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SPIRITUAL FLOW:THE INFLUENCE OF RELIGIOUS EXPERIENCE
ON PSYCHOLOGICAL WELL-BEING

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ABSTRACT

Researchers in the psychology of religion have attempted to better explain the relationship of religion/spiritual practice and psychological benefits, including the concept of well-being. The use of optimal experiences, or flow theory, has not yet been used in this endeavor. Flow is described as experiences which include meaningful enjoyment, focus, and intrinsic rewards and motivation. Since reports of transcendent, spiritual experiences appear similar to experiences of flow, it is likely that these experiences may overlap in structure. Also, since both religious and flow experiences have been associated with psychological well-being, it is likely that a spiritual flow experience may explain, in part, the mediating factors of the relationship between religion and mental health. This study used a cross-sectional, correlational design to examine if a spiritual flow experience predicts higher reports of psychological well-being in a religious adult population. One-Hundred and seventy five religiously active adults completed an online survey which included measures of mysticism, religious orientation, flow, psychological well-being, and spiritual well-being. The goal of the study was to assess the existence and structure of spiritual flow and its potential impact on well-being across a variety of domains. There was evidence that spiritual flow experiences do exist, though there were structural differences between spiritual and general flow. Though intrinsic religious motivation did not have an major effect on well-being, spiritual flow was a major predictor of well-being. A qualitative review of which activities tend to lead to spiritual flow is also discussed.

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CHAPTER 1

Introduction

Overview

Flow is a state of focused experience in which an individual is able to participate in an enjoyable, personally meaningful activity which provides intrinsic rewards (Csikszentmihalyi 1975a, 1990, 1993). This concept has been used to explain individuals' positive experiences with work, leisure, academics, psychotherapy, and other areas. Previous literature has provided support for certain theoretical characteristics of flow (Csikszentmihalyi, 1993). These characteristics include intense experiential involvement, merging of action and awareness, a perception of control, an altered sense of time, a loss of self-consciousness, and an autotelic (intrinsically motivated) nature of experience. In order for an experience to include flow it must also meet certain conditions. These include having clear goals for the activity, experiencing a balance between the challenge of the task and the skills of the individual, and receiving immediate feedback concerning the performance of the individual in the activity. Flow has been investigated in terms of its influence on psychological well-being and findings indicate a relationship with several aspects of this important treatment and research outcome variable.

Spiritual experiences have previously been investigated using the term 'mystic experience.' Research on mystic experiences has included characteristics and structure similar to that of flow. Stace (1960) provided characteristics of mysticism that have influenced other major researchers (e.g., Hood, 1975). Stace's theory includes the following dimensions of mystic experiences: 1) Feelings of unity within oneself and with the world; 2) Timelessness and a loss of

a sense of self; 3) A sense of joy and peace; 4) A sacred and holy quality; 5) A contact with the divine; 6) A presence of contradictions or paradox; 7) Ineffability (i.e., the inability to explain the experience in words).

The current study uses a broader definition of spiritual experiences than mysticism; however, the above mentioned theoretical components are considered in light of the similarities they share with flow characteristics. Specifically, Stace's (1960) concept of unity may relate to the merging of action and awareness which was included in flow theory (Csikszentmihalyi, 1993). Flow and mysticism also both include an altered sense of time, control, and other characteristics. Mystic experiences differ from flow in that they deal specifically with the holy or sacred.

Though not included as part of a mystic experience, intrinsic motivation (Allport & Ross, 1967) is one of the most fundamental principles of the psychology of religion. This concept is very similar to Csikszentmihalyi's (1990, 1993) concept of an autotelic experience.

Considering the potential similarities between spiritual experiences and flow, it was hypothesized that flow theory could help define meaningful spiritual experiences in terms of structure and characteristics. The current study was designed to provide evidence for the existence of a spiritual flow.

In addition to this, the researcher attempted to investigate the influence of spiritual flow on positive outcome variables. Psychological well-being is a construct which has been increasingly focused on as the positive psychology movement has expanded. It is considered to be one of the more important outcomes of any psychological treatment. Both religious activity and flow experiences have been related to psychological well-being. Thus, it was hypothesized

that those who experience higher frequency and intensity of spiritual flow will have increased well-being in general.

Flow

One concept which has been tied to the development and current work of the positive psychology movement is Csikszentmihalyi's work on optimal experience, or flow theory (see Csikszentmihalyi, 1975a; Csikszentmihalyi, 1997; Csikszentmihalyi & Gillham, 2000). Flow is described as a state of being in which an individual is completely absorbed in a task for the sake of the task itself. It is a state that is experienced when engaging in activities which the individual finds personally meaningful and in which the person can become lost in. In illustrating the feelings of flow one could potentially experience, Csikszentmihalyi (1993) once used a poem written about rock climbing: "Climbing is the same: recognizing that you are a flow. The purpose of the flow is to keep on flowing, not looking for a peak or utopia but staying in the flow" (p. 180). Many people may term the concept of flow as a state of transcendence, a natural high, or a perhaps a trance.

Flow theory was originally developed with focus on creative activities and recreation (Csikszentmihalyi, 1975a), yet its principles have been adapted to many areas including business/work (Donner & Csikszentmihalyi, 1992), education (Rathunde & Csikszentmihalyi, 2005), and psychotherapy (Delle Fave & Massimini, 1992; Massimini, Csikszentmihalyi, & Carli, 1987). This concept of flow may be considered to be universal as it is found across a variety of cultures and areas, though some cultures may vary somewhat in which activities or conditions create flow (Moneta, 2004). Indeed, optimal experiences surround the average person no matter who they are. One survey indicated that nearly 90% of Americans report having a

state of flow at some point in their lives and many experience these states rather often (Csikszentmihalyi, 1993).

Structure of Flow Experiences

Through many initial interviews with artists and athletes (Csikszentmihalyi, 1975a) and by using a technique called the experience sampling method (ESM), researchers have been able to determine certain characteristics and conditions required for flow to occur (Csikszentmihalyi & Larson, 1992). Though brief definitions of flow were given above, the characteristics which are part of the flow experience create a more complex and specific structure than previously described. This structure includes what elements are inherently part of the flow experience. Some specific conditions also need to occur in a situation in order to allow the experience to grow to this optimal state.

Csikszentmihalyi (1993) stated that the characteristic dimensions of flow include: 1) clear goals, 2) a balance of skills and challenge, 3) complete concentration, 4) sense of control, 5) loss of self-consciousness, 6) altered sense of time, and 7) activities/ experiences which are autotelic (i.e, intrinsically rewarding). Of these, clear goals and balance of skills/challenge with the addition of immediate feedback are considered to be conditions of creating flow.

A clear goal is important to the obtainment of flow. Having a goal includes having specific rules or structures in place to achieve that goal. Without a basic understanding of the primary goal of the activity and the rules of how to accomplish it, the experience is likely to produce either anxiety or boredom. For example, someone who is participating in a novel physical activity with many rules to memorize and who is unsure of the objective of the sport is most likely going to feel nervous about even attempting the experience. Likewise, an employee whose job is to watch a monitor but does not understand what he or she is watching for might

experience boredom. Without a precise goal to base the activity on, one might not be able to find enough structure in the activity to obtain flow. However, even if a goal is identified, but there is no structure provided that will allow the individual to achieve the goal, the optimal experience will not actualize.

Goals are also related to the need for a match of skill and challenge. Generally, flow could be considered to be delicately balanced between anxiety and boredom. Once a goal has been established and the activity has provided enough structure, the individual is left to decide if he or she is able to meet the challenges of the experience. If the activity presents challenges that exceed one's skills (e.g., climbing a very difficult mountain with little experience), the individual is likely to experience a greater amount of anxiety. It is likely they will avoid the climb or feel overly fearful while climbing instead of enjoying it. Boredom results from having skills which are much greater than the challenge presented. For instance, the climb is only a few feet up but the climber is a professional who has scaled Mt. Everest.

Csikszentmihalyi (1993) also theorizes that flow is dependent on immediate feedback as to how well one is performing in a specific activity. After understanding the objective one is working to achieve, and once the individual has achieved the necessary skills to meet the right amount of challenge, it is important for the person to know if they are succeeding or not. Activities may use points received or approval from other participants, as well as many other prestructured feedback tools. Individuals may also gain a state of flow through natural feedback, such as successfully repairing an engine or finishing a work of art.

Once these three conditions are met, encouraging the individual to find balance between anxiety and boredom, optimal experience occurs. At this point, the person may experience some of the other characteristics of flow. One of these characteristics concerns the ability to fully

concentrate on the task at hand. This indicates the individual is aware only of the situation he or she is a part of. All other irrelevant thoughts or distractions are outside of awareness (Csikszentmihalyi, 1993). In addition, Csikszentmihalyi described the process of "merging action and awareness" (p. 183). Concentration is so strong that one not only focuses on the activity, but also the actions that are required by the activity come without conscious effort or thought. The individual may feel that every part of his or her body and mind are working together in perfect unison. Often one might describe a sense of losing oneself in the action. One example of this may be a tennis player who does not need to think about where her racket is in relation to her body or the moving ball. Instead she is able to complete her swing and achieve her immediate goal without effortful or conscious thought. Perhaps she is unaware of her stance, her form, her swing, or indeed her very goal for that moment, nonetheless she is successful in fulfilling each of these aspects of the activity.

This concept is also similar to that of losing self-consciousness. When a person experiences flow, he or she is absorbed in the activity. Thus, there is no room for attention to be taken up with thoughts or feelings that deal with the daily self. The individual is not worried about their appearance, the people they are impressing, or their personal weaknesses. Instead, they give the self to the experience. They view themselves as part of the overall experience, with their body and mind in tune with what they are doing in every aspect. Any other egocentric focus slips away. Some participants who had achieved flow in competition reported that they often were not even aware of the opponent as another person, but simply as part of the experience.

At the same time, the person experiences a potential sense of control. Since the skills/challenge balance has been met, the individual can experience control in the requirements

of the task (Csikszentmihalyi, 1993). However, it is important to note that this does not indicate that an individual in flow truly has control. Csikszentmihalyi (1993) stated:

Actually, in a flow state one is not, in fact, in complete control. If one were, the tenuous balance between challenges and skills would tilt in favor of the skills, and the intensity of the experience would decrease. Rather, what happens is that one knows that control is possible *in principle*. (p. 182)

Flow experiences occur without notice of the passing of time. Minutes or hours may pass by without the realization of the individual. In this altered sense of time, one might spend a long time in the activity, thinking it has been much shorter. Likewise, in a flow state an individual may feel that time seems to slow down while involved in the activity. Again, this characteristic relates to the complete concentration, or absorption, of the participant in the given activity.

The last characteristic which describes flow states is perhaps, one of the most important aspects of the experience: the autotelic nature of the activity. Csikszentmihalyi (1990) uses the term autotelic to indicate that people engage in flow activities simply for the sake of the activity and not with thought toward any other benefit. "An activity that produces such experiences is so gratifying that people are willing to do it for its own sake, with little concern for what they will get out of it, even when it is difficult or dangerous" (Csikszentmihalyi, 1990, p. 71). This concept can also be viewed as a motivation rather than the actual structure of the experience. Two people can enter into the exact same activity and receive the exact same outcome, but do it for completely different reasons. For one, the exhilaration is gaining something from being successful in the activity, and for the other it is the opportunity to participate in the activity itself (Csikszentmihalyi, 1990). This is, perhaps, in opposition to principles of behaviorism, which would explain that the person seeks to complete the activity in order to obtain a desired reward

(i.e., reinforcer). However, in the autotelic experience, the behavior is the reinforcer for itself. (Csikszentmihalyi, 1975b). Csikszentmihalyi (1990) notes that the majority of people are not purely autotelic in their nature or experiences. Rather they engage in situations which are partially autotelic yet continue to include other aspects as part of the overall experience. Experiences are often enjoyed when they include a combination of the internal exhilaration of the activity itself (autotelic) and realization of external benefits (reinforcement).

Models of Flow

As research and theory has encouraged the growth of the flow theory, several practical models have been proposed. Though each may differ in the number of conceptual experiential states, they all focus on the balance between challenge and skill as the main condition of flow.

The original flow model indicated that flow is a state between worry and boredom (Csikszentmihalyi, 1975a). If an individual participates in an activity which is beyond his or her ability to successfully complete (i.e., they are not able to meet the challenge of the experience), they undergo a form of anxiety. The experience is too much for them and they do not wish to continue or may avoid that activity all together. On the other hand, if the activity cannot produce enough psychological or physical arousal (i.e., the challenge is not high enough), it produces a state of boredom. The activity is unable to fulfill the need for challenge of the individual. However, if the experience can provide a balance of individual ability (skills) and mental/physical stimulation (challenge), it is able to produce feelings of accomplishment, exhilaration, or elation. As each challenge is increased, the individual is able to meet it with increased skills. Likewise, as skills are developed and enhanced, the person is able to participate in more challenging situations. Thus, the concept of flow indicates that the individual is able to

maintain the channel of optimal experience. This channel model of flow is illustrated in Figure 1.

As noted in the model (see Figure 1), there may be differing levels of flow. Those with lower levels of skill might find flow in lower challenge situations. This may produce a sense of optimal experience which is pertinent to that individual. However, if the same person engages in a different activity in which he or she possesses a great amount of skill, he or she may find more intense flow states when engaging in the higher challenge. Though both experiences are inclusive of the flow state, the more intense flow experience may be much stronger and more meaningful to the individual. This meaningfulness may be viewed in terms of the increased complexity of the experience. Some have argued that complexity is the fundamental human attribute. This position states that human systems, including the mind, are essentially designed to seek greater amounts of complexity in order to enhance living conditions and survival (Dell Fave & Massimini, 2005).

Because of the increasing need for more complexity, it is possible that some activities which have been able to produce flow previously may eventually lose their potential in providing such optimal states for the individual. "A game of tick-tack-toe, for instance, soon becomes boring because it cannot offer new opportunities for action. Chess, on the other hand, provides an almost unlimited range of increasing challenges." (Csikszentmihalyi, 1982a, p. 176)

In addition to this basic model, other authors have proposed that flow may be a part of more dimensional experiential states than simply being found between boredom and worry. LeFevre (1988) argues that flow might be viewed in terms of the compilation of experiences one might have throughout a day, not only in an activity-by-activity basis. In examining the overall

flow of a person, the model may be changed to include other states. Please refer to Figure 2 for an illustration of LeFevre's four channel model.

This model again uses challenges and skills as the focus of deciding the state of an experience. However, as illustrated, the experience types are more dimensional. Again, we see that as skills increase beyond a 'midpoint' they must interact with the level of challenge experienced. If skills and challenge are above the midpoint ranges, the person is likely to experience flow (i.e., Quadrant I), though intensities may vary. As with the one channel model, boredom (Quadrant II) is experienced if skills are high and challenge is low. Likewise, anxiety (worry) is experienced when challenge is high and skills are low. In addition, this model denotes what may happen if both skills and challenge are low. This is termed a state of apathy (see Quadrant III). Apathy, a "negative and psychologically disruptive [state]" has been "characterized by the perception of low challenges, an individual experiences a lack of concentration and uninvolved, disengagement, and limited mobilization of individual resources" (Delle Fave & Massimini, 2005, p. 265). This type of experience has been associated with decreased well-being and impaired developmental success (Larson, 2000).

In taking this Four Channel model a step further, Massimini and Carli (1988) subdivided the skills/challenges dimensions to include a moderate level in addition to the basic low and high levels of each. By doing this they produced an Eight Channel model (see Figure 3). In this model the same four experience types are included as before (i.e., flow, boredom, apathy, anxiety). In addition control, relaxation, worry, and arousal states are also included. This model has been widely used in research on flow partially because it narrows the field of what flow includes. However, it has been argued that this model does not have a strong justification in its theoretical frameworks (Ellis, Voelkl, & Morris, 1994).

Measurement of Flow

Csikszentmihalyi's (1975a) original research on the concept of flow was conducted solely using interviewing techniques. Specifically, participants were questioned concerning positive experiences regarding their preferred activities. After interpreting this qualitative data, the flow theory was first proposed. Later the interview technique was standardized through the development of the Flow Questionnaire (Flow Q; Csikszentmihalyi & Csikszentmihalyi, 1988). This assessment provides the participant with three quotes from the initial interviews (see Csikszentmihalyi, 1975a) which best describe the flow experience according to the theory. Participants then answer questions as to whether or not they have had a similar experience and what that experience was like. As can be noted from viewing the questionnaire (see Appendix A for an adapted version), the measure continues to obtain mostly qualitative information.

In order to provide more quantitative data concerning flow, researchers have created scales to be used in conjunction with the Flow Q. One such measure was developed by Jackson and Eklund (2002) for use in research with athletes. The Dispositional Flow Scale - 2, uses a nine factor model, which coordinates with nine flow dimensions (i.e., balance of challenge and skill, action-awareness merging, clear goals, unambiguous feedback, concentration on task at hand, sense of control, loss of self-consciousness, transformation of time, and autotelic experience). The measure specifically attempts to determine personality traits which are related to the flow characteristics. A similar scale, the Flow State Scale, was developed at the same time to examine flow experiences which are situationally based (Jackson & Eklund, 2002). In both measures, participants select the flow experience identified in the Flow Q and rate the experience on several items.

An alternate method to the Flow Q is the experiential sampling method (ESM, Csikszentmihalyi & Larson, 1992). This technique is able to examine a range of data on daily experiences as they immediately occur. The participant is given a set of measures which ask questions about experiences the individual may have. For a predetermined amount of time, often a week, the participant carries the measures with him or her. He or she will also be given a pager or a preprogrammed watch which will go off at random times throughout the time period. Whenever the participant is prompted by the page or alarm, he or she will complete the measure relative to what was occurring at the time of the prompt. In this way, the researchers are able to aggregate the data together to determine the nature of daily experiences, the amount of optimal experience incurred, and which activities were more frequent or more beneficial. This method is continued to be used widely in research on optimal experience (see Csikszentmihalyi & Larson, 1992; Delle Fave & Massimini, 1992, 2005).

Religion

Psychology has examined theories and outcomes of religious activity almost since the inception of the social science. However, this topic has also at times been excluded from psychological focus (Koenig & Larson, 2001). During the past few decades researchers have again studied this area and have provided the field of psychology with more understanding of how this human aspect shows positive effects in the lives of many individuals. One of the more prominent findings of this area concerns the positive relationships of religious involvement to health outcomes, including physical and mental health (Hackney & Sanders, 2003; Koenig & Larson, 2001; Koenig, McCullough, & Larson, 2001). Some theorists are seeking ways to integrate religion with the treatment of a variety of psychological disorders and presenting issues (see Pargament, 2007; Richards & Bergin, 2004; Shafranske, 1996). Others have sought to

provide evidence of religious activity being generally associated with positive outcomes and negatively related to dysfunction (Koenig, McCullough, & Larson, 2001). The majority of these studies indicate that religion inherently includes many factors that influence better individual, holistic health (Koenig & Larson, 2001; Koenig, McCullough, & Larson, 2001).

In terms of physical health, Koenig, McCullough, and Larson (2001) report that religious involvement may have effects on coronary artery disease, immune functioning, and pain management. They suggest that religion encourages many activities which promote benefits in these areas (e.g., avoiding substance use or risk-taking behaviors). Religious activity is also associated with prevention of disease, potentially due to the finding that negative health behaviors are not participated in as much in religious individuals. Following this line of research, the authors conclude that religion has a strong influence on medical health.

Considering mental health, religiosity has been negatively associated with anxiety disorders throughout many studies (Plante & Sharma, 2001). Most often it is those individuals who are intrinsically motivated to participate in religion that show a decreased likelihood of anxiety (Richards & Bergin, 2000). Though much of the research in the interactions between religion and mental health outcomes is based largely on Christian or Judeo-Christian beliefs, similar effects have been found in other religious traditions. For example, Tapanya, Nicki, and Jarusawad (1997) were able to find the same negative relationship between intrinsic religiosity and worry with elderly Buddhists as they did with an elderly Christian sample.

Depression is another disorder that has been often studied in regards to religion and religious activity. Again, most of the studies in this area indicate the influence of religion on symptomatic expressions of mood disorders. Mickley, Carson, and Soeken (1995) show that intrinsic religiosity is negatively correlated to symptoms of depression. This is a finding that is

evidenced in many other studies. Religion has also been implicated heavily in coping practices of patients and in the direct treatment of depressive individuals (Plante & Sharma, 2001). Nearly 30 years ago, a few spiritually integrated psychological treatments were being developed and studied for effectiveness. One such treatment included using religiously based guided imagery (Propst, 1980). Though non-religious imagery was no more effective in reducing reports of depressive symptoms than the control group, the participants who underwent the religious imagery treatment were much more likely to report decreases than controls or a group which received an effective traditional group therapy.

In addition to its negative association with disorders and its utility in treatment of such, religion has been associated with higher levels of psychological well being. In reviewing 100 studies investigating the relationship between religion and well-being, Koenig, McCullough, and Larson (2001) discovered that nearly 80% of cross-sectional, cohort, and intervention studies resulted in positive significant relationships. Only one of the included studies showed a negative association. The authors reported that many empirically supported predictors of overall psychological well-being (e.g., marriage and family satisfaction) are influenced in part by religious belief and religious activities participated in. Several other meta-analytic investigations led researchers to conclude that religiosity does tend to have a positive association with mental health in general (Bergin, 1991; Hackney & Sanders, 2003; Larson, et al., 1992). Plante and Sharma (2001) stated that, "healthy religious functioning or a spiritual outlook on life has been *clearly associated* with mental well-being and negatively associated with depression, anxiety, and substance abuse" (p. 254, italics added).

With such a "clear association" established, it seems that the question of whether religion should be included in psychological research and potential practice has been answered.

However, one problem which has not yet been thoroughly explored in the research literature concerns the specific factors of religion which might create these results. Essentially, it is more a question of *how* religion works than *if* it works which has been left to current investigators (Pargament, 2002). Researchers have attempted to answer this question by looking at religious coping (Pargament, 1997), effects of religious motivation (Allport & Ross, 1967), and strength of faith (Plante & Sharma, 2001).

As noted previously, one of the major factors in the relationship between positive outcomes and religion/spirituality is an intrinsic religious motivation. Allport and Ross (1967) proposed that individuals engage in religion for various personal reasons. Based on their work, psychology of religion theorists have accepted the existence of religious motivation orientations, including intrinsic and extrinsic orientations. Someone with high intrinsic motivation engages in religious practice because he or she is "wholly committed to their religious beliefs" (Maltby & Day, 2003). This is a person who truly believes in the religious practice and is participating for the sake of spirituality itself. His or her spiritual and religious experiences are based on personal, internal aspects. In comparison, those who express an extrinsic orientation are motivated to participate in religious activity for secondary gains. Most often the benefits sought for by extrinsically motivated individuals include social acceptance and being a part of an "in-group." It is unclear whether their spiritual experiences are similar to intrinsic individuals or not.

As research into spirituality and religiosity has been conducted, intrinsic religious orientation is consistently supported as a major factor in the relationship of religion and positive outcomes of well-being. Through many studies, the result has been that intrinsic religious orientation is related positively to well-being; extrinsic religiosity appears to be negatively

correlated to psychological well-being (Dezutter, Soenens, & Hutsebaut, 2006). This can be illustrated in the examples of mental health outcomes given above.

This overview of research findings provides support for the influence of several components of an individual's experience in religious activity. However, researchers have not focused many investigations on the influence of the actual spiritual experience or religious activity on the person. Interestingly, aspects of spiritual experiences, sometimes termed as mystic experience, have been examined by researchers for over a century (Argyle & Hills, 2000; James, 1902; Pratt, 1920; Spilka, Brown, & Cassidy, 1992) yet they have not adequately been studied with the intent of discovering a potential mediation of the evidenced association of religion and health outcomes. The current study proposed that meaningful religious or spiritual experiences which include a sense of flow have an impact on the relationship between intrinsic religiosity and mental health.

Spiritual Experiences

The current study is focused on a broad range of spiritual experiences and considers these experiences as best defined by personal meaning that an individual subscribes to. People view their spirit, spiritual beliefs, and spiritual activity in a wide variety and extremely personal ways (Purdy & Dupey, 2005). Each individual engages in a variety of activities or experiences which may produce a transcendent state for that individual. Examples may include prayer, sacred text readings, meditation, feeling close to God, admiring the beauty of nature, serving others, or whatever is pertinent to each individual person in obtaining a sense of spiritual magnitude which directly interacts with the self. The nature of these experiences is highly personal and can only be defined by the person him or her self, with each individual identifying various meaningful experiences. However, it is important to understand what might be included

in these personal moments in order to view this concept in beneficial ways. This requires researchers to examine these experiences in a structured manner.

Previous researchers have provided some understanding of the structure of spiritual experiences. Many of these authors have theorized spiritual experiences in terms of the concept of mysticism (Argyle & Hills, 2000; Greeley, 1975; Hay, 1979; Hood, 1975; Spilka, Brown, & Cassidy, 1992; Stace, 1960). In reviewing the principles of mystic experiences, it is important to note that the current study was designed to examine a different kind of experience than these theoretical explanations of spiritual experiences (i.e., the inclusion of flow). Though mysticism does not fully exemplify the manner in which the conceptual considerations of flow will be viewed for the current hypothesis, the literature does result in many similarities between the two concepts.

Since the inception of the study of religion, hypotheses have been suggested concerning the structure of the mystic experience. For example, in 1899 Starbuck developed response patterns in regard to the spiritual experience (Spilka, Brown, & Cassidy, 1992). Stace (1960) proposed seven aspects as being the core of the personal religious event. This work was the foundation for Hood's (1975) Mysticism Scale. They are: 1) Feelings of unity within oneself and with the world; 2) Timelessness and a loss of a sense of self; 3) A sense of joy and peace; 4) A sacred and holy quality; 5) A contact with the divine; 6) A presence of contradictions or paradox; 7) Ineffability (i.e., the inability to explain the experience in words).

Argyle and Hills (2000) described mystical experience as "any awareness or experience of being, power, or force that is independent of the self, irrespective of the way the being, power, or force is perceived or interpreted" (p. 160). This definition was designed to include religious experiences in a subcategory of the overarching construct. The authors made the distinction that

religious experiences are simply mystical experiences which are interpreted in a religious manner.

Across cultures, researchers have consistently found that approximately one third of participants report having had spiritual experiences (Greeley, 1975; Hay, 1979, 1990). Previous work has indicated that, for the majority of people, these experiences are quite infrequent and short in duration (Greeley, 1975; Hay, 1982). For instance, Hay (1982) stated half of his participants indicated that the mystic experiences they identified lasted only "between a few seconds and 10 min." It should be noted that in each of these studies, mystic experience was defined by feeling the presence of a higher being or power. It is possible that if the definition of spiritual experience was expanded to include transcendent feelings without identification with a specific being, the frequency and duration rates might change.

Researchers have also attempted to provide a description of subjective reports of the experience and potential stimuli for identified mystic experiences. For instance, Greeley (1975) and Hardy (1979) reported that a large minority of people sometimes describe extraordinary facets of their religious experiences such as seeing lights, having visions, and sensing warmth. However, most experiences did not include these sensational aspects. In the attempt to discover what types of religious practices tend to stimulate the mystical experience, researchers have found a wide variety of activities. The more common practices or activities resulting in this type of experience include focus on nature's beauty, contact with something sacred, listening to music, prayer, attending church services, and feeling a harmony with the universe (Greeley, 1975; Wuthnow, 1978). Though not as common among participants, there are other activities which have been reported as resulting in a transcendent/spiritual state which are not directly religious in nature. They include reading novels or poetry, childbirth, and sexual encounters (Greeley, 1975).

The current study attempted to examine the influence of spiritual or religious experiences on psychological well-being as mediated by flow. In attempting to do this, the definition given earlier (i.e., Argyle & Hills, 2000) had to be adapted and broadened somewhat, partially due to the broader nature of flow theory. In defining the experience only in relation to a "being, power, or force" the authors exclude many spiritual experiences which may be of benefit to the individual. It is likely that many transcendent feelings may tend to lead a religious or spiritual person to feel closer to a "being, power, or force" but they may not always include feeling close to deity. In order to determine if religious or spiritual experiences can impact religion's effect on well-being, the experience must be viewed as its own entity. Also, it should be noted that in the current study the experience of lights or visions may be considered potential aspects of spiritual experiences. A spiritual experience is not necessarily determined by these intense aspects, even though they may be part of them. Instead, the religious experiences examined in this work include any personal state that a participant may identify as having spiritual or religious importance to them. Therefore, although mystic experience appears to be similar to the current researcher's conceptualization of spiritual experience, it may be appropriately categorized under the umbrella of spiritual experience.

Since the goal of the study was to more accurately understand how spiritual experiences can have a mediating impact, it was thought that optimal experience (i.e., flow) can help this exploration. As noted earlier, flow theory is one concept which enables researchers to view the optimal states that humans can experience (Csikszentmihalyi, 1975a). When comparing religious experiences with the principles of flow, one finds striking similarities, which may indicate they can occur simultaneously or in connection with each other.

Spiritual Flow Experiences

The structure of flow and the structure of spiritual, or mystic, experiences are described with similar aspects. Thus, it can be inferred that the theoretical and practical states of both experiences may overlap with each other. Can flow be used to explain the nature of spiritual experiences? Are they essentially the same construct? By looking at the theoretical framework established on both sides of the question, one can deduce how these states relate to each other.

Recall that Stace's (1960) cores of mysticism included the feelings of unity within oneself and the world. Csikszentmihalyi (1993) states that one characteristic of the flow experience is a merging of action and awareness. This merging could also be thought of as a sense of unity. When the mystic or spiritual individual is able to feel unity within himself or herself, he or she may be able to interact with the environment in a more unified state. The same may true when the person is engaging in specific experiences. Thoughts and actions become the same in this unity, which indicates that structural aspects of both the flow experience and the spiritual state are fulfilled. In this state of unity, the individual is able to keep his or her thoughts focused with the rest of the self and the environment. Here again, he or she has developed the complete concentration which Csikszentmihalyi (1993) describes.

Another shared aspect is Csikszentmihalyi's concept of an altered sense of time. To the individual in flow, time may speed up or slow down compared to the actual pace of time. Similarly, Stace (1960) included timelessness and lost sense of location as a necessary part of the spiritual experience. This loss of time and location may also include losing a sense of self, similar to another one of flow theory's characteristics.

Control is also a similar principle between theories. As Csikszentmihalyi (1990) noted, the individual does not truly need to be in control in order to perceive a potential of control in the

experience. Likewise, social psychological theories of religion state that one of the primary purposes of engaging in religious activities is to maintain a sense of control, even if that entails turning control over to the trust of God's or a higher power's abilities and wisdom (Spilka, Shaver, & Kirkpatrick, 1985; Spilka, Hood, Hunsberger, & Gorsuch, 2003).

One important characteristic that Stace (1960) proposed which is not included in flow theory is "a sacred and holy quality" (Spilka, Brown, & Cassidy, 1992). Since flow is a general theory which encompasses many different kinds of experiences, the inclusion of this aspect is inappropriate outside of religious experiences. However, the holy nature of a personal state is part of the underlying definition of a spiritual experience. Thus, without this quality, religious or spiritual flow will simply be flow.

Religious involvement often includes clear goals, as is a necessary condition to obtain flow. These goals mainly concern the personal relationship with deity or the fulfillment of a higher purpose that brings the individual to a greater reward in this life or beyond it. Each religious tradition or denomination may define specific goals as they believe necessary. However, most religious people have a basic understanding of the reasons for participating in their preferred religious activity. As flow theory indicates, if the person does not understand the underlying goals and the required tasks to achieve them, an optimal experience does not materialize. There are, admittedly, some experiences in which the goal of the specific religious activity is not fully understood by the participants. For example, a newly converted religious devotee may not fully grasp the specific aim of certain rituals. However, the individual may still experience a flow state in this circumstance. This may be due to the underlying goals of all spiritual endeavors. Each individual may view the primary goals of religious involvement differently (e.g., coming closer to God or coming closer to people through the activities), but is it

possible that these main goals are what takes place of specific goals which are not understood. Many individuals who believe in Christian religious orientations focus on faith that things happen, not understanding of why it is. Though this concept of faith may be viewed as opposed to having a specific goal, one might argue that gaining faith is the goal of the individuals who are engaging in spiritual activities with this principle.

The above example also illustrates how personal motivation may spur people to engage in the same activity for differing reasons. As previously noted, Allport and Ross (1967) first theorized the intrinsic and extrinsic motivational styles of religiosity, which has been one of the most studied and supported theories in psychology of religion. Again, intrinsically oriented people participate in religious practice for the purpose of the practice, not for external or subsequent benefits (e.g., social companionship). Csikszentmihalyi (1990, 1993) stated that an autotelic nature of experience was one of the major characteristics of flow, indicating that the experience itself is rewarding for itself. It is possible to consider a connection between this concept and intrinsic motivation. Since both concepts involve the individual engaging in the religious activity for the sake of the activity, they may be quite similar in nature. Carr (2004) stated that when people have a sense of intrinsic motivation they tend to "show more interest, excitement and confidence about the the tasks they are intrinsically motivated to do" (p.47). He explained further that these people "show enhanced performance, persistence and creativity concerning these tasks, and more generally report higher self-esteem and subjective well-being" (p. 47). Indeed these descriptions have a strong resemblance to many of the points presented by the various explanations of flow (see Clarke & Haworth, 1994; Csikszentmihalyi, 1990; Delle Fave & Massimini, 2005). It is also notable that just as flow is connected with a sense of

feedback loops, intrinsic motivation (or autotelic experience) is impacted by what feedback is provided through the experience (Carr, 2004).

One discrepancy between the theories of flow and spiritual experience includes this sense of feedback. (Csikszentmihalyi, 1990; 1993). Some religious experiences may include direct feedback as to the participant's performance (e.g., specific prayers, special rituals), but others may not contain this immediate feedback as a part of the activity's inherent nature (e.g., personal prayer, reading of sacred text, contemplating beauty of nature). Indeed, in many cases performance feedback on personal spiritual tasks occurs much later, if at all. The only immediate feeling may be faith or the sense of transcendence or flow that is experienced. However, the autotelic nature of religious flow experiences may itself act as a form of immediate feedback. As indicated previously, this autotelic nature is partially influenced by the feedback process itself. Also it was noted earlier that faith may be considered as the goal of the activity, which might imply that a fluctuation in faith could be viewed as immediate feedback. The obtaining of a personally meaningful spiritual state may also be a form of feedback. In short, success in the attainment of the experience, rather than in the specific details of the task performance may be the stimuli which guides the individual to have an optimal experience in spiritual terms.

Reviewing the similarities in the spiritual and flow experiences, it appears that so many principles coincide that it is likely the theories of each experience overlap. Thus, one might conclude that positive religious experiences may often include flow. The present study is intended to test this hypothesis by establishing a positive relationship to reports of flow and spiritual experiences. The researcher also wishes to investigate the potential outcomes of the religious flow experience concerning psychological well-being.

Psychological Well-Being

Psychological well-being was considered the primary outcome variable explored in this investigation. This variable is important to the realm of practical application to areas such as mental health, as it could be considered the ultimate outcome goal of professional psychological services, and psychological research, especially in the positive psychology realm. Seligman and Csikszentmihaly's (2000) introduction to the concept of positive psychology states, "treatment is not just fixing what is broken; it is nurturing what is best" (p. 9). Well-being has been posited as an alternative to viewing mental health outcomes as simply the absence of dysfunction (Ryff, 1995). In a review of studies concerning well-being, Diener (1984) indicated that there may be several factors which influence well-being, including biological and developmental factors, as well as positive or negative events and the individual's perspective of the current situation.

One widely used model of well-being was proposed by Ryff (Ryff, 1989, 1995; Ryff & Singer, 2006). Ryff derived her model of well-being by reviewing the various personality theories which included the subject of positive self. In doing this, she adopted and combined ideas of what makes a positive state of being from authors such as Jung, Allport, Rogers, Maslow, and Erickson (Ryff, 1995). These theorists made arguments for various concepts and practices that differ greatly and sometimes oppose each other. The result of combining these ideas was a six-dimension theory of psychological well-being. The factors included are: Autonomy, Environmental Mastery, Personal Growth, Positive Relations with Others, Purpose in Life, and Self-Acceptance. Autonomy deals with the ability to mentally function based on your own perspective and confidence. This may include following a personal view even though it is in opposition to others' perspectives or demands. The Environmental Mastery aspect concerns the ability to meet the needs and requirements of the lifestyle the individual is living (e.g., work

responsibilities, home maintenance). Those who are high in environmental mastery are able to utilize their environmental resources and are able to find environments which are conducive to their personal value systems. Personal Growth entails the individual's views on the importance of growth and ability to meet challenges. Those high in this dimension are able to view their own potential and are open to new experiences. Positive Relations with Others involves the quality of a person's interpersonal relationships. This may include satisfying relationships and concern for others. The Purpose in Life aspect of well-being represents the understanding of goals and meaning for the individual's life. The last dimension, Self-Acceptance, defines how a person views him or herself and his or her accomplishments (i.e., satisfied with choices and success, or regretful about how they conduct themselves). Those with high self-acceptance are able to have positive attitudes about themselves while accepting the negative qualities they may have.

Ryff (1989) used this theoretical model to create the Scales of Psychological Well-Being (SPWB). This measure operationally defined each of the six dimensions and includes 14 items per dimension, including equal positive and negative items for each scale. Van Dierendonck (2005) determined through factor analysis that 3-item versions of the scales were most valid. However, he also found that internal consistency of each 3-item scale was not at an appropriate level. Currently, the 14-item version and a 9-item version are used as a standard measurement of well-being. Ryff (1989) found that the SPWB generally did not correlate with previous measures designed to assess human positive traits (i.e., life satisfaction, self-esteem, morale, etc.). She argued that this was evidence to support that prior research had not adequately addressed psychological well-being and that her model was sufficient to alter the manner in which this construct was viewed. In his validation study, Van Dierendonck (2005) also posited that the

scales should include a measure of spiritual well-being. He defined spiritual well-being "as the integral experience of a person who is functioning as God intended," (p. 631) and stated that the concept of spirituality may be part of the "essence" of being human. Since the SPWB continues to exclude spiritual well-being as part of the measure, other assessments are used to fill this void.

Paloutzian and Ellison (1983) developed the Spiritual Well-being Scale (SWB), a means of measuring spiritual well-being in the contexts of religious well-being and existential well-being. Though it is able to assess some aspects of religious nature, the measure is also considered to tap a general psychological construct (Hill & Hood, 1999). It is considered to be "a general measure of the subjective quality of life" (Boivin, Kirby, Underwood, & Silva, 1999, p. 382.) The concept of religious well-being includes how the individual views their spiritual life and relationship with God. The existential well-being dimension is a sense of positive meaning for the individual's life and can be outside of the realm of religion. This could include a perspective of a meaning for life, satisfaction in life, and life experiences (positive or negative).

As reported earlier, researchers have found that religion and religious practice are positively related to various treatment outcomes, indicating a likely increase in psychological well being (see Bergin, 1991; Hackney & Sanders, 2003; Larson et al., 1992; Plante & Sharma, 2001). Again, the current state of psychological research on religion includes a need to understand which variables may be influencing this relationship (Pargament, 2002).

Csikszentmihalyi (1993) argues that flow has the capacity for increasing subjective well-being, stating "all the evidence agrees that when people in flow act at the peak of their capacity it...improves subjective well-being" (p. 197). Indeed research has shown a relationship between flow experiences and forms of well-being (Csikszentmihalyi, 1999; Eisenberger et al., 2005; Steele & Fullagar, 2009). For example Eisenberger et al. (2005) found that flow experiences at

work were associated with positive mood, work interest, and performance. Steele and Fullagar (2009) studied the effect of flow on the relationships between academic engagement and psychological well-being. Their results indicate that without frequent flow experiences in academic setting students would not develop a sense of engagement which leads to well-being. The authors stated, "It is clear that flow is an important positive psychological variable that researchers have found to be associated with flourishing" (p. 10).

Since both religious experience and flow have supported claims as to their relationship with psychological well-being, and in consideration of the potential overlap in the theories themselves, it is likely that spiritual flow will also result in well-being. However, since this has not yet been a topic of research, the specific aspects of well-being (i.e., Ryff's six factors) that may result from spiritual flow experiences are not currently understood. As part of the current study, the researcher sought to explore this relationship and outcome.

Summary

The above literature and theoretical conceptualizations explain a potential interaction between namely spiritual experiences, flow, and psychological well-being. Religious activity has been shown to have a positive association with psychological well-being, especially when viewed through intrinsic religious motivation (Koenig, McCullough, & Larson, 2001). Though researchers are currently investigating mediators of this relationship, the influence of spiritual experiences has not been represented in the literature. Theories and research regarding the characteristics of spiritual experiences mostly include the concept of mysticism (Hood, 1975; Stace, 1960). Though spiritual experiences may include more aspects than the concept of mysticism has addressed, the literature regarding the structure of mystic experience may add convergent validity to an investigation of spiritual experience. Another concept which may

explain spiritual experiences is that of flow. Flow is a state of optimal experience in which an individual is able to reach a higher state of experience than normal (Csikszentmihalyi, 1990, 1993; Delle Fave & Massimini, 2005). Since flow and spiritual experiences appear to have many similarities in structure and characteristics, it is possible to conclude that these theories of experience can help define or inform each other. Also, since both flow and religious activity have positive associations with psychological well-being, it is likely that the inclusion of flow in spiritual experiences may partially explain the mediating connection between intrinsic religious activity and positive mental health outcomes. The current study investigated this possibility.

CHAPTER 2

METHODS

Research Questions and Hypotheses

The current study was designed to investigate the relationship between spiritual experiences, flow, and psychological well being. Specifically, the follow questions were addressed.

First, the theories of optimal experience and mystic experience appear to have a significant amount of overlap in terms of experiential structure, which may also be true of broad views of spiritual experience. This study attempted to determine if there is an association between spiritual experiences and flow; thus, supporting the notion that spiritual flow experiences exist. It was hypothesized that there would be a significant, positive relationship between the two variables.

A second hypothesis concerns the mediating impact of spiritual flow on the previously established relationship between intrinsic religious orientation and psychological well-being. It was prosed that those who identify as intrinsically religious will have significantly higher rates of well-being. Also, through stepwise regression, this study attempt to show that having increased elements of spiritual flow, as measured by the dispositional flow scale, will account for a significant amount of variance in this relationship.

This study also included a qualitative exploration of the types of spiritual activities that may be able to produce a spiritual flow experience. This was done by gathering information on

the kinds of situations/activities which participants reported engaging in while experiencing spiritual flow.

Design

This research project was designed as a cross sectional, correlational study. It used online, self-report questionnaires to measure each variable and analyzed the correlations and interactions of each measure. The project was designed to explore mediating effects of one of the variables. Specifically, it examined if rates of spiritual flow obtained from the spiritually adapted Flow Questionnaire and Dispositional Flow Scale (explained below) create a mediating effect on reports of Intrinsic Religiosity's and Mysticism's prediction of Psychological and Spiritual Well-being.

Power Analysis

A power analysis was conducted in order to determine the appropriate sample size needed for appropriate significance levels. It was hypothesized that a moderate effect size would be found between the variables of interest and an effect size of $d = .15$ was used to establish sufficient power. Using the recommended power of .80 and an alpha level of .05, the analysis produced an estimated sample size of 130 participants. The actual number of participants after data collection was complete equaled 175.

Procedure

Recruitment initially took place through individual religious organizations. The researcher contacted various religious institutions in specified areas via mail to make arrangements for recruitment. Upon receiving permission from the proper authority regarding each institution, the researcher provided recruitment fliers and the online link to the survey to be distributed at the religious leader's discretion. The fliers described the study and provided a

website for participants to use in order to complete the surveys. After the initial phase of recruitment, it was discovered this recruitment process was not successfully producing a sufficient number of participants.. Recruitment expanded to include many methods. In addition to the letters which were initially distributed, the researcher began emailing religious leaders throughout the nation. A ‘snowballing’ technique was used to distribute the survey through Facebook and email to as many individuals as possible. There were three attempts to use the snowballing technique before sufficient numbers were obtained. An ad was also placed on Facebook targeting people with stated interests in religion or spirituality. Finally, Indiana State University undergraduates were recruited through the University’s psychology department. Students enrolled in Introduction Psychology classes were recruited through a general recruitment system and announcements made to their classes. They were offered credit in addition to the incentive included in the study.

As participants followed the survey link, they were provided with informed consent information and then asked to complete each questionnaire. After completing all questionnaires, they were provided a second link which led them to a different survey used to gather personal identification data in order to facilitate the incentive procedure. Information collected included name, address, phone number, email address, and how they would prefer to be contacted if they were chosen in the incentive drawing.

Participants were offered a small incentive for filling out the questionnaire packets. This consisted of entering a drawing to win 1 of 10 gift certificates. After the drawing took place personal information was deleted. All available security measures were taken to ensure confidentiality of participants and data.

Pilot Study

In order to ensure the procedures would be successful, the researcher conducted a small pilot study. In this pilot phase, participants were given the study link directly from the researcher. The primary aim of this phase was to answer the following questions: 1) How much time is required for participants to complete the questionnaire packets? 2) Are the instructions clear for a variety of people? 3) Is the wording sufficiently clear and non-offensive for participants from varying religious backgrounds? 4) Do the measures and adaptations adequately solicit spiritual flow experiences? During the pilot phase, there were approximately 15 participants from varying religious traditions. They were primarily graduate students. Feedback from these participants helped to clarify the wording of instructions, determined that the time need was about 30-40 minutes, and confirmed that nothing in the survey would be considered offensive. Suggestions were also made to adapt some of the language in the introduction of the study to make it more understandable.

Measures

Adapted Flow Questionnaire (Flow Q.)

The Flow Questionnaire has been used with a wide variety of samples and participants. Different variables that have been considered in past use include gender, age, ethnicity, occupation, geographical areas (including international variations), hobbies/recreational pursuits, and some mental health issues (Allison & Duncan, 1988; Han, 1988; Massimini, Csikszentmihalyi, & Delle Fave, 1988).

This measure was developed using information and concepts obtained from Csikszentmihalyi's (1975) initial interviews on optimal experience. Participants read a set of three descriptions of flow experience. Then they are asked whether they have had a similar

experience, to indicate how frequent they have these experiences, and to identify an experience which is similar to the one read about.

The quotes provided in the Flow Questionnaire are:

"My mind isn't wandering. I am not thinking of something else. I am totally involved in what I am doing. My body feels good. I don't seem to hear anything. The world seems to be cut off from me. I am less aware of myself and my problems."

"My concentration is like breathing. I never think of it. I am really quite oblivious to my surroundings after I really get going. I think that the phone could ring, and the doorbell could ring, or the house could burn down or something like that. When I start, I really do shut out the whole world. Once I stop, I can let it back in again."

"I am so involved in what I am doing. I don't see myself as separate from what I am doing."

This measure is being used to examine the incidence of spiritual flow; however, in order to determine applicability of spiritual flow experiences compared with other types of flow experiences, the measure was adapted to include a rating of flow in terms of spiritual experience. The adaptations are described in the following paragraphs.

After reading the paragraphs, participants using the original Flow Q are asked, "Have you had a similar experience to the one described in the quotes?" For the current study, this item was adapted slightly to encourage the participant to consider religious/spiritual experiences. The question was changed to read, "Have you had an experience *of a spiritual nature* similar to the one described in the quotes?" This adaptation did not alter the meaning of the question as much as it narrowed the type of experience being considered.

After the questions concerning frequency of the experiences, participants are presented with open ended questions about the experience, including about specific activities that encourage the flow experience. The follow items were also altered by adding the word "spiritual" to each question that asked about "such experiences." For instance, the question "Is there a particular activity that provides such experiences when you engage in it?" became "Is there a particular activity that provides such spiritual experiences when you engage in it?" This process was repeated for each question of flow experience in the measure.

The Flow Q provides mostly qualitative data about the types of activities a person might identify as being most likely to produce a flow state. This allowed the researcher to include data analysis concerning which types of experiences are reported by most participants who have spiritual flow. Frequency rates of having a flow experience are the only quantitative information provided. More quantitative data is provided by combining the Flow Q with the Dispositional Flow Scale.

Dispositional Flow Scale - 2 (DFS-2)

This scale was designed by Jackson and Eklund (2002) to be used in conjunction with the Flow Questionnaire. It is intended to measure the participant's inherent personality aspects which relate to the characteristics of the flow experience. In the DFS-2, the participant uses the identified activity from the Flow Questionnaire to rate 36 items on a 5 point Likert-type scale concerning the frequency the individual feels the aspect of the experience occurs (see Appendix B).

The items on the scale relate to a nine factor theory of flow which coincides with the conditions and characteristics found in Csikszentmihalyi's (1993) theory. They are challenge-skill balance, action-awareness merging, clear goals, unambiguous feedback, concentration on

task, sense of control, loss of self-consciousness, time transformation, and autotelic experience. Examples of items relating to these measures include: "Time seems to alter (either slows down or speeds up)," "I feel like I can control what I am doing," "I am aware of how well I am performing," and "I perform automatically, without thinking too much." The DFS-2 shows a high reliability rate, with estimates between .81 and .90.

Mysticism Scale (M Scale)

The Mysticism Scale (Hood, 1975) is included in the study to provide a comparison of spiritual experiences to flow. Again, it should be noted that mysticism is only a part of the spiritual experiences currently being investigated. However, by making this comparison, it might be possible to provide evidence of the overlapping nature of flow and spiritual experience. The M Scale is a 32 item self-report measure in which participant rate their personal experiences in regards to Stace's (1960) nine dimensions of mystic experience (see above for more information on these dimensions). See Appendix C for a copy of this measure.

Religious Orientation Scale – Revised

This scale was developed as an adaptation of the original Religious Orientation Scale (Allport & Ross, 1967) by Gorsuch and McPherson (1989). The Allport and Ross Scale allows the participant to endorse items associated with *extrinsic* or *intrinsic* religious motivation. People categorized with an extrinsic religious orientation are described as participating in religious activity in attempt to obtain secondary goals (e.g., social connection). On the other hand, those high in intrinsic orientation are motivated by goals of religion itself. The Gorsuch and McPherson adaptation of the scale makes the addition of subdividing the extrinsic scale into two types of extrinsicness (i.e., personally oriented and socially oriented).

It is a 14 item self-report measure which asks participants to rate statements of religious attitude (See Appendix D). Respondents rate how much they agree the statement reflects their nature on a 5-point Likert-type scale (i.e., 1 - "I strongly disagree," 2 - "I tend to disagree," 3 - "I'm not sure," 4 - "I tend to agree," 5 - "I strongly agree"). Items are categorized as endorsing or not endorsing intrinsic (I), socially oriented extrinsic (Es), and personally oriented extrinsic (Ep) religious motivational styles. Eight items are designed to measure intrinsic orientation. Example items of these items include: "It is important to me to spend time in private thought and prayer" and "My whole approach to life is based on my religion." The Es scale includes three items such as "I go to church mainly because I enjoy seeing people I know there." Personally oriented extrinsicness is also measured by three items (e.g., "What religion offers me most is comfort in times of trouble and sorrow").

Concerning reliability, the revised intrinsic scale expressed an estimated reliability correlation of .83. The reliability estimates of the extrinsic scales (i.e., Ep, Es, and Ep/Es) were not as high as the I (Revised), based on the following values (respectively) .57, .58, and .65. Though the measure has not been studied extensively for validity, it is able to confirm construct aspects proposed by Kirkpatrick's (1988) reanalysis of several studies using the original scale (Hill, 1999).

Marlow-Crowne Social Desirability Scale (M-C SDS)

In order to control for the effect of socially desirable responding, participants completed the M-C SDS (Crowne & Marlowe, 1960). This scale presents 33 items which have been judged as been socially desirable or undesirable. The respondent marks each item as true or false as it relates to them. The M-C SDS, compared to other measures of desirable responding, was developed to be used outside of the assessment of psychopathology. It has convergent validity

with the MMPI – Lie Scale ($r = .54$, $p < .01$). The measure shows good internal consistency (KR-20 = .88) and test-retest reliability ($r = .89$). An example of an item keyed true is “I’m always willing to admit it when I make a mistake.” One item keyed false is “There have been times when I felt like rebelling against people in authority even though I knew they were right.”

Appendix E provides a copy of this measure.

Scales of Psychological Well-Being (PWBS)

This measure was developed by Ryff (1989) using her six factor theory of well-being. The measure includes a scale for each factor, including *autonomy*, *environmental mastery*, *personal growth*, *positive relations with others*, *purpose in life*, and *self-acceptance*. The original scales included 14 items for each scale. In addition 9-item and 3-item scales have been developed for various studies. The 3-item version is not often recommended as it shows low internal consistency (Ryff & Keyes, 1995; van Dierendonck, 2005). Since this study included several measures and items, the 14-item scales were chosen to decrease the time required to respond. The scales are presented in a mixed fashion as indicated in Appendix F. Items are rated on a 6 point Likert-type system indicating the level of agreeance with items (i.e., 1 - "Strongly Disagree," 2 - "Disagree Somewhat," 3 - "Disagree Slightly," 4 - "Agree Slightly," 5 - "Agree Somewhat," 6 - "Strongly Agree").

A sample item for the Self-Acceptance scale is: "When I look at the story of my life, I am pleased with how things have turned out." An example of the Environmental Mastery scale includes: "I am quite good at managing the many responsibilities of my daily life." Items from other scales include the following: "I think it is important to have new experiences that challenge how you think about yourself and the world" (Personal Growth). "Some people wander

aimlessly through life, but I am not one of them" (Purpose in Life). "I have confidence in my own opinions, even if they are contrary to the general consensus" (Autonomy)

Ryff (1989) found high internal consistency for all six scales (i.e., ranging from .83, for Autonomy, to .91 for Self Acceptance). She also established good construct validity, with some sub-scales showing greater effects than others. The two subscales that have evidenced the most validity are *self-acceptance* and *environmental mastery*. These were correlated with life satisfaction (.73 and .61, respectively), balance of positive and negative affect (.55 and .62, respectively), and self-esteem (.62 and .55, respectively).

Spiritual Well-being Scale (SWB)

In order to include a broader sense of well-being the Spiