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Abstract

The field of research on religion and well-being is predominantly focused on the three monotheistic religions, thereby omitting Buddhism. The current study aims to investigate the relationship between Buddhist religiosity and subjective well-being (SWB), by determining which factors possibly mediate this relationship. A survey measuring Buddhist religiosity, six potential mediators (cognitive, emotional, and social), and SWB was given to a sample of 124 Thai Buddhists, living in Thailand. Results showed that presence of meaning in life and social support, which are factors commonly found in other religions, but also humor coping style, which seems specific to Buddhist attitudes, significantly mediated between Buddhist religiosity and SWB. Buddhist religiosity was also correlated with higher compassion and lower intolerance of contradiction, but these factors were not significant mediators. The ideal affect of low-arousal positive emotions was included as well and was correlated with SWB but not with Buddhist religiosity. The study demonstrates the similarities in the function of religion for Thai Buddhists, but also opens the possibility for several culturally specific mediators, such as an apparent unique use of coping with humor.

Keywords: religion; Buddhism; subjective well-being; meaning in life; social support; humor

Introduction

"If you light a lamp for somebody, it will also brighten your path." - Buddha.

The study of religion and its association with subjective well-being has been greatly expanded, generating a general agreement that religiosity brings many benefits for physical and mental health. The majority of these studies have mostly focused on the three monotheistic religions, namely Christianity, Islam, and Judaism, therefore omitting the prominent religion of Buddhism. Nonetheless, over the last few decades there has been a rise in interest in Buddhism, both in the public domain and in psychological research. The growing trend of the use of mindfulness, a practice derived from Buddhism, and its clinical applicability has led researchers to further investigate the religion whose stereotyped image is one of a smiling and tranquil Buddha, in the realm of well-being. Indeed, more and more Westerners choose to affiliate with Buddhism through beliefs that it is a unique religion and it emanates the concept of happiness. Several differences have been found between

Buddhism and other religions, certainly in doctrine and ideas, but also in people's cognitions, affects, and behavior, therefore we are led to question whether Buddhism is distinct in the way it is associated with well-being.

The present thesis will analyze the relationship between Buddhist religiosity in Thailand and well-being, and the potential factors that help explain this relationship through mediation. This analysis will begin with a literature review based on theoretical claims and scientific findings. In the first chapter, we will take a general look at the field of research on religion and mental health, then more specifically at subjective well-being as our choice of indicator of mental health. The individual factors that have been most frequently found to influence and explain religion's impact on subjective well-being will also be clarified. In the second chapter, we will take a cross-cultural perspective of the link between religion and subjective well-being, along with a broad overview of the history and teachings of Buddhism. From this we will develop the potential factors that mediate the influence of Buddhist religiosity on subjective well-being. The third chapter will introduce the empirical part of our study in which we surveyed 124 participants, of Thai nationality and of Buddhist religion, living in Thailand. Our hypotheses will thus be formulated and the study's methodology will be elaborated. Results from our study will then be demonstrated in the fourth chapter, followed by the final chapter containing a discussion and final conclusion.

I. Religion and mental health on an individual level

A. Religion and mental health

i. Link between religion and mental health

The area of research investigating the link between religion and mental health continues to expand year after year and remains prominent. Despite prior contradictions, the general agreement produced in this area is that religion is mainly beneficial for mental health, however many aspects complexify this claim.

Psychologists such as Sigmund Freud and Albert Ellis first claimed that religion had deleterious effects of mental health, with Freud putting forth the idea that to be religious, was to be irrational, and that reason was a better path to follow (Freud, 1927). Recently however,

the opinion has shifted into a positive effect of religion on mental health, shown by multiple studies that have found positive correlations between the two. In a systematic review by Koenig, King and Carson (2012), 224 quantitative studies carried out since 2010 were identified, of which 78% of those reported positive correlations between religiousness and well-being, 4% had mixed findings, 17& had no association, and 2 studies reported a negative correlation. Koenig et al. (2012) made sure to include studies with high research quality, thereby excluding published dissertations, books, and studies with small sample sizes.

Despite the numerous positive findings, researchers today now understand that the link between religion and mental health is complexified by conceptual and measurement issues. Hackney and Sanders (2003) provide evidence for this through their analysis of 34 previous studies, as they investigate the hypothesis that religion is a multifaceted concept and thus different facets of religion could relate differentially to mental health. Three definitions of religion were assembled based on these studies: "institutional religion": consisting of attending religious services, participating in church activities and ritual prayer, and extrinsic religious orientation, "ideological religion", combining the various beliefs and attitudes associated with religious activities, and finally, "personal devotion", which included intrinsic religious orientation, emotional attachment to God, and devotional intensity. Their results first showed a positive correlation ($r = 0.10$) between religiosity and mental health, regardless of the chosen definition for religion, adding therefore more evidence that religion is beneficial for mental health. However, a general pattern emerged in which institutional religion was negatively correlated to mental health, ideological religion was slightly positively correlated, and personal devotion was strongly and positively correlated with mental health (Hackney & Sanders, 2003).

These results suggest that the impact of religion on mental health also depends on the way religiosity is expressed. Consistent with this approach, Janssen, Bänziger, Dezutter and Hutsebaut (2005) researched the correlations of differential aspects of religious commitment and of mental health. They discovered a positive relation between all measures of religious commitment and multiple aspects of mental health, except for measures of church attendance and extrinsic personal and social orientation, which translates into a person using religion as a source of comfort and relief (personal) or a source of social contacts (social). With these measures, there was an almost null relationship. Furthermore, the results also indicated that

interpreting religion in a symbolic way was associated with positive outcomes of mental health but interpreting religion in a literal way was associated with negative outcomes of mental health. Moreover, the study showed that differential aspects of mental health are related differently to religion, namely that positive indicators of mental health such as life satisfaction and happiness have a clear positive relationship, but negative indicators, such as psychological distress, is more ambiguously related.

A theoretical framework that has been suggested to understand the differential effects of religion and mental health, and why intrinsic orientation appears to have a greater positive effect, is that of the self-determination theory. This theory posits that motives for behavior corresponds to a dimensional level of motivation, going from external motivation on one end to internal motivation on the other. Behavior performed for rewards or demands reflects external motivation and a low level of the self-integration of the values stemming from that behavior, whereas behavior performed due to seeing that activity as personally important or performed just for its own sake reflects integrated or intrinsic motivation accordingly (Deci & Ryan, 1985). The degree of internalization, a process in which the activity becomes fully endorsed by a person's own personal values and does not depend on any external motives, therefore increases within this dimensional level of motivation, and leads to a positive mental health. In terms of religion, Ryan, Rigby, and King (1993) found that higher forms of religious internalization were positively related to outcomes of psychological adjustment such as self-esteem and self-actualization and negatively related to depression and anxiety. Introjected motivation for religion, situated on the low end of the internalized motivation dimension, correlated negatively to the outcomes of psychological adjustment. Their results thus provide evidence that the degree of internalization of religion is an important factor in the effects of religion on mental health.

ii. Limitations of the link between religion and mental health

It is important to note in what way religion could have a positive influence on mental health. One could infer that religion has a power to heal mental illness but as Levin (2010) puts it, this is a common misinterpretation. The majority of studies that have found a positive association between religion and mental health maintain a focus of religion as a primary preventive mechanism. In other words, results suggest that religion could prevent

psychological distress, but the research methods are unable to go so far as saying that religion has a supernatural power on the mind or the body. Levin (2010) adds that there is no evidence for or against a healing power of prayer, and while religion plays a significant role in measures of mental health, this does not mean that religious people do not become ill, nor that it is the most important factor.

The methodology used in research of religion and mental health has in fact often been considered to present various limitations. Hood, Hill and Spilka (2018) argue that there are four main methodological problems that surface in the majority of those studies. First, the most commonly used method of research is self-report measures and is thus subject to a higher probability of biases such as intentional deception and impression management. For example, a review by Galen (2012) provides arguments against the "religion prosociality" hypothesis, in other words the claim that religious people are typically higher in prosociality than nonreligious people, by demonstrating various methodological problems in the literature. Galen (2012) reminds us of experimental evidence that religious people have a tendency to self-enhance, thereby making a good impression, and to answer self-reports in a socially desirable way, which consequently, inflates the correlation between religiosity and prosociality. The study goes so far as to claim that even peer and family reports aren't reliable alternatives since religious individuals also tend to perceive more positively their religious counterparts and believe in the stereotype that religiosity is associated with prosociality, therefore making their reports biased. Galen (2012) adds that these biases are also valid in the religion and mental health literature since the stereotype of "religious people are happier" is just as strong, rendering self-reports and peer-reports empirically weak.

The second main methodological issue revealed by Hood et al. (2018) is, besides relying on self-report measures, studies also mostly rely on cross-sectional studies, a method whose main disadvantage is not being able to claim cause-and-effect relationships, and who are thus correlational in nature. In order to investigate causality, longitudinal methods are necessary since they allow us to follow individuals throughout a given time period, giving us the opportunity to evaluate which variable is the cause and which variable is the effect. Unfortunately, these studies aren't used as often; Koenig et al. (2012) even reports that, since 2000, cross-sectional studies were used six times more often than longitudinal studies to study the association between church attendance and depression for example.

Third, as aforementioned, religion and mental health are multidimensional concepts, therefore the risk of reductionism, a phenomenon in which complex processes are simplified, is highly elevated. Consequently, Hood et al. (2018) add that to avoid this, research should shift to using more qualitative methods as this would allow the researcher to take a more holistic view of the individual and his psychological processes. Finally, the last methodological issue raised by Hood et al. (2018) is that most research is based on individuals with a Christian denomination, therefore our knowledge of processes associated with other religions is limited and we can not exclude the possibility that current findings differ per religion nor can we yet determine specifically which similarities exist amongst religions.

Despite these issues, we can note several studies that have used a different methodology but have found similar results in terms of positive effects of religion and mental health. Gonçalves, Lucchetti, Menezes and Vallada (2015) carried out a meta-analysis of 23 randomized controlled clinical trials that investigated mental health outcomes after religious/spiritual interventions and found significant beneficial effects on general anxiety and depressive symptoms, and a general reduction of stress and alcoholism. Furthermore, VanderWeele, Jackson and Li (2016) introduce a new class of causal models that are different from the standard regression methods. They are termed as marginal structural models, are based on a longitudinal design and take into account effects of variables in different time periods as well as the feedback effects that occur between the exposure of a variable and its outcome. Using a marginal structural model to analyze the data, the authors illustrate evidence that service attendance prevents depression over time, and depression decreases levels of subsequent service attendance.

In light of these positive findings, it would still be inappropriate to say that religion is only beneficial for mental health. There are studies that find negative associations between the two, and we will give three examples in which we can find this association. First, positive links between authoritarianism, religious fundamentalism, and personality traits that are considered to impair mental health have been shown (Koenig, et al., 2012). Hood et al. (2018) explain this process as “rigid religiosity”, in which a very strict religious upbringing could lead to emotional disorders, depression, suicide, and anxiety. However, they conclude by stating that the research pertaining to religious fundamentalism and mental health is

contradicting and poorly objective. Second, religion can be used an expression of self-punishment, potentially leading to physical self-injury, and often to emotions of guilt and shame. This self-punishment can be seen as a spiritual struggle, stemming from acts of sin, or spiritual doubts, and can take extreme proportions (Hood, et al., 2018). Finally, the most common example in which religion can be associated with psychological impairment is its manifestation seen in various mental disorders. Disorders such as schizophrenia, acute mania, or psychotic depression often present religious delusions, for example beliefs that one is an angel of God or hearing voices from God or the Devil ordering to carry out certain acts, or having visual hallucinations of religious symbols (Koenig, et al., 2012). Obsessive-compulsive disorder can also be taken under the form of "scrupulosity", defined as a condition with constant worry of religious issues and compulsions to perform religious rituals (Hood, et al., 2018).

