament et al., 1998, p. 712). On the contrary, the negative religious coping is "an expression of a less secure relationship with God, a tenuous and ominous view of the world, and a religious struggle in the search for significance" (Pargament et al., 1998, p. 712).

The Brief RCOPE (Pargament et al., 1998) was developed and tested on three samples in the original study: the Oklahoma City sample, a college sample, and a hospital sample. The participants in the Oklahoma City sample were 296 members from two churches in Oklahoma City during the period of federal building bombings. A 34-item preliminary Brief RCOPE was administered to these participants. A two-factor solution, Positive coping and Negative coping, was obtained as a result of an exploratory factor analysis and accounted for 33% of the variance. In the end, twenty-one items, 12 Positive religious coping and 9 Negative religious coping, that had factor loadings of .50 or higher, were retained to compose the preliminary Brief RCOPE.

The preliminary Brief RCOPE (Pargament et al., 1998) demonstrated satisfactory internal consistency. Cronbach alphas were .87 for the Positive religious coping and .78 for the Negative religious coping. The two scales were uncorrelated (r = .03), which means they are measuring different constructs. The result of the two-factor structure from the preliminary Brief RCOPE study indicated the research direction of positive and negative religious coping is a promising one.

Later, Pargament and colleagues (Pargament et al., 1998) administered the newly developed full RCOPE (Pargament et al., 2000) to 540 college students and the results were analyzed through an exploratory factor analysis. Again, an acceptable two-factor solution, Positive coping and Negative coping, was obtained, explaining 38% of the variance. In selection of the final Brief RCOPE (Pargament et al., 1998) items, several criteria were considered, including factor loadings, items loading on only one factor, and economy in measurement. Finally, 14 items, seven from each subscale, were selected. The Brief RCOPE exhibited excellent internal consistency. Cronbach alphas were .90 for the positive coping and .81 for the negative coping. A CFA of the 14 items was also conducted and the results supported the two-factor structure.

Lastly, the Brief RCOPE (Pargament et al., 1998) was tested on 551 hospital patients over the age of 55. Cronbach alphas were .87 for the positive scale and .69 for the negative scale, indicating satisfactory internal consistency. A CFA was also conducted on the hospital sample and the two-factor solution was shown to be a good model fit. The CFA results in the hospital sample were very similar to those in the college sample. It gives further evidence that the factor structure and psychometric properties of the Brief RCOPE are stable and reliable. Moreover, the

consistent results across the three samples indicate that the Brief RCOPE may possess high generalizability.

In general, findings from the three samples all reported that greater use of positive religious coping was associated with lower levels of psychological distress, greater stress-related growth, and better religious outcomes. Greater use of negative religious coping was related to higher levels of psychological distress, poorer quality of life, and slightly higher level of stress-related growth. However, both positive and negative religious coping were found to associate with poorer physical health in the study. It is very likely that people with more health problems tend to use religion more in coping than healthy people or people with other problems (Pargament et al., 1998).

The Brief RCOPE (Pargament et al., 1998) has been shown to be a useful and efficient instrument to measure individual religious coping patterns in a theoretically meaningful way. It exhibits good internal consistency and discriminant validity. Its briefness enables researchers to apply it in large-scale surveys and studies. Moreover, the two subscales are better predictors of stress-related outcomes than the general religiousness adopted in earlier studies (Pargament, 1997). Therefore, it is very possible that the Brief RCOPE will be a promising instrument to advance religious coping research in Taiwan. However, the Brief RCOPE is not a comprehensive measure for religious coping. Although it does include a variety of religious coping methods, the 14 items in the instrument do not capture all the religious coping strategies. As the authors of the Brief RCOPE stated clearly, the instrument was not designed to be used as a substitute for a thorough analysis of religious coping methods. For that purpose, the RCOPE (Pargament et al., 2000) may be a better choice.

Research of the Brief RCOPE on Other Cultural Populations

The Brief RCOPE (Pargament et al., 1998) has not been widely studied or used in other cultural populations. This instrument has been translated into Spanish through translation and back-translation techniques in a preliminary reliability study (Gonzalez-Morkos, 2005). The Spanish version of Brief RCOPE (Gonzalez-Morkos, 2005) was tested on 38 adults of Mexican descent in Southern California and showed good reliability. Cronbach alphas were .87 and .80 for the Positive and the Negative Religious Coping scales respectively. No correlation was found between the two scales. The two scales were proven to measure distinct styles of religious coping. Rivera-Ledesma and Lena (2007) also investigated the psychometric properties of the Brief RCOPE in two samples of the Mexican older adults. The results showed that the Positive Religious Coping scale demonstrated adequate internal consistency (Cronbach alpha = .82) and explained 49.5% of the variance. However, the Negative Religious Coping scale only yielded conservative results and required further research. In Rivera-Ledesma and Lena's (2007) study, the Positive Religious Coping scale was found to associate with a number of religious variables, including religious coping when confronted with loneliness and the subscale of the Relationship with God. Yet similar associations were not found for the Negative Religious Coping scale (Rivera-Ledesma & Lena, 2007).

The Brief RCOPE (Pargament et al., 1998) was also psychometrically studied among the Pakistan college students who were Muslim (Khan & Watson, 2006). The two-factor structure of the Brief RCOPE was shown to be a reasonable solution after a confirmatory factor analysis, although the Positive Religious Coping was found to be stronger than the Negative Religious Coping. The Positive Religious Coping scale was also found to have correlations with other religious variables, i.e., levels of religious interest and religious orientation, but the Negative

scale did not. On the other hand, the Negative Religious Coping scale displayed positive associations with three psychological symptoms: depression, anxiety, and hostility. The Positive Religious Coping was not correlated with any of these symptoms. However, a negative relation between the Positive Religious Coping and depression emerged after the variance associated with the Negative Religious Coping was partialed out. All these findings are consistent with findings from the American samples (Pargament et al., 1998). Therefore, the Brief RCOP was shown to be a valid and useful religious instrument for Pakistanis although further studies are needed to test the Brief RCOPE on groups of Pakistanis other than college students.

To date, the Brief RCOPE (Pargament et al., 1998) has not been tested on any people group in East Asia where the collectivist culture dominates. Will the Brief RCOPE be a useful religious instrument for samples in a collectivist culture like Taiwanese culture? This is the question that the present study aims to find out.

Summary

In review of the literature, the constructs of God attachment and religious coping have been well researched and documented in the recent decades. Measures intended to assess these two constructs have also flourished. Due to the growth of psychometric research, measuring instruments have improved in precision and variety, and often showed excellent psychometric properties. Many of them have been widely applied to research and clinic purposes, and received promising empirical support. However, most of the studies of the AGI (Beck & McDonald, 2004) and the Brief RCOPE (Pargament et al., 1998) were conducted on the American populations. The two instruments have never been tested on any collectivist culture (whether Pakistan is considered as a collectivist culture is questionable). The purpose of the present paper is to find

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out whether the AGI and the Brief RCOPE can be applied to population of a collectivist culture such as the Taiwanese. Moreover, no God attachment research has been found in Taiwan. Although a few studies related to religious coping were done for the Taiwanese, none of them used an instrument specifically evaluating religious coping. The lack of psychometrically sound instrument is very likely contributing to the limited quantity and scope of the study on God attachment and religious coping in Taiwan. Therefore, the psychometric investigation of the AGI and the Brief RCOPE may provide the investigators useful tools to advance the research of God attachment and religious coping among the Taiwanese in the future.

CHAPTER THREE: METHODS

The purpose of the present study was to psychometrically investigate the Chinese versions of the Attachment to God Inventory(AGI: Beck & McDonald, 2004) and the Brief Religious Coping scale (Brief RCOPE: Pargament et al., 1998) in a Taiwanese Christian sample. Two phases of study were conducted to accomplish the stated purpose. Phase One focused on the translation and back translation of the AGI and the Brief RCOPE from English to Chinese. In Phase Two, a confirmatory factor analysis (CFA) was conducted to examine the factor structure and psychometric properties of the Chinese versions of the two instruments.

Research Design

The current study employed a survey design to investigate the factor structure and psychometric properties of the AGI (Beck & McDonald, 2004) and the Brief RCOPE (Pargament et al., 1998) in a Taiwanese Christian sample. In addition to a demographic data sheet, five self-rated instruments, the AGI, the Brief RCOPE, the World Health Organization Quality of Life (WHOQOL)-BREF Taiwan version (Yao et al., 2002), the Taiwanese Depression Questionnaire (TDQ: Lee et al., 2000), and the short form of Taiwan Social Desirability Scale (TSDS: Lao & Lin, 2000), were included in the study. The survey was anonymous to encourage participation and participants' honesty except for the retest participants. During the survey, the investigator asked for volunteers to participate in the retest and to leave their names and contact information for the investigator to follow up.

The data collected from the Chinese versions of the AGI and the Brief RCOPE was analyzed by confirmatory factor analysis (CFA) to determine the consistency between the factor structures of the two instruments for the United States samples and for the Taiwanese Christian sample. The data from the other three instruments, the WHOQOL-BREF Taiwan version (Yao et al., 2002), the TDQ (Lee et al., 2000), and the short form of the TSDS (Lao & Lin, 2000), were used to further examine the usefulness of the AGI and the Brief RCOPE for the Taiwanese Christian sample. If significant correlations in hypothesized directions can be found between these instruments, it will further provide evidence for the validity of the AGI and the Brief RCOPE for the Taiwanese Christians. The TSDS was used to control for the effect of social desirability on the participants' responses.

Participants

A total of 400 participants were recruited from Protestant churches and parishes of the Catholic Church in Taipei. Members from four denominations of the Protestant church—Baptist, Presbyterian, Charismatic, and Local Church—and two parishes of the Catholic Church were chosen to form the sample. These denominations were selected because they are representative of the diversity of the Christian churches in Taiwan. Members of these denominations occupy a significant portion of the Taiwanese Christian population. By using the Research Randomizer, the investigator randomly chose two churches from each of the four Protestant denominations and two parishes from the Catholic Church through the church directory that each denomination posed online. As a result, 10 churches were selected.

Once the list of the churches was developed, the researcher sent a letter to each church to introduce the investigator, state the rationale of the study, and to ask for permission to conduct

the survey. A recommendation letter from the dissertation committee was also included to increase the investigator's credibility and trustworthiness. One week after the mailing of the letter, the investigator followed up with a phone call to each church and answered any of their questions. If the pastor wanted to review the content of the questionnaires or further understand the survey, the investigator would schedule a meeting with the pastor. Three churches requested a face-to-face meeting before the survey. Two churches required the investigator to send the questionnaires through email for them to review. The researcher also agreed to give a seminar on a topic that the church is interested in, in exchange for the survey. Three churches showed interest and talked about the possibility to invite the investigator to speak in the future but none actually scheduled a seminar. Once the permission was given, the researcher scheduled a time with the church to conduct the survey. The total administration time was estimated to be 30 to 45 minutes. When a selected church refused to participate, a new church from the directory was randomly selected to replace the previous church and the same procedure was repeated until two participating churches were found from each denomination. However, since all of the selected churches from the Local Church refused to participate after several attempts, Lutheran, another representative denomination in Taiwan, was selected to replace the Local Church. Moreover, three churches, instead of two, were ultimately chosen from the Lutheran denomination due to the small number of participants (around 10) in each church. The participants were restricted to Taiwan's Christian adults (age 18 and older), both male and female. Re-test participants were also recruited during the survey and 45 people from various churches volunteered to participate in the retest.

Instrumentation

In addition to a demographic data sheet, a total of five instruments, the Chinese version of the AGI, the Chinese version of the Brief RCOPE, the WHOQOL-BREF Taiwan version, the TDQ, and the TSDS, were administered to the participants.

Demographic Information.

Participants were asked to complete a demographic information questionnaire to provide background information, including gender, age, education, marital status, religion and year(s) of affiliation, name of the church attending and year(s) of affiliation, and whether the subject experienced a major stressful event such as death of a loved one, divorce, and major sickness in the recent three years.

Attachment to God Inventory.

The AGI is a 28-item questionnaire developed by Beck and McDonald (2004). Every item is assessed along a 7-poing Likert-type scale with 1 representing strong disagreement and 7 representing strong agreement. The instrument aims to measure one's attachment to God in two dimensions: Avoidance of Intimacy and Anxiety about Abandonment. Fourteen items are under the subscale of Avoidance of Intimacy and another fourteen items the subscale of Anxiety about Abandonment. Taking on the model of Experiences in Close Relationships scale (ECR, Bernnan et al., 1998), Beck and McDonald (2004) used Avoidance of Intimacy and Anxiety about Abandonment as the two basic dimensions underlying one's attachment relationship with God. Avoidance of Intimacy subscale measures one's tendency to be emotionally distant from God

and to rely on oneself. Anxiety about Abandonment, on the other hand, assesses one's unhealthy concern over God's acceptance and affection.

The AGI (Beck & McDonald, 2004) shows good factor structure and construct validity. Every item in the subscale of Avoidance had a factor loading of .47 or above. Every item in the subscale of Anxiety had a factor loading of .43 or above. The two subscales also demonstrated good internal consistency (Cronbach's alphas were.86 for Avoidance subscale and .84 for Anxiety subscale), and were found to share only 6.1 % of the variance (r=.248).

Among the 28 items, the even numbered items belong to the Avoidance scale, and the odd numbered items the Anxiety scale. Items 4, 8, 13, 18, 22, 26, and 28 are reverse scored. Items in the Avoidance subscale include "I prefer not to depend too much on God" (item number10)and "My experiences with God are very intimate and emotional" (item number 8, reverse scored). Items in the Anxiety subscale include "I worry a lot about my relationship with God" (item number 1) and "Even if I fail, I never question that God is pleased with me" (item number 13, reverse scored).

Brief Religious Coping Scale.

The Brief Religious Coping scale (Brief RCOPE: Pargament et al., 1998) is a 14-item instrument assessing the religious coping methods. Each item is indicated by a 4-point Likert scale ranging from 1 (not at all) to 4 (a great deal). It is a short form of the Religious Coping Scale (RCOPE, Pargament et al., 1998; Pargament et al., 2000) which is a comprehensive measure of religious coping. The RCOPE (Pargament et al., 2000) consists of 21 subscales and each subscale includes 5 items. This results in a total number of 105 items. The length of the

RCOPE makes it not feasible for clinical purposes. Thus, a short version of the RCOPE, the Brief RCOPE (Pargament et al., 1998) was developed.

The Brief RCOPE has a two-factor structure: a Positive Religious Coping and a Negative Religious Coping. The Positive Religious Coping methods include seeking spiritual support, religious forgiveness, collaborative religious coping, spiritual connection, religious purification, benevolent religious appraisal and religious focus. The Negative Religious Coping methods include spiritual discontent, punishing God reappraisals, interpersonal religious discontent, demonic reappraisal, and reappraisal of God's power.

Among the 14 items of the Brief RCOPE, the first seven items were loaded on the positive coping and the second seven items were loaded on the negative coping. Every item in each subscale had a factor loading of .50 or above. The Brief RCOPE has exhibited high internal consistency, construct validity, and discriminative validity in previous studies (Pargament et al., 1998; Pargament et al., 2000). Cronbach's alphas for the Positive Religious Coping subscale ranged from .87 to .90 and the Negative Religious Coping subscale ranged from .69 to .81 in Pargament and colleagues' multiple sample study (Pargament et al., 1998).

Questions from the positive religious coping methods include "I looked for a stronger connection with God", "I sought God's love and care", and "I tried to put my plans into action together with God." Examples from the negative religious coping methods are "I felt punished by God for lack of devotion", "I wondered whether God had abandoned me", and "I questioned God's love for me."

Taiwanese Depression Questionnaire.

Depression was found to relate to individual attachment to God or God image (Bishop, 2008; Braam, et al., 2008; Rowatt & Kirkpatrick, 2002) and religious coping (Herrera et al., 2009; Hills, Paice, Cameron, & Shott, 2005). Those who reported a secure attachment with God and positive religious coping tend to have less depressive symptoms. Findings of significant correlations between the two religious instruments and the TDQ (Lee et al., 2000) would provide good preliminary evidence for the validity of the Chinese versions of the AGI and the Brief RCOPE. In the present study, depression was assessed through the TDQ.

The TDQ (Lee et al., 2000) is a self-rating instrument used to screen depressive people in Taiwan. It is one of the most widely used depression inventories in Taiwan and has been tested on a number of studies (Chen, Shi, & Yang, 2002; Lee et al., 2008; Liu, Yang, & Su, 2000; Yang & Shi, 2001; Yen et al., 2005). The TDQ has been found to be an effective and culturally relevant assessment tool in screening depression for the Taiwanese. It is sensitive to the somatization tendency and the indigenous idioms of depression among the Taiwanese. Some researchers found that the TDQ was more valid than the Chinese version of the Beck Depression Inventory-I (Shek, 1991) in detecting depression for Taiwanese patients with chronic pain (Lee et al., 2008).

The TDQ (Lee et al., 2000) contains 18 items. Each item is rated on a scale of 0 to 3 based on the subject's physical and emotional states during the past week. The total scores range from 0 to 54. Nineteen was recommended as the optimal cutoff score in the original study (Lee, et al., 2000). Respondents score 19 or higher may reflect depressive symptomology. At a cutoff score of 19, the TDQ had sensitivity of .89 and a specificity of .92.

The TDQ (Lee et al., 2000) also demonstrated excellent internal consistency and factor structure. The Cronbach's alpha coefficient was .90. Factor analysis of the TDQ found two principal components: cognitive and affective symptoms (Factor one) and somatic symptoms (Factor two). Factor one consists of 11 items, explaining 41.7% of the variance. Factor two is comprised of 7 items, accounting for 7.8% of the variance. All the items showed satisfactory factor loadings (.45 or higher).

Typical items of the TDQ include "I felt miserable and even wanted to die" (cognitive and affective symptoms), "I often feel like crying" (cognitive and affective symptoms), "I had a poor appetite" (somatic symptoms), and "I felt tired and weak (somatic symptoms) ("Xu", "Mo wan qi" in local idiom)."

World Health Organization Quality Of Life - Brief Taiwan Version.

A quality of life measure was included in the study because of the close relationship found in the literature between religious coping and quality of life (Miller, McConnell, & Klinger, 2007; Pearce, Singer, & Prigerson, 2006; Tarakeshwar et al., 2006; Tsevat et al., 2009). Positive religious coping was reported to associate with better quality of life, and negative religious coping to lower level of quality of life. Findings of significant correlations between the two religious instruments and the WHOQOL-BREF Taiwan version (Yao et al., 2002) would provide good preliminary evidence for the validity of the Chinese versions of the AGI and the Brief RCOPE. Participants' quality of life was assessed through WHOQOL-BREF Taiwan version which is a short form of WHOQOL-100 (The WHOQOL Group, 1994).

From 1991 to 1995, the World Health Organization (WHO) developed a cross-cultural Quality of Life questionnaire, the WHOQOL-100 (The WHOQOL Group, 1994), to measure

individuals' quality of life in various areas. The WHOQOL-100 consists of 24 facets that are organized into six domains: physical, psychological, level of independence, social relationships, environment, and spirituality/ religion/ personal belief. Because the WHOQOL-100 was too long for practical use, the WHOQOL Group later took one item from each facet and two general items from facet G (overall QOL and general health) and formed a 26-item instrument, called WHOQOL-BREF (The WHOQOL Group, 1998). The WHOQOL-BREF was simplified into four domains, physical health, psychological, social relationships, and environment.

The WHOQOL group suggested every country add culture-specific questions, called national items, to its own version of WHOQOL or WHOQOL-BREF to reflect cultural distinctiveness. The WHOQOL Taiwan version (The WHOQOL- Taiwan Group, 2000) was based on the original WHOQOL-100 (The WHOQOL Group, 1994) and added two new national facets (four items in each facet) after consulting patients and an expert focus group. The WHOQOL-BREF Taiwan version (Yao et al., 2002) adopted the 26 items of the original WHOQOL-BREF (The WHOQOL Group, 1998), and it selected one item from each of the new national facets after applying the psychometric criteria proposed by the WHOQOL Group. The total number of item in the WHOQOL-BREF Taiwan version is thus 28 and is organized into four domains as the original WHOQOL-BREF.

The WHOQOL-BREF Taiwan version (Yao et al., 2002) was tested on a randomly selected large sample in Taiwan (n=1068) through both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). The WHOQOL-BREF Taiwan version demonstrated good factor structure, adequate internal consistency, test-retest reliability, content validity, and discriminative validity. The four domains of the WHOQOL-BREF are used as the four factors. The EFA results showed that the data were appropriate for factoring and about 73% of the total

variance could be accounted by the four factors. The CFA results also indicated that the four factors were appropriate. The Cronbach's alphas were .70 to .77 at domain level and .91 for the whole questionnaire. For the test-retest reliability, 142 subjects were randomly selected from the original sample to do the retest, and the test-retest reliability coefficients were .41 to .79 at the item level and .76 to .80 at the domain level (p<.01). Among the 26 items, three items (item number 3, 4, and 26) are reverse scored.

Examples of items from WHOQOL-BREF Taiwan version include "How would you rate your quality of life?" (Overall domain), "To what extent do you feel that (physical) pain prevents you from doing what you need to do?" (Physical domain), "How well are you able to concentrate?" (Psychological domain), "How satisfied are you with your personal relationships?" (Social Relations domain), and "How safe do you feel in your daily life?" (Environment domain). The two national items are "Do you feel respected by others?" (Social Relations domain) and "Are you usually able to get the things you like to eat?" (Environment domain).

The Short Form of the Taiwan Social Desirability Scale.

The short form of the Taiwan Social Desirability Scale (TSDS: Lao & Lin, 2000) is included in the present study to control for the effect of social desirability on the participants' responses. Religious participants usually have the predisposition to present themselves in a favorable manner. Therefore, for a self-report survey on religious participants, it will be helpful to use a social desirability scale to control for the variance in the data caused by the potential influence of response bias. The original TSDS contains 40 items, which is considered lengthy for the purpose of the current study. Therefore, the short form of the TSDS which consists of 10 items was adopted in the present study to control for the social desirability effect.

Due to the observation that the Western social desirability instruments, including the widely used Marlowe-Crowne social desirability scale (MCSD), were not culturally relevant and valid for the Taiwan society, Lao and Lin (2000) developed the Taiwan Social Desirability Scale (TSDS) to measure individuals' tendency to present themselves in a positive manner. The TSDS is composed of 40 items, 18 positive questions and 22 negative questions. Every item is rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The positive questions evaluate behaviors that are recognized by the society as good and desirable but are seldom practiced. The negative questions assess behaviors that are considered by the society to be undesirable and immoral but are widely practiced.

The Cronbach's alpha coefficients are .87 for the positive questions and .90 for the negative ones. The factor analysis results of the TSDS match with the subscales of the positive and negative questions. Factor one contains all the negative questions, and Factor two the positive questions. However, three items in the positive questions and three items in the negative questions had factor loading scores lower than .30. According to Lao and Lin (2000), the positive questions tend to reflect the subject's "self-deception", and the negative questions the subject's "impression management" skill. Lao and Lin (2000) took the five items with the highest factor loadings from each subscale and formed the short form of the TSDS. The Cronbach alphas of the positive and the negative scales are .65 and .74 respectively in the current study.

The items in the positive questions include "I will think before I act under any circumstance.", "I always humbly accept other people's criticism.", and "I always do whatever I ask of others." Examples of negative questions are "Sometimes I criticize other people behind their back.", "Sometimes I gossip.", and "Sometimes I find excuses for my own fault."

Phase One: Translation and Back Translation

 Translation.

  Before the translation of the AGI (Beck & McDonald, 2004) and the Brief RCOPE (Pargament et al., 1998), the researcher obtained the permissions from the authors of the two instruments. Next, the researcher and another bilingual therapist translated the AGI and the Brief RCOPE from English to Chinese. Both of the translators obtained their graduate degrees from the United States and are fluent in both Chinese and English. The translation results were submitted to a panel of experts for review. A panel of five experts, four professional translators and one counselor, compared the two translation results with the original instruments and made suggestions. The researcher then made adjustments according to the panel's suggestions and produced a Chinese draft version for each instrument.

  Back Translation.

  The Chinese draft versions of the AGI and the Brief RCOPE were given to another bilingual therapist and someone who is not in the counseling field to translate back to English. The two translators are fluent in both Chinese and English, and they have not seen the English versions of the AGI and the Brief RCOPE before. After the back translation was done, the results were examined by the panel once again and compared to the Chinese draft versions. Modifications were required in the Chinese version and were made accordingly.

Pilot Study.

A pilot study composed of 26 participants was conducted to test the utility of the Chinese versions of the AGI and the Brief RCOPE. The goal of the pilot study is not to statistically analyze the items but rather to make sure that the wording of the items are understandable and make sense to the participants. Through the pilot test, the investigator also tried to detect any potential problems with the survey administration.

Before the pilot study, the author had obtained overall study approval from the Liberty University Institutional Review Board (LU IRB). The participants of the pilot study were recruited from the investigator's own church, the New Hope Church, and a Christian book study group. A permission letter was issued from the pastor of the New Hope Church to the LU IRB. Both groups would not participate in the real survey of the Phase Two study. After the 26 participants were gathered together, the researcher explained the purpose of the meeting and the rules for answering the survey. The researcher also answered any question the participants had. The participants then were given the AGI and the Brief RCOPE in Chinese versions to fill out. They were encouraged to raise their hand to ask the researcher a question about any survey item they did not understand. After the participants completed the survey, the researcher asked the participants to report any problem or confusion regarding the content of the questionnaires they encountered during the survey. A few questions and suggestions were raised by the participants and the researcher made needed adaptations based on the suggestions of the participants.

Phase Two: Surveys Administration

The task of Phase Two is to conduct the survey to the participants from the selected churches. After the investigator had the permission from churches to conduct the survey, the

investigator began the data collection process. Two forms of survey administration were adopted based on the requests of the churches. Some of the churches permitted the investigator to conduct the survey in the church, either during or after the church meeting time, so the investigator could conduct the survey in person and collected the questionnaires right away. During the survey, the investigator first explained the purpose and the procedure of the survey to the participants. The participants were also given a blank copy of the informed consent information with the researcher's contact information and the LU IRB's contact information in case they have questions after they complete the survey. The investigator then answered any question the participants had during the survey. A small gift such as a small pack of chocolate (worth 1 to 2 U.S. dollars) or a nice pen and a small pack of cookies (worth 1 to 2 U.S. dollars) was given at the end of the survey to express appreciation and encourage participation. It was clarified that these gifts would be given regardless of how participants answer any of the questions and regardless of whether participants choose to skip any items.

For some churches, they did not desire or found it difficult to accommodate the survey into their meeting schedule. They preferred having the church members complete the survey at home. The package of the take-home survey contained the same questionnaires and a copy of a similar informed consent as the in-church survey. The only difference was that the take-home survey was put in a blank envelop and the participants were instructed in the informed consent to seal their completed questionnaires inside the envelope when they returned the survey to their church. However, the return rate of the take-home survey was very low (less than 10%) compared to the in-church survey. Those churches that had a very small number of participants mostly adopted the form of the take-home survey.

During the survey, the investigator also asked anyone who was willing to participate in the retest to leave their contact information for the investigator to follow up either through email or mail. Those participants were asked to sign a consent form. This consent clarified that the participant was giving the investigator the permission to contact them later to mail them a retest on the instruments. The consent will also describe similar information to the original informed consent regarding the procedures. Another small gift of similar worth was given to the participants of the retest after the completion of the retest. Forty-four people agreed to participate in the retest and 43 returned the retest questionnaires. Thirty-eight copies of questionnaires were considered valid in the end.

Data Processing and Analysis

When the questionnaires gathered back from all of the selected churches (n = 353), the data from the Chinese versions of the AGI and the Brief RCOPE was analyzed through CFAs to compare their factor structures and psychometric properties with results from the United States samples. The data was run through Amos of SPSS. Correlation analyses were also conducted to determine the associations between the two religious instruments and the WHOQOL-BREF Taiwan version (Yao et al., 2002) and the TDQ (Lee et al., 2000) to investigate whether there is further evidence to support the validity of the Chinese versions of the AGI and the Brief RCOPE. The scores of the short form of the TSDS (Lao & Lin, 2000) were treated as a covariate to adjust for the effect of social desirability on the participants' responses. In other words, the researcher examined the correlations between variables such as God attachment and depression or quality of life after controlling for the scores of the short form of the TSDS. If the correlations between variables still exist after controlling for social desirability effect, it indicates that the associations

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really exist and are not the results of social desirability effect. This will provide evidence for the concurrent validity of the Chinese versions of the AGI and the Brief RCOPE.

In the following section, the four research questions stated in chapter one will be reiterated and then put into the forms of a null hypothesis and an alternate hypothesis. The statistic analysis used to investigate the alternate hypothesis will follow afterwards. Since each research question generates two hypotheses, the hypotheses for each research question will be labeled as "hypothesis A" and "hypothesis B".

Research Question 1: Is the AGI applicable to the Taiwan's Christian sample? In other words, will the Chinese version of the AGI yield similar psychometric properties and factor structure as the original AGI on the American population?

Two hypotheses are developed from research question 1:

Null Hypothesis A: Internal consistency reliability and test-retest reliability for the AGI will be insufficient for the Taiwanese Christian sample.

Alternate Hypothesis A: Internal consistency reliability and test-retest reliability for the AGI will be sufficient for the Taiwanese Christian sample.

Statistical Analysis Method for Hypothesis A: Coefficient Alphas will be conducted on each scale and subscale.

Null Hypothesis B: The factor structure found in the AGI for the Taiwanese Christian sample will be inconsistent with the factor structure found for the U. S. population.

Alternate Hypothesis B: The factor structure found in the AGI for the Taiwanese Christian sample will be consistent with the factor structure found for the U. S. population.

Statistical Analysis Method for Hypothesis B: A confirmatory factor analysis will be conducted on the AGI for the Taiwanese Christian sample.

Research Question 2: Is the Brief RCOPE applicable to the Taiwanese Christian sample? In other words, will the Chinese version of the Brief RCOPE yield similar psychometric properties and factor structure as the original Brief RCOPE on American population?

Two hypotheses are developed from research question 2:

Null Hypothesis A: Internal consistency reliability and test-retest reliability for the Brief RCOPE will be insufficient for the Taiwanese Christian sample.

Alternate Hypothesis A: Internal consistency reliability and test-retest reliability for the Brief RCOPE will be sufficient for the Taiwanese Christian sample.

Statistical Analysis Method for Hypothesis A: Coefficient Alphas will be conducted on each scale and subscale.

Null Hypothesis B: The factor structure found in the Brief RCOPE for the Taiwanese Christian sample will be inconsistent with the factor structure found for the United States population.

Alternate Hypothesis B: The factor structure found in the Brief RCOPE for the Taiwanese Christian sample will be consistent with the factor structure found for the U. S. population.

Statistical Analysis Method for Hypothesis B: A confirmatory factor analysis will be conducted on the Brief RCOPE for the Taiwanese Christian sample.

Research Question 3: Will the AGI yield further evidence of applicability for the present Taiwanese Christian sample by showing significant correlations with depression and quality of

life? In other words, will outcomes of the AGI subscales correlate with outcomes of the TDQ and outcomes of the WHOQOL-BREF Taiwan version?

Two hypotheses are developed from research question 3:

Null Hypothesis A: Outcomes of the AGI subscales will show no correlations with outcomes of the TDQ?

Alternate Hypothesis A: Outcomes of the AGI subscales will show significant correlations with outcomes of the TDQ. Participants with higher scores on the AGI subscales will have higher TDQ scores.

Statistical Analysis Method for Hypothesis A: A correlation analysis will be computed on the subscales of the AGI with the outcomes of the TDQ.

Null Hypothesis B: Outcomes of the AGI subscales will show no correlations with outcomes of the WHOQOL-BREF Taiwan version.

Alternate Hypothesis B: Outcomes of the AGI subscales will show significant correlations with outcomes of the WHOQOL-BREF Taiwan version. Participants with higher scores on the AGI subscales will have lower scores on the WHOQOL-BREF Taiwan version.

Statistical Analysis Method for Hypothesis B: A correlation analysis will be computed on subscales of the AGI with the outcomes of the WHOQOL-BREF Taiwan version.

Research Question 4: Will the Brief RCOPE yield further evidence of applicability for the present Taiwanese Christian sample by showing significant correlations with constructs of depression and quality of life? In other words, will the outcomes of the Brief RCOPE subscales correlate with outcomes of the TDQ and outcomes of the WHOQOL – BREF Taiwan version?

Two hypotheses are developed from research question 4:

Null Hypothesis A: Outcomes of the two Brief RCOPE subscales will show no correlations with outcomes of the TDQ?

Alternate Hypothesis A: Outcomes of the two Brief RCOPE subscales will show significant correlations with outcomes of the TDQ. Participants with higher scores on the Positive coping of the Brief RCOPE scale will have lower TDQ scores. On the contrary, participants with higher scores on the Negative Coping of the Brief RCOPE scale will have higher TDQ scores.

Statistical Analysis Method for Hypothesis A: A correlation analysis will be computed on subscales of the Brief RCOPE with the outcomes of the TDQ.

Null Hypothesis B: Outcomes of the two Brief RCOPE subscales will show no correlations with outcomes of the WHOQOL-BREF Taiwan version.

Alternate Hypothesis B: Outcomes of the two Brief RCOPE subscales will show significant correlations with outcomes of the WHOQOL-BREF Taiwan version. Participants with higher scores on the Positive coping of the Brief RCOPE scale will have higher scores on the WHOQOL-BREF Taiwan version. On the contrary, participants with higher scores on the Negative Coping of the Brief RCOPE scale will have lower scores on the WHOQOL-BREF Taiwan version.

Statistical Analysis Method for Hypothesis B: A correlation analysis will be computed on subscales of the Brief RCOPE with the outcomes of the WHOQOL-BREF Taiwan version.

Summary

A survey design is utilized in the present study to examine the factor structure and psychometric properties of the AGI and the Brief RCOPE in a Taiwanese Christian sample. Two

phases of procedure were conducted in the study. In Phase one, the two religious instruments were translated and back translated from English to Chinese and the needed adaptations were made according to the suggestions gathered from the panel of experts and the pilot study. In Phase two, 400 participants were recruited from different churches in Taipei, and five instruments, including the two translated religious instruments, were administered to the participants. The data collected from the subjects were analyzed by CFAs, and the factor structure and psychometric properties were compared to the results from the original U. S. samples. If similar factor structure and psychometric properties are found, it indicates that the AGI and the Brief RCOPE can be useful instruments for the Taiwanese Christians. The results will be analyzed and reported in the next chapter.

CHAPTER FOUR: RESULTS

The purpose of this paper is to investigate the psychometrical properties and factor structures of the Attachment to God Inventory and the Brief RCOPE in a Taiwanese Christian sample and the applicability of these two religious instruments for this sample. In this chapter, survey data collected from eleven randomly selected churches, representing five prominent Christian denominations in Taiwan, will be analyzed through a series of descriptive statistics and factor analyses. The results of data analyses will be reported in the sequence of the four research questions listed in the previous chapters.

Participant Characteristics

Four hundred copies of questionnaires were collected from eleven churches representing five denominations of Christian and the Catholic churches in Taipei. Among the 400 questionnaires, forty six were considered invalid (11.5%) due to a large amount of missing data or the participants not meeting the criteria of inclusion (Christian over age 18). Additionally, one case was deleted for giving the same answer to every question. As a result, the final sample size was 353, composed of 111 men (31.4%) and 242 women (68.6%), with a mean age of 59.98. Seventy-nine point eight percent of the participants had an education level of a college degree or higher. The percentage of church affiliation reported by the subjects are 31.4% Charismatic (n=111), 21.5% Baptist (n=76), 19.8% Presbyterian (n=70), 19.3% Catholic (n=68), 7.4% Lutheran (n=26), and 0.6% not specified (n=2). More than half (55.2%, n=195) of the

participants reported having experienced a stressful life event in the past three years, 43.3% (n=153) of the participants did not, and 1.4% (n=5) failed to give an answer.

After deleting the invalid data, the reverse items were corrected for their value and the missing data were substituted with series means except the World Health Organization Quality of Life-Brief Taiwan Version. The WHOQOL–Brief Taiwan Version requires its user to substitute the domain mean for each missing value. The corrected data was then subjected to a series of statistic analyses, including reliability analyses (Crobach alpha), factor analyses, and correlation analyses, in order to answer the research questions.

Research Question One: the Applicability of the AGI for the Taiwan's Christian Sample

Research Question 1: Is the AGI applicable to the Taiwanese Christian sample? In other words, will the Chinese version of the AGI yield similar psychometric properties and factor structure as the original AGI on the American population? It is hypothesized that the internal consistency, test-retest reliability, and factor structure for the AGI subscales will be acceptable for the Taiwanese Christian sample when compared to the original American sample.

Estimated Reliability of the AGI

The mean scores of the Anxiety scale and the Avoidance scale were 3.16 (SD=.90) and 2.82 (SD=.74) respectively. The reliability analysis (Cronbach's alpha) from the SPSS was conducted to evaluate the internal consistency of the AGI subscales. The Anxiety subscale demonstrated a good internal consistency with a Cronbach's alpha of .85. The result is slightly higher than the one obtained from the original American sample (Cronbach's alpha =.84). The Avoidance subscale also showed an acceptable internal consistency with a Cronbach's alpha

of .82. The result is slightly lower than the one obtained from the original sample (Cronbach's alpha =.86). The current Anxiety factor explained 23.85% of the variance, which was slightly higher than the original one of 23.2%. The Avoidance factor accounted for 7.11% of the variance, which was also lower than the result from the original study of 13.9%. The factor correlation for the two scales was .534. The two scales were moderately related.

A retest was administered in the current study to further ensure reliability. The investigator recruited volunteers of retest from three participating churches. Forty-four volunteers agreed to participate in the retest. After two weeks of the original test, each participant was mailed the retest package which included a cover letter, the questionnaires, the informed consent, and a small gift. Forty-three of the participants returned the retests after the researcher followed up with a phone call or email. However, one case was deleted due to a large portion of missing data, and four more cases were considered as outliers because their Z scores were larger than two. Therefore, 38 copies of retest were entered into the SPSS to examine the test-retest reliability. The retest sample is 10.76% of the original sample. The demographic characteristics of the retest sample are very similar to the first sample. The retest sample is composed of 14 men (36.8%) and 24 women (63.2%), with a mean age of 49.78. Eighty-one point six percent of the retest participants received a college education or higher. However, due to the limited budget, the researcher only recruited retest volunteers from three participating churches which belong to two denominations. Thus, the majority of the retest subjects came from a Presbyterian church (n=21, 55.3%) and two Baptist churches (n=16, 42.1%). The test-retest reliability coefficients for both subscales of the AGI were good (Anxiety=.85, Avoidance=.87, all p<.01). The item-to-item test-retest coefficients can be seen in Table 1. In the Anxiety scale, item 13 had the lowest coefficient (.205) and item 9 the highest (.737). In the Avoidance scale,

item 12 had an extremely low coefficient (.087), and both item 10 and item 22 had the highest

coefficients (.710). The test-retest coefficients showed that the stability of the test results over

time is good except for a few items.

Table 1

Test-Retest Coefficients for the AGI

Item	Test-Retest Coefficient
1	.593
2	.315
3	.647
4	.383
5	.731
6	.663
7	.731
8	.574
9	.737
10	.710
11	.665
12	.087
13	.205
14	.611
15	.572
16	.662
17	.462
18	.544
19	.558
20	.542
21	.631
22	.710
23	.644
24	.702
25	.396
26	.643
27	.522
28	.588
Anxiety	.850
Avoidance	.870

Factor Structure of the AGI

A Confirmatory Factory Analysis was performed to examine the factor structure of the Chinese version of the AGI. In their original study, Beck and McDonald (2004) employed EFAs to investigate the factor structure of the AGI on three samples. The first sample was used to develop the AGI and the second and the third samples were used to verify the factor structure found in the first sample. An EFA is generally used to explore the underlying factor structure of a set of observed variables without imposing a preconceived structure on the data. On the other hand, CFA is usually used to verify the factor structure of a set of variables that a hypothesized structure has been imposed on the outcomes (Maruyama, 1998; Matsunaga, 2010). Based on theoretic assumptions and/or empirical research, a relationship between observed variables and their underlying latent construct is postulated a priori. If the factor structure of a certain instrument has been specified, CFA should be used to verify the data (Matsunaga, 2010; Thompson, 2004). Therefore, CFA is employed in the present study.

Three types of fit indices were employed to evaluate the goodness of fit of the CFA models: the Comparative Fit Index (CFI), the Goodness of Fit Index (GFI), and the root-mean-square error of approximation (RMSEA). According to Hu and Bentler's (1999) "two criteria" strategy, at least two other types of fit indices should be applied to the CFA in addition to the exact/absolute index. Therefore, besides GFI (exact index), CFI (incremental fit index) (Bentler, 1990) and RMSEA, (approximate fit index) (Steiger, 1980) were used to determine the model fit. A reasonable or acceptable model fit is generally defined as $CFI \geq .90$, $GFI \geq .90$, and $RMSEA \leq .08$ (Marsh, Hau, & Wen, 2004; Matsunaga, 2010; Thompson, 2004). The results of the CFA using a two-factor model for the Chinese version of the AGI were proven to be a poor model fit (CFI=.695, GFI=.750, RMSEA=.090).

An Exploratory Factor Analysis was employed to detect the problem. Through a principal axis analysis with promax rotation (Matsunaga, 2010) and fixing the number of factors as two, all of the items fell under the designated factors except item 12. That is, each odd-number item has a higher factor loading with factor one (Anxiety) and each even-number item has a higher factor loading with factor two (Avoidance) except item 12 was loaded higher with factor one (Anxiety) (See Table 2). A few items were found to have a factor loading of less than .40 (item 13, 14, and 20) and a few items were found to have a high loading for both factors (item 12, 15, 16, and 24). The two factors had a medium correlation of .534.

Table 2

Factor Loadings for Exploratory Factor Analysis With Principal Axis Analysis and Promax Rotation of AGI (Two-Factor Model)

Item	Anxiety	Avoidance
Item 11	**.70**	.33
Item 17	**.65**	.33
Item 23	**.64**	.39
Item 7	**.62**	**.48**
Item 5	**.62**	.34
Item 9	**.62**	.38
Item 27	**.59**	**.40**
Item 15	**.59**	**.55**
Item 19	**.57**	.37
Item 1	**.55**	.31
Item 3	**.46**	.08
Item 12	**.45**	.36
Item 21	**.44**	.08
Item 25	**.43**	.07
Item 13	.27	.25
Item 10	.39	**.71**
Item 8	.39	**.63**
Item 24	**.52**	**.61**
Item 22	.26	**.58**
Item 26	.27	**.57**
Item 4	.24	**.56**
Item 28	.14	**.55**
Item 18	.15	**.54**

Item 16	**.42**	**.48**
Item 2	.25	**.41**
Item 6	.19	**.40**
Item 20	.19	.33
Item 14	.22	.31

Note. Factor loadings equal to or > .40 are in boldface.

Several criteria were considered in selecting deleted items, including low factor loading (less than .40), cross factor loading (cross factor loading less than .15, later increased to .20), item-to-item correlation, item-to-scale correlation, Cronbach's alpha when item deleted, and the content of the item. However, since only item13 would result in increased Cronbach's alpha when it is deleted, this criteria was not applied much. In evaluating the content of the items, frequency of response was sometimes used to verify the hypothesis of the investigator.

The investigator first deleted item 13 which loaded low on both factors (.27 for the Anxiety, .25 for the Avoidance). This item also had low item-to-item correlations (all were less than .30) and the lowest item-to-scale correlation (.36) in the Anxiety scale. Item 13 is the only item that would increase Cronbach's alpha if it is deleted. Cronbach's alpha for the scale increased from .854 to .859 when the item was deleted. The content of this item is: "Even if I fail, I never question that God is pleased with me." For the investigator, using this question to assess one's attachment relationship with God is problematic theologically. Although the Bible teaches that God's love is unconditional and not based on individual performance, it also teaches that believers can displease God by sinning. When a child of God goes astray, God often uses suffering and problems as a reminder and tool of discipline to take the person back to Him. Therefore, it is sometimes healthy for a believer encountering failure to examine oneself whether he/she has done something to displease God. This kind of doubt is not a sign of anxious attachment to God, but one of holiness. For reasons mentioned above, this item was thus

considered inapt and removed from the scale. After deleting item 13, however, the model fit was still poor (CFI=.696, GFI=.748, RMSEA=.092).

Next, the investigator examined item 14 which also had a low factor loading on both factors (.22 for the Anxiety, .31 for the Avoidance). Most of the item-to-item correlations for this item were low (ranging from .13 to .38) except with item 16 (Pearson correlation=.54). The content of this item is "My prayers to God are often matter-of-fact and not very personal." This item may be true for most Christians who are not very close to God (one's spirituality) but may not be an accurate criterion to differentiate one's avoidant attachment to God. Moreover, in the Chinese translation, "personal" connotes a sense of intimacy which involves expressing one's feelings. For many traditional Chinese, openly expressing one's feelings in front of an authoritative figure is foreign to their cultural practice. After removing this item, the result was still a poor model fit (CFI=.721, GFI=.768, RMSEA=.090).

The last item which had a factor loading of less than .40 in this EFA was item 20 (.19 for the Anxiety, .33 for the Avoidance). The item-to-item correlations were poor, ranging from .04 to .33. Item 20 was the only item in the Avoidance scale that did not decrease the Cronbach's alpha of the scale if it was deleted (Cronbach's alpha = .82). The statement of the item is "I believe people should not depend on God for things they should do for themselves." The meaning of this sentence is vague and varies with the interpretation of the respondent. Moreover, it echoes the ancient Chinese proverb "God helps those who helps themselves" (天助自助). Many participants may agree with the statement regardless of their attachment to God. Therefore, this item fails to be a good indicator of one's avoidant attachment to God. After removing this item, the model fit was still far from being acceptable (CFI=.723, GFI=.769, RMSEA=.092).

The investigator next began to examine items with cross factor loadings. Item 15 was high on both factors (Anxiety = .59, Avoidance = .55). This item was first considered among the cross-factor items because it showed the closest factor loadings for the two factors (the difference was .04). It also showed significant item-to-item correlations with many items on the Avoidance scale (its correlations with seven items were larger than .30) and medium item-to-scale correlation with the Avoidance scale (.53). The content of the item was "Almost daily I feel that my relationship with God goes back and forth from 'hot' to 'cold'". This description can be applied to any Christian who does not feel a secure attachment to God or anyone whose emotional state is not stable. This probably explained why this item was loaded high on both scales. Deletion of this item, however, did not result in a reasonable model fit for the data (CFI=.731, GFI=.779, RMSEA=.092).

After item 15, item 16 was considered. This item was also loaded high on both the Anxiety scale (factor loading = .42) and the Avoidance scale (factor loading = .48). This item had low (.10 - .30) to medium (.40 - .60) correlations with items in both scales. The highest item-to-item correlation was with item 14 which was considered an inappropriate item. Actually, item 14 and 16 were regarded as unstable items in the original study and were recommended by the original authors for future studies to disregard (Beck & McDonald, 2004). The statement of item 16 is "I am uncomfortable with emotional displays of affection to God." This item may not be an appropriate item to assess attachment to God for Christians under the influence of the Confucian culture because emotional expression is usually discouraged by the society. Individuals may feel uncomfortable displaying their affection to God, not due to their avoidant attachment, but due to their cultural practice. Deleting item 16 still did not give the data a good model fit (CFI=.751, GFI=.798, RMSEA=.089).

The next item considered was item 24 which had high factor loadings for both Anxiety (factor loading = .52) and Avoidance (factor loading = .61) scales. For this item, the item-to-item correlations with the Anxiety (ranging from .15 to .38) and the Avoidance (ranging from .20 to .45) were not very different. Moreover, item 24, which was an item on the Avoidance scale, had a medium correlation with the Anxiety scale (.49). This item was thus not a good item to be included on the scale. Judging from the wording of the item, "I am uncomfortable allowing God to control every aspect of my life", this item is directly related to the teaching of the Lordship in the church. Good Christians know that they should give God total control of their lives. Therefore, this item may be more like a question of Lordship than one of attachment. That is, individuals who do not want to give up control of their lives, regardless of their attachment type, would agree with this question. After item 24 was removed, the obtained model fit was still not satisfactory (CFI=.750, GFI=803, RMSEA=.091).

Item12 was also loaded high on both factors (Anxiety = .45, Avoidance = .36). This item belonged to the Avoidance scale in the original study (Beck & McDonald, 2004) but was categorized as an Anxiety item in the present study. However, it had a higher item-to-scale correlation with the Avoidance scale (.51) than with the Anxiety scale (.40). Also, its item-to-item correlations for both factors were similar (ranging from .08 to .39 for the Anxiety, and .04 to .39 for the Avoidance). The content of item 12 was "I am uncomfortable being emotional in my communication with God." This item had the same problem as item 16 which focused more on whether one is accustomed to emotional expression before God than one's attachment relationship with God. As discussed before, emotional expression may not be an excellent criterion to examine attachment to God for individuals from a culture greatly influenced by the

Confucianism. This item, therefore, was removed from the scale. Nevertheless, it did not help much in improving the model fit (CFI=.774, GFI=.819, RMSEA=.089).

Since the CFA still resulted in a poor model fit even after deleting the above items, the remaining items were put through EFA again to detect further items with low factor loading and cross factor loading. In this EFA results, items 2 and 6 showed low factor loadings and item 7 had a cross-factor loading. Using the criteria mentioned above, item 6 was examined first. Its factor loadings for both scales were low (Anxiety = .15, Avoidance = .34). Among its item-to-item correlations, the highest correlations were with item 14 (.31) and item 16 (.43). Item 14 and item 16 were considered unfit previously and have been removed from the scale. Therefore, item 6 may be also an unfit item. Its item-to-scale correlation was reasonable (.54 with Avoidance and .15 with Anxiety), and Cronbach's alpha decreased slightly (from .823 to .814). Its content ("It is uncommon for me to cry when sharing with God.") was, nevertheless, considered flawed for the Taiwanese population because emotion expression before an authoritative figure was considered inappropriate, especially for a male. This item was thus disregarded from the scale. The model fit was tested with CFA again, but the result was still poor (CFI=.784, GFI=.822, RMSEA=.090).

Item 2 was also considered for removal for its low factor loadings on both factors. Item 2 had a factor loading of .24 on the Anxiety scale and .39 on the Avoidance scale. All of the item-to-item correlations were lower than .25 except with item 10 (.37), and its item-to-scale correlation was not high (.47). Cronbach's alpha for the scale did not increase if it was deleted, but did not decrease much either (from .823 to .817). The content of this item ("I just don't feel a deep need to be close to God.") was more like an item to evaluate one's devoutness, that is, whether one wants to build a close relationship with God. This statement obviously contradicts

the teachings of the Bible and of the church. It is hard for a devoted Christian to agree with this statement. Consequently, this item received the highest negative responses from the participants (95.8%). This item was considered improper and was deleted. Yet, the model fit still did not reach an acceptable level after removing this item (CFI=.784, GFI=.821, RMSEA=.094).

Item 7 was the last item to be considered as problematic in this analysis of EFA. It had high factor loading for both factors (Anxiety = .62, Avoidance = .48). It also had medium to high item-to-scale correlations with both scales (Anxiety = .64, Avoidance = .43). Although it is in the Anxiety scale, its correlations with some items of the Avoidance scale were higher than some items of the Anxiety scale. Its content reads "Sometimes I feel that God loves others more than me." This statement communicates a strong connotation of jealousy which is greatly discouraged in collectivist culture because it destroys group coherence. Jealousy is also prohibited by the Bible and considered an immoral emotion (Cor. 13: 4; Gal. 5: 20-21, Holy Bible, NIV). It is, therefore, difficult for Taiwanese Christians to acknowledge their jealousy toward other believers who are also members of God's family. Less than 10% (9.3%) of the participants gave a positive answer to this question. This item was therefore considered inappropriate and taken out of the scale. After item 7 was removed, the model fit was still not acceptable (CFI=.782, GFI=.825, RMSEA=.095).

The data was put into EFA with principal axis factoring and promax rotation again to examine any other problematic items. In this analysis, all of the remaining factors had factor loadings above .40 with one or both factors, and all of the items with cross-factor loadings had a difference of factor loading larger than .15. Therefore, the criterion for cross-factor loading increased to .20. Item 19 and 27 were thus considered. Item 19 had the closest factor loadings for the two scales (Anxiety = .57, Avoidance = .40) among the remaining items. Several of its inter-

item correlations were less than .20 (with items 1, 3, and 25). Although after deleting this item Cronbach's alpha decreased from .854 to .843, the content of the item was considered inappropriate. Item 19 reads "I often feel angry with God for not responding to me when I want." This statement sounds very negative. For a respondent to answer yes, it takes tremendous courage, honesty, and self-awareness, especially when the word "often" is used. 10.5% of the participants answered positively and none of them answered "Strongly agree". The description also suggests a troubling relationship with God. It denotes that this individual is unsatisfied with and disappointed with his/her relationship with God. It is questionable whether anxious attachment to God requires this type of negative feeling toward God. For these reasons, this item was also eliminated from the scale. Unfortunately, the resulting model fit by CFA was still unsatisfied (CFI=.787, GFI=.836, RMSEA=.095). More items need to be taken out in order to reach an acceptable model fit.

The next item considered was item 27 which also showed signs of cross factoring. Its factor loadings were .61 for the Anxiety scale, and .42 for the Avoidance scale. It had seven item-to-item correlations lower than .30. It showed high correlation with Anxiety (.634) and moderate correlation with Avoidance (.331). Its content was "I get upset when I feel God helps others, but forgets about me." Similar to item 19, this sentence implies a sense of negative and unsatisfactory feelings toward God. For the same reasons given for item 19, this item may have difficulty drawing true responses from the participants. Thus, item 27 was removed from the scale. Nevertheless, the result still did not meet the criteria of an acceptable model fit (CFI=.812, GFI=.864, RMSEA=.091).

The remaining items were put into the EFA once more. All of the items had factor loadings of .45 or above. Item 23 had the closest cross-factor loadings between the two scales

(Anxiety = .57, Avoidance = .37). In the Anxiety scale, it had one low correlation with item 25 (Pearson = .151) and had several other inter-item correlations less than .30. Its highest inter-item correlations were with item 5, 9, 19, and 27. Item 19 and 27 were considered unfit and have been removed. The content of this item also emphasized jealousy over others' relationships with God. Based on reasons described previously, this item was eliminated from the scale. The model fit indices after removing item 23 were very close to be acceptable (CFI=.863, GFI=.904, RMSEA=.078).

In addition to item 23, item 5 and 9 both had cross factor loadings around .21. Among its item-to-item correlations, item 5 showed higher correlations with item 9, 19, and 27. Item 19 and 27 have been considered improper and removed from the scale. Judging from its content, "I am jealous at how God seems to care more for others than for me", item 5 also belonged to the "jealousy" group and was judged as inappropriate. When it was deleted, the fit indices improved (CFI=.887, GFI=.919, RMSEA=.073) although it was still not good enough.

Item 9 was also deemed problematic due to its cross-factor loadings. It showed higher inter-item correlations with items that were considered inapt, including item 5, 7, 23, and 27. Item 9 fell into the "jealousy" category. Its content was, "I am jealous at how close some people are to God." As discussed before, jealousy is not regarded as an accurate indicator of anxious attachment to God for Taiwanese Christians. For that reason, item 9 was taken out of the scale. The model fit reached a good fit after item 9 was removed (CFI=.905, GFI=.927, RMSEA=.070).

In the end, only 13 items out of the original 28 items remained when a set of acceptable fit indices were obtained (See Table 1 for the fit indices of different item deletion). The final items were items 4, 8, 10, 18, 22, 26, 28 for the Avoidance scale (factor 1) and items 1, 3, 11, 17, 21, 25 for the Anxiety scale (factor 2) (See Table 2). These two scales showed acceptable

internal consistency with Cronbach's alphas of .80 for Avoidance and .76 for Anxiety, although they were not as good as the ones in the original version (Anxiety=.86, Avoidance=.83). The six items of the Anxiety scale explained 24.13% of the variance, and the seven items of the Avoidance scale explained 13.79% of the variance. The factor correlation was .293.

Table 3

Goodness-of-Fit Indices for the AGI With Different Item Deletion

Item Deleted	CFI	GFI	RMSEA
None	.695	.750	.090
13	.696	.768	.092
13, 14	.721	.768	.090
13, 14, 20	.723	.769	.092
13, 14, 20, 15	.731	.779	.092
13, 14, 20, 15, 16	.751	.751	.089
13, 14, 20, 15, 16, 24	.750	.803	.091
13, 14, 20, 15, 16, 24, 12	.774	.819	.089
13, 14, 20, 15, 16, 24, 12, 6	.784	.822	.090
13, 14, 20, 15, 16, 24, 12, 6, 2	.784	.821	.094
13, 14, 20, 15, 16, 24, 12, 6, 2, 7	.782	.825	.095
13, 14, 20, 15, 16, 24, 12, 6, 2, 7, 19	.787	.836	.095
13, 14, 20, 15, 16, 24, 12, 6, 2, 7, 19, 27	.812	.864	.091
13, 14, 20, 15, 16, 24, 12, 6, 2, 7, 19, 27, 23	.863	.904	.078
13, 14, 20, 15, 16, 24, 12, 6, 2, 7, 19, 27, 23, 5	.887	.919	.073
13, 14, 20, 15, 16, 24, 12, 6, 2, 7, 19, 27, 23, 5, 9	.905	.927	.070

Table 4

Factor Loadings of Modified AGI (13 items)

AGI Item	Avoidance	Anxiety
10. I prefer not to depend too much on God.	.66	.23
8. My experiences with God are very intimate and emotional	.65	.29
4. I am totally dependent upon God for everything in my life.	.65	.14
28. I let God make most of the decisions in my life.	.63	.06
22. Daily I discuss all of my problems and concerns with God.	.62	.19
26. My prayers to God are very emotional	.53	.18
18. Without God I couldn't function at all.	.51	.04
11. I often worry about whether God is pleased with me.	.31	.79
17. I fear God does not accept me when I do wrong.	.27	.75
1. I worry a lot about my relationship with God.	.28	.59
25. I worry a lot about damaging my relationship with God.	.06	.57
3. If I can't see God working in my life, I get upset or angry.	.02	.44
21. I crave reassurance from God that God loves me.	.03	.43

In Beck and McDonald's (2004) original study, they used principal component analysis

with varimax rotation to analyze the data. When the same procedure was applied to the current

data, the results were not very far from the results of the original study. Three items had factor

loadings less than .40 (items 13, 14, and 20) and five items had cross factor loadings (items 7, 15,

12, 24, and 16) (see Table 3). However, the results were not as good if using an EFA with a

principal axis factoring and promax rotation. Many items showed signs of cross factor loadings

(see Table 4). Matsunaga (2010) argued that principal component analysis should only be used in

the initial stage of instrument development, namely, generating and screening items. To

determine the factor structure, principal axis analysis, instead of principal component analysis,

should be employed. Also, it is suggested that promax rotation, not varimax rotation, should be

used because absolutely unrelated factors are rare (Matsunaga). In the case of the AGI, the two

subscales are not totally unrelated. Thus, promax rotation should be applied.

Table 5

Factor Loadings for Exploratory Factor Analysis With Principal Components Analysis and Varimax Rotation of AGI (Two-Factor Model)

Item	Anxiety	Avoidance
Item 11	**.71**	.14
Item 17	**.66**	.15
Item 23	**.64**	.23
Item 5	**.64**	.17
Item 9	**.62**	.22
Item 27	**.58**	.26
Item 7	**.57**	.35
Item 19	**.56**	.23
Item 3	**.56**	-.09
Item 1	**.55**	.17
Item 21	**.54**	-.10
Item 25	**.54**	-.10
Item 15	**.51**	**.45**
Item 12	**.42**	.28
Item 13	.25	.21
Item 10	.20	**.71**
Item 28	-.05	**.64**
Item 22	.08	**.63**
Item 8	.23	**.62**
Item 18	-.04	**.62**
Item 26	.10	**.62**
Item 4	.08	**.60**
Item 24	.40	**.54**
Item 6	.06	**.46**
Item 16	.32	**.46**
Item 2	.14	**.44**
Item 20	.10	.36
Item 14	.14	.33

Note. Factor loadings> .40 are in boldface.

The investigator also examined the possibility of models with different number of factors through EFAs. Six factors with an Eigen value bigger than 1 were extracted from the data. Judging from the scree plot (see Figure 1), three to four factors would be appropriate. Principal axis analysis with promax rotation was conducted with the data by fixing the number of factors as three and four (see Table 6 and 7). Parallel analysis (PA) was used to further determine the appropriate factor number for the data, and the four-factor model was considered more appropriate (see Figure 2). Parallel analysis was considered by many researchers as one of the most accurate criteria in determining the number of factors to retain (Henson & Roberts, 2006; Matsunaga, 2010). The results were again tested through CFAs. Neither the three-factor model (CFI=.735, GFI=.788, RMSEA=.084) nor the four-factor model (CFI=.820, GFI=.840, RMSEA=.069) exhibited a good model fit. Even after deleting items with low factor loadings (item 2, 13, and 20), the four-factor model still resulted in a poor model fit (CFI=.828, GFI=.848, RMSEA=.075).

From the above analyses of reliability and factor structure, it is suggested that the original AGI may not be an applicable instrument to the Taiwanese Christians. Although the instrument yielded good internal consistency and test-retest reliability among the Taiwanese Christian sample, the factor structure through the CFA has proven to be a poor fit. More than half of the items need to be removed in order to obtain an acceptable model fit. In order for this instrument to be used in Taiwan, adaptation of factor structure or items may be needed. Various possible explanations for this result and suggestions for future studies are presented in the next chapter.
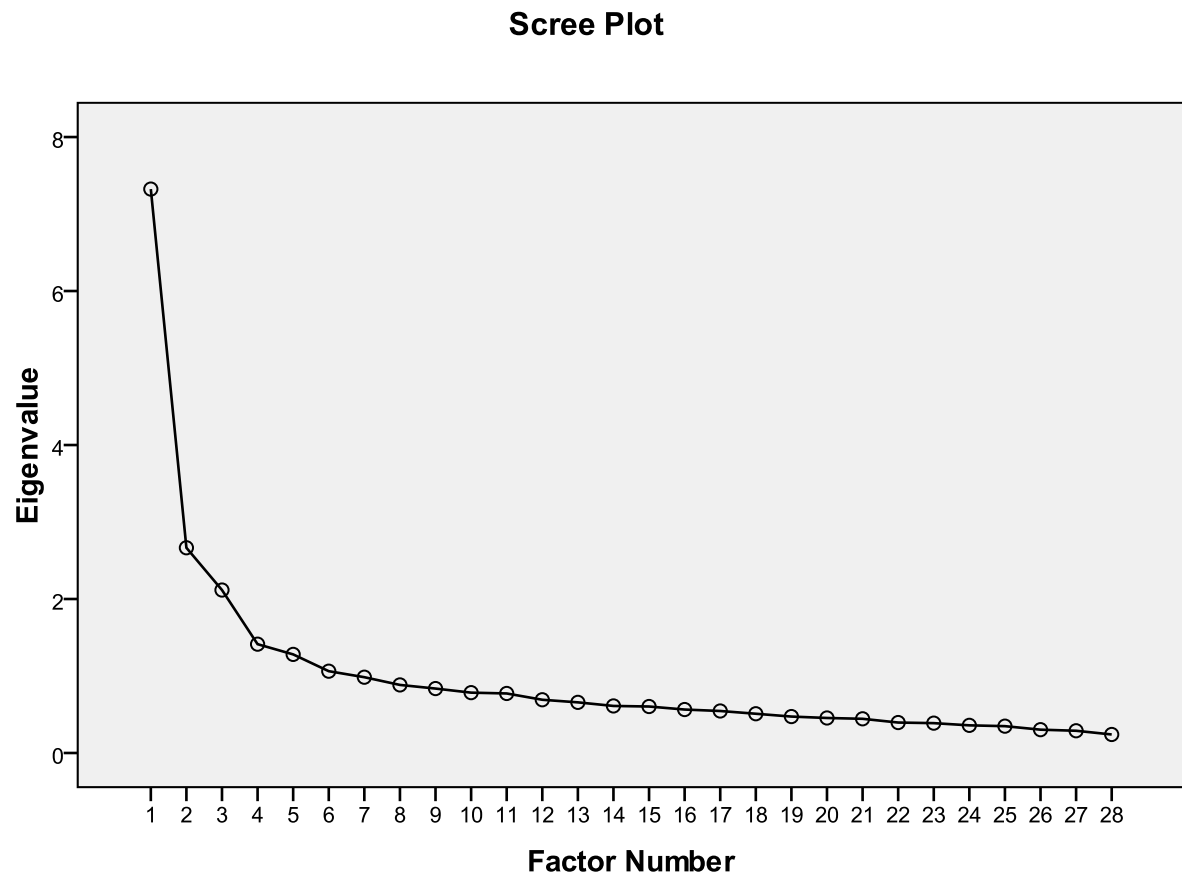
Scree Plot

Figure 1. Scree plot for the exploratory factor analysis with principal axis analysis and promax rotation of AGI.

Table 6

Factor Loading for Exploratory Factor Analysis with Principal Axis Analysis and Promax Rotation of AGI (Three-Factor Model)

Item	Factor		
	1	2	3
Item 23	**.70**	.33	.23
Item 27	**.68**	.37	.17
Item 5	**.67**	.28	.22
Item 19	**.66**	.35	.12
Item 7	**.65**	**.42**	.31
Item 9	**.64**	.30	.30
Item 11	**.63**	.17	**.54**
Item 21	**.41**	-.02	.28
Item 3	**.41**	-.04	.35
Item 25	.38	-.06	.37
Item 13	.30	.23	.09
Item 10	.38	**.69**	.34
Item 4	.30	**.61**	.07
Item 28	.18	**.61**	.07
Item 8	.39	**.60**	.29
Item 22	.24	**.57**	.27
Item 18	.15	**.55**	.17
Item 24	**.50**	**.54**	**.41**
Item 26	.23	**.54**	.34
Item 2	.23	.38	.25
Item 20	.15	.28	.28
Item 16	.28	.36	**.70**
Item 17	**.56**	.14	**.64**
Item 12	.35	.22	**.57**
Item 14	.08	.20	**.56**
Item 15	**.53**	**.43**	**.54**
Item 1	**.47**	.18	**.48**
Item 6	.10	.34	**.42**

Note. Factor loadings equal to or >.40 are in boldface.

Table 7

Factor Loading for Exploratory Factor Analysis with Principal Axis Analysis and Promax Rotation of AGI (Four-Factor Model)

Item	Factor			
	1	2	3	4
Item 23	**.74**	.33	**.42**	.26
Item 27	**.74**	.35	.35	.23
Item 5	**.72**	.27	**.40**	.25
Item 7	**.69**	**.41**	**.41**	.37
Item 19	**.68**	.36	.37	.14
Item 9	**.62**	.33	**.47**	.27
Item 13	.30	.24	.19	.10
Item 10	**.45**	**.67**	.24	**.48**
Item 4	.32	**.65**	.16	.13
Item 8	.39	**.64**	.32	.33
Item 28	.21	**.64**	.07	.16
Item 22	.25	**.60**	.23	.32
Item 24	**.52**	**.55**	.39	**.46**
Item 26	.26	**.54**	.21	**.41**
Item 18	.23	**.52**	.04	.31
Item 2	.28	.36	.15	.34
Item 11	**.48**	.30	**.79**	.32
Item 17	**.41**	.26	**.76**	**.44**
Item 1	.37	.27	**.58**	.34
Item 15	**.47**	**.51**	**.58**	**.48**
Item 25	.23	.05	**.57**	.15
Item 21	.33	.04	**.44**	.14
Item 3	.35	-.00	**.43**	.25
Item 16	.29	.35	**.40**	**.75**
Item 14	.11	.16	.20	**.68**
Item 12	.33	.23	**.42**	**.57**
Item 6	.13	.32	.16	**.51**
Item 20	.18	.27	.14	.34

Note. Factor loadings equal to or >.40 are in boldface.

Parallel Analysis and Scree Plot
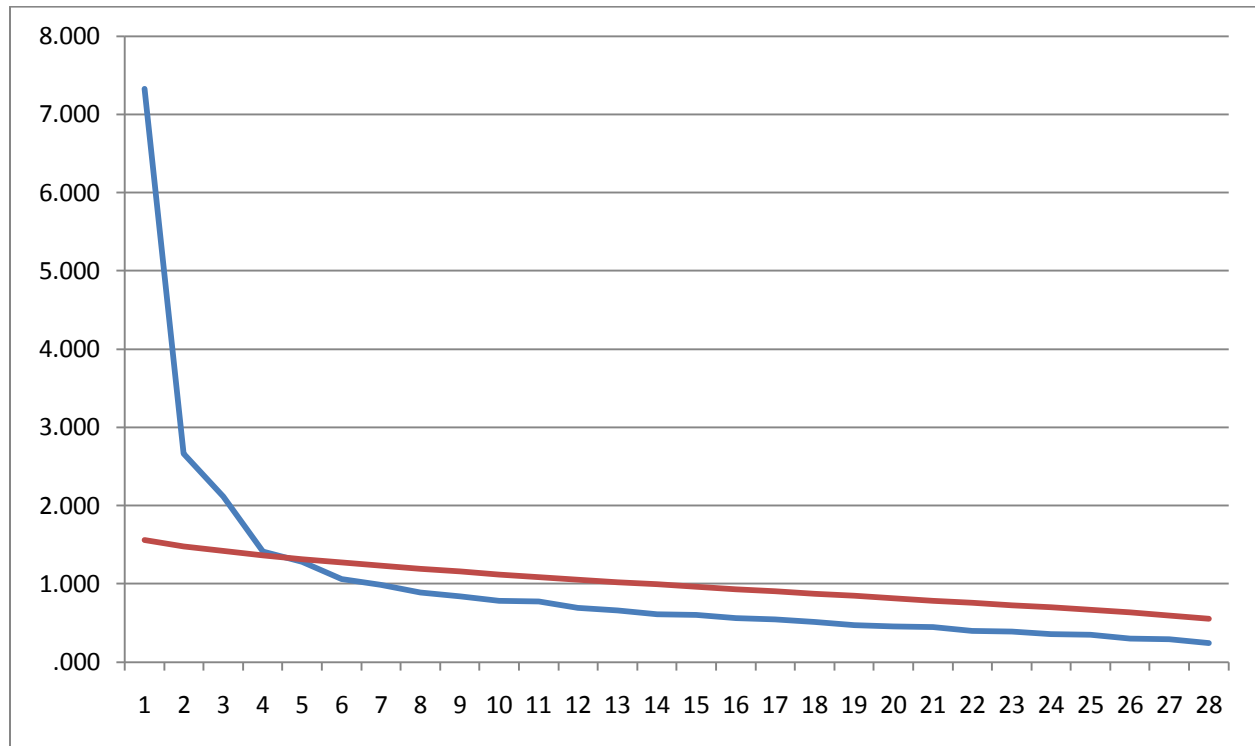
Figure 2. Parallel analysis (red line) and scree plot (blue line) for the exploratory factor analysis with principal axis analysis and promax rotation of AGI.

Research Question Two: the Applicability of the Brief RCOPE for this Taiwanese Christian Sample

Research Question 2: Is the Brief RCOPE applicable to the Taiwanese Christian sample? In other words, will the Chinese version of the Brief RCOPE yield similar psychometric properties and factor structure as the original Brief RCOPE on American population? It is hypothesized that the internal consistency, test-retest reliability, and factor structure for the Brief RCOPE subscales will be acceptable for the Taiwanese Christian sample compared to the original American sample.

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Estimated Reliability of the Brief RCOPE

The mean score of the Positive scale of the Brief RCOPE is 3.13 (SD=.51), which is higher than the mean score of the college sample (Mean=1.30, SD=.81) but similar to the hospital sample (Mean=2.15, SD=.87) in the original study (Pargament et al., 1998). Pargament and colleagues' study adopted a 4-point Likert scale ranging from 0 to 3 instead of 1 to 4 as in the current study. Therefore, the mean score of the current study would be 2.13 if scored as the original study. The mean score of the Negative scale is 1.45 (SD=.36), which would be .45 in Pargament et al's (1998) study. Therefore it is similar to the mean score of the college sample (Mean=.43, SD=.52) and slightly higher than the hospital sample (Mean=.37, SD=.50). In both Positive and Negative scales, the standard deviations are smaller than the ones from the original American sample. It indicates that the response of the present sample is more homogeneous than the original sample.

The data collected for the Chinese version of the Brief RCOPE was analyzed through the Cronbach coefficient test to evaluate its internal consistency. The Positive scale of the Brief RCOPE demonstrates good internal consistency with a Cronbach's alpha of .84. The internal consistency of the Negative scale is less satisfactory with a Cronbach's alpha of .70. However, this result is similar to the one acquired from the hospital sample in the original American study (Cronbach's alpha=.69).

The test-retest reliability of the Brief RCOPE on the Taiwanese Christian sample is somehow problematic. The Negative scale shows a moderately acceptable retest reliability (Pearson correlation=.71).The result for the Positive scale is not as good (Pearson correlation=.47) although the correlation is still significant at a .01 level. In the Positive scale, four items (1, 2, 5, & 7) had coefficients lower than .30. The highest coefficient was item 6. In

the Negative scale, item 8 had the lowest coefficient (.149), and the highest was item 9 (.724). This result raises concern over the stability of the Positive scale over time. The test-retest coefficient results are listed in Table 8.

Table 8

Test-Retest Coefficients for the Brief RCOPE

Item	Test-Retest Coefficient
1	.230
2	.234
3	.371
4	.363
5	.268
6	.546
7	.293
8	.149
9	.724
10	.628
11	.444
12	.366
13	.463
14	.280
Positive	.471
Negative	.711

Factor Structure of the Brief RCOPE

The factor structure of the Brief RCOPE was evaluated through a CFA. The two-factor model was found to be a poor fit for the data (CFI=.835, GFI=.882, RMSEA=.091). Analyzing through EFA with principal axis factoring and promax rotation, the first seven items fell under the Positive scale (factor 1) and the last seven items under the Negative scale (factor 2) (see Table 9). The Positive accounted for 22.80% of the variance and the Negative for 13.39%. The

two factors had a low negative correlation of -.125. Two items showed low factor loadings (item 13 and 14) and none had cross-factor loadings.

Table 9

Factor Loadings for Exploratory Factor Analysis With Principal Axis Analysis and Promax Rotation of Brief RCOPE (Two-Factor Model)

Item	Positive	Negative
2	**.79**	-.08
1	**.74**	-.16
4	**.65**	-.21
3	**.64**	.01
5	**.63**	-.13
6	**.58**	.09
7	**.58**	-.09
10	-.04	**.68**
9	-.06	**.64**
11	-.08	**.53**
8	-.13	**.51**
12	-.06	**.45**
14	-.15	.39
13	.12	.32

Note. Factor loadings equal to or >.40 are in boldface.

Item 13 had the lowest factor loadings (Positive = .12, Negative = .32). It was the only item in the Negative scale which showed a positive correlation with the Positive scale and items in it. It was also the only item that would increase Cronbach's alpha of the Negative scale if it were deleted (from .679 to .704). It demonstrated low inter-item correlations with all of the items in the Negative scale (range from .084 to .257). Its content was, "I decided the devil made this happen." That difficulties and problems may come from the devil is a common teaching among the churches, especially from the Charismatic denomination which occupied the largest percentage of the participants. This can be proven by the fact that this item has the highest item mean in the Negative scale (Mean = 2.12). Most of the participants answered 2 (Somewhat)

(49%). This teaching also has its biblical foundation (Job 1; 2 Cor. 12:7, Holy Bible, NIV). Therefore, this kind of thinking is regarded as healthy by most of the believers as long as it is not overused. For reasons above, item 13 should not be considered as a "negative" religious coping and thus disregarded. The model fit did not reach an acceptable level after removing item 13 (CFI= .840, GFI=.882, RMSEA=.097).

Next the investigator examined item 14 which also had low factor loadings for both scales (Positive = -.153, Negative =.395). All of the item-to-item correlations within scale for item 14 were lower than .30, except with item 12 (correlation=.384). Moreover, it had the lowest item-to-scale correlation with the Negative scale (correlation=.426). The content of the item reads, "I questioned the power of God." This item was problematic probably because questioning the power of God was a sign of weak faith. All of the other questions in the Negative item were blaming the person or someone else for the misfortune. Even Item 11 "I questioned God's love for me" did not directly say that God was being unloving. Yet this item directly challenged God's ability, one of His very basic attributes. Most Christians may feel hesitant to answer positively to this question. Actually, 93.48% of the participants answered 1 ("Not at all") to this question. This item was shown to be ineffective in distinguishing patterns of religious coping among the participants. After removing this item, the model fit was still unsatisfactory (CFI=.873, GFI=.903, RMSEA=.092).

The remaining items were put into the EFA again, and only item 12 had a low factor loading (Positive =-.057, Negative =.386). It also had low within-scale inter-item correlations (less than 2.0) with item 9, 10, and 13. Its correlation with the Negative was the second lowest in the scale (correlation =.525). As they did with item 13, the majority of the participants (83.29%) gave 1 ("Not at all") as their answer for item 12. This item was "I wondered whether my church

had abandoned me." Since most of the surveys were taken during "extra-worship" activities, in either a Sunday school class, a discipleship class, or a small group, the participants probably generally had a pleasant relationship with the church for them to be willing to make extra effort to attend those meetings. Those who think their church has abandoned them might not come to the church anymore. At least for this group of participants, this item failed to accurately assess patterns of religious coping. With the deletion of item 12, the model fit improved but was still poor (CFI=.887, GFI=.912, RMSEA=.094). An extra item needed to be removed.

The remaining items were analyzed by an EFA, but none of the items exhibited low factor loadings, cross-factor loadings, or increased the Cronbach's alpha when the item was deleted. Judging from the inter-item correlations, item 1 and 2 were found to have inappropriately high correlation (.734). These two items had very similar means (Mean1 = 3.24, Mean2 = 3.33), standard deviations (SD1 = .636, SD2 = .613), and even percentiles for each response. They also had the same median (3.0) and mode (3). In other words, these two questions may be redundant and one of them should be removed. Item 1 was "I looked for a stronger connection with God." Item 2 was "I sought God's love and care." When someone is looking for a stronger connection with God, he/she is actually looking for or will experience God's love and care. It is not surprising that these two questions drew similar responses from the subjects. Item 1 was selected to be taken away because item 2 had a higher factor loading and item-to-scale correlation than item 1. After item 1 was deleted, the model fit of the CFA was finally a good one (CFI=.925, GFI=.945, RMSEA=.074, see Table 10).

Each remaining item has a factor loading of .43 or higher. The factor loadings of each item are listed in Table 11. The modified version of the Brief RCOPE demonstrated reasonable internal consistency. The alpha value for the Positive scale was .81, and .the Negative scale

was .69. The remaining items in the Positive scale (items 2, 3, 4, 5, 6, and 7) accounted for

25.62% of the variance, and the remaining items in the Negative scale (items 8, 9, 10, and 11)

accounted for 15.76% of the variance. The two factors had factor correlation of -.085. If item 12

is added to the scale, the goodness-of-fit index is still acceptable (CFI=.903, GFI=.931,

RMSEA=.077). However, since the factor loading of item 12 is lower than .40 (.36), this item is

not included. Future studies can still consider including this item to the instrument because the

factor correlation between the two scales was very low and varimax rotation can be employed. If

that is the case, item 12 would have a factor loading higher than .40.

Table 10

Goodness-of-Fit Indices for the Brief RCOPE with Different Items Deleted

Item Deleted	CFI	GFI	RMSEA
None	.835	.882	.091
13	.840	.882	.097
13, 14	.873	.903	.092
13, 14, 12	.887	.912	.094
13, 14, 12, 1	.924	.946	.074

Table 11

Factor Loadings of Modified Brief RCOPE (10 Items)

Item	Factor 1: Positive Coping	Factor 2: Negative Coping
2. I sought God's love and care.	.71	-.09
5. I tried to see how God might be trying to strengthen me in this situation.	.66	-.15
3. I sought help from God in letting go of my anger.	.65	-.01
4. I tried to put my plans into action together with God.	.64	-.17
6. I asked forgiveness for my sins.	.62	.10
7. I focused on religion to stop worrying about my problems.	.61	-.06
10. I wondered what I did for God to punish me.	-.03	.79
9. I felt punished by God for my lack of devotion.	-.04	.76
11. I questioned God's love for me.	-.06	.43
8. I wondered whether God had abandoned me.	-.11	.43

In summary of the above analyses, the Brief RCOPE shows reasonable internal consistency among the Taiwanese Christian sample. The Negative scale also demonstrates good test-retest reliability though the Positive scale does not. The goodness of fit of the CFA model proved to be a poor fit for the two-factor model. However, an acceptable model fit was obtained after removing items 1, 12, 13, and 14.

Research Question 3: Correlations between the AGI, the TDQ and the WHOQOL-BREF

Research Question 3: Will the AGI yield further evidence of applicability for the present Taiwanese Christian sample by showing significant correlations with depression and quality of life? In other words, will outcomes of the AGI subscales correlate with outcomes of the TDQ and outcomes of the WHOQOL-BREF Taiwan version? It is hypothesized that outcomes of the AGI subscales will show significant correlations with outcomes of the TDQ and of the WHOQOL-BREF Taiwan version. Participants with higher scores on the AGI subscales will have higher TDQ scores and lower scores on various domains of the WHOQOL-BREF Taiwan version.

The correlations between these scales were analyzed through a Pearson test first without controlling for the social desirability effect. The AGI items after modifications were considered. The results are listed in Table 12. Both the Anxiety and the Avoidance scales of the AGI are positively correlated with the TDQ and negatively correlated with four domains of the WHOQOL-BREF Taiwan version (p<.01). It indicates that participants with greater attachment anxiety or avoidance in their relationship with God show more signs of depressed mood and less satisfaction with their life in physical, psychological, social, and environmental domains. The same results were obtained even after controlling for the social desirability effect (Table 13). It

seems that social desirability did not have a significant influence on how the participants answered these questions.

Although the results of the correlations between the AGI and the TDQ and between the AGI and the WHOQOL-BREF are consistent with the hypotheses and thus provided further evidence for the usefulness of the AGI for the Taiwanese Christians, the poor model fit of the AGI raises a great concern over the applicability of the instrument for this population. If the factor structure cannot be supported through the data, the evidence from the correlation tests might be useless. Further discussion will be devoted to the problematic factor structure of the AGI in the Taiwanese Christian sample in the next chapter.

Table 12

Correlations Between AGI, TDQ, and WHOQOL-BREF

	1	2	3	4	5	6	7
1. Anxiety	-						
2. Avoidance	.194**	-					
3. TDQ	.320**	.217**	-				
4. Physical	-.295**	-.184**	-.541**	-			
5. Psychological	-.389**	-.356**	-.515**	.591**	-		
6. Social	-.299**	-.261**	-.438**	.537**	.651**	-	
7. Environmental	-.233**	-.264**	-.377**	.598**	.645**	.649**	-

Table 13

Correlations Between AGI, TDQ, and WHOQOL-BREF After Controlling for TSDS

	1	2	3	4	5	6	7
1. Anxiety	-						
2. Avoidance	.199**	-					
3. TDQ	.318**	.221**	-				
4. Physical	-.294**	-.186**	-.540**	-			
5. Psychological	-.389**	-.357**	-.516**	.592**	-		
6. Social	-.305**	-.257**	-.443**	.541**	.654**	-	
7. Environmental	-.233**	-.264**	-.377**	.598**	.645**	.651**	-

Note. **. Correlation is significant at the 0.01 level (2-tailed).

Research Question 4: Correlations between the Brief RCOPE, the TDQ, and the

WHOQOL-BREF Taiwan Version

Research Question 4: Will the Brief RCOPE yield further evidence of applicability for the present Taiwanese Christian sample by showing significant correlations with constructs of depression and quality of life? In other words, will the outcomes of the Brief RCOPE subscales correlate with outcomes of the TDQ and outcomes of the WHOQOL – BREF Taiwan version? It is hypothesized that the outcomes of the two Brief RCOPE subscales will show significant correlations with outcomes of the TDQ and the WHOQOL-BREF Taiwan version. Participants with higher scores on the Positive Coping of the Brief RCOPE scale will have lower TDQ scores and higher domain scores in WHOQOL-BREF. On the contrary, participants with higher scores on the Negative Coping of the Brief RCOPE scale will have higher TDQ scores and lower WHOQOL-BREF scores in various domains.

The data from two subscales of the Brief RCOPE, the TDQ, and the WHOQOL-BREF Taiwan version were put into Pearson tests to analyze their correlations. The results are listed in Table 14. Only the items of the Brief RCOPE after modification were considered. The Negative Coping of the Brief RCOPE after modification showed a highly positive and significant correlation with the TDQ and strong negative correlations with four domains of the WHOQOL-BREF Taiwan version (p<.01). However, the modified Positive Coping of the Brief RCOPE failed to show significant correlations with the TDQ and the Physical domain of the WHOQOL-BREF. Nevertheless, the modified Positive Coping still showed significant positive correlations with the Psychological, Social, and Environment domains of the WHOQOL-BREF. In other words, respondents who employed more negative religious coping tend to experience more depressed mood and were less satisfied with their life conditions. However, individuals who

utilized more positive religious coping were not necessarily less depressed or satisfied with their physical condition. Nevertheless, people who employed more positive religious coping did report more life satisfaction in psychological, social, and environmental domains. The correlation test was also conducted on data controlling for social desirability (see Table 15). No significant difference was found.

Table 14

Correlations Between Brief RCOPE, TDQ and WHOQOL-BREF

	1	2	3	4	5	6	7
1. Positive	-						
2. Negative	-.082	-					
3. TDQ	-.080	.310**	-				
4. Physical	.044	-.315**	-.541**	-			
5. Psychological	.217**	-.406**	-.515**	.591**	-		
6. Social	.155**	-.341**	-.438**	.537**	.651**	-	
7. Environmental	.199**	-.282**	-.377**	.598**	.645**	.649**	-

Note. **. Correlation is significant at the 0.01 level (2-tailed)

Table 15

Correlations Between Brief RCOPE, TDQ and WHOQOL-BREF After Controlling for TSDS (Two-Tailed)

	1	2	3	4	5	6	7
1. Positive	-						
2. Negative	-.086	-					
3. TDQ	-.086	.309**	-				
4. Physical	.048	-.315**	-.540**	-			
5. Psychological	.220**	-.406**	-.516**	.592**	-		
6. Social	.147**	-.345**	-.443**	.541**	.654**	-	
7. Environmental	.201**	-.282**	-.377**	.598**	.645**	.651**	-

Note. **. Correlation is significant at the 0.01 level (2-tailed)

Summary

Although the AGI demonstrated good internal consistency and test-retest reliability among the Taiwanese Christian sample, the CFA result of the two-factor model on the instrument failed to provide evidence for a good fit. Fifteen items out of the original twenty-eight items had to be removed before a reasonable model fit could be obtained. With such a large portion of items deleted, whether the AGI could be a useful instrument for the Taiwanese Christians becomes questionable. Even though the original and modified versions of the AGI both show strong correlations with the suggested instruments, the TDQ and the WHOQOL-BREF, the support from these analyses becomes irrelevant when the basic problem, the factor structure of the AGI, is not resolved. The applicability of the AGI for the Taiwanese Christians will be further discussed in the fifth chapter.

The results of the statistical analyses for the Brief RCOPE are more positive. Although the retest reliability of the Positive coping was barely acceptable and the results of the goodness of fit from the CFA were not perfect, the instrument still proved to be useful for the Taiwanese Christians after several items were removed. The weaknesses of the instrument and the potential problems when it is applied to the Taiwanese Christians will be discussed later.

CHAPTER FIVE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of the present study was to investigate the psychometric properties and the factor structures of the Attachment to God Inventory (AGI) and the Brief Religious Coping scale (Brief RCOPE) in a Taiwanese Christian sample. Cronbach's alpha analyses were conducted to evaluate the internal consistency and a retest was employed to examine the test-retest reliability of the two instruments. The factor structures of the AGI and the Brief RCOPE were assessed through Confirmatory Factory Analyses. Exploratory Factor Analyses were also utilized when modifications were needed to detect problematic items. Further support of the applicability of the AGI and the Brief RCOPE was drawn from results of correlation analyses between these two instruments and the Taiwanese Depression Questionnaire and the World Health Organization Quality of Life questionnaire – Brief Taiwan version (WHOQOL-BREF) after controlling for the social desirability effect through the Taiwan Social Desirability Scale (TSDS).

This chapter will first briefly summarize the findings of the study. Next, the major questions related to the purpose of the study will be discussed in the conclusion section. Implications for practice and research, recommendations for future studies, and limitations of the current study will be presented at the end of the chapter.

Summary of the Findings

This is the first survey design study psychometrically evaluating the AGI and Brief RCOPE with 11 Taiwanese churches from five Christian denominations (Protestant and Roman Catholic). Results of the study support the usage of the Brief RCOPE (with modification) for the

Taiwanese Christians while findings for the AGI question its factor structure and hence its utility. The AGI after modification, however, does receive support from the correlation analyses. As predicted, both the Anxiety and the Avoidance scales show positive correlations with the TDQ and negative correlations with the four domains of the WHOQOL-BREF. That is, when individuals have more signs of anxiety or avoidance in their attachment to God, they experience higher levels of depression and lower levels of life satisfaction. Results remained the same even after controlling for social desirability. However, the support from the correlation analyses may not be strong enough to overcome the inadequacy of the AGI in its factor structure. Therefore, it is suggested that the AGI may not be applicable to this Taiwanese Christian sample.

The internal consistency and retest reliability of the Brief RCOPE were acceptable except the retest coefficient for the Positive scale was not very satisfactory. The factor structure of the Brief RCOPE was more promising than the one of the AGI. After removing items 12, 13, and 14 from the Negative coping and item 1 from the Positive coping, the model resulted in a good fit. Although the outcomes of the correlation tests between the Brief RCOPE and the TDQ and the WHOQOL-BREF did not match the hypotheses perfectly, they are similar to those found by Pargament and associates in the original study (Pargament et al., 1998). In view of the psychometric properties and factor structure of the Brief RCOPE, it is suggested that this religious instrument, when modified with appropriate item deletions, could be considered as a useful instrument for Taiwanese Christians.

Conclusions

In addition to the findings from the previous statistical analyses, this section will also try to present explanations for the rejection of the hypotheses from a cultural perspective, especially

in light of the cultural difference between an individualist culture and a collectivist culture. The two instruments, the AGI and the Brief RCOPE, will be discussed separately.

Applicability of the AGI for the Taiwanese Christians

As seen from the above analyses, the AGI showed good internal consistency and test-retest reliability but failed to produce an acceptable model fit through CFA. After removing numerous items with low factor loadings or cross factor loadings, a reasonable model fit was obtained. The final result of the AGI derived from the process retained only 13 items from the 28 original items; 15 items were considered unfit and thus removed. This posed a question toward the applicability of the AGI for Taiwanese Christians.

One thing worth noting is that the AGI has never been tested by a CFA in previous studies. In the original multi-sample study by Beck and McDonald (2004), the replicated studies only used EFAs to confirm their findings. One reason might be that both samples in the replicated studies were small (n=118 and n=109) and thus were not suitable for CFAs. The present study has not only been the first cross-cultural psychometric study but also the first replicated study that has used CFAs and the largest psychometric sample ever on this instrument. It was not clear in the original study that how many factors had an Eigen value greater than one or whether the factor numbers of the EFAs were limiting at two. Judging from the variance the two factors accounted for reported by the authors (37.1% in total), it was very possible that there were other factors having an Eigen value greater than one which were not considered by the authors. Although most of the items did not cross load on both factors (cross factor loadings $\leqq .25$), some items did appear unstable (Beck & McDonald, 2004). Therefore, it is possible that the AGI validated in the American samples could have resulted in a poor model fit if it were

analyzed by a CFA. If applying the same statistical criteria used in Beck and McDonald's study (2004) on the present study, fewer items would need to be removed. As mentioned above, however, a CFA is considered more appropriate to evaluate the factor structure of the AGI in the current study.

On the other hand, according to the results of the EFA, the data of the AGI obtained from the Taiwanese sample fit better to a three- or four-factor model solution. Judging from the result of a parallel analysis, a four-factor model was considered appropriate. Among the four factors, two factors actually covered all of the 13 items in the final version of the modified AGI obtained in this study. One factor was Anxiety, including item 1, 3, 11, 15, 17, 21, and 25. Another was Avoidance, including item 2, 4, 8, 10, 18, 22, 24, 26, and 28. Only two items (2 & 24) were not included in the final 13-version of the Brief RCOPE. The other two factors were named Jealousy and Emotion Expression. Factor Jealousy contained seven items (5, 7, 9, 13, 19, 23, & 27). It featured in one's jealous feelings toward God's favor upon other believers. Items in Emotion Expression were characterized by one's degree of comfort in expressing emotions before God. They included five items (6, 12, 14, 16, & 20).

From a collectivist cultural point of view, Jealousy and Emotion Expression may not be good indicators to detect one's attachment to God. Jealousy is considered as a negative feeling and a taboo in collectivist culture because cooperation with other group members and putting group wellbeing above individual's are important for collectivist culture as mentioned earlier. Thus, jealousy may not be easily recognized as a sign of one's anxiety over relationship with God. Moreover, the AGI is modeled after the Experience in Close Relationships scale (Brennan et al., 1998), an instrument assessing adult romantic relationship. The AGI used the wording of some items in the Experience in Close Relationships scale (Beck & McDonald, 2004). In an

adult romantic relationship, jealousy is an important and unavoidable aspect of anxious attachment. However, jealousy may not be a necessary reaction in one's anxious attachment to God, especially in a collectivist culture where group coherence is strongly emphasized. Also, traditional Chinese culture like most Asian culture under the influence of Confucianism tends to be more reserved in the aspect of emotion expression. Individuals who have difficulties expressing their emotions before God are not necessarily distant from or avoidant of Him. Therefore, items addressing aspects of emotional expression may not be accurate indicators of individual attachment to God as the original instrument intended to measure, especially for older generations of Chinese who are under greater influence of Confucian teachings than the younger generation. Given 56.6% of the participants in the current study were age 45 and older, the sample was probably biased. As a result, after items of Jealousy and Emotion Expression were deleted, the remaining items reached an acceptable model fit. Although the present study concluded that the AGI may not be suitable for the Taiwanese Christians due to the large number of item deletion, the remaining items may actually accurately assess the attachment relationship with God for Taiwanese Christians. Further research is needed to understand the applicability of the 13-item version of the AGI for the Taiwanese and the different ways of measuring attachment to God for this population.

Applicability of the Brief RCOPE for the Taiwanese Christians

The Brief RCOPE showed good to acceptable internal consistencies for the Positive coping and the Negative coping scales. These findings are consistent with those from the literature. The Negative coping also exhibited an excellent test-retest coefficient. Yet the retest coefficient of the Positive coping was slightly disappointing. This may indicate that Positive

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coping scale cannot give a reliable assessment of people's use of religious coping in a positive way, especially over a long period of time. It also might indicate the subscale is mood state dependent. Nevertheless, since the retest sample was quite small and was not a random sample, it is too early to draw such a conclusion. Moreover, the test and the retest were taken in different settings. The initial test was taken in a church setting, yet the retest was delivered to the home of the participants. Although the other three retests also faced the same problems, it is still possible that the reliability of the Positive coping was influenced by these variables, or the Positive coping scale in some way was more vulnerable to these threats than other subscales (Kazdin, 2003). However, since there has never been a retest done on the Brief RCOPE, no comparison can be made. More research is needed to find out the answer.

As the AGI, The model fit indices of CFA of the Brief RCOPE for the Taiwanese Christian sample did not reach an acceptable level. However, a good model fit was achieved after deleting four items from the instrument. The remaining 10 items, six for the Positive coping and four for the Negative coping, can still comprise a useful assessing tool for the Taiwanese Christians, probably the first religious coping instrument in Taiwan.

Further Evidence of the Applicability of the AGI and the Brief RCOPE

Both the full scale of the AGI and the remaining 13 items after modification demonstrated strong correlations with the TDQ and every subscale of the WHOQOL-BREF. As predicted by the hypothesis, the AGI subscales were positively related to the TDQ and negatively related to the four domains of quality of life. These findings are consistent with the existing body of literature. However, since the AGI was considered inapplicable to the Taiwanese Christians because too many items had to be removed from it to gain a reasonable

model fit for CFA, the further evidence seems to be meaningless in supporting the applicability of the AGI for Taiwanese Christians. Nevertheless, if future studies can prove that the 13-item version of the AGI is more appropriate for Taiwanese Christians, the AGI can still be useful for Taiwanese and findings of the correlations between these scales can provide further evidence for the usefulness of the instrument.

On the other hand, the correlations between the TDQ and the WHOQOL provided further evidence for the applicability of the Brief RCOPE to the Taiwanese Christian sample. The Negative coping of the Brief RCOPE demonstrated a strong positive correlation with the TDQ and negative correlations with the four domains of the WHOQOL-BREF. These results are also consistent with findings reported by the literature. The Positive coping scale had negative associations with the psychological, social, and environmental domains of the WHOQOL-BREF but failed to show associations with the TDQ and the physical domain of the WHOQOL-BREF. It means that individuals who employ more negative religious coping tend to feel more depressed and less satisfied with their life in physical, psychological, social, and environmental domains; individuals who utilize more positive religious coping are not necessarily less depressed or more satisfied with their physical condition but report higher quality of life in psychological, social, and environmental domains. The results, though contradicting the findings of some studies (Emery & Pargament, 2004; Harrison, et al., 2001; Khan & Watson, 2006), are similar to those obtained by Pargament and associates (1998). Although in one-tail Pearson test the correlation between the Positive coping and the TDQ is close to a significant level, the correlation is still very weak. It is possible that application of positive coping strategies may help alleviate some people's depression but not others. The result of no relationship between the Positive coping and TDQ also signifies that both participants who are depressed and participants who are not employ

positive religious coping strategies when facing stressful events, but depressed individuals tend to use more negative coping strategies than those who are not depressed. In other words, depressed believers attempt to use both positive and negative religious coping to solve their problems. Their level of use of positive religious coping is similar to other believers, yet their use of negative religious may surpass those who are not depressed. Given the correlational nature of this analysis, one cannot say whether the negative religious coping leads to more depression or whether depression leads to more religious coping.

Implications, Limitations, and Recommendations

Implications

Findings from the present study raise concern over the factor structure of the AGI. Since there has never been any CFA conducted on the AGI with an American sample, it is questionable whether all of the items in the AGI would stand the test. Further studies are needed to answer the question

Even though future research may prove that the current items of the AGI for the American sample are appropriate, the items used to measure God attachment for the Taiwanese can be different from their American counterparts. Items specially designed for the Taiwanese from its unique cultural perspective may be needed. Regardless, researchers and clinicians need to be cautious with the interpretation of results when they apply the AGI or any other assessment tool from a different cultural background to Taiwanese, even if the instrument has solid theoretical and empirical support from the other population. It is safe for clinicians to keep in mind that sometimes well-founded theories can be culturally biased to some degree.

The AGI's failure to find a good model fit again points out the importance and urgency of the development of a sound religious instrument for the Taiwanese population. The unfitness of the AGI for the Taiwanese Christians does not mean that every Western instrument or religious instrument will be unsuitable for the Taiwanese. The Brief RCOPE has at least proven to be useful. However, careful evaluation and adaptation of the content to some extent are necessary.

Limitations

Several limitations are noted in this study. First, the sample, though representing five major denominations of Taiwan Christian churches, is not exclusive. Undeniably, some important denominations and churches were left out. Also, due to the voluntary basis of the recruiting method, the participants may not be representative of the selected church or denomination. Many of the churches only had their members in Sunday school class, discipleship class, or Bible study group take the survey. Church members attending these classes are usually more devoted to their faith and to the church. They are more active in church activities and are the so called "elites" of the church. They may be different from the non-participating members. Also, the low return rate of take-home survey and the refusing denomination certainly resulted in certain types of subjects missing from the sample. The high education level and the high mean age of the sample indicated that the sample probably over-represented certain kind of participants.

Second, although the sample outnumbers the minimum target number, 300, the CFA results could be better if the sample size was increased. Because the AGI has 14 items in each subscale, more participants might be needed to obtain a more accurate result. Actually a larger sample could have been reached if the research did not adopt the take-home survey method

because the return rate of the take-home survey was very low. Those churches let their members take the survey in the church had a much better response rate.

Third, because of a limited sample size, the current research could not divide the sample into two parts, one for the CFA and the other for the EFA, to further validate the findings. For example, if two parts of the sample were used, the second sample could be used to evaluate whether the 13-item version of the AGI and the modified version of the Brief RCOPE are valid.

Fourth, the retest is not based on a random sample because the sample was only limited to those who were willing to participate. Furthermore, the investigator did not invite the participants of every church to attend due to limited budget and time constraint. The recruitment of the retest sample stopped when number of the subjects had reached 10% of the first test. Therefore, the retest sample did not include every denomination and every church in the original sample.

Recommendations

Even though the present study failed to prove the AGI to be a useful religious instrument for the Taiwanese Christians, it is not necessarily true that the AGI will not have any value for the Taiwanese. More studies are needed to draw more confident conclusions about the item selection and usefulness of the instrument. Studies with a larger sample and participants from more denominations will be ideal. Due to the nature and structure of the church, it is difficult to have a random sample from selected churches. Not every selected church and church member is interested in participating in the survey. Future studies may benefit from including believers from more denominations and religious backgrounds when the budget and time allow them.

As pointed out previously, a study with a large American sample with AGI analyzed by a CFA is definitely needed to further examine the factor structure and the appropriateness of current items of the instrument. Researchers may also be interested in finding whether an AGI with different number of factors or selection of items will be more suitable for the Taiwanese Christians regardless of the findings from the American samples. Given that the AGI is not applicable to the present sample, future research is also encouraged to develop a Taiwanese version of God attachment instrument beyond replicating the current study with a larger sample.

Certainly, more studies are needed to examine the usefulness of the modified version of the Brief RCOPE found in this study before it can be actually put to use. Researchers can even consider adding items suitable for Taiwanese to supplement the deleted items, especially for the Negative scale. Researchers may also want to understand the applicability of the Brief RCOPE for Buddhists and believers from other religious backgrounds in Taiwan.

Final Summary

The current study is just a beginning. More religious instruments and studies are greatly needed for this religious population before it can be better served and understood. Although in the study the AGI did not obtain the expected results and the Brief RCOPE became even more "brief", something new has been learned through the process; more understanding about Taiwanese Christians in the aspects of attachment to God and religious coping have been attained. Hopefully, this study is a step forward to fill in the gap of literature, a small brick in the giant tower of knowledge. Certainly, no research is perfect, and no study can claim the final word for a topic. There is always room to grow, and there is always hope for the future. This is the fun of research. This is the fun of life.

REFERENCES

Alferi, S. M., Culver, J. L., Carver, C. S., Arena, P. L., & Antoni, M. H. (1999). Religiosity, religious coping and distress: A prospective study of Catholic and Evangelical Hispanic women in treatment for early stage cancer. *Journal of Health Psychology, 4,* 343-356.

Anderson, M. J., Marwit, S. J., Vandenberg, B., & Chibnall, J. T. (2005). Psychological and religious coping strategies of mothers bereaved by the sudden death of a child. *Death Studies, 29,* 811-826.

Aniworth, M. D. S. (1985). Attachment across the lifespan. *Bulletin of the New York Academy of Medicine, 61,* 792-812.

Aniwoth, M. D. S. (1989). Attachment beyond infancy. *American Psychologist, 44,* 709-716.

Aniworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation.* Hillsdale, NJ: Lawrence Erlbaum.

Ano, G. G., & Vasconcelles, E. B. (2005). Religious coping and psychological adjustment to stress: A meta-analysis. *Journal of Clinical Psychology, 61,* 461-480.

Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of Social and Personal Relationships, 7,* 147-178.

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61,* 226-244.

Bartholomew, K., & Shaver, P. R. (1998). Methods of assessing adult attachment: Do they converge? In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships.* New York: Guilford.

Beck, R. (2006a). Communion and complaint: Attachment, object-relations, and triangular love perspectives on relationship with God. *Journal of Psychology and Theology, 34(1),* 43-52.

Beck, R. (2006b). God as a secure base: Attachment to God and theological exploration. *Journal of Psychology and Theology, 34(2),* 125-132.

Beck, R., & McDonald A. (2004). Attachment to God: The Attachment to God Inventory, tests of working model correspondence, and an exploration of faith group differences. *Journal of Psychology and Theology, 32(2),* 92-103.

Benore, E., Pargament, K. I., & Pendleton, S. (2008). The initial examination of religious coping in children with asthma. *The International Journal for the Psychology of Religion, 18,* 267-290.

Bentler, P. M. (1990). Comparative fit indices in structural equation models. *Psychological Bulletin, 107,* 238-246.

Bishop, A. J. (2008). Stress and depression among older residents in religious monasteries: Do friends and God matter? *International Journal of Aging and Human Development, 67(1)*,

Bond, M. H. (1991). *Beyond the Chinese face.* New York: Oxford University Press.

Bond, M. H., & Wang, S. H. (1981). Aggressive behavior in Chinese society: The problem of maintaining order and harmony. *Acta Pschologica Taiwanica, 23,* 57-73.

Boudreaux, E., Catz, S., Ryan, L., Amaral-Melendez, M., & Brantley, P. J. (1995). The ways of religious coping scale: Reliability, validity, and scale development. *Assessment, 2,* 233-244.

Bowlby, J. (1969/1982). *Attachment and loss: Vol. 1. Attachment.* New York: Basic Books.

Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation: Anxiety and anger.* New York: Basic Books.

Bowlby, J. (1979). *The making and breaking of affectional bonds.* London: Tavistock.

Bowlby, J. (1980). *Attachment and loss: Vol. 3. Loss.* New York: Basic Books.

Braam, A. W., Schaap-Jonker, H., Mooi, B., De Ritter, D., Beekman, A. T. F., & Deeg, D. J. H. (2008). God image and mood in old age: Results from a community-based pilot study in the Netherland. *Mental Health, Religion and Culture, 11(2)*, 221-237.

Bradley, R., Schwartz, A. C., & Kaslow, N. J. (2005). Posttraumatic stress disorder symptoms among low-income, African American women with a history of intimate partner violence and suicidal behaviors: Self-esteem, social support, and religious coping. *Journal of Traumatic Stress, 18(6),* 685-696.

Brechting, E. H., & Giancola, P. R. (2006). A longitudinal study of coping strategies and substance use in adolescent boys. *Journal of Child and Adolescent Substance Abuse, 16(2),* 51-67.

Brennan, K. A. (2001). Adjustment to cancer – Coping or personal transition? *Psycho-Oncology, 10(1),* 1-18.

Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measures of adult attachment . An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46-76). New York: Guilford Press.

Bretherton, I., & Munholland, K. A. (1999). Internal working models in attachment relationships: A construct revisited. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 89-111). New York: Guilford Press.

Brokaw, B. F., & Edwards, K. J. (1994). The relationship of God image to level of object relations development. *Journal of Psychology and Theology, 22,* 352-371.

Cardella, L. A., & Friedlander, M. L. (2004). The relationship between religious coping and psychological distress in parents of children with cancer, *Journal of Psychosocial Oncology, 22(1),* 19-37.

Carleton, R. A., Esparza, P., Thaxter, P. J., & Grant, K. E. (2008). Stress, religious coping resources, and depressive symptoms in an urban adolescent sample. *Journal for the Scientific Study of Religion, 47(1),* 113-121.

Cassibba, R., Granqvist, P., Costantini, A., & Gatto, S. (2008). Attachment and God representations among lay Catholics, priests, and religious: A matched comparison study based on the Adult Attachment Interview. *Developmental Psychology,44(6),* 1753-1763.

Cassidy, J. (1999). The nature of the child's ties. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 3-20). Now York: Guilford Press.

Chang, Y. H. (2000). *Survey of Taiwan Social Change*. Taipei: Academia Sinica, Institute of Sociology.

Chen, S. C. (2000). A review of research in the field of Taiwan sociology of religion. *Taiwan Sociology, 22,* 173-212.

Chen, X. Z., Shi, C. H., & Yang, M. R. (2002). The validity and reliability research of the Taiwanese Depression Questionnaire on teenagers. *The 41th Annual Meeting Report of the Taiwan Psychiatric Association.*

Chien, T. J. (2009). Developing the "pure land on earth"– A study of the relationship between religion and the quality of life of cancer patients. Dharma Drum Buddhist College, master thesis.

Chiu, C. P. (1987). The stress sensation, social adaptation and relative factors in hemodialysis patients. Master thesis. Taipei, ROC: National Defense Medical Center, Department of Nursing.

Cooper, L. B., Bruce, A. J., Harman, M. J., & Boccaccini, M. T. (2009). Differentiated styles of attachment to God and varying religious coping efforts. *Journal of Psychology and Theology, 37(2),* 134-141.

Cozolino, L. (2006). *The neuroscience of human relationships: Attachment and the developing social brain.* New York: W. W. Norton & Company.

Dumas, J. E., & Nissley-Tsiopinis, J. (2006). Parental global religiousness, sanctification of parenting, and positive and negative religious coping as predictors of parental and child functioning. *The International Journal for the Psychology of Religion, 16(4),* 289-310.

Dew, R. E., Daniel, S. S., Goldston, D. B., McCall, W. V., Kuchibhatla, M., Schleifer, C., et al. (2010). A prospective study of religion/spirituality and depressive symptoms among adolescent psychiatric patients. *Journal of Affective Disorders, 120,* 149-157.

Emery, E. E., & Pargament, K. I. (2004). The many faces of religious coping in late life: conceptualization, measurement, and links to well-being. *Ageing International, 29(1),* 3-27.

Eurelings-Bontekoe, E. M., Steeg, J. H., & Verschuur, M. J. (2005). The association between personality, attachment, psychological distress, church denomination and the God concept among a non-clinical sample. *Mental Health, Religion, & Culture, 8(2),* 141-154.

Fallot, R. D., & Heckman, J. P. (2005). Religious/spiritual coping among women trauma survivors with mental health and substance use disorders. *Journal of Behavioral Health Services & Research, 32(2),* 215-226.

Fetzer Institute, National Institute on Aging Working Group. (1999). *Multidimentional measurement of religiousness, spirituality for use in health research.* Kalamazoo, MI: Fetzer Institute.

Filazoglu, G., & Griva, K. (2008). Coping and social support and health related quality of life in women with breast cancer in Turkey. *Psychology, Health and Medicine, 13(5),* 559-573.

Fraley, R. C. (2002). Attachment stability from infancy to adulthood: Meta-analysis and dynamic modeling of developmental mechanisms. *Personality and Social Psychology Review, 6(2),* 123-151.

Fraley, R. C., & Waller, N. G. (1998). Adult attachment patterns: A test of the typological model. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships.* New York: Guilford.

Fonagy, P., Steele, H., & Steele, M. (1991). Maternal representations of attachment during pregnancy predict the organization of infant-mother attachment at one year of age. *Child Development, 62,* 891-905.

Gall, T. L. (2004). Relationship with God and the quality of life of prostate cancer survivors. *Quality of Life Research, 13,* 1357-1368.

George, C., & West, M. (1999). Developmental vs. social personality models of adult attachment and mental ill health. *British Journal of Medical Psychology, 72,* 285-303.

Gonzalez-Morkos, B. (2005). *Preliminary reliability analysis of a Spanish translation of the Brief RCOPE.* Unpublished doctoral dissertation, Pepperdine University.

Gorsuch, R. L., & Miller, W. R. (1999). Assessing spirituality. In W. R. Miller (Ed.), *Integrating spirituality into treatment: Resources for practitioners* (pp. 47-64). Washington, DC: American Psychological Association.

Granqvist, P. (1998). Religiousness and perceived childhood attachment: On the question of compensation or correspondence. *Journal for the Scientific Study of Religion, 37(2),* 350-367.

Granqvist, P. (2002). Attachment and religiosity in adolescence: Cross-sectional and longitudinal evaluations. *Personality and Social Psychology Bulletin, 28(2),* 260-270.

Granqvist, P., & Hagekull, B. (1999). Religiousness and perceived childhood attachment: Profiling socialized correspondence and emotional compensation. *Journal for the Scientific Study of Religion, 38(2),* 254-273.

Granqvist, P., & Hagekull, B. (2000). Religiosity, adult attachment, and why "singles" are more religious. *The International Journal for the Psychology of Religion, 10,* 111-123.

Granqvist, P., & Kirkpatrick, L. A. (2004). Religious conversion and perceived childhood attachment: A meta-analysis. *International Journal for the Psychology of Religion, 14,* 223-250.

Greenway, A. P., Milne, L. C., & Clarke, V. (2003). Personality variables, self-esteem and depression and an individual's perception of God. *Mental Health, Religion and Culture, 6(1),* 45-58.

Hall, T. W., & Brokaw, B. F. (1995). The relationship of spiritual maturity to level of object relations development and God image. *Pastoral Psychology, 43,* 373-391.

Hall, T. W., Brokaw, B. F., Edwards, K. J., & Pike, P. L. (1998). An empirical exploration of psychoanalysis and religion: Spiritual maturity and object relations development. *Journal for the Scientific Study of Religion, 37,* 302-313.

Harris, J. I., Erbes, C. R., Engdahl, B. E., Olson, R. H. A., Winskowski, A. M., & McMahill, J. (2008). Christian religious functioning and trauma outcomes. *Journal of Clinical Psychology, 64,* 17-29.

Harrison, M. O., Koenig, H. G., Hay, J. C., Eme-Akwari, A. G., Pargament, K. I. (2001). The epidemiology of religious coping: A review of recent literature. *International Review of Psychiatry, 13,* 86-93.

Hathaway, W. L., & Pargament, K. I. (1990). Intrinsic religiousness, religious coping, and psychosocial competence: A covariance structure analysis. *Journal for the Scientific Study of Religion, 29,* 423-441.

Hazan, C., & Shaver, P. R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology, 52,* 511-524.

Hayden, B. B., Park, K. S., McQuoid, D. R., Hays, J. C., & Steffens, D. C. (2003). The impact of religious practice and religious coping on geriatric depression. *International Journal of Geriatric Psychiatry, 18,* 905-914.

Hebert, R., Zdaniuk, B., Schulz, R., & Scheier, M. (2009). Positive and negative religious coping and well-being in women with breast cancer. *Journal of Palliative Medicine, 12(6),* 537-545.

Henson, R. K., & Roberts, J. K. (2006). Use of exploratory factor analysis in published research: Common errors and some comment on improved practice. *Educational and Psychological Measurement, 66*, 393-416.

Heppner, P. P., Heppner, M. J., Lee, J. G., Wang, Y. W., Park, H. J., & Wang, L. F. (2006). Development and validation of a Collectivist Coping Style inventory. *Journal of Counseling Psychology, 53(1),* 107-125.

Herrera, A. P., Lee, J. W., Nanyonjo, R. D., Laufman, L. E., & Torres-Vigil, I. (2009). Religious coping and caregiver well-being in Mexican-American families. *Aging and Mental Health, 13(1),* 84-91.

Hesse, E. (1999). The adult attachment interview: Historical and current perspectives. In J. A. Cassidy & P. R. Shaver (Eds.), *Handbook and attachment : Theory, research, and clinical applications* (pp. 395-433). New York: Guilford Press.

Hills, J., Paice, J. A., Cameron, J. R., & Shott, S. (2005). Spirituality and distress in palliative care consultation. *Journal of Palliative Medicine, 8(4),* 782-788.

Hofstede, G. (1980). *Culture's consequences.* Beverly Hills, CA: Sage.

Hofstede, G. (1991). *Culture and organizations: Software of the mind.* London: McGraw-Hill.

Hsu, P. H. C., Krageloh, C. U., Shepherd, D., & Billington, R. (2009). Religion/spirituality and quality of life of international tertiary students in New Zealand: an exploratory study. *Mental Health, Religion & Culture, 12(4),* 385-399.

Hu, H. S. (2008). The role of caregiving on quality of parents with children having autism in Taiwan. Doctoral dissertation. Michigan State University. 157 pages.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6,* 1-55.

Huang, X. Y., Hung, B. J., Sun, F. K., Lin, J. D., & Chen, C. C. (2009). The experiences of carers in Taiwanese culture who have long-term schizophrenia in their families: A phenomenological study. *Journal of Psychiatric and Mental Health Nursing, 16,* 874-883.

Jalowiec, A., & Power, M. (1981). Stress and coping in hypertensive and emergency room patients. *Nursing Research, 30,* 10-15.

Jiang, B. Y. (2007). *The response of social work education in Taiwan under globalization.* Unpublished master's thesis, National Chi Nan University, Nantou, Taiwan.

Joung, E. S. (2006). Attachment and women's faith development. *Journal of Beliefs and Values, 27(2),* 145-155.

Kahle, P. A., & Robbins, J. M. (2004). *The power of spirituality in therapy: Integrating spiritual and religious beliefs in mental health practice.* New York: The Haworth Pastoral Press.

Khan, Z. H., & Watson, P. J. (2006). Construction of the Pakistani Religious Coping Practices Scale: Correlations with religious coping, religious orientation, and reactions to stress among Muslim university students. *The International Journal for the Psychology of Religion, 16(2),* 101-112.

Kirkpatrick, L. A. (1992). An attachment-theory approach to the psychology of religion. *International Journal for the Psychology of Religion, 2(1),* 3-28.

Kirkpatrick, L. A. (1997). A longitudinal study of changes in religious belief and behavior as a function of individual differences in adult attachment style. *Journal for the Scientific Study of Religion, 36(2),* 207-217.

Kirkpatrick, L. A. (1998). God as a substitute attachment figure: A longitudinal study of adult attachment style and religious change in college students. *Personality and Social Psychology Bulletin, 24(9),* 961-973.

Kirkpatrick, L. A. (1999). Attachment and religious representations and behavior. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 803-822). New York: Guilford Press.

Kirkpatrick, L. A. (2005). *Attachment, evolution, and the psychology of religion.* New York: The Guilford Press.

Kirkpatrick, L. A., & Shaver, P. R. (1990). Attachment theory and religion: Childhood attachments, religious beliefs, and conversion. *Journal for the Scientific Study of Religion, 29(3),* 315-334.

Kirkpatrick, L. A., & Shaver, P. R. (1992). An attachment-theoretical approach to romantic love and religious belief. *Personality and Social Psychology Bulletin, 18(3),* 266-275.

Koenig, H. G. (1995). Religion and older men in prison. *International Journal of Geriatric Psychiatry, 10,* 219-230.

Koenig, H. G. (1998). Religious attitudes and practices of hospitalized medically ill older adults. *International Journal of Geriatric Psychiatry, 13,* 213-224.

Koenig, H. G., Cohen, J. J., Blazer, D. G., Kudler, H. S., Krishnan, K. R. R., & Sibert, T. E. (1995). Religious coping and cognitive symptoms of depression in elderly medical patients. *Psychosomatics,* 36, 369-375.

Koenig, H. G., McCullough, M. E., & Larson, D. B. (2001). *Handbook of religion and health.* New York: Oxford University Press.

Koenig, H. G., Meador, K. G., Shelp, F., Goli, V., Cohen, H. J., Blazer, D. G., & Depasquale, R. (1992). Religious coping and depression in hospitalized medically ill men. *American Journal of Psychiatry, 149,* 1693-1700.

Koenig, H. G., Pargament, K. I., & Nielsen, J. (1998). Religious coping and health outcomes in medically ill hospitalized older adults. *Journal of Nervous and Mental Diseases, 186,* 513-521.

Kuo, T. T., & Ma, F. C. (2002). Symptom distresses and coping strategies in patients with non-small cell lung cancer. *Cancer Nursing, 25(4),* 309-317.

Lao, Y. L., & Lin, Y. C. (2000). The development of Taiwan Social Desirability Scale and the analysis of the psychological process. Doctoral dissertation of National Taiwan University, Department of Psychology.

Lavery, M. E., & O'Hea, E. L. (2010), Religious/spiritual coping and adjustment in individuals with cancer: Unanswered questions, important trends, and future directions. *Mental Health, Religion & Culture, 13(1),* 55-65.

Lazarus, R. S., & Folkman, S. (1984). *Appraisal and coping*. New York: Springer.

Lee, Y., Lin, P. Y., Hsu, S. T., Yu, C. C., Yang, L. C., & Wen, J. K. (2008). Comparing the use of the Taiwanese Depression Questionnaire and Beck Depression Inventory for screening depression in patients with chronic pain. *Chang Gung Medical Journal, 31(4),*369-376.

Lee, Y., Yang, M. J., Lai, T. J., Chiu, N. M., & Chau, T. T. (2000). Development of the Taiwanese Depression Questionnaire. *Chang Gung Medical Journal, 23,* 688-694.

Lewis, M. (1997). *Altering fate: Why the past does not predict the future*. New York: Guilford.

Lin, C. S., Wang, S. S. Chang, C. L., & Shih, F. J. (2010). Dark-recovery experiences, coping strategies, and needs of adult heart transplant recipients in Taiwan. *Transplantation Proceedings, 42,* 940-942.

Liu, J. H., Yang, M. R., & Su, D. P. (2000). The validity research on the scores of the Taiwanese depression screening questionnaires. *Taiwan Psychiatric Medical 39th Annual Meeting Report.*

Main, M. (1999). Attachment theory: Eighteen points with suggestions for future studies. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 845-887). New York: Guilford Press.

Main, M., & Goldwyn, R. (1998). *Adult attachment scoring and classification system.* Unpublished manuscript, University of California at Berkeley.

Main, M., & Solomon, J. (1986). Discovery of an insecure-disorganized/disoriented attachment pattern. In T. B. Brazelton & M. Yogman (Eds.), *Affective development in infancy* (pp. 95-124). Norwood, NJ: Ablex.

Marsh, H. W., Hau, K.-T., & Wen, Z. (2004). In search of golden rules: Comment on hypothesis-testing approaches to setting cutting off values for fit indexes and dangers in overgeneralizing Hu and Bentler's (1999) findings. *Structural Equation Modeling, 11,* 320-341.

Marterelle, M. K., & Brock, L. J. (2008). Religion and spirituality as a resource in marital and family therapy. *Journal of Family Psychotherapy, 19(4),* 330-344.

Maruyama, G. M. (1998). *Basics of structural equation modeling.* Thousand Oaks, CA: SAGE Publications.

Matsunaga, M., (2010). How to factor-analyze your data right: Do's, don'ts, and how-to's. *International Journal of Psychological Research, 3(1),* 97-110.

McConnell, K. M., Pargament, K. I., Ellison, C. G., & Flannelly, K. J. (2006). Examining the links between spiritual struggles and symptoms of psychopathology in a national sample. *Journal of Clinical Psychology, 62,* 1469-1484.

McDonald, A., Beck, R., Allison, S., & Norsworthy, L. (2005). Attachment to God and parents: Testing correspondence vs. compensation hypotheses. *Journal of Psychology and Christianity, 24(1),* 21-28.

McIntosh, D. N., Silver, R. C., & Wortman, C. B. (1993). Religion's role in adjustment to a negative life event: Coping with the loss of a child. *Journal of Personality and Social Psychology, 65(4),* 812-821.

Merrill, R., Read, C., & LeCheminant, A. (2009). The influence of positive and negative outcomes associated with stress among college students. *Mental Health, Religion & Culture, 12(5),* 501-511.

Miller, J., McConnell, T., & Klinger, T. (2007). Religiosity and spirituality: Influence on quality of life and perceived patient self-efficacy among cardiac patients and their spouses. *Journal of Religion & Health, 46(2),* 299-313.

Miller, W. R. (Ed.). (1999). *Integrating spirituality into treatment: Resources for practitioners.* Washington, DC: American Psychological Association.

Miller, W. R., & Thoresen, C. E. (1999). Spirituality and health. In W. R. Miller (Ed.), *Integrating spirituality into treatment* (pp. 3-18). Washington, DC: American Psychological Association.

Miner, M. (2009). The impact of child-parent attachment, attachment to God and religious orientation on psychological adjustment. *Journal of Psychology and Theology, 37(2),* 114-124.

Murphy, S. A., & Johnson, L. C. (2003). Finding meaning in a child's violent death: A five-year prospective analysis of parents' personal narratives and empirical data. *Death Studies, 27,* 381-404.

Namini, S., & Murken, S. (2009). Self-chosen involvement in new religious movements (NRMs): well-being and mental health from a longitudinal perspective. *Mental Health, Religion and Culture, 12(6)*, 561-585.

Oyserman, D., Coon, H. M., & Kemmelmeier, M. (2002). Rethinking individualism and

collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological*

Bulletin, 128, 3-72.

Pargament, K. I. (1997). *The psychology of religion and coping: Theory, research, practice*. New

York: The Guilford Press.

Pargament, K. I. (1999). Religious/spiritual coping. In *Multidimentional measurement of*

religiousness, spirituality for use in health research (pp. 43-56). Kalamazoo, MI: Fetzer

Institute.

Pargament, K. I., Ensing, D. S. Falgout, K., Olsen, H., Reilly, B., Van Haitsma, K., & Warren, R.

(1990). God help me: I. Religious coping efforts as predictors of the outcomes to significant

negative life events. *American Journal of Community Psychology, 18,* 793-824.

Pargament, K. I., Kennell, J., Hathaway, W., Grevengoed, N., Newman, J., & Jones, W. (1988).

Religion and the problem-solving process: Three styles of coping. *Journal for the Scientific*

Study of Religion, 27, 90-104.

Pargament, K. I., Koenig, H. G., & Perez, L. M. (2000). The many methods of religious coping:

Development and initial validation of the RCOPE. *Journal of Clinical Psychology, 56(4),*

519-543.

Pargament, K. I., Koenig, H. G., Tarakeshwar, N., & Hahn, J. (2004). Religious methods as

predictors of psychological, physical, and spiritual outcomes among medically ill elderly

patients: A two-year longitudinal study. *Journal of Health Psychology, 9(6),* 713-730.

Pargament, K. I., Smith, B. W., Koenig, H. G., & Perez, L. (1998). Patterns of positive and

negative religious coping with major life stressor. *Journal for the Scientific Study of*

Religion, 37, 710-724.

Pargament, K. I., Zinnbauer, B. J., Scott, A. B., Butter, E. M., Zerowin, J., & Stanik, P. (2003). Red flags and religious coping: Identifying some religious coping signs among people in crisis. *Journal of Clinical Psychology, 59,* 1335-1348.

Pearce, M. J., Singer, J. L., & Prigerson, H. G. (2006). Religious coping among caregivers of terminally ill cancer patients – main effects and psychosocial mediators. *Journal of Health Psychology, 11(5),* 743-759.

Peterman, A. H., Fitchett, G., & Brady, M. J. (2002). Measuring spiritual well-being in people with cancer: The functional assessment of chronic illness theory – spiritual well-being scale (FACIT-Sp). *Annuals of Behavioral Medicine, 24(1),* 49-58.

Phillips, R. E., & Stein, C. H. (2007). God's will, God's punishment, or God's limitations? Religious coping strategies reported by young adults living with serious mental illness. *Journal of Clinical Psychology, 63(6),* 529-540.

Plante, T. G., & Boccaccini, M. (1997). The Santa Clara Strength of Religious Faith Questionnaire. *Pastoral Psychology, 45(5),* 375-387.

Post, B. C., & Wade, N. G. (2009). Religion and spirituality in psychotherapy: A practice-friendly review of research. *Journal of Clinical Psychology: In Session, 65(2),* 131-146.

Proctor, M. T., Miner, M., McLean, L., Devenish, S, & Bonab, B. G. (2009). Exploring Christians' explicit attachment to God representations: The development of a template for assessing attachment to God experiences. *Journal of Psychology and Theology, 37(4),* 245-264.

Reinert, D. F. (2005). Spirituality, self-representations, and attachment to parents: A longitudinal study of Roman Catholic college seminarians. *Counseling and Values, 49,* 226-238.

Richards, P. S., & Bergin, A. E. (Eds.). (2000). *Handbook of psychotherapy and religious diversity*. Washington, DC: American Psychological Association.

Rivera-Ledesma, A., & Montero-Lopez, M. (2007). Medidas de afrontamiento religioso y espiritualidad en adultos mayors Mexicanos. *Salud Mental, 30(1),* 39-46).

Rosmarin, D. H., Pargament, K. I., Krumrei, E. J., & Flannely, K. J. (2009). Religious coping among Jews: Development and initial validation of the JCOPE. *Journal of Clinical Psychology, 65(7),* 670-683.

Ross, C. E. (1990). Religion and psychological distress. *Journal for the Scientific Study of Religion, 29,* 236-245.

Rowatt, W. C., & Kirkpatrick, L. A. (2002). Two dimensions of attachment to God and their relation to affect, religiosity, and personality constructs. *Journal for the Scientific Study of Religion, 41(4),* 637-651.

Schottenbauer, M. A., & Spernak, S. M., & Hellstrom, I. (2007). Relationship between family religious behaviors and child well-being among third-grade children. *Mental Health, Religion & Culture, 10(2),* 191-198.

Schuengel, C., Bakersmans-Kranenburg, M. J., & Van Ijzendoorn, M. H. (1999). Frightening maternal behavior linking unresolved loss and disorganized infant attachment. *Journal of Consulting and Clinical Psychology, 67,* 54-63.

Schuster, M. A., Stein, B. D., Jaycox, L. H., Collins, R. L., Marshall, G. N., Elliott, M. N., et al. (2001). A national survey of stress reactions after the September 11, 2001, terrorist attacks. *New England Journal of Medicine, 345,* 1507-1512.

Shek, D. T. (1991). What does the Chinese version of the Beck Depression Inventory measure in

    Chinese students – general psychopathology or depression? *Journal of Clinical Psychology,*

    47, 381-390.

Shin, H. (2009). Asian American college students' parental attachment and their relationship

    with God. *Christian Education Journal, 6(2)*, 353-375.

Sim, T. N., & Loh, B. S. M. (2003). Attachment to God: Measurement and dynamics. *Journal of*

    Social and Personal Relationships, 20(3), 373-389.

Simpson, J. A., Rholes, W. S., & Nelligan, J. S. (1992). Support seeking and support giving

    within couples in an anxiety-provoking situation: The role of attachment styles. *Journal of*

    Personality and Social Psychology, 62, 434-446.

Smith, T. B., McCullough, M. E., & Poll, J. (2003). Religiousness and depression: Evidence for

    a main effect and the moderating influence of stressful life events. *Psychological Bulletin,*

    129, 614-636.

Steiger, J. H. (1980). Test for comparing elements of a correlation matrix. *Psychological Bulletin*

    87, 245-251.

Straub, J. D. (2009). *God attachment, romantic attachment, and relationship satisfaction in a*

    sample of evangelical college students, Unpublished doctoral dissertation, Liberty

    University.

Szewczyk, L. S., & Weinmuller, E. B. (2005). Religious aspects of coping with stress among

    adolescents from families with alcohol problems. *Mental Health, Religion & Culture, 9(4),*

    389-400.

Tarakeshwar, N., Vanderwerker, L. C., Paulk, E., Pearce, M. J., Kasl, S. V., & Prigerson, H. G. (2006). Religious coping is associated with the quality of life of patients with advanced cancer. *Journal of Palliative Medicine, 9(3),* 646-657.

The WHOQOL Group. (1994). Development of the WHOQOL: Rationale and current status. *International Journal of Mental Health, 23,* 24-56.

The WHOQOL Group (1998). Development of the World Health Organization WHOQOL – BREF quality of life assessment. *Psychological Medicine, 28,* 551-558.

The WHOQOL-Taiwan Group. (2000). *The user's manual of the development of the WHOQOL-BREF Taiwan version, 1st ed.* Taipei, Taiwan: WHOQOL-Taiwan Group.

Thompson, B. (2004). *Exploratory and confirmatory factor analysis: Understanding concepts and applications,* Washington, D.C.: American Psychological Association.

Thompson, M. P., & Vardaman, P. J. (1997). The role of religion in coping with loss of a family member to homicide. *Journal for the Scientific Study of Religion, 36,* 44-51.

Thune-Boyle, I. C., Stygall, J. A., Keshtgar, M. R., & Newman, S. P. (2006). Do religious/spiritual coping strategies affect illness adjustment in patients with cancer? A systematic review of the literature. *Social Science and Medicine, 63(1),* 151-164.

Triandis, H. C., Chan, D. K. S., Bhawuk, D. P. S., Iwao, S., & Sinha, J. B. P. (1995). Multimethod probes of allocentrism and idiocentrism. *International Journal of Psychology, 30(4),* 461-480.

Tsevat, J., Leonard, A. C., Szaflarski, M., Sherman, S. N., Cotton, S., Mrus, J. M., et al. (2009). Change in quality of life after being diagnosed with HIV: A multicenter longitudinal study. *AIDS Patient Care and STDs, 23(11),* 931-937.

Tzeng, H. M., &Yin, C. Y. (2008). Religious practices of inpatients and their families. *Journal of Holistic Nursing, 26(2),* 98-106.

United States Department of State. (2010). 2010 report on international religious freedom – Taiwan. Available at http://www.unhcr.org/refworld/docid/4cf2d062c.html

van Dyke, C. J., Glenwick, D. S., Cecero, J. J., & Kim, S. K. (2009). The relationship of religious coping and spirituality to adjustment and psychological distress in urban early adolescents. *Mental Health, Religion & Culture, 12(4),* 369-383.

van IJzendoorn, M. H. (1995). Adult attachment representations, parental responsiveness, and infant attachment: A meta-analysis on the predictive validity of the Adult Attachment Interview. *Psychological Bulletin, 117*, 387-403.

Wang, C.-W., Chan, C. L. W., Ng, S.-M., Ho, A. H. Y. (2008). The impact of spirituality on health-related quality of life among Chinese older adults with vision impairment. *Aging and Mental Health, 12(2),* 267-275.

Wildes, K. A., Miller, A. R., de Majors, S. S. M., & Ramirez, A. G. (2009). The religiosity/spirituality of Latina breast cancer survivors and influence on health-related quality of life. *Psycho-Oncology, 18,* 831-840.

Williams, B. (2003). The worldview dimensions of individualism and collectivism: Implications for counseling. *Journal of Counseling and Development, 81,* 370-374.

Wu, C., & Jang, L. C. (2005). Hedonic and utilitarian ad effects in collectivist culture. Working paper.

Yao, G., Chung, C. W., Yu, C. F., & Wang, J. D. (2002). Development and verification of validity and reliability of the WHOQOL-BREF Taiwan Version. *Journal of Formos Medical Association, 101(5),*342-351.

Yamaguchi, S., Kuhlman, D. M., & Sugimori, S. (1995). Personality correlates if allocentric

    tendencies in individualist and collectivist cultures. *Journal of Cross-Cultural Psychology,*

    26(6): 658-672.

Yang, M. J., & Shi, C. H. (2001). The validity and reliability research of the verified Taiwanese

    Depression Questionnaire. *The 40th Annual Meeting Report of the Taiwan Psychiatric*

    Association.

Yen, J. Y., Ko, C. H., Yang, M. J., Shi, W. C., Huang, W. C., Lian, Y. D., et al. (2005).

    Screening depression in the community: Comparison between the Taiwanese Depression

    Questionnaire and the 5-item Brief Symptom Rating Scale. *Taipei City Medical Journal,*

    2(8), 737-744.

Zehnder, D., Prchal, A., Vollrath, M., & Landolt, M. A. (2006). Prospective study of the

    effectiveness of coping in psychiatric patients. *Child Psychiatry and Human Development,*

    36(3), 351-368.

Zheng, G. C. (2007). *The changes of culture values: Starting from Hofstede's research.*

    Unpublished master's thesis, National Chi Nan University, Nantou, Taiwan.

APPENDIXES

Appendix A: Survey Invitation Letter to Churches

親愛的牧者同工們：

　　主內平安。這一封信是想要請您考慮准許我在貴教會進行一項有關信仰的問卷調查。在您作任何決定前，請您先耐心看完這封信。

　　首先讓我來簡單地自我介紹並解釋這個研究的性質。我名叫焦如品，是一位師母也是一位宣教士。過去與先生楊敦興牧師在美國一所華人教會牧會十七年，前年因上帝呼召，全家五口從美國返台宣教。在美國服事期間，我因看見教會內外人們對輔導龐大的需要，和自感所學不足，開始進修諮商輔導，並於回台之前完成了所需修習的課程，現在正處於寫博士論文的階段。

　　基於想要對台灣的教會和弟兄姊妹有所貢獻的理念，同時鑒於台灣輔導界對基督教輔導研究的缺乏，我的論文主要是翻譯和測試兩個宗教量表–「與上帝依附關係量表」和「簡短版宗教因應量表」。因為我相信有了合適的測驗工具，才能有進一步的學術研究和實際的應用。為了完成這個研究，我需要至少 300 位參與者的幫助。您的教會與會友被選上參加這次的研究，因為貴教會是台灣教會的代表之一。

　　其實參加的人只需要花 20 到 30 分鐘左右的時間填寫幾份問卷，問卷不記名，完全不會有任何安全上或隱私上的顧慮。問卷的結果也不會涉及個人或個別的教會，所以絕不會提到貴教會的名字或任何資訊。同時即使貴教會答應參加，個別會友是否參與也是憑個人意願，完全不勉強。進行問卷調查的時間也將完全尊重貴教會的決定。在填寫問卷後我會贈送一份小禮物給參與者表示謝意。

　　我在此很誠懇地要求您准許我在貴教會進行這一項調查，我相信這是上帝要我做的事，也相信這會對我將來的服事，以及對台灣的教會和基督徒們有幫助。若您答應讓我在貴教會做這問卷，我可以為您的教會舉辦一場講座或提供諮詢，演說題目由貴教會來決定，可以是有關心理衛生、婚姻家庭、子女教養、情緒困擾，或任何心理方面的相關議題。將來若是貴教會在這方面有需要，我仍可以提供幫助。

　　我於幾天後會以電話聯絡貴教會，若您願意我也可以到貴教會，跟您進一步解釋這個研究和問卷調查的過程，並讓您親自審閱問卷的內容，或提供任何您需要的資料。不論您與教會同工們最後的決定是甚麼，我還是很高興有這個機會可以認識貴教會，也很感謝您慎重考慮這件事。希望將來有機會能為貴教會做進一步的服務。

<div align="right">敬祝</div>

主恩滿溢

<div align="center">主的僕人</div>

<div align="center">焦如品敬上</div>

Appendix B: Recommendation Letter from Dissertation Committee (English Version)

LIBERTY
U N I V E R S I T Y™

Dear pastor or coworker:

This letter is to highly recommend Mrs. Ju-Ping Yeo and her research to you. I ask you to kindly consider giving her the permission to conduct a survey in your church.

Mrs. Ju-Ping Yeo is a Ph.D. student of counseling department at Liberty University in the United States. She completed her doctoral course work in 2009 and returned to Taiwan to write her doctoral dissertation. Her dissertation is about the applicability of two Western religious instruments for the Taiwanese Christians. The dissertation committee is composed of two professors from Liberty University (Dr. Fernando Garzon and Dr. John Thomas) and one professor from National Taiwan University (Dr. Grace Yao). With the scarcity of well-designed religious instruments in Taiwan, we believe her research will bring contributions to the academic field as well as to Christ's churches.

To accomplish the goals of her dissertation, we will need your help. In order to test the usefulness of the two religious instruments for Taiwan's Christians, she needs to recruit around 300 participants to complete the survey. Your church and church members are selected as part of our research sample because your church represents part of the Christian churches in Taipei. Your participation and cooperation are very important to her. Without your help, she might not be able to complete her study and could not further her service for the Lord and people in Taiwan.

Mrs. Yeo returned to Taiwan with her family as a missionary to respond to God's call in 2009 after being a pastor's wife for 16 years in the US. She believes God will use her training in counseling and theology as well as her counseling and pastoral experiences to help churches and people in Taiwan. She needs your help to accomplish this part of God's plan for her life. Thank you for your support of this research in any way. Even though your church decides not to participate, your willingness to consider is still deeply appreciated by the entire research team. May God continue to bless and use your church to expand His kingdom!

Chair of the Dissertation committee,

Fernando Garzon, Psy. D.
Associate Professor
Liberty University

Appendix C: Recommendation Letter from Dissertation Committee (Chinese Version)

LIBERTY
U N I V E R S I T Y

Center for Counseling and Family Studies

親愛的牧者或主內同工們平安:

　　我這封信是要向您大力推薦焦如品姊妹以及她的研究。我希望您能准許她在貴教會進行問卷調查。

　　焦如品姊妹是美國利柏提基督教大學輔導系的博士生。她已於 2009 年完成她的博士課程，並回到台灣撰寫博士論文。她的博士論文是要測試兩個西方的宗教量表對台灣基督徒的適用性。論文委員會由兩位利柏提大學的教授(Dr. Fernando Garzon, Dr. John Thomas)和一位台灣大學的教授(姚開屏博士)組成。鑒於台灣設計良好的宗教量表還很稀少，我們相信焦姊妹的研究將對台灣的學術界以及基督的教會都帶來貢獻。

　　為了完成這些目標，我們需要您的協助。為了要測試這兩個宗教量表對台灣基督徒的適用性，焦姊妹需要找三百位左右的參與者來完成問卷。貴教會和會友被選為其中之一的參與者，因為貴教會是台北基督教會的代表之一。您的參與和配合將對她非常重要，沒有您的幫助，她也許將無法完成她的學業，也無法進一步擴展她在台灣對主對人的服事。

　　在美國華人教會做了 16 年的師母後，焦姊妹於 2009 年回應神的呼召，與全家一起回台宣教。她相信上帝會用她在輔導及神學上的訓練，以及她在輔導及牧養上的經驗來幫助台灣的教會及人們。她需要您幫助她一起完成神在她生命中這部分的計劃。謝謝您對這個研究在各方面的支持。即使貴教會決定不參與這項研究，論文委員會的每位成員仍對您慎重考慮此事致上最深的謝意。最後願上帝繼續賜福並使用貴教會來擴展祂的國度。

論文委員會主席

Dr. Fernando Garzon

利柏提大學教授

Appendix D: Informed Consent Information for In-Church Survey Participants

　　你被邀請參加這項有關「與上帝依附關係量表」和「宗教因應方式量表-簡短版」對台灣基督徒的適用性研究。您被選為其中一名參與者，因為貴教會被本研究選為其中一個參與的教會，而您是貴教會中一名成年基督徒。請您在同意參與這個研究之前先讀以下的說明，並提出任何你可能有的問題。

這個研究是由焦如品，一位美國利伯提大學諮商輔導系的博士候選人，所負責執行。

背景資料
這個研究的目的是要翻譯兩個西方的宗教量表，「與上帝依附關係量表」和「簡短版信仰因應量表」，並測試它們對台灣基督徒的適用性。

過程
如果您同意參與這項研究，我們將要求您在此時完成以下的問卷。在填寫問卷時，您可以問任何有關問卷的問題。當您完成後，請將問卷交給負責人。

這個研究的危險和好處
這個研究可能會有極小的危險。參加者有極小的可能會因作答某些題目而覺得情緒低落。如果這樣的情形發生，您可以在會後跟研究人員談，研究人員會確保您得到需要的幫助或轉介(教牧輔導或專業心理輔導)。您也可以在之後與研究人員聯絡，她會幫助您得到合適的轉介。

補償:
為了表示我們的感謝，您填完問卷後我們將贈送您一份小禮物。無論您如何回答某一問題，或選擇不回答某一問題，您仍會得到這份禮物。

保密問題
這個研究的任何資料都將維持保密並匿名。所蒐集到的研究資料將被妥善保管，只有研究者才能接近這些記錄。未來這個研究的結果只會以統計數字發表，不會提到任何個人的資料。

參與研究的自願性
您對這項研究的參與完全是自願性的。不論您決定是否參與這項研究，您的決定不會影響您現在或未來與利伯提大學或與您教會的關係。如果您決定要參加，您仍有自由不回答其中任何一項問題，或在任何時候決定退出研究，而不影響這些關係。

當您有問題時與我們的聯絡方式:
負責這項研究的研究者是美國利伯提大學的富蘭多•各桑博士和焦如品女士。現在您有任何問題，請盡量提出。如果之後您有任何問題，也歡迎與焦如品女士電話聯絡(0981001934)或電郵聯絡 (jyeo@liberty.edu)。或您也可以與富蘭多•各桑博士聯絡 (Dr. Fernando Garzon, 1971 University Blvd, Suite 1582, Lynchburg, VA 24502，或email:

fgarzon@liberty.edu)。如果您對這項研究有任何顧慮，或想聯絡研究員以外的人，您也可以與利伯提大學的審查委員會聯絡 (email: irb@liberty.edu)。

這份資訊將讓您保留，不用交回。

非常感謝您的參與。您的參與對我們的研究非常重要也有極大的幫助。願上帝祝福您。

以下是一些教牧或專業輔導機構機聯絡電話及網址，供您參考:

宇宙光全人關懷中心 02-2363-2107 www.cosmiccare.org
珍愛家庭中心 02-2718-1110 ext.222 www.frpctw.org.tw/fcc/homepage.html
衛理協談中心 02-2700-3034 www.wcc.url.tw
加利利成長協談中心 02-2517-0991 www.team.tw/ccg

Appendix E: Informed Consent for Take-Home Survey Participants

　　你被邀請參加這項有關「與上帝依附關係量表」和「宗教因應方式量表-簡短版」對台灣基督徒的適用性研究。您被選為其中一名參與者，因為貴教會被本研究選為其中一個參與的教會，而您是貴教會中一名成年信徒。請您在同意參與這個研究之前先讀以下的說明，並提出任何你可能有的問題。

這個研究是由焦如品女士，一位美國利伯提大學諮商輔導系的博士候選人，所負責執行。

背景資料
這個研究的目的是要翻譯兩個西方的宗教量表，「與上帝依附關係量表」和「簡短版信仰因應量表」，並測試它們對台灣基督徒的適用性。

過程
如果您同意參與這項研究，我們將要求您在此時完成以下的問卷，並於完成後將問卷放在我們給您的信封內，將信封封起，交給您的傳道人。在填寫問卷時，如果你有任何有關問卷的問題，您可以藉著電子郵件或打電話與研究者聯絡。焦如品女士的電話是: 02-23643542, 0981001934, 電郵地址是: jupingyeo@gmail.com
這份問卷是匿名性質，所以請不要在問卷上寫名字。

這個研究的危險和好處
這個研究可能會有極小的危險。參加者有極小的可能會因作答某些題目而覺得情緒低落。如果這樣的情形發生，您可以與研究人員聯絡，研究人員會確保您得到需要的幫助或轉介您到合適的教牧輔導或專業心理輔導。這份資料的最後我們也列有一些教牧輔導和基督徒專業輔導的聯絡資訊，供您參考。

補償:
為了表示我們的感謝，您填完問卷後我們將贈送您一份小禮物。無論您如何回答某一問題，或選擇不回答某一問題，您仍會得到這份禮物。

保密問題
由於這個問卷是匿名性質，所以您的任何個人資料絕不會被人認出。在未來所發表的研究結果中，我們也絕不會提到任何個人的姓名或資料。我們對所蒐集到的研究資料將妥善保管，只有研究者才能接近這些記錄。沒有您的同意，我們不會把您的個人資料或聯絡方式給任何人或任何機構。

參與研究的自願性
您對這項研究的參與完全是自願性的。不論您決定是否參與這項研究，您的決定不會影響您現在或未來與利伯提大學或與您教會的關係。如果您決定要參加，您仍有自由不回答其中任何一項問題，或在任何時候決定退出研究，而不影響這些關係。

當您有問題時與我們的聯絡方式**:**

負責這項研究的研究者是美國利伯提大學的富蘭多˙各桑博士和焦如品女士。如果您有任何問題，歡迎與焦如品女士電話聯絡(02-23643542, 0981001934)或電郵聯絡 (jyeo@liberty.edu)。或您也可以與富蘭多˙各桑博士聯絡 (Dr. Fernando Garzon, 1971 University Blvd, Suite 1582, Lynchburg, VA 24502)，或email: fgarzon@liberty.edu)。如果您對這項研究有任何顧慮，或想聯絡研究員以外的人，您也可以與利伯提大學的審查委員會聯絡(email: irb@liberty.edu)。

這份資訊將讓您保留，不用交回。

非常感謝您的參與。您的參與對我們的研究非常重要也有極大的幫助。願上帝祝福您。

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衛理協談中心 02-2700-3034 www.wcc.url.tw
加利利成長協談中心 02-2517-0991www.team.tw/ccg

受試者需知

　　你被邀請參加這項有關「與上帝依附關係量表」和「宗教因應方式量表-簡短版」對台灣基督徒的適用性研究。您被選為其中一名參與者，因為貴教會被本研究選為其中一個參與的教會，而您是貴教會中一名成年基督徒。您同時同意參加再測。請您在同意參與這個研究之前先讀以下的說明，並提出任何你可能有的問題。

這個研究是由焦如品，一位美國利伯提大學諮商輔導系的博士候選人，所負責執行。

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這個研究的目的是要翻譯兩個西方的宗教量表，「與上帝依附關係量表」和「簡短版信仰因應量表」，並測試它們對台灣基督徒的適用性。

過程

如果您同意參與這項研究，我們將要求您完成以下的問卷，並用附上的回郵信封郵寄給研究者，或用電子郵件寄回給研究者。在填寫問卷時，您可以藉著電子郵件或打電話給研究者，詢問任何有關問卷的問題。和研究者的聯絡方式請參見後面與我們的聯絡方式。

這個研究的危險和好處

這個研究可能會有極小的危險。參加者有極小的可能會因作答某些題目而覺得情緒低落。如果這樣的情形發生，您可以在會後跟研究人員談，研究人員會確保您得到需要的幫助或轉介(教牧輔導或專業心理輔導)。您也可以在之後與研究人員聯絡，她會幫助您得到合適的轉介。您也可以參考後面的轉介資訊。

補償:

為了表示我們的感謝，您填完問卷後我們將贈送您一份小禮物。無論您如何回答某一問題，或選擇不回答某一問題，您仍會得到這份禮物。

保密問題

這個研究的任何資料都將維持保密並匿名。所蒐集到的研究資料將被妥善保管，只有研究者才能接近這些記錄。未來這個研究的結果只會以統計數字發表，不會提到任何個人的資料。我們也絕不會將您的個人資料或聯絡資料在未經您的允許下給任何人或任何機構。

參與研究的自願性

您對這項研究的參與完全是自願性的。不論您決定是否參與這項研究，您的決定不會影響您現在或未來與利伯提大學或與您教會的關係。如果您決定要參加，您仍有自由不回答其中任何一項問題，或在任何時候決定退出研究，而不影響這些關係。

當您有問題時與我們的聯絡方式:

負責這項研究的研究者是美國利伯提大學的富蘭多•各桑博士和焦如品女士。現在您有任何問題，請盡量提出。如果之後您有任何問題，也歡迎與焦如品女士電話聯絡 (0981001934)或電郵聯絡 (jyeo@liberty.edu)。或您也可以與富蘭多•各桑博士聯絡 (Dr. Fernando Garzon,1971 University Blvd, Suite 1582, Lynchburg, VA 24502)，或email: fgarzon@liberty.edu)。如果您對這項研究有任何顧慮，或想聯絡研究員以外的人，您也可以與利伯提大學的審查委員會聯絡 (email: irb@liberty.edu)

以下是一些教牧或專業輔導機構機聯絡電話及網址，供您參考:

宇宙光全人關懷中心 02-2363-2107 www.cosmiccare.org
珍愛家庭中心 02-2718-1110 ext.222 www.frpctw.org.tw/fcc/homepage.html
衛理協談中心 02-2700-3034 www.wcc.url.tw
加利利成長協談中心 02-2517-0991 www.team.tw/ccg/

同意申明:
我已經看完以上的資訊。我已經提出我所有的問題並得到答案。我同意參與這次的研究和再測。

簽名: _____ 日期: _____

研究員簽名: _____ 日期:_____

Appendix G: Cover Letter for Retest Participants

親愛的主內弟兄姊妹:

　　平安。幾週前我曾到您的教會作一項問卷調查，感謝您的參與。當時您在問卷上表示您願意參加幾週後的第二次再測，並留下您的聯絡地址，因此我在此將問卷寄上。請您看了受試者需知後在簽名處簽名，與完成的問卷，用我附上的回郵信封寄回給我。並請盡量於一週內寄回問卷。為了表示謝意，我隨信附上一份小禮物聊表心意。

　　您所作的問卷，是一份跟上次一樣的問卷。每頁的問題有兩面，請注意不要遺漏任何題目，並請您每題只選出一個答案，不要複選。如果有任何問題，請與我聯絡。我的電話是: 02-23643542。

　　再次提醒您，您需要寄回的有您完成的問卷，和一份簽了名的受試者需知。並請您於一週內或盡快寄回。再次謝謝您的參與，您真的幫了我很大的忙。願全能慈愛的上帝親自記念報答您。

　　　　　　　　　　　　　　　　　　　　　　　　　敬祝

以馬內利

　　　　　　　　　　　　　　主內
　　　　　　　　　　　　　　焦如品敬上

Appendix H: Demographic Sheet for Survey Participants

個人基本資料

性別: ＿＿＿男 ＿＿＿女

年齡: ＿＿＿

教育程度: ＿＿小學或以下 ＿＿中學 ＿＿高中/高職 ＿＿大學/專科 ＿＿研究所或以上

婚姻狀況: ＿＿＿單身 ＿＿＿已婚 ＿＿＿喪偶 ＿＿＿離婚

您是基督徒嗎? ＿＿＿是 ＿＿＿不是

如果您是基督徒，您信主多久了? ＿＿＿＿ 年

您隸屬或參加哪個教會? ＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

您參加這個教會多久了? ＿＿＿＿ 年

在最近三年內，您是否曾在生活中經歷重大事故或不幸，像是親人過世、生大病或手術、意外事故、離婚、失業、或生活困難等? ＿＿＿有 ＿＿＿沒有

以下是給願意參加第二次測試的人填寫，若您不參加再試則不用填寫。參加第二次測試者我們將贈送另一份小禮物。

如果您願意參加第二次的測試，請留下您的姓名和聯絡資訊:

姓名: ＿＿＿＿＿＿＿＿＿＿＿＿＿

地址: ＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

電話: ＿＿＿＿＿＿＿＿＿＿＿＿＿＿

E-mail: ＿＿＿＿＿＿＿＿＿＿＿＿＿＿

非常感謝您的幫忙，願上帝祝福您!

Appendix I: Attachment to God Inventory (English Version)

The following statements concern how you feel about your relationship with God. We are interested in how you generally experience your relationship with God, not just in what is happening in that relationship currently. Respond to each statement by indicating how much you agree or disagree with it. Write the number in the space provided, using the following rating scale.

1	2	3	4	5	6	7

Disagree   Agree
Strongly   Strongly

_____ 1. I worry a lot about my relationship with God.

_____ 2. I just don't feel a deep need to be close to God.

_____ 3. If I can't see God working in my life, I get upset or angry.

_____ 4. I am totally dependent upon God for everything in my life.

_____ 5. I am jealous at how God seems to care more for others than for me.

_____ 6. It is uncommon for me to cry when sharing with God.

_____ 7. Sometimes I feel that God loves others more than me.

_____ 8. My experiences with God are very intimate and emotional.

_____ 9. I am jealous at how close some people are to God.

_____10. I prefer not to depend too much on God.

_____11. I often worry about whether God is pleased with me.

_____12. I am uncomfortable being emotional in my communication with God.

_____13. Even if I fail, I never question that God is pleased with me.

_____14. My prayers to God are often matter-of-fact and not very personal.

_____15. Almost daily I feel that my relationship with God goes back and forth

       from "hot" to "cold."

_____16. I am uncomfortable with emotional displays of affection to God.

_____17. I fear God does not accept me when I do wrong.

_____18. Without God I couldn't function at all.

_____19. I often feel angry with God for not responding to me when I want.

_____20. I believe people should not depend on God for things they should do for

themselves.

_____21. I crave reassurance from God that God loves me.

_____22. Daily I discuss all of my problems and concerns with God.

_____23. I am jealous when others feel God's presence when I cannot.

_____24. I am uncomfortable allowing God to control every aspect of my life.

_____25. I worry a lot about damaging my relationship with God.

_____26. My prayers to God are very emotional

_____27. I get upset when I feel God helps others, but forgets about me.

_____28. I let God make most of the decisions in my life.

Appendix J: Attachment to God Inventory (Chinese Version)

與上帝依附關係量表

以下的陳述是您覺得自己與上帝的關係為何。我們想要了解您<u>向來是如何經歷與上帝的關係</u>，而不是您目前的狀況。請用以下的評量指標寫出您對每項陳述同意或不同意的程度。

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

完全不同意 很不同意 不同意 一半一半 同意 很同意 完全同意

_____ 1. 我非常擔憂自己與上帝的關係。

_____ 2. 我不覺得很需要親近上帝。

_____ 3. 如果我沒有感受到上帝在我生命中的作為，我就會感到沮喪或生氣。

_____ 4. 我在生活中的每件事上，都完全倚靠上帝。

_____ 5. 當上帝似乎看顧別人比看顧我多時，我會感到嫉妒。

_____ 6. 當我向上帝傾訴時我很少哭。

_____ 7. 有時候我覺得上帝愛別人比愛我更多。

_____ 8. 我與上帝的互動常是很親密且情感豐富。

_____ 9. 我很嫉妒有些人可以跟上帝很親密。

_____ 10. 我不喜歡太倚靠上帝。

_____ 11. 我常擔心上帝是否悅納我。

_____ 12. 當我跟上帝交談時，我若充滿了情緒，我會感到不太自在。

_____ 13. 即使我失敗了，我也從不懷疑上帝悅納我。

_____ 14. 我向上帝的禱告通常是陳述事實而不涉及個人感受。

_____ 15. 我幾乎天天都覺得自己跟上帝的關係是忽冷忽熱、反覆無常。

_____ 16. 我不習慣以充滿感情的方式來表達對上帝的情感。

_____ 17. 我害怕當我做錯事時，上帝會不接納我。

_____ 18. 沒有上帝我甚麼都不能做。

_____ 19. 當我渴望上帝的回應卻落空時，我往往會對上帝生氣。

_____ 20. 我認為人不該在自己當做的事上依賴上帝。

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_____ 21. 我渴望上帝一再向我保證祂愛我。

_____ 22. 每天我都會跟上帝討論我所有的問題與掛慮。

_____ 23. 當別人能感受到上帝的同在而我卻不能時，我會感到嫉妒。

_____ 24. 我對讓上帝來掌管我生活的每個層面感到不自在。

_____ 25. 我很擔心會破壞自己與上帝之間的關係。

_____ 26. 我對上帝的禱告常是充滿感情。

_____ 27. 當我覺得上帝幫助了別人卻忘了我時，我會感到很沮喪。

_____ 28. 生活中大部分的事情，我都讓上帝作決定。

Appendix K: Brief RCOPE (English Version)

Think about how you try to understand and deal with major problems in your life. To what extent is each involved in the way you cope?

1. I looked for a stronger connection with God.

   ___1. Not at all ___ 2. Somewhat ___ 3. Quite a bit ___ 4. A great deal

2. I sought God's love and care.

   ___1. Not at all ___ 2. Somewhat ___ 3. Quite a bit ___ 4. A great deal

3. I sought help from God in letting go of my anger.

   ___1. Not at all ___ 2. Somewhat ___ 3. Quite a bit ___ 4. A great deal

4. I tried to put my plans into action together with God.

   ___1. Not at all ___ 2. Somewhat ___ 3. Quite a bit ___ 4. A great deal

5. I tried to see how God might be trying to strengthen me in this situation.

   ___1. Not at all ___ 2. Somewhat ___ 3. Quite a bit ___ 4. A great deal

6. I asked forgiveness for my sins.

   ___1. Not at all ___ 2. Somewhat ___ 3. Quite a bit ___ 4. A great deal

7. I focused on religion to stop worrying about problems.

   ___1. Not at all ___ 2. Somewhat ___ 3. Quite a bit ___ 4. A great deal

8. I wondered whether God had abandoned me.

   ___1. Not at all ___ 2. Somewhat ___ 3. Quite a bit ___ 4. A great deal

9. I felt punished by God for my lack of devotion.

   ___1. Not at all ___ 2. Somewhat ___ 3. Quite a bit ___ 4. A great deal

10. I wondered what I did for God to punish me.

   ___1. Not at all ___ 2. Somewhat ___ 3. Quite a bit ___ 4. A great deal

11. I questioned God's love for me.

   ___1. Not at all ___ 2. Somewhat ___ 3. Quite a bit ___ 4. A great deal

12. I wondered whether my church had abandoned me.

   ___1. Not at all ___ 2. Somewhat ___ 3. Quite a bit ___ 4. A great deal

13. I decided the devil made this happen.

   ___1. Not at all ___ 2. Somewhat ___ 3. Quite a bit ___ 4. A great deal

14. I questioned the power of God.

   ___1. Not at all ___ 2. Somewhat ___ 3. Quite a bit ___ 4. A great deal

Appendix L: Brief RCOPE (Chinese Version)

簡明版信仰因應量表

想想看您是如何嘗試了解以及處理你生活中的重大難題或困境。**在面對困難時**，以下各個因應方法，您使用的程度為何?

1. 我尋求更加親近上帝。
   ___1. 一點也不　　___2. 有一點　　　　___3. 頗多　___4. 極多
2. 我尋求上帝的愛與看顧。
   ___1. 一點也不　　___2. 有一點　　　　___3. 頗多　___4. 極多
3. 我尋求上帝幫助我化解我的怒氣。
   ___1. 一點也不　　___2. 有一點　　　　___3. 頗多　___4. 極多
4. 我試著跟上帝一起實行我的計畫。
   ___1. 一點也不　　___2. 有一點　　　　___3. 頗多　___4. 極多
5. 我試著了解上帝在這樣的處境下會如何堅固我。
   ___1. 一點也不　　___2. 有一點　　　　___3. 頗多　___4. 極多
6. 我求上帝赦免我的罪。
   ___1. 一點也不　　___2. 有一點　　　　___3. 頗多　___4. 極多
7. 我會藉著定睛在信仰上使我停止憂慮。
   ___1. 一點也不　　___2. 有一點　　　　___3. 頗多　___4. 極多
8. 我懷疑上帝是否已經棄我於不顧。
   ___1. 一點也不　　___2. 有一點　　　　___3. 頗多　___4. 極多
9. 我覺得上帝懲罰我是因為我不夠愛主。
   ___1. 一點也不　　___2. 有一點　　　　___3. 頗多　___4. 極多
10. 我懷疑是不是我做了甚麼導致上帝懲罰我。
   ___1. 一點也不　　___2. 有一點　　　　___3. 頗多　___4. 極多
11. 我懷疑上帝對我的愛。
   ___1. 一點也不　　___2. 有一點　　　　___3. 頗多　___4. 極多
12. 我懷疑我的教會是否已經棄我於不顧。
   ___1. 一點也不　　___2. 有一點　　　　___3. 頗多　___4. 極多
13. 我認定這一切困難是出於魔鬼。
   ___1. 一點也不　　___2. 有一點　　　　___3. 頗多　___4. 極多
14. 我質疑上帝的能力。
   ___1. 一點也不　　___2. 有一點　　　　___3. 頗多　___4. 極多

Appendix M: Taiwanese Depression Questionnaire

台灣人憂鬱問卷

為了評估您的**身心健康**，下列問題請依據您**最近一個星期**以來，您對自己身體與情緒狀態知真正感覺，圈選一最能代表您的看法。

	沒有或極少 (每週一天以下)	有時候 (每週 1-2 天)	時常 (每週 3-4 天)	經常 (每週 5-7 天)
1. 我覺得想哭。	0	1	2	3
2. 我覺得心情不好。	0	1	2	3
3. 我覺得比以前容易發脾氣。	0	1	2	3
4. 我睡不好。	0	1	2	3
5. 我覺得不想吃東西。	0	1	2	3
6. 我覺得心肝頭或胸坎綁綁 (經常覺得胸口悶悶的)	0	1	2	3
7. 我覺得不輕鬆、不舒服(不爽快)。	0	1	2	3
8. 我覺得身體疲勞虛弱、無力 (身體 很虛、沒力氣、元氣、體力。)	0	1	2	3
9. 我覺得很煩。	0	1	2	3
10. 我覺得記憶力不好。	0	1	2	3
11. 我覺得做事時無法專心。	0	1	2	3
12. 我覺得想事情或做事時， 比平時要緩慢。	0	1	2	3
13. 我覺得比以前較沒信心。	0	1	2	3
14. 我覺得較會往壞處想。	0	1	2	3
15. 我覺得想不開，甚至想死。	0	1	2	3
16. 我覺得對甚麼事都失去興趣。	0	1	2	3
17. 我覺得身體不舒服(譬如: 頭痛、 頭暈、心悸或肚子不舒服等)。	0	1	2	3
18. 我覺得自己很沒用。	0	1	2	3

Appendix N: WHOQOL-BREF Taiwan Version

世界衛生組織生活品質問卷 – 台灣簡明版

問卷說明:

　　　　這份問卷詢問您對於自己的生活品質、健康、以及其他生活領域的感覺。請您回答所有的問題。如果您對某一問題的回答不確定，請選出五個答案中最合適的一個，通常會是您最早想的那個答案。

　　　　我們的問題所關心得是您**最近兩星期內**的生活情形，請您用自己的標準、希望、愉快、以及關注點來回答問題。請參考下面的例題:

例題一: 整體來說，您滿意自己的健康嗎?

　　　　____極不滿意　　____不滿意　　____中等程度滿意　　____滿意　　____極滿意

　　　　請選出最和是您在最近兩個星期內對自己健康的滿意程度，如果您<u>不滿意</u>自己的健康，就在「不滿意」前的____內打勾(V)。請仔細閱讀每個題目，並評估您的感覺，然後就每一個題目選出最合適您的答案。謝謝您的協助!

---

1. 整體來說，您如何評價您的生活品質?
   ____ 極不好　____不好　____中等程度好　____好　____極好

2. 整體來說，您滿意自己的健康嗎?
   ____極不滿意　____不滿意　____中等程度滿意　____滿意　____極滿意

3. 您覺得身體疼痛會妨礙您處理需要做的事情嗎?
   ____完全沒有妨礙　____有一點妨礙　____中等程度妨礙　____很妨礙　____極妨礙

4. 您需要靠醫療的幫助應付日常生活嗎?
   ____完全沒有需要　____有一點需要　____中等程度需要　____很需要　____極需要

5. 您享受生活嗎?
   ____完全沒有享受　____有一點享受　____中等程度享受　____很享受　____極享受

6. 您覺得自己的生命有意義嗎?
   ____完全沒有　____有一點有　____中等程度有　____很有　____極有

7. 您集中精神的能力有多好?
   ____完全不好　____有一點好　____中等程度好　____很好　____極好

8. 在日常生活中，您感到安全嗎?
   ____完全不安全　____有一點安全　____中等程度安全　____很安全　____極安全

9. 您所處的環境健康嗎? (如汙染、噪音、氣候、景觀)
   ____完全不健康　____有一點健康　____中等程度健康　____很健康　____極健康

10. 您每天的生活有足夠的精力嗎?
    ____完全不足夠　____少許足夠　____中等程度足夠　____很足夠　____完全足夠

11. 您能接受自己的外表嗎?
　　____完全不能夠　____少許能夠　____中等程度能夠　____很能夠　____完全能夠
12. 您有足夠的金錢應付所需嗎?
　　____完全不足夠　____少許足夠　____中等程度足夠　____很足夠　____完全足夠
13. 您能方便得到每日生活所需的資訊嗎?
　　____完全不方便　____少許方便　____中等程度方便　____很方便　____完全方便
14. 您有機會從事休閒活動嗎?
　　____完全沒有機會　____少許機會　____中等程度機會　____很有機會　____完全有機會
15. 您四處行動的能力好嗎?
　　____完全不好　____有一點好　____中等程度好　____很好　____極好
16. 您滿意自己的睡眠狀況嗎?
　　____極不滿意　____不滿意　____中等程度滿意　____滿意　____極滿意
17. 您滿意自己從事日常活動的能力嗎?
　　____極不滿意　____不滿意　____中等程度滿意　____滿意　____極滿意
18. 您滿意自己的工作能力嗎?
　　____極不滿意　____不滿意　____中等程度滿意　____滿意　____極滿意
19. 您對自己滿意嗎?
　　____極不滿意　____不滿意　____中等程度滿意　____滿意　____極滿意
20. 您滿意自己的人際關係嗎?
　　____極不滿意　____不滿意　____中等程度滿意　____滿意　____極滿意
21. 您滿意自己的性生活嗎?
　　____極不滿意　____不滿意　____中等程度滿意　____滿意　____極滿意
22. 您滿意朋友給您的支持嗎?
　　____極不滿意　____不滿意　____中等程度滿意　____滿意　____極滿意
23. 您滿意自己住所的狀況嗎?
　　____極不滿意　____不滿意　____中等程度滿意　____滿意　____極滿意
24. 您滿意醫療保健服務的方便程度嗎?
　　____極不滿意　____不滿意　____中等程度滿意　____滿意　____極滿意
25. 您滿意所使用的交通運輸方式嗎?
　　____極不滿意　____不滿意　____中等程度滿意　____滿意　____極滿意
26. 您常有負面的感受嗎? (如傷心、緊張、焦慮、憂鬱等)
　　____從來沒有　____不常有　____一半有一半沒有　____很常有　____一直都有
27. 您覺得自己有面子或被尊重嗎?
　　____完全沒有　____有一點有　____中等程度有　____很有　____極有
28. 您想吃的食物通常都能吃到嗎?
　　____從來沒有　____不常有　____一半有一半沒有　____很常有　____一直都有

Appendix O: Taiwan Social Desirability Scale

請依照你生活中的狀況真實的填寫下列問題

1. 我總是以客觀的立場看待事情。 　　 否　是

2. 在任何情況下我都會先冷靜思考之後才行動 　　 否　是

3. 有時我會在背後批評別人 　　 否　是

4. 我有時會表裡不一 　　 否　是

5. 有時我會因情緒不佳而遷怒於別人 　　 否　是

6. 我一發現自己的過錯就馬上改進 　　 否　是

7. 我總是虛心接受別人對我的批評 　　 否　是

8. 我總是以身作則 　　 否　是

9. 有時我會講別人的閒話 　　 否　是

10. 有時我會為自己的疏失找理由 　　 否　是