In general, it seems that religion, taken in its most extreme form, can serve as a way to manifest harmful behavior, beliefs, and emotions. However, it remains unclear whether religion actually causes poorer mental health, or whether mentally ill individuals are more likely to become religious. Further longitudinal and experimental studies are needed to access these possibilities.

Conclusion

Taken all together, studies have found that, in general, higher rates of religiosity are associated with positive mental health outcomes and play a preventive role in psychological distress. The exact mechanisms of the influence of religion are yet to be clearly revealed, especially since the link is clouded by methodological and conceptual issues. Indeed, religion is a multidimensional construct, but evidence shows that intrinsic orientation towards religion, namely internalizing religion as one's personal beliefs and values, is more likely to explain its positive impact on mental health, as displayed by self-determination theory.

B. Religion and well-being

As much as religion is a multidimensional concept, so is mental health. The concept can either be characterized as the presence of positive psychological traits, such as high self-

esteem, self-actualization, resilience, or the absence of negative psychological traits, such as depression, anxiety, or addiction. For this present study, we have decided to narrow down the concept of mental health by only focusing on subjective well-being (SWB).

Ever since Wilson's (1967) review of subjective well-being, the construct has been extensively studied by numerous researchers, with Ed Diener being the most prominent in the field. Diener, Suh, Lucas, and Smith (1999) explain that the study of subjective well-being stems from the importance of considering a subjective point of view while evaluating the quality of life and the recognition that well-being includes more positive elements than simply financial security. Additionally, there needed to be more focus on positive psychological states instead of merely negative states, therefore subjective well-being includes both dimensions.

Subjective well-being thus consists of multiple components involving the evaluation of both positive and negative affect, life satisfaction, and domain satisfactions, such as work, family, health, and one's social group. These measures can be divided into measures of affective well-being, such as happiness or sadness, and measures of cognitive well-being, corresponding to life satisfaction (Emmons, 1998). Both dimensions reflect the short-term and the long-term quality of a person's life as asking someone how happy they are usually prompts that person to respond according to his current emotional state, but asking someone how satisfied they are with their life leads to a cognitive evaluation of their well-being in general. The most used measures of subjective well-being are therefore subjective evaluations of happiness and life satisfaction (Diener, et al., 1999).

The complexity of factors that influence subjective well-being in individuals has been carefully studied ever since the introduction of the construct. At first, researchers tried to determine *who* was happy and *what* made people happy. However, it became clear that demographic and external situational factors only account for a small part of the variance in subjective well-being, and that there are other factors that act as predictors (Diener, et al., 1999). Nowadays, studies therefore investigate the individual and cultural factors that could impact the influence of life conditions and events on subjective well-being.

In parallel, multiple studies have found positive correlations between religion and the two measures of subjective well-being. In the study by Helliwell and Putnam (2004), data examined from a random sample who participated in the World Values Survey at the

individual level showed that importance of God/religion was significantly correlated with both life satisfaction and happiness, and religious attendance had a positive correlation with happiness as well. However, as aforementioned, being religious has a moderate association with well-being but individual and cultural factors greatly influence the strength of this association. It is primordial therefore to identify and understand these factors.

C. Individual factors that mediate the relationship between religion and mental health

To further understand the positive relationship between religion and subjective well-being, we must take a look at the possible variables that mediate this relationship. For now, we will focus exclusively on individual factors, and in the second chapter we will include factors that are chosen within a cross-cultural perspective. Park and Slattery (2013) identified 11 pathways in which religiousness/spirituality may facilitate mental health: through social support, social identity, guidelines for living, forgiveness, a positive relationship with God, religious coping resources and strategies, religious practices, positive affect, sense of meaning, emotional regulation, and afterlife beliefs. For the scope of this thesis, we will first focus on four main individual factors that have received a good amount of support, namely social support, religious practices, sense of meaning in life, and need for order and control.

i. Social support

The social aspect of religion has been seen as greatly influencing the impact that religion has on mental health. Evidently, being religious often comes with a social package, namely a community with which one shares his own personal beliefs and values, and with which one can also seek various types of support. Indeed, Hayward and Krause (2014) demonstrate how these communities can either directly impact well-being by providing access to mental health care resources, including consultation with a member of the clergy for example, or indirectly through various mechanisms. To illustrate, Hayward and Krause (2014) show that there is strong evidence that participating in religious groups improves social integration, which in turn is beneficial for mental health.

Diving deeper into the matter, Lim and Putnam (2010) demonstrate the social and participatory mechanisms that impact religion's effect on life satisfaction. They first show

that religious service attendance is a predominant factor but more importantly, the social networks that people build during these services mediates these positive effects. Therefore, it is likely that religious people develop higher life satisfaction through the intimate friendships that they develop during their attendance in church.

One could argue however that non-religious people are just as likely to have intimate friendships as religious people, and therefore dispute the uniqueness of the social support mechanism in religion. However, it is possible that the religious networks have more influence over SWB, only if there is a strong shared religious identity, characterized by a sense of belonging and common beliefs and attitudes. Indeed, the interaction effect found by Lim and Putnam (2010) is evidence for this claim as a strong religious identity impacted life satisfaction only if congregational social networks reinforced that identity. The process of sharing common views about existential and moral issues that religion generates is therefore a likely factor through which SWB is strengthened. Additionally, the construct of "spiritual support", introduced by Krause, Ellison, Shaw, Marcum and Boardman (2001) and relating to church members encouraging each other to integrate their religious beliefs and practices into daily life, has been found to be distinct from regular emotional support and to be associated with positive outcomes such as optimism and sense of closeness to God (Hayward & Krause, 2014). Finally, religion often emphasizes on prosocial behavior and compassion, which are benefits that not necessarily every type of social group possesses.

ii. Religious practices

Every religion contains religious practices such as rituals and acts of praying, which can be seen as beneficial to subjective well-being. Praying can be conceptualized in various ways and can impact SWB differentially. Firstly, Poloma and Pendleton (1991) found that, contrarily to common belief, frequency of prayer is a weak predictor of well-being, and that prayer experience and the type of prayer appear to more determining factors. It is more likely that a religious person who continuously prays for various reasons experiences therefore less life satisfaction than one who doesn't pray frequently but derives more meaning when he does.

Following from their study, other researchers have begun to consider the different forms of prayers that exist and investigate which form appears to have a greater effect on

well-being. Whittington and Scher (2010) determined six forms of prayer: adoration (worship of God without referring to circumstances, needs, or desires), thanksgiving (gratitude towards God), supplication (requesting God's intervention), confession (admitting a negative behavior and requesting forgiveness), reception (adopting an open attitude to become close with God), and obligatory prayer (fixed prayers that are required), for example in Islam. From their research, they found that only adoration, thanksgiving, and reception had a positive influence on well-being, whereas the other three types negatively influenced well-being. The authors explain these findings by stating that supplication, confession, and obligatory prayers have an extrinsic nature, revolve around negative emotions such as guilt and fear, and are more ego-focused. Therefore, the types of prayers that seem to be beneficial for well-being are based on a selfless attitude, positive emotions such as peacefulness and gratitude, and a positive imagery and relation to God. Consequently, we can suggest that the influence of religion on well-being is mediated by prayer experiences that allow space to feel positive affect and maintain a positive attachment to God, more so than mere prayer frequency.

iii. Sense of meaning in life

Religion, above all else, gives answers, although incomplete, to existential questions that revolve around who we are, why we are here, and what happens when we die. These questions can refer to the overarching concept of meaning in life, a concept that has recently gained more popularity.

Although no clear definition of meaning in life has been agreed upon by researchers in the field, there are three common concepts that have been regularly attached to the definition (Martela & Steger, 2016). First, meaning in life has been referred to having coherence in one's life and one's world, understanding it, and making sense out of it. It is seen as the cognitive component of meaning in life, as one constructs models of patterns and predictability in one's environment, in order to make sense of one's self, the world, and one's place in the world. The second concept that is attached is purpose, often viewed as being synonymous to meaning in life but actually pertaining to having a sense of direction and future-oriented goals in life. These goals are seen as relating to one's personal values and beliefs and represent an ideal for one's life. Finally, meaning in life has been linked to significance, defined by the worth and the importance of one's life, the essential value that is

attached to it. This refers to the feeling that one's personal existence matters within the context of a broader universe, as well as the idea that one's life is a life worth living (Martela & Steger, 2016).

By keeping these three dimensions of meaning in life in mind, it has been argued that religion has an influence on all three dimensions. Firstly, religion can provide coherence by making sense of how this world was created and what is our place in it. Indeed, religious belief systems can provide comprehensive frameworks of meaning that help individuals explain events in life, especially the most difficult such as death, suffering, and injustice. Secondly, religion can point out what values and behaviors can act as guidelines for achieving the ultimate goals that constitute their purpose in life. For example, a common life purpose valued by religion is living with benevolence and altruism, thus the guidelines provided by religion such as prosocial behavior and forgiveness can lead to fulfilling this purpose (Park, 2013). Finally, religion can add significance through beliefs of the importance of each individual's life, through sayings such as "God has a plan for you", and "God loves all His creations". This final assumption has yet to be empirically tested, however.

Through the dynamics of religion creating a sense of meaning in life, it is highly likely that this contributes to the explanation of how religion is linked with well-being. Steger and Frazier (2005) have evidently found that meaning in life significantly mediates the relationship between religion and well-being. They conclude that religious individuals feel a greater sense of meaning during religious services and practices and that this greater sense of meaning is associated with well-being in daily life.

iii. Sense for order and self-control

The last mechanism through which religion could influence well-being is satisfying the need for order and self-control. Religion is used as a moral compass, by presenting the various "rules" and "restrictions" that enable people to do what is morally best for themselves and for society, and what is in their best long-term interest (Geyer & Baumeister, 2005). Even though there are many conflicts that are generated in this regard, coming mainly from a disaccord in opinion of what is "morally best", most of religion's values such as family, work, and prosociality, help individuals have order and self-control in their lives.

Evidently, McCullough and Willoughby (2009) provide support for a link between religion and self-control by reviewing a series of experimental, cross-sectional, longitudinal studies. To demonstrate this link, a prime argument is evidence of a significant association between religiousness and personality traits that are considered to be clear advocates of self-control, namely Agreeableness and Conscientiousness. For example, a meta-analysis by Saroglou (2010) displays a significant mean effect size for a positive correlation between religiousness and Agreeableness and Conscientiousness, an effect that remained pertinent across different religious dimensions and contexts such as gender, age, and country. These two traits are part of the five-factor personality model by McCrae and Costa (1999), a personality model commonly used by researchers. In this model, having high levels of Conscientiousness is defined as being an organized, disciplined, ambitious person, as well as aiming for perfection and accuracy in the things that one does. Additionally, conscientious people are marked by a need for personal and social order in their lives, and having self-control is essential. Since there is more evidence that conscientiousness predicts religiosity, instead of the other way around (Saroglou, 2010), we therefore suggest that individuals with high conscientiousness are more likely to become religious, since religion is a highly compatible framework with their need for order and self-control.

Having a sense of structure and being able to control one's behaviors in various domains has been linked with a higher well-being. Hofmann, Luhmann, Fisher, Vohs and Baumeister (2014) demonstrate that the trait of self-control is positively correlated with happiness and life satisfaction, and they suggest that this is due to self-control leading to better avoidance and regulation of motivational conflict, by placing a favor on virtues instead of vices. We can compare this with religion by stating that through the favoritism of certain moral virtues, that can be considered healthy in the long term, religious people have less difficulty in understanding and choosing what is right for them, which creates less conflict and ambiguity in their minds. The review by McCullough and Willoughby (2009) supports this claim by providing evidence that religion increases the importance of certain goals by "sanctifying" them, a process in which a goal is considered more important than others due to its attribution to a sacred source. This could be one of the mechanisms through which religion could impact well-being, and indeed, McCoullough and Willoughby (2009) found four studies in which religion's ability to enhance self-control mediates religion's association

with health and well-being. These studies remain preliminary however, and further investigation is needed.

Conclusion

The link between religion and subjective well-being has already been established by numerous meta-analyses, and researchers now try to seek exactly how religion influences SWB and what possible factors act as mediators in their relationship. Although this is not an easy task, we have focused on four main individual factors that have consistently found to be particularly influential, namely social support, religious practices, sense of meaning in life, sense for order, and self-control. Possible explanations of the influence of these factors are that by sharing a religious identity with a community characterized by prosocial behavior and compassion, SWB is increased. Plus, the act of praying marked by a selfless attitude and a positive image of God creates experiences that could increase SWB. Furthermore, religion helps create coherence, purpose, and significance, pertaining to the three components of meaning in life, which is seen as an important factor for SWB. Finally, by acting as a moral compass, religion provides structure, order, and self-discipline, thereby aiding regulation in conflict in everyday situations, and increasing SWB. To deepen our understanding of the relationship between religion and well-being, we will now adopt a cross-cultural perspective, taking into account the differential expression and use of Buddhism in East Asia, and the potential uniqueness of how Buddhism increases subjective well-being for them.

II. Religion and subjective well-being in Buddhism

A. Cross-cultural psychology of religion and subjective well-being

i. Religion and culture

In order to gain a more complete understanding of the link between religion and subjective well-being, we must set the analysis on a cross-cultural level, and thus compare between cultures the effect of religion on SWB. Before stating the specific differences of this effect, we must first take a general and synthesized perspective of the cross-cultural psychology of religion, with a primary focus on a comparison between Western and Eastern cultures and its

religions. It is important to note that reference to the West in this case generally pertains to the United States of America, as well as countries of Western Europe, and reference to the East pertains to countries of East Asia, in particular China, Japan, South Korea, and Thailand. We are aware that there is high variability within the West and the East, therefore further statements should be considered as general tendencies and not systematic truths for every country.

Religion and culture are two distinct concepts, but their interrelations can be perceived in several ways (Saroglou & Cohen, 2011; Saroglou & Cohen, 2013). First, religion can be seen as being part of culture, in other words it is an element that helps define a culture, along with other elements such as language or territory. Second, religion can be viewed as being conceptually the same as culture, as it also possesses shared values, norms, symbols, and practices, and thus it can serve as a cultural model within itself. Third, there could be a bidirectional influence between religion and culture. In one direction, religion is influenced by culture, and so cultural specificities can lead its inhabitants to develop a certain religion or religious experience. In the other direction, religion can shape culture, by influencing certain non-religious, but still cultural, elements. For example, particular cross-cultural differences could be explained through according religious differences. Finally, there is a possible interaction between religion and culture in their influence on human psychological traits such as cognition and behavior, namely that the same religion can have different effects in different cultures for instance. As we compare the manifestations of religion and its various effects between Western and Eastern countries, it's important to keep in mind these four possible conceptions of the interplay between religion and culture and their consequential complexity.

The main differences between Western and Eastern cultures can be analyzed in terms of cognitive, emotional, moral, and social aspects. For cognitive aspects, a key difference that has been extensively studied is the significant contrast between holistic versus analytic reasoning styles. Ji and Chan (2017) present evidence that East Asians use a holistic reasoning style, meaning that they tend to perceive patterns and events as the outcomes of multi-variable and changeable processes. In other words, they are more likely to pay attention and to take into account the "whole situation", all the external elements that come into play, all the while understanding that these elements are highly variable. In contrast, Westerners

display an analytic reasoning style, defined by a tendency to perceive patterns and events as the outcomes of single-variable and nonmodifiable processes. They are thus more likely to be attentive to the most salient aspect of a situation, using it as the central explanation, and viewing it as stable and not variable.

In terms of emotions, Ji and Chan (2017) show that the culture of East Asian discourages the experience and expression of extreme emotions, whereas Westerners do encourage extreme emotions. Affect valuation theory, posited by Tsai, Knutson, and Fung (2006), recognizes this by claiming that cultural factors shape how we wish to feel, termed as ideal affect, and demonstrating that East Asians prefer to feel positive low-arousal emotions whereas Westerners prefer to feel positive high-arousal emotions.

Differences in morality have also been found, notably based on the five moral foundations presented by Haidt and Graham (2007) which consist of moral judgements based on care, fairness, loyalty, authority, and purity. Growing evidence show that Westerners use moral judgements based solely on care and fairness, but that non-Westerners use all five foundations (Haidt & Graham, 2007). Indeed, morality related to satisfying interpersonal obligations (loyalty) and to an appropriate fit within a perceived natural order (purity) seem to be more salient outside the West (Heine, 2010). Finally, social differences between the West and the East consist mostly of a higher sense of interdependence in the East, displayed through greater conformity within ingroups, compared to a self-concept of independence and individualization in the West (Heine, 2010).

Keeping these main differences in mind, we can start to analyze the variabilities in the content and the use of religion across cultures. Although Saroglou and Cohen (2013) conclude that the main psychological functions of religion are universal in terms of satisfying primary human needs, there are important differences. One difference that has been studied by Sasaki and Kim (2011) is the use of religious coping. The authors found that religious coping predicted secondary control for European Americans, thus using religion as a means to accept and to adjust to difficult situations, whereas for East Asians, religious coping predicted social affiliation, as a way to reinforce social bonds within their religious community. A possible explanation for this phenomenon can related to the hypothesis that East Asians depend less on religion to cope with adverse situations, but instead rely on their holistic thinking styles. For example, studies have shown that Chinese participants expect

situations to change, and consequently they generate possible positive outcomes when faced with negative life events, as well as negative outcomes when faced with positive life events (Ji & Chang, 2017). Their tendency to think holistically therefore could serve them a coping mechanism instead of relying on prayers to God for example. This hypothesis has yet to be tested however.

The moral function of religion also seems to be less salient in Eastern religions and cultures. Stark (2001) finds no correlation between the importance placed on God and on the one hand, the frequency of prayers or temple visits, and on the other hand, moral attitudes in Japan and in China. This absence of correlation is explained through the rejection of an existing conscious, all-powerful, and concerned God, therefore, morality in Eastern religion doesn't seem to depend on a God. Furthermore, a study by Liang (2012) demonstrates differences in the affective experience of conversion in China, showing that this process doesn't typically involve extreme emotions, compared to American conversions. Plus, only a small number of participants converted because of adverse events and crisis, the majority chose to become religious in order to have a sense of belonging to a group.

Looking at these religious differences between the West and the East, it is possible to link them to the cultural variation that we previously mentioned. Now, we will examine the specific differences of the effect of religion on subjective well-being between Western and Eastern countries.

ii. Religion, culture, and subjective well-being

In general, studies have found a positive association between religion and SWB across numerous countries. Diener, Tay and Myers (2011) examined data from 154 nations and found that religiosity correlated with a slightly higher SWB for four religions, namely, Buddhism, Christianity, Hinduism, and Islam. Lun and Bond (2013) also analyzed data from 57 countries and results indicated that measures of life satisfaction and happiness were positively correlated with various measures of religion and spirituality, except for spiritual practice, who, regarding engagement in prayers or meditation, was negatively correlated to life satisfaction and happiness in cultures with low religious socialization. It would appear therefore, that these associations are dependent on multiple cultural and societal factors.

One factor that seems to interact with the link between religion and SWB is difficult life conditions encountered in that country, given by indicators such as illness, crime and hunger. When such indicators are present, Diener et al. (2011) found an even greater association between religion and SWB, as well as support for its three mediators: social support, feeling respected, and meaning in life. In countries with less difficult life conditions, religious people have similar levels of SWB as non-religious people. It is highly likely therefore that, once there is economic prosperity in a country that results in satisfying human needs, religion loses its important function of coping and SWB can be achieved through other means. Findings also suggested the presence of a person-culture fit effect, in which individual characteristics are adapted to environmental characteristics. In this case, higher SWB was only found for religious people living in religious nations and not in nonreligious nations (Diener, et al., 2011).

Another influential factor seems to be the level of religious socialization in one's country. It's possible that supporting younger generations to continue upholding religious values and practices creates a higher social support, and thus acceptance, of these religious practices, which in turn could lead to a greater SWB. Indeed, as aforementioned, in the study by Lun and Bond (2013), spiritual practice was negatively correlated to life satisfaction and happiness in countries where religious socialization is less prevalent, and the relationship was reversed for countries with high religious socialization. Finally, in the same study, the authors discovered that the positive link between believing in religious authorities providing adequate answers to life difficulties and SWB varied according to the level of social hostility towards religion in one's country, becoming stronger when social hostility increases. In this case, social hostility was interpreted as the level of societal restriction towards religious freedom. To conclude, it appears that universally, religion is beneficial to SWB, but several cultural and societal factors interact with the strength of these benefits.

One of the setbacks of these studies however is the assumption that subjective well-being can be correctly measured through life satisfaction and happiness for all cultures, but this might not be the case. Even though research on the difference in evaluation of SWB among cultures is sparse, one study by Shiah, Chang, Chiang and Tam (2016) has shown that Western and Eastern religious groups do evaluate SWB in different ways. The authors used a different tool to measure SWB, one that appears to be more culturally balanced, and is

termed Socially Oriented Cultural Conception of Subjective Well-Being (Lu & Gilmour, 2006; SSWB). Based on the accumulating knowledge that Eastern religions arose in collectivistic cultures, in which social relationships are emphasized and revolve around holistic thinking styles, the SSWB measures subjective well-being with two constructs: role obligations and dialectical balance. Role obligations can be viewed as achieving happiness through the maintenance of social harmony and common welfare and dialectical balance refers to the belief of the interdependence between happiness and unhappiness and the cyclic dynamic force that converts one to the other continuously. Using a sample of Chinese participants, results show that Buddhists scored the highest in the SSWB, followed by Taoists and atheists, and with Christians scoring the lowest (Shiah, et al., 2016). These findings further indicate a difference in the use and expression of one's religion, as regards to one's well-being, amongst Western and Eastern cultures.

Conclusion

To conclude, cross-cultural research on the psychology of religion between Western and Eastern countries has yet to be fully expanded. Slowly we begin to see that although religion seems to serve a universal positive function for subjective well-being, several factors appear to interact with this function, leading to apparent differences in the use and expression of religion between the West and the East. In general terms, the social aspect of satisfying interpersonal obligations and reinforcing social bonds seems to be of great importance in terms of religion and SWB for Eastern cultures, which can be interpreted due to them primarily being collectivistic cultures. The function of religion in helping to cope with difficult life situations also appears to be less prevalent. Moreover, religion in Eastern cultures can be viewed as highly influenced by a holistic thinking style, less dependent on an all-powerful God and less emotion-laden. Further investigation is needed, and we will now focus on the religion on Buddhism, a religion deeply rooted in East Asian culture.

B. Buddhism

i. History and principles of Buddhism

Before making an analysis of Buddhism's link with well-being, a general introduction must be made. We will take a look at the history and development of Buddhism and its main characteristics that sets it apart from other religions.

In essence, the term "Buddhism" refers to the teachings and practices set forth by the historical teacher known as the Buddha. It is most commonly believed that the first Buddha was a man named Siddartha Gotama, born in a royal family in the western Himalayas, around the sixth century BC. History claims that one day, the man left his home of comfort and luxury and discovered a world full of pain and suffering, in the forms of sickness and death. This insight deeply struck him, and he decided to dedicate the rest of his life to understanding suffering and to free himself and others from it. Siddartha first joined the monks and followed their methods, but quickly came to realization that these methods of self-abstinence did not lead to relief from human suffering. Instead, he engaged himself with a specific kind of meditation, that involved being aware of the flow of his conscious mind, in a nonjudgmental way: Western psychology has dubbed this practice as "mindfulness". Siddartha sat beneath a tree, deeply meditating, until he reached the state known as Enlightenment, considered as an awakening to the true nature of self, reality, and attaining a transcendent experience of self-hood, compassion, and wisdom. Siddartha thus became the Buddha (Tirch, Silberstein & Kolts, 2015). Already the history of Buddhism sets it apart from other religions as the main figure of this religion is not a God but was actually a human.

After reaching Enlightenment, the Buddha sought out to teach his methods and to share his wisdom, called under the name of "*dharma*". His most fundamental teachings are known as the Four Noble Truths and are considered to be the four principles that lead to a release from suffering. The First Noble Truth, "*dukkha*", is at best translated into the principle that life inevitably contains suffering, of which there are three types described. The first type of suffering is called "the basic suffering of living", the pain that comes with having a physical body, with our life experiences, and the overall shortness of life. The second type is named "the suffering of change", referring to the fact that everything changes, that even the most perfect appearing situation can change, and even if the world doesn't change, our mind does as it habituates to stimuli that previously gave us joy but then disappoints us. The third type of suffering is called "the suffering of conditioned reality", a concept that is difficult to grasp but that basically refers to the pain that all things decay in order to transform into other

forms of existence. Concepts such as reality and the self, have no substantial existence and are dependent on a ceaseless flow of causes and conditions that remain always ephemeral.

These three principles aren't considered to be the source of our suffering, but it is rather our responses to them that causes our suffering. The Second Noble Truth, "*tanha*", defines the origin of suffering as our craving for things we don't have and our avoidance for things we don't wish to have. Even though approach and avoidance behaviors are essential for human survival, our excessive pursuit of abstract goals such as power, desire, status, and relationship can lead us to neglect experiencing the way things are, and no longer respond to the present moment. Additionally, constant avoidance and unwillingness to accept certain experiences leads to long-term negative effects. The Third Noble Truth is seen to hold the key to liberation from suffering, consisting of reaching a state of "*nirvana*", a state in which we have overcome our cravings and we no longer avoid adverse experiences. This principle tells us that peace is possible, that we are able to be released from suffering.

The Fourth Noble Truth shows us exactly how we are able to reach *nirvana*, by following the path known as "The Middle Path". This path can be regarded as an intervention plan, consisting of eight capacities that one can develop in order to be alleviated from suffering, all the while going in the middle between indulgence and extreme asceticism. The eight capacities can be divided into three general categories. For reasons of synthesis, we will present them only briefly. The first category, "adaptive conduct", contains three capacities: healthy speech, action, and livelihood, which in short translates into speaking truthfully and kindly, behaving in ways that promote the well-being of the self and others, and avoiding a career or activity that involves harming others. The second category, "mental discipline" possesses the elements of healthy effort, mindfulness, and concentration, three mental techniques that are needed to become more aware of the present moment and to intentionally direct our attention towards reducing suffering. The final category, "wisdom", consists of healthy intention, which is to commit oneself to adapt to attitudes of love, compassion, and nonviolence to all beings, and healthy understanding, which involves understanding the Buddhist principles, and seeing the world realistically, without any subjective biases (Tirch, et al., 2015).

ii. Comparison of Buddhism with other religions

By considering the content of these teachings in Buddhism, we can notice similarities and differences with other main religions. Like other religions, Buddhism is based on principles that depict an ideal state for humans to adapt to, a state that appears different from what humans typically say and do, and in which similar codes of morality can be taken out of, such as no harm to oneself or to others. Buddhism thus shares this characteristic with other religions (Siderits, 2017). Plus, attitudes of love and compassion is prevalent and commonly promoted amongst religions as well. However, the path to achieve the suggested ideal state is different in Buddhism: one doesn't reach this state by simply having faith in Buddhist doctrines and unconditionally accepting its teaching. Instead, autonomous thinking and meditation, not praying, are regarded to be the most important ways to achieve salvation from suffering.

Furthermore, in Buddhism, the concept of karma does resemble a system of moral reward and punishment found in other religions, in the sense that it is the belief that the worth of one's volitional actions lead to consequences that take their form in reincarnation. If one has done good actions in their life, then they will be reborn in a life full of suffering but if one has done bad actions, then they will be reborn in life free of suffering. Nonetheless, karma is linked with the will to continue living even after death, which the Buddha considered to be an obstacle to reaching *nirvana* and it is believed that if one reaches *nirvana*, then the cycle of rebirth stops (Rāhula, 1974). Therefore, compared to other religions where sin and heaven and hell are emphasized concepts and there is presence of an omnipresent judging God, Buddhism minimizes these concepts, does not state a presence of such a God, and instead provides guidelines to practitioners that are based on philosophical terms. Plus, to become Buddhist, one must simply understand and apply the Buddhist teachings, there is no sort of initiation ceremony, unlike most religions (Rāhula, 1974). For these reasons, Buddhism is more often considered to be a philosophy of life rather than an organized religion.

C. Possible mediators between Buddhist religiosity and subjective well-being

Now that we understand the history and the characteristics of Buddhism, we will start to suggest the various mechanisms through which Buddhist religiosity could be related to subjective well-being. We have determined these hypothetical mechanisms after consideration of the existing research on the link between religion in general and subjective

well-being, the cross-cultural research between Western and Eastern cultures, as well as the content and use of Buddhist teachings. We hypothesize that there are six possible factors mediating the relationship between Buddhist religiosity and SWB, of which four could be unique to Buddhism. The unique factors are tolerance of contradiction, compassion, humor coping style, and an ideal affect of low-arousal emotions. Meaning in life and social support have been added due to their claimed importance in the link between religion and SWB.

i. Tolerance of contradiction

As aforementioned, East Asians have more of a tendency to have a holistic thinking style, which allows them to adopt a multi-variable explanatory process and to understand that these variables can change (Ji & Chan, 2017). Linked with this thinking style is the dialectical approach, namely accepting the contradiction among two premises and applying a middle ground in between these premises, and there is evidence that East Asians are likely to apply this approach when faced with problems involving contradictions (Nisbett, Peng, Choi, & Norenzayan, 2001). A study by Clobert, Saroglou and Hwang (2016) shows that religious East Asians scored low in intolerance of contradiction, compared to Western Christians who scored high, and this intolerance of contradiction acted as a mediator between religiosity and tolerance of racial and ethnoreligious outgroups.

Consequently, this cognitive mechanism of being able to accept contradictions can potentially be helpful for Buddhists due to the growing complexity of the modern world. Indeed, religious people typically have difficulty in accepting change in the perspectives of the moral issues important in religion such as abortion, homosexuality, and euthanasia (Malka, 2014). Moreover, the study by Deak and Saroglou (2015) demonstrates that this tendency is due to "self-centered moral rigorism" instead of "compassionate openness", marked by interpersonal and prosocial dispositions. Therefore, it's likely that through the willingness to seek compromise and harmony, and thus being more tolerant, Buddhists may feel less conflicted with apparent contradictions that consistently present themselves in daily life and therefore feel more satisfied and happier.

ii. Compassion

An important Buddhist principle is that all things in the universe are interconnected since everything is basically made of the same "stuff of space-time" and the separateness that we perceive between things is only an illusion (Tirch, et al., 2015). Leading from this principle, it appears that Buddhists have an expanded conception of compassion. Koopmann-Holm and Tsai (2017) show that compared to the West, where people believe to feel compassion only towards those with who they can identify with, or with who they can relate to, Buddhists actually consider that they should feel compassion towards everyone and everything, even those who appear in opposition. The experience of compassion also appears to differ between Western and Eastern cultures, for example studies have shown that empathy reduces the focus on oneself in Japan, but not in Australia (Park, Haslam, Kashima, & Norasakkunkit, 2016) and meditation leads to an increase in empathy (Lutz, Brefczynski-Lewis, Johnstone, & Davidson, 2008).

Compassion, defined by recognizing and being sensitive to the suffering of others, all the while having the desire to help them (Goetz, Keltner, & Simon-Thomas, 2010), has been found to promote subjective well-being, especially by boosting the sense of social connectedness (Seppala, Rossomando, & Doty, 2013) and increasing pro-social behavior (see Koopmann-Holm & Tsai, 2017). In a qualitative study carried out with British men who recently became Buddhist, the participants stated that the emphasis on compassion as an ideal in Buddhism and the use of meditation has been greatly beneficial for them (Lomas, Cartwright, Edginton, & Ridge, 2014). We therefore hypothesize that compassion serves as a potential mediator between Buddhist religiosity and subjective well-being.

iii. Humor coping style

Humor and religion are typically not seen to be associated, and indeed it has been found that stimulation of religious stimuli inhibits spontaneous humor creation (Saroglou & Jaspard, 2001). Different hypotheses have been suggested to explain why humor and religion are negatively correlated. For example, essential to humor is the enjoyment of incongruity, which includes appreciating ambiguity, logical impossibility, irrelevance, and inappropriateness, and is linked to tolerating contradictions (Collicutt & Gray, 2012). As we have previously seen, the majority of religious people have difficulty in tolerating contradictions and thus may appreciate less incongruity. For Buddhists however, due to their supposed low

intolerance of contradiction, it is possible that they are more likely to enjoy incongruity. Furthermore, Saroglou and Jaspard (2001) found that the personality trait of conscientiousness, known to be associated with religiosity and the need for order, was the only trait that was negatively related to humor creation. In contrast, Buddhists appear to have a lower association with conscientiousness (Saroglou, 2017), further enforcing the possibility that Buddhist religiosity and humor might not be negatively correlated. Finally, humor is often related to absurdity, sometimes marking the apparent meaningless of life, and this directly opposes the primary use of religion which is to be able to create a framework of meaning in life. Again, this opposition might be absent in Buddhism as Buddhists are actually encouraged to recognize the absurdity in life, to take things less seriously, as this would lead them to the path towards Enlightenment (Collicutt & Gray, 2012).

Humor and subjective well-being seem to have a positive association but depending on the type of humor used as some forms can be cynical and isolating whereas others can lead to higher self-esteem and social affiliation (Collicutt & Gray, 2012). Nonetheless, certain researchers have approached humor as an adaptive coping response that helps the reappraisal of stressful events or the appropriate distance-taking that allows a switch of perspective (Abel, 2002). Even though Saroglou and Anciaux (2004) found that use of humor as coping was negatively correlated to religiosity, this might not be replicated for Buddhist religiosity. Indeed, their study displays a negative association between religiosity and use of self-distraction as coping, implying the need to disengage oneself from the situation, which in contrast was positively related to all indicators of humor. Compared to other religions, Buddhism supports mental and affective disengagement of one's perception of the situation, using one's awareness that everything is in constant change (Tyson & Pongruengphant, 2007). Using humor might be a process through which one can apply this disengagement. We will therefore investigate whether a humor coping style mediates the link between Buddhist religiosity and subjective well-being.

iv. Ideal affect of low-arousal emotions

We have previously seen that there is a difference in the ideal affect of certain emotions between Western and Eastern cultures, empirically based on the affect valuation theory (Tsai, et al., 2006). This theory contains three premises: the first premise is that there is a difference

between how people actually feel (actual affect) versus how they wish to feel (ideal affect), the second premise is that cultural factors shape ideal affect, and the third premise is that people actively try to reduce the discrepancy between their actual affect and ideal affect (Tsai, Miao, & Seppala, 2007). The cultural variation in ideal affect has been found between religions as well, as the study by Tsai et al. (2007) found that classical texts in Christianity endorsed positive high-arousal emotions (HAP), such as excitedness, more than Buddhist classical texts and Christian practitioners held greater value for these emotions than Buddhist practitioners. In contrast, Buddhists endorsed positive low-arousal emotions (LAP), such as peacefulness and calmness, more than Christians (Tsai, et al., 2007). There is therefore a clear indication of a difference in ideal affect between religions.

Whether having a preference to feel LAP emotions leads to a higher subjective well-being has not been empirically tested yet. However, a study by Scheibe, English, Tsai and Carstensen (2013) shows that in older North American participants, having a low discrepancy with the ideal affect of LAP emotions predicted fewer physical health symptoms and this effect was not found for HAP emotions. In addition, due to a person-culture fit effect, it is likely that having an ideal affect of LAP emotions positively impacts SWB for Buddhists since this acts in accordance with their collectivistic culture. Indeed, it has been found that discrepancies between actual and ideal affect of LAP emotions correlated with depression for Hong Kong Chinese participants (Tsai, et al., 2006). The ideal of low-arousal positive states has therefore been added as a potential mediator in the relationship between Buddhist religiosity and SWB.

v. Meaning in life and social support

There is mounting evidence that religion is associated with meaning in life and social support, and as we previously argued, it is likely that these two factors act as mediators in the religion and subjective well-being relationship. Very few studies have actually researched the presence of these factors in Buddhism, however. The qualitative study by Lomas et al. (2014) does indicate that the British participants turned to Buddhism due its appeal of creating a framework of meaning and offering a community with shared values. Plus, we can argue that Buddhism allows for the three elements of meaning in life to arise. For example, the Buddha offers an explanation as to where suffering comes from, which can pertain to coherence, and

even provides the solution with the proper guidelines as to how one can alleviate that suffering, which can be related to purpose. The element of significance is possibly expressed differently in Buddhism through not necessarily giving importance to one's own self but rather through the principle of interconnectedness and the idea that one belongs to something bigger than one's own life.

For the factor of social support, Buddhists are just as likely to derive social support from their religion as they too build religious groups and go to social gatherings in sacred places such as temples. Moreover, as aforementioned, East Asians tend more to use religious coping to reinforce social affiliation (Sasaki & Kim, 2011) and become religious to obtain a sense of belonging to a group (Liang, 2012). We suggest that the prevalent social support is likely to be beneficial for subjective well-being, through the apparent prominence of extended prosociality in Buddhism (Clobert, Saroglou & Hwang, 2015). For example, based on the principle of karma, in Thailand's society, it is part of the norm for children to take care of their parents when they grow older as a form of repayment for having nurtured and educated them (Choowattanapakorn, 1999). Being a part of a social group in which prosociality, as well as compassion, is emphasized is likely to influence subjective well-being. We therefore hypothesize that meaning in life and social support mediate Buddhist religiosity's association with SWB.

In sum, we hypothesize that Buddhist religiosity has a positive correlation with subjective well-being, through the mediation of four factors considered to be unique to Buddhism, namely tolerance to contradiction, compassion, humor coping style and ideal affect of low-arousal positive emotions, along with factors that are commonly found in religion, namely meaning in life and social support.

III. Methodology

A. Hypotheses

In total, the present study contains four main hypotheses. They are listed below:

H1: Buddhist religiosity is positively correlated with subjective well-being.

H2: Buddhist religiosity is positively correlated with tolerance of contradiction, compassion, humor coping style, ideal affect of low-arousal positive emotions, meaning in life, and social support.

H3: Tolerance of contradiction, compassion, humor coping style, ideal affect of low-arousal positive emotions, meaning in life, and social support are in turn positively correlated with subjective well-being.

H4: Tolerance of contradiction, compassion, humor coping style, ideal affect of low-arousal positive emotions, meaning in life, and social support act as mediators in the relationship between Buddhist religiosity and subjective well-being.

B. Participants

A total number of 124 participants participated in the study, with an additional number of about 40 participants who started the study but did not complete it. The percentage of females was about 80% (N = 99) and 20% (N = 25) were male, leading to an unbalanced sample in favor of women. The age range was from 19 to 63 years old (M = 34.76, SD = 10.52), with the interval between 22 and 36 years having the highest frequencies, due to a higher number of students amongst the participants. Socio-economic class and occupation were not requested in the survey. All participants were of Thai nationality, living in Thailand, and were assumed to be Buddhists, since this was an inclusion criterion announced in the emails sent out to prospective participants.

C. Procedure

The study consisted in participants having to fill in an online survey. To recruit participants, contact was first made via acquaintances in Thailand. Through the help of social media, the survey was spread through the social network of these acquaintances. Then, we tried to contact 25 different universities situated in Bangkok but only one responded. The psychology faculty of this particular university, named Chulalongkorn University, kindly agreed to diffuse the questionnaire to its students. An anonymous link to the questionnaire was shared and sent out to the participants, along with the inclusion criteria and the aim of the study,

namely that it was meant to research the differences in attitudes, beliefs, and emotions in Buddhists, in the framework of completing our Master's thesis.

Upon opening the link to the questionnaire, subjects were presented with the duration of the survey, which was estimated to be about 30 minutes, and an informed consent form to which they had to agree to. Participants were also informed of the possible compensation of winning a lottery of 2000 Bahts, which converts to around 55 euros. After finishing the study, participants were thanked and were given a number, presumed to be their participant number. If they wished to participate in the lottery, then they had to send an email informing this number. The number was the same for all participants and was actually used to keep responses anonymous, all the while being able to simply have the participant's email address in order to contact the winner of the lottery. After the recruitment for participants was closed, the winner of the lottery was designated through a random number generator, and the money was sent via bank transfer after notification.

D. Measures

Participants were required to fill in an online survey that consisted of a series of questions that evaluated Buddhist religiosity (predictor variable), the potential mediators, and subjective well-being (outcome variable), containing the constructs of happiness and life satisfaction. Measures of physical health were also included.

Buddhist religiosity. To access Buddhist religiosity, the questionnaire used by Saroglou and Dupuis (2006) was applied. This questionnaire possesses 14 questions that partly relate to the domain of personal investment in Buddhism, which contains 7 items: considering oneself as being Buddhist, willingness to share self-interest in Buddhism in one's social environment, frequency of making merit, frequency of temple attendance, and frequency of praying/meditating in temples or at home. These items are rated on a 7-point Likert scale. The remaining items, rated on a 5-point Likert scale, relate to the domain of one's level of interest or attraction towards particular concepts in Buddhism: the beauty of the rituals or ceremonies, the meaning or values, the community aspect, the emotional-relational dimension, the work on oneself, and the learning of a certain lifestyle. The global score of Buddhist religiosity was measured by calculating the average between the total score of each domain.

Intolerance of contradiction. The method to evaluate intolerance of contradiction was taken out of the study by Peng and Nisbett (1999). In this study, they measured intolerance of contradiction by presenting ten small fictional descriptions of scientific findings divided into groups of five items to the participants and asking them to evaluate the degree of plausibility of each description on a 9-point Likert scale, ranging from "strongly disbelieve" to "strongly believe". In each group, two scientific statements were related to each other but in apparent opposition, not fully contradicting each other however. The authors made sure that a dialectical approach to find some truth in both opposing statements was possible. For example, the third group of items contained these two statements: "a health magazine survey found that people who live a long life eat some sorts of white meat, e.g., fish or chicken" and "a study by a health organization suggests that it is much more healthy to be a strict vegetarian who does not eat meat at all". These statements appear to be opposing but are not completely contradicting each other. The absolute difference in the stated plausibility of the opposing statements indicated the level of intolerance of contradiction.

Compassion. This construct was measured by using the Santa Clara Brief Compassion Scale (Hwang, Plante & Lackey, 2008), which is a shortened version of the Compassionate Love Scale, created by Sprecher and Fehr (2005). The scale contains five items, measured with a 7-point Likert scale ranging from "not at all true of me" to "very true of me", and evaluates one's overall level of compassion, especially towards strangers, not only loved ones, e.g. items such as "I tend to feel compassion for people, even though I do not know them" and "I often have tender feelings toward people (strangers) when they seem to be in need".

Humor coping style. The full Brief COPE inventory (Carver, 1997) was included in the survey but only the two items pertaining to coping with humor were used in the data analysis. The Brief COPE measures various coping styles by asking subjects to rate how much they act in this way whenever faced with a stressful situation, on a 4-point scale going from "never" to "very much". We decided to put in the complete inventory in order to minimize the focus on humor by including all the coping styles. The two items involving humor coping styles are "I've been making jokes about it" and "I've been making fun of the situation".

Ideal affect of low-arousal emotions. For the evaluation of the ideal affect of low-arousal emotions, we took as example the affect valuation index (AVI), developed by Tsai et al. (2006) which contains the complete range of 25 low-arousal and high-arousal emotions, varying in positivity or negativity. In our survey, we did not include the positive and negative emotions that were neutral in arousal, therefore we had a total of 19 emotions. Participants were thus asked to rate how much they would ideally like to feel, on a 5-point Likert scale, going from "very slightly or not at all" and "extremely or all of the time". Since our focus is on low-arousal positive emotions, only those were included in the data analysis, namely the emotions of calm, at rest, relaxed, and peaceful, creating a total of four items in the data analysis.

Meaning in life. This construct was assessed by using the Meaning in Life Questionnaire (MLQ), created by Steger, Frazier, Oishi & Kaler (2006). The MLQ evaluates having meaning in life through two subscales: the presence of meaning and the search for meaning. Two items from each subscale, those with the lowest reliability score, were taken out, leaving us with a total of six items, measured with a 7-point Likert scale, ranging from "absolutely untrue" to "absolutely true", all the while the participants were asked to reflect on what made their life feel important to them. Sample items include "my life has a clear sense of purpose", and "I am searching for meaning in my life".

Social support. The final potential mediator, social support, was evaluated by the use of the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet & Farley, 1988). With 12 items using a strongly disagree/strongly agree 7-point Likert scale, the MSPSS measures one's perceived social support from three different sources: a significant other, family, and friends. In this study, the MSPSS was shortened: we took out two items with the lowest reliability score from each source of social support, therefore taking out six items in total. The MSPSS in our study thus only possessed six items, e.g. "I get the emotional help and support I need from my family", "I have friends with whom I can share my joys and sorrows" and "there is a special person in my life who cares about my feelings".

Happiness. A single item was used to measure happiness, taken from the European Social Survey. The item consisted of asking: "taking all things together, would you say you

are…", with a possible 10-point scale going from "extremely unhappy" to "extremely happy".

Life satisfaction. The Satisfaction With Life Scale developed by Diener, Emmons, Larsen and Griffin (1985) was used to measure global life satisfaction. All five items with a 7-point Likert scale of strongly disagree/strongly agree are included in this scale. Examples of these items are: "in most ways, my life is close to my ideal" and "if I could live my life over, I would change almost nothing".

Physical health. Two items from the European Social Survey to evaluate general physical health were used in this study. The first item involves subjective general health and asks the subjects: "Would you say your health in general is…", with five possible answers: very bad, bad, fair, good, and very good. The second item is termed more objectively and requires asking: "Are you hampered in your daily activities in any way by any longstanding illness, or disability, infirmity or mental health problem?", with three possible answers: no, yes to some extent, or yes, a lot.

All these measures were grouped together in a Qualtrics survey. Since the participants were of Thai nationality, to avoid a language incomprehension bias, a Thai translator was used to translate all the questions from English to Thai. The translation was further cross-checked by another Thai translator.

E. Statistical Procedure

The first step in the statistical procedure was determining each variable by carrying out a reliability analysis and descriptive statistics. There were no missing values as the questions in the survey were marked by a forced response. For the measure of Buddhist religiosity, containing 14 items, we first took out the item of frequency of prayer as the reliability analysis demonstrated that Cronbach's alpha would be 0.865 if the item were deleted, compared to 0.393 if the item stayed. This could possibly be due to an error of miscomprehension from the participants as this item required them to fill in themselves how many hour(s) or minute(s) they prayed every day. We then carried out a factor analysis with Principal Axis Factoring as an extraction method and Varimax as a rotation method. The analysis extracted two factors with six items related to Buddhist practices and four items related to Buddhist interests. Three items, revolving around the interest towards the beauty

of rituals or ceremonies, the meaning or values, and the community aspect, were unrelated to both factors and were therefore also taken out.

Finally, we calculated the average between these two factors and named the variable "Buddhist religiosity". We decided to use this variable as the final measure of Buddhist religiosity as we considered it to be more pertinent than calculating the total of the remaining 10 items from the questionnaire since the items with a 5-point Likert scale were associated with Buddhist practices and the items with a 7-point Likert scale were associated with Buddhist interests. Creating an average between the two was therefore more appropriate than calculating a total. The final reliability score for the variable of Buddhist religiosity was fairly low but acceptable ($\alpha = 0.643$) and the factors of Buddhist practices and Buddhist interests were highly correlated with the variable ($r = 0.803$ and $r = 0.934$, respectively).

The next variable to be determined was the measure of tolerance of contradiction. The total of the differences between the statements in each item was calculated, indicating thus a score of **in**tolerance of contradiction. The reliability analysis delivered an unacceptable reliability score. One item was taken out and a factor analysis of the remaining four items was implemented and resulted in a clear distinction between two sets of items. We named these two sets as "intolerance of contradiction items 1 and 2" (IC12) and "intolerance of contradiction items 3 and 5" (IC35). Both still had poor reliability scores but IC35 had a slightly higher score than IC12 ($\alpha = 0.349$) and was therefore selected for the data analysis. Due to the questions being translated into Thai, it is possible that some items were better translated than others, leading to discrepancies.

The measure of compassion yielded an acceptable reliability score ($\alpha = 0.774$) and therefore no modification was needed. The humor coping style variable also had an acceptable reliability score ($\alpha = 0.737$) and was thus not modified. The reliability score for the ideal affect of low-arousal positive emotions was slightly below the acceptable standard and a factor analysis was therefore implemented. This analysis led to a clear distinction between two sets of items, creating two variables, one named "low-arousal positive emotions 1 and 4" (LAP14) and the other "low-arousal positive emotions 2 and 3" (LAP23). Reliability scores were evaluated and LAP14 had a higher reliability score ($\alpha = 0.715$) then LAP23 ($\alpha = 0.655$). For the remainder of the data analysis, the variable LAP14 was therefore used.

For the measure of meaning in life, the reliability score was questionable. We then took a look at the reliability scores for each subscale. Evidently, the subscale of presence of meaning in life yielded a higher reliability score ($\alpha = 0.715$) then the subscale of search for meaning in life ($\alpha = 0.652$). We therefore decided to use only the subscale of presence of meaning since statistically it is more appropriate and theoretically as well as an association between the actual presence of meaning, religiosity and well-being is more probable than an association with still searching for meaning in one's life, religiosity and well-being.

The measure of social support had a good reliability score ($\alpha = 0.846$) and no modification was necessary. Life satisfaction also delivered a good reliability score ($\alpha = 0.867$). We decided to combine this measure with the measure of happiness to create a variable of "subjective well-being" (SWB), using the average between the two, considering its very high correlations with life satisfaction ($r = 0.887$) and with happiness ($r = 0.937$). The reliability score of SWB was acceptable ($\alpha = 0.784$).

The second step in the statistical procedure was to determine whether there were outliers or not. We eventually spotted three outliers by looking at the boxplot for the Buddhist religiosity variable and seeing three extreme values too far from the interquartile range, on the low end. These outliers had therefore a very low level of Buddhist religiosity. We decided to take these outliers out of the data analysis due to the theoretical importance that the subjects have a minimum level of Buddhist religiosity and for these outliers, this was not the case.

Finally, the third and last step in the statistical procedure was to test the hypotheses. To test the first three hypotheses, we used Pearson's bivariate correlation to analyze the various correlations. To test the fourth hypothesis including mediation, a specific modeling tool called PROCESS macro, designed by Andrew F. Hayes, was used. This tool is a program that can be added to SPSS and enables to estimate mediation effects. We first evaluated the mediation effects for each potential mediator individually. Then, we tested a complete mediation model containing all six potential mediators, determining the variable of Buddhist religiosity as the predictor variable and subjective well-being as the outcome variable. This complete model allowed us to look at the unique mediation effect for each factor, while controlling for the other factors. An alpha level of .05 was used for all statistical tests.

IV. Results

The results of our statistical analysis will now be formulated. In Table 1, the mean, the standard deviation and the minimum and maximum values possible for each variable is given. Each variable was expressed with a different scale therefore it is necessary to compare the mean with its personal minimum and maximum values.

Table 1. *Descriptive statistics for each variable*

Variable	Mean	Standard Deviation	Minimum	Maximum
Buddhist religiosity	4.06	0.92	1	6
Intolerance of contradiction	2.64	1.7	0	8
Compassion	5.08	0.94	1	7
Humor coping style	2.54	0.76	1	4
Ideal affect of LAP emotions	3.42	0.73	1	5
Presence of meaning in life	5.05	1.14	1	7
Social support	5.66	1.07	1	7
Subjective well-being	6.34	1.14	1	8.5

All variables expressing positive characteristics appear to have a high mean, when compared to the minimum and maximum values possible, as well as low standard deviations. Intolerance of contradiction, which can be considered as non-desirable in Buddhism, has a very low mean. The descriptive statistics on Table 1 therefore show that the sample we tested

had generally high levels of Buddhist religiosity, compassion, humor coping style, ideal affect of low-arousal positive emotions, presence of meaning in life, social support, and subjective well-being, as well as low levels of intolerance of contradiction. To make sure there was enough variability in the data sample, tests of normality were carried out for each variable: using the Shapiro-Wilk's normality test, Buddhist religiosity and SWB were not significant, thus indicating a normal distribution. The normality tests of the six potential mediators however were significant, but their normal Q-Q plots and levels of skewness and kurtosis did not show extreme signs of non-normality.

A. Hypothesis 1: *Buddhist religiosity is positively correlated with subjective well-being*

Using Pearson's correlation, results indicate a significant positive correlation between Buddhist religiosity and subjective well-being ($r = 0.318$, $p < .001$). The first hypothesis is therefore supported: higher levels of Buddhist religiosity is correlated with higher levels of subjective well-being.

B. Hypothesis 2: *Buddhist religiosity is positively correlated with tolerance of contradiction, compassion, humor coping style, ideal affect of low-arousal positive emotions, meaning in life, and social support.*

Next, to test the second hypothesis, the correlation coefficient values are reported in Table 2. Every variable, except for ideal affect of low-arousal positive emotions, is significantly correlated with Buddhist religiosity. Their correlations are positive, except for intolerance of contradiction, who has a negative correlation. We can therefore state that Buddhist religiosity is associated with higher levels of compassion, humor coping style, presence of meaning in life, and social support, as well as lower levels of intolerance of contradiction. The second hypothesis is thus supported to a great extent. It is still to be noted that the variable of low-arousal positive emotions is almost significantly correlated with Buddhist religiosity.

Moreover, after controlling for the variables of age and sex, compassion's correlation with Buddhist religiosity becomes slightly non-significant ($r = 0.194$, $p = .06$) but the difference is rather small. Compassion remains partially correlated with Buddhist religiosity. No other correlations are affected by the variables of age and sex. By comparing the

variables, we notice that presence of meaning in life has the highest correlation with Buddhist religiosity, followed by humor coping style, social support, and intolerance of contradiction.

Table 2. *Correlations between Buddhist religiosity and potential mediators*

Variable	Pearson's R	P-value	Lower level confidence interval	Upper level confidence interval
Intolerance to contradiction	-0.214	0.018	-0.725	-0.068
Compassion	0.189	0.038	0.011	0.375
Humor coping style	0.285	0.002	0.091	0.378
Ideal affect of LAP emotions	0.170	0.063	-0.007	0.277
Presence of meaning in life	0.410	0.000	0.303	0.713
Social support	0.217	0.017	0.047	0.460

C. Hypothesis 3: *Tolerance of contradiction, compassion, humor coping style, ideal affect of low-arousal positive emotions, meaning in life, and social support are positively correlated with subjective well-being*.

Correlation coefficients were again used to test the third hypothesis and the results are shown in Table 3. All the potential mediators, except for intolerance of contradiction, are significantly and positively correlated to subjective well-being. Therefore, Table 3 shows support for the third hypothesis, as we can say that compassion, humor coping style, ideal affect of low-arousal positive emotions, presence of meaning in life, and social support are positively related to a higher subjective well-being.

These correlations appear to be stronger than the ones between Buddhist religiosity and the potential mediators. Indeed, presence of meaning in life and social support have the highest correlations with subjective well-being, followed by ideal affect of low-arousal

positive emotions, compassion, and humor coping style. However, the variable intolerance of contradiction has an almost nonexistent relationship with subjective well-being.

Table 3. *Correlations between potential mediators and subjective well-being*

Variable	Pearson's R	P-value	Lower level confidence interval	Upper level confidence interval
Intolerance of contradiction	0.015	0.871	-0.111	0.131
Compassion	0.275	0.002	0.121	0.544
Humor coping style	0.231	0.011	0.082	0.612
Ideal affect of LAP emotions	0.352	0.000	0.284	0.812
Presence of meaning in life	0.635	0.000	0.495	0.775
Social support	0.576	0.000	0.454	0.770

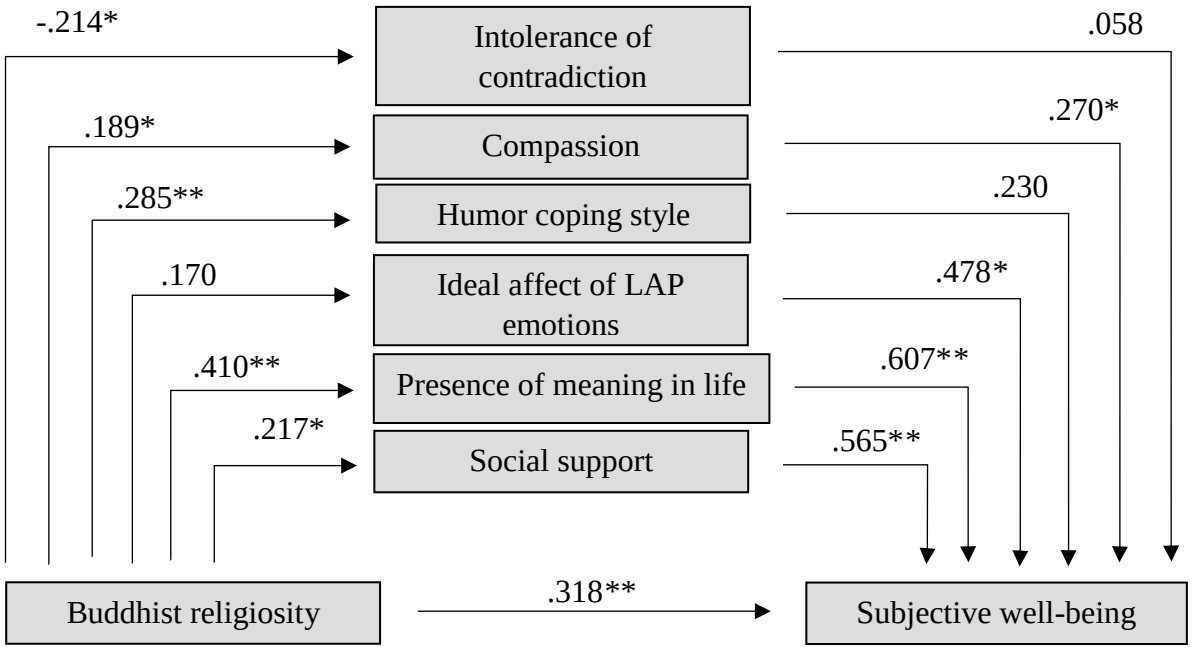
D. Hypothesis 4: *Tolerance of contradiction, compassion, humor coping style, ideal affect of low-arousal positive emotions, meaning in life, and social support act as mediators in the relationship between Buddhist religiosity and subjective well-being.*

Correlations help us establish a relationship between two variables, however they do not tell us much about the nature of that relationship, nor what can explain it. We therefore sought out the various factors that potentially mediate between the two variables. In other words, we investigated whether Buddhist religiosity influences subjective well-being through the intervening influence of intolerance of contradiction, compassion, humor coping style, ideal affect of low-arousal positive emotions, meaning in life, and social support.

In order to have mediation, three series of paths must first be significant. The first path is the correlation between the predictor variable Buddhist religiosity, and the outcome variable subjective well-being, which is validated in our first hypothesis, and can be found

on the bottom of Figure 1. The second path is the correlation between Buddhist religiosity and the potential mediators and has been validated for all the factors, except for ideal affect of LAP emotions, in our second hypothesis. These links can be seen on the left side of Figure 1. The third path is the correlation between the potential mediators and subjective well-being, which we supported to a great extent in our third hypothesis. However, in order to have mediation, this correlation needs to be controlled for Buddhist religiosity. We can find these correlations on the right side of Figure 1. It would appear that compassion, ideal affect of LAP emotions, presence of meaning in life, and social support all positively correlate with SWB, when Buddhist religiosity is being held constant. Humor coping style does not significantly correlate with SWB anymore, which is in contrast to when Buddhist religiosity was not being controlled. Intolerance to contradiction also does not significantly correlate with SWB.

Figure 1. *The three paths leading to mediation*



Note. * $p < .05$ ** $p < .01$

i. Simple mediation effects

After establishing the three series of paths leading to mediation, we began with an evaluation of the simple mediation effects for each variable individually, thus without controlling for the other potential mediators. We first noticed that presence of meaning in life is a significant mediator (*Effect* = 0.308, *BootCI* = 0.185 to 0.484), as well as social support (*Effect* = 0.143, *BootCI* = 0.030 to 0.276) and compassion (*Effect* = 0.052; *BootCI* = 0.0015 to 0.140), since their bias-corrected bootstrap 95% confidence intervals, based on 5,000 bootstrap samples, are above zero. However, only presence of meaning in life appears to be a full mediator as the correlation between Buddhist religiosity and subjective well-being becomes non-significant ($r = .085$, $p = .377$) when being controlled for presence of meaning in life, whereas for social support and compassion, the correlation stays significant, which indicates partial mediation.

When investigated alone, humor coping style doesn't appear to be a significant mediator (*Effect* = 0.054, *BootCI* = -0.017 to 0.170). Intolerance of contradiction and ideal affect of LAP emotions are also insignificant mediators (*Effect* = -0.023; *BootCI* = -0.104 to 0.020; *Effect* = 0.064, *BootCI* = -0.006 to 0.174; respectively). However, these results are perhaps less pertinent than if we were to look at a complete model of multiple mediation since there is possible overlap between the mediators, so it is important to control for all mediators. Indeed, Table 4 shows us the intercorrelations between the potential mediating factors.

Table 4 shows us that there is a positive correlation firstly, between compassion and ideal affect of LAP emotions, and presence of meaning; secondly, between ideal affect of LAP emotions and presence of meaning and social support; and finally, between presence of meaning and social support. This strong overlap invites us to evaluate a complete model of multiple mediation instead.

Table 4. *Intercorrelation matrix between the potential mediators.*

Variable	Compassion	Humor coping style	Ideal affect of LAP emotions	Presence of meaning in life	Social support
Intolerance to contradiction	-0.105	-0.128	-0.077	0.00	0.047
Compassion		0.001	0.269**	0.371**	0.151
Humor coping style			0.115	0.125	0.025
Ideal affect of LAP emotions				0.259**	0.186*
Presence of meaning in life					0.496**

Note. * $p < .05$ ** $p < .01$

ii. Multiple mediation effects

Table 5 reports the direct and indirect effects of Buddhist religiosity on subjective well-being after implementing a multiple mediation analysis. The first result we notice is that the direct effect of Buddhist religiosity on subjective well-being is no longer significant (*Effect* = 0.019, $p = .836$). This therefore supports the possibility of full mediation.

Then, there are three variables that significantly act as mediators since their bias-corrected bootstrap 95% confidence interval, based on 5,000 bootstrap samples are above zero: presence of meaning in life, social support and humor coping style. We can therefore claim that Buddhist religiosity lead to higher levels of humor coping style, presence of meaning in life, and social support, which in turn lead to a higher SWB, partially supporting our fourth hypothesis.

Compared to when we investigated the variables without controlling the other potential mediators, there are two effect changes that are worth to be noted. First, compassion no longer significantly acts as a mediator when it is evaluated with the complete model. We

can interpret this effect change of the variable of compassion due to its significant correlations with presence of meaning in life and with ideal affect of LAP emotions. By controlling for these correlations, the individual mediating effect of compassion on SWB is therefore not unique enough.

Table 5. *Direct and indirect effects.*

Variable	Effect	SE	LLCI	ULCI
Direct effect				
Buddhist religiosity	.019	.091	-.161	.199
Indirect effects	Effect	Boot SE	BootLLCI	BootULCI
Intolerance of contradiction	-.010	.020	-.061	.020
Compassion	.009	.020	-.021	.065
Humor coping style	.055	.032	.007*	.139*
Ideal affect of LAP emotions	.034	.030	-.001	.124
Presence of meaning in life	.195	.063	.097*	.357*
Social support	.092	.047	.019*	.200*

Note. *bias-corrected bootstrap 95% confidence interval is above zero

Second, the mediation effect of the variable of humor coping style becomes significant when the other variables are controlled. This effect change is hard to interpret, especially since humor coping style is not correlated with any of the other potential mediators, thus we can not claim that there is an influence of overlap. Nonetheless, since the complete model of mediation is more pertinent, we will base our conclusions on these results.

As for intolerance of contradiction and ideal affect of LAP emotions, there is no modification when investigating them in a complete multiple mediation model: they remain insignificant mediators.

V. Discussion and conclusion

A. Results and interpretations

The present study's main goal was to investigate the relationship between Buddhist religiosity and subjective well-being, and particularly to determine which factors help explain this relationship. Six factors were suggested to mediate Buddhist religiosity's association with SWB: tolerance of contradiction, compassion, humor coping style, ideal affect of low-arousal positive emotions, presence of meaning in life, and social support. The first four factors are seen as unique to the religion of Buddhism and the last two are viewed as common to all religions. A survey evaluating these factors, as well as Buddhist religiosity and subjective well-being, was given to a sample of Thai Buddhist adults (N = 121). Four hypotheses were tested and results showed support for each one.

Results first showed support for the first hypothesis by demonstrating a significant positive correlation between Buddhist religiosity and subjective well-being. Then, results supported the second hypothesis to a great extent as Buddhist religiosity was found to be positively correlated with compassion, humor coping style, presence of meaning, and social support, as well as negatively correlated with intolerance of contradiction. The only factor found to not have a significant correlation with Buddhist religiosity was ideal affect of LAP emotions. The third hypothesis was also greatly supported as factors of compassion, humor coping style, ideal affect of LAP emotions, presence of meaning, and social support were positively correlated with subjective well-being. The factor of intolerance of contradiction was not found to be significantly correlated with subjective well-being. Finally, results showed partial support for the fourth and final hypothesis as humor coping style, presence of meaning in life, and social support significantly mediated the relationship between Buddhist religiosity and SWB in a complete model of mediation and compassion was also a significant mediator when the other variables were not controlled.

i. Buddhist religiosity and its associated psychological mechanisms

Faced with these results, a few interpretations will now be given. First, our results are in conformity with the general findings of the positive relationship between religion and

subjective well-being as a moderate correlation was found between Buddhist religiosity and SWB. The present study thus adds support to the notion that religiosity is associated with higher levels of SWB and additionally allows us to apply this notion to the case of Thai Buddhism, thus replicating results from past cross-cultural studies (Diener, et al., 2011; Lun & Bond, 2013). Like for Christianity, Islam, and Judaism, Buddhist religiosity is positively correlated with SWB.

Secondly, the current study allows us to further investigate what explains this relationship between religiosity and SWB, in the case for Thai Buddhism, therefore also granting us the opportunity to make a cross-cultural comparison between Buddhism and other main religions. In preparation to explaining the relationship between Buddhist religiosity and SWB, we will first interpret Buddhist religiosity's association with the suggested psychological mechanisms. Evidently, results showed support for our theoretical arguments that Buddhist religiosity is associated with lower levels of intolerance of contradiction and higher levels of compassion, humor coping style, presence of meaning in life, and social support. The links between Buddhist religiosity and low intolerance of contradiction and high presence of meaning in life and social support, are in conformity with previous findings (Clobert, et al., 2016; Diener, et al., 2011). However, to our knowledge, no direct relations between Buddhist religiosity and compassion and humor coping style have ever been tested. Our findings therefore present preliminary evidence that Buddhist religiosity is correlated with higher levels of compassion and humor coping style.

We can thus suggest that Buddhism teaches the values of being compassionate towards all beings and tolerating apparent contradictions by standing in a middle ground. These values are accompanied by appreciating ambiguity, allowing to use humor as a way to cope with difficult situations and in general, are possibly unique to Buddhism. Indeed, tolerating apparent contradictions stems from the cognitive trait of a holistic thinking style that is specific to East Asians, in contrast to the analytic thinking style of Westerners (Nisbett, et al., 2001) and applying a middle way between two extremes is one of the main principles of Buddhism (Tirch, et al., 2015). Moreover, although Westerners are shown to feel compassion, this compassion is limited to people with whom they can identify with, whereas Buddhists are encouraged to be have extended compassion towards all living beings (Koopmann-Holm & Tsai, 2017). Finally, the most prevalent difference falls in the hands of

humor coping style, as studies have shown religiosity to be negatively correlated with use of humor as coping (Saroglou & Anciaux, 2004) whereas our study clearly presents the opposite. Possible reasons of why this unique association presented itself is that Buddhism teaches individuals to appreciate incongruity and to accept absurdity; these traits are characteristics of humor. Using humor is seen as necessary to becoming Enlightened as it allows to gain deeper insight and laughter is associated with good luck, friendliness, and prosperity (Yue, 2010) whereas for other religions, laughter is often viewed as a loss of self-mastery (Collicutt & Gray, 2012).

No significant correlation was found between Buddhist religiosity and ideal affect of LAP emotions however. To interpret this result, we must consider that the measurement of this factor contained a methodological error since it hadn't been measured along with the actual affect of LAP emotions. Indeed, participants were asked how they would ideally like to feel but not how they actually feel, and both needed to be evaluated to make sure that participants responded accurately by only relating to how they would ideally like to feel. A difference between the two measures would have then shown that they did respond appropriately. Considering this methodological error, it is thus difficult to correctly interpret the non-significant correlation between Buddhist religiosity and the ideal affect of LAP emotions. Finally, as in all religions, Buddhism also serves as a pathway to have meaning in life and to build a social support system.

ii. The psychological mechanisms associated with subjective well-being

Now we will interpret the association between the psychological mechanisms and subjective well-being. Results showed that compassion, humor coping style, ideal affect of LAP emotions, presence of meaning, and social support are all associated with a higher SWB. Interestingly, as we tested these correlations after controlling for Buddhist religiosity, the link between humor coping style and SWB became non-significant. Nonetheless, as we also controlled for the other potential mediators, humor coping style became once again significantly correlated with SWB. The relationships between compassion, ideal affect of LAP emotions, presence of meaning, social support and SWB were all preserved when controlled for Buddhist religiosity.

Previous studies have already found a relationship between compassion, humor coping style, presence of meaning, and social support with SWB (Koopmann-Holm & Tsai, 2017; Collicutt & Gray, 2012; Steger & Frazier, 2005; Lim & Putnam, 2010) and therefore our study adds further support for these relationships. As for ideal affect of LAP emotions, even though there was a methodological error in our measurement, we can still assume that either ideally wanting to feel or actually feeling LAP emotions is related to a higher SWB and this remains an important finding. We suggest that this association could be due to the cultural context of East Asia that discourages the experience and expression of extreme emotions (Ji & Chan, 2017) and therefore feeling or wanting to feel LAP emotions allows the person to feel at ease within this cultural context. The last factor, intolerance of contradiction, was not found to be related to SWB, perhaps because a low intolerance of contradiction may lead to more tolerance of racial and ethnoreligious outgroups (Clobert, et al., 2016) but this doesn't necessarily impact SWB. A low intolerance of contradiction may help an individual accept change in one's life and worldly matters but have no direct influence on SWB.

iii. Explanation of the link between Buddhist religiosity and subjective well-being

Our final results refer to the core of the present study, namely which psychological mechanisms explain Buddhist religiosity's impact on subjective well-being. By doing a complete multiple mediation analysis, it appeared that humor coping style, presence of meaning in life, and social support are significant mediators.

Having a sense of meaning in life and a social support system are two main factors that have consistently been found to associate with religion and SWB, and to even act as a mediator in various countries (Steger & Frazier, 2005; Diener, et al., 2011). It is therefore not unexpected that they present the strongest effect sizes in this study. In the case of Buddhism, we can speculate that through the Four Noble Truths, Buddhists are provided a coherent framework that answers important questions such as the origins of suffering, and guidelines of how one can alleviate that suffering. Along with the principles of interconnectedness in Buddhism, this framework could be essential to developing a sense of meaning in life of which its coherence, purpose, and significance greatly impacts one's happiness and one's life satisfaction positively.

As for social support, religious social support has been found to increase SWB, especially when there is a strong shared religious identity with a sense of belonging and common beliefs and attitudes (Lim & Putnam, 2010). In Thailand, about 94.6% of the population are Buddhists (The World Factbook: Thailand, 2018), making the practice of this religion very common. We can thus infer that the religious identity of Buddhism is strong amongst Thai people, possibly reinforcing the mediating effect of social support of Buddhist religiosity on SWB found in the present study.

Interestingly, even though it is a small effect size, humor coping style has found to be a significant mediator between Buddhist religiosity and SWB. Our study therefore presents preliminary findings that use of humor for coping can be associated with, and even mediate between, religion and SWB. These results clearly oppose those found with other religions in previous studies (Saroglou & Jaspard, 2001; Saroglou & Anciaux, 2004). Humor coping can be seen as a way to disengage oneself from the present situation and to reinterpret the situation. In contrast, religiousness is positively correlated with active coping, thus actively trying to cope with the situation through planning for example, and negatively correlated with self-distraction, thus disengagement (Saroglou & Anciaux, 2004). In Buddhism however, coping is viewed as reducing our biases of reality and therefore changing our perception of the situation requires mentally and affectively disengaging oneself (Tyson & Pongruengphant, 2007). Perhaps it is through the encouragement of this type of coping that humor coping was found to significantly mediate between Buddhist religiosity and subjective well-being. One setback found in our results however is that when tested as a single mediator, thus without controlling for the other potential mediators and instead only controlling for Buddhist religiosity, humor coping style wasn't a significant mediator. Since humor coping style was also not correlated with the other factors, it is difficult to appropriately interpret this effect change.

The remaining factors, namely intolerance of contradiction, compassion and ideal affect of LAP emotions aren't found to be significant mediators. Indeed, intolerance of contradiction is linked with Buddhist religiosity but its null relationship with SWB stops it from being a significant mediator. For the factor of compassion, without controlling for the other potential mediators, compassion does act as a significant mediator, perhaps due to its strong correlations with presence of meaning in life and ideal affect of LAP emotions,

creating thus an overlap between the mediators. Compassion is still a valuable factor, but its effects aren't unique enough to stand on their own. Finally, ideal affect of LAP emotions fails the final step of being a significant mediator but presents strong overlap with presence of meaning in life, compassion, and social support as well. The interpretation of this result remains difficult to determine due to the error in measuring this variable.

Apart from humor coping style, the unique factors associated with Buddhism, namely intolerance of contradiction, compassion, and ideal affect of LAP emotions, are not significant mediators. A possible explanation for this is that instead of directly impacting an individual's subjective well-being, Buddhism aims to impact collective well-being. Factors such as compassion and tolerance of contradiction are more beneficial for a society as a whole instead of for a single individual and this is possibly why no mediating effects were found in the present study. One of the core values of Buddhism is detachment from the self, hence focusing on one's own well-being seems contradictory. The study does demonstrate however that Buddhism serves similar functions as other religions by giving a sense of meaning in life and building a social support system.

In conclusion, we suggest that Buddhist religiosity offers a package of psychological mechanisms that can be divided into cognitive, social, and emotional factors, that lead to SWB. Meaning in life is a cognitive factor as it offers a coherent framework and guidelines to abide by, social support is a social factor as it is inherently based on social relationships, and humor coping style is a partly cognitive and partly emotional factor as it relies on cognitive processes to allow distance-taking and laughter takes effect on our positive emotions. The relationship between Buddhist religiosity and SWB is fully mediated by these cognitive, social, and emotional factors, but this does not mean that Buddhist religiosity has no effect on SWB and that these factors are the sole explanation for the increase in SWB. The article by Saroglou (2012) cautions against making these kinds of conclusions and therefore, we conclude instead that it is through Buddhist religiosity's unique configuration of psychological factors that explains its impact on SWB.

B. Limitations

Several limitations were presented in the study and they should therefore be mentioned. The first limitation, and possibly the most important, is regarding the probable influence of Thai

culture and the specificities of Buddhism in Thailand that potentially impact the effects found in the current study. In Thailand the main school of Buddhism is Theravada, which translates to "School of the Elders" and is considered to be the oldest form of Buddhism (Bodhi, 2005), as well as the most conservative (Gombrich, 2006). It is likely that the teachings and organization of this Buddhist school offers particularities that are only found in Thailand and could therefore influence the functions and uses of Buddhism for Thai people. For example, it is highly valued that Thai men become monks for a short period of time, and it is seen almost as an obligation that the Thai king is to be Buddhist (Mérieau, 2018). These characteristics create a context in which the practice of religion is highly normalized, and religion and politics are deeply tied to each other.

Beyond Buddhism, Thai culture is also very specific and unique, as for example family has a central place for most Thai people, and there is great respect for social hierarchy. Concepts such as *sanuk* and *mai pen rai* are predominant in Thailand and they display the strive towards getting satisfaction and pleasure from whatever you do (*sanuk*), and the need to accept the current situation and move on (*mai pen rai*). Considering all these specific characteristics, the present study can therefore not easily generalize to the overarching religion of Buddhism and is only applicable to Thai Buddhism.

Concerning the methodology, the study possesses the typical limitations through the use of self-report measures. As aforementioned, such limitations include biases such as impression management and self-deception. There is therefore a weak degree of control over the accuracy of the answers given by the participants. Using self-report measures also means that results are correlational, and thus cause-and-effect relationships can not be inferred. In order to do this, future studies would have to be experimental or longitudinal.

Furthermore, the measurement of most variables were shortened, in which items were cut out, either before being included in the survey, or during the statistical procedure. Even though reliability analysis were implemented for each variable, the number of items were limited compared to the statistical norm, such as some variables only had two items. Plus, the reliability score for intolerance to contradiction was still on an unacceptable level. Additionally, the methodological error of not measuring actual affect of LAP emotions along with ideal affect of LAP emotions presents a limitation to this study.

Another important limitation is the fact that the survey had to be translated from English into Thai. It's highly likely that some terms or concepts were mistranslated, as they could mean something entirely or slightly different than in its original form. Indeed, Thai is very different from English, not even belonging in the same language family, and possessing a different alphabet. Nonetheless, we did make sure to carry out the translation in the best way possible, using an initial translator and a second translator to cross-check.

An additional methodological limitation concerns the possible restricted variability in the evaluation of Buddhist religiosity. Even though a normal distribution was checked and validated, it's important to note that only about 12% of the sample scored between 1 and 3 on a total scale of 1 to 6, indicating a distribution slightly skewed to the high end of religiosity. This implies that our results are based on a comparison between the moderately religious and the highly religious, thereby not including lower levels of religiosity.

Finally, the last limitation is regarding the measurement of the multidimensional concepts of religiosity and subjective well-being. Such concepts are complex, and an agreement on a clear definition has yet to be determined. For the present study, we decided to measure Buddhist religiosity in its globality, including both Buddhist practices and Buddhist interests in order to maximize statistical power. We deemed the items appropriate to measure Buddhist religiosity but with such a multi-faceted construct perhaps different effects would be obtained with a different combination of items. The same applies for subjective well-being, as research into this construct is still growing. We could have also included items pertaining to psychological distress as a way to measure SWB but we decided to only measure SWB through the presence of positive well-being and not the absence of negative psychological indicators. Plus, we also didn't take into account the possible cultural specificity of evaluating SWB that is maybe different in East Asia, as shown by Shiah et al. (2016).

C. Future research indications

We will now give a few propositions for future research in the field of religion and subjective well-being. A first step would be to carry out the same study but with samples of different religious denominations, for example Christians or Muslims, living in Belgium. This would help us take both a cross-cultural perspective and a comparison between religions. It would

allow us to see whether the mediations found in the current study can be replicated for other religions, or whether they are unique to Thai Buddhism. Essentially, we would have to use the same measures and procedures in order to make an appropriate comparison.

Then, to investigate the extent of the possible influence of Thai culture in this study, it would also be interesting to implement the same study but with Belgian Buddhists for example. This would allow us to establish the importance of the impact of culture in the relationship between Buddhism and subjective well-being, as well as the specificities of this impact. Again, a similar methodology would be necessary to adequately be able to compare.

To go even further, it is essential that research in another culture should take into account as much as possible the cognitive, behavioral, and emotional specificities of that cultural context. For example, as aforementioned, the study by Shiah et al. (2016) demonstrates that Western and Eastern religious groups evaluate SWB differently, as Buddhists view happiness through role obligations and dialectical balance. Indeed, we should consider that asking Buddhists how happy they are and how satisfied they are with their life may not be the best way to obtain an accurate view of their SWB. We suggest therefore to use more culturally balanced measurements, such as the Socially Oriented Cultural Conception of Subjective Well-Being, a scale developed by Lu and Gilmour (2006), as this might lead to different results.

Finally, in order to have a deeper and more global understanding of the mechanisms that link religion with subjective well-being, we also suggest to make more use of qualitative methods, as Hood et al. (2018) recommends. Conducting semi-structured interviews for example can lead us to question the person how he views and uses his religion, and in what ways this use makes him happier and more satisfied with his life. This would allow us to avoid having the limitation of strictly defining religiosity and SWB and instead directly access the individual's personal perspective of these concepts, thereby also increasing cultural sensitivity. Plus, there would be less risk of the social desirability bias as participants are generally more truthful during interviews.

D. Final conclusion

As the field of religion and well-being has been more focused on the three monotheistic religions, the desire to include Buddhism prompted the current study. Its main goal was to

investigate the relationship between Buddhist religiosity and subjective well-being by determining which variables mediate this relationship. Results demonstrate that Buddhist religiosity offers a unique configuration of cognitive, social, and emotional mechanisms, namely meaning in life, social support, and humor coping style, that help explain its positive link with subjective well-being. Other results show that Buddhist religiosity is also associated with tolerance of contradiction and compassion, but these variables do not uniquely impact SWB. The ideal affect of low-arousal positive emotions is significantly correlated with SWB but not with Buddhist religiosity. The present study adds further support that religion is beneficial for well-being, also in the case of Thai Buddhists. Future research should dive deeper into the cross-cultural analysis of religion and well-being, with a stronger inclusion of Buddhism and its unique characteristics.

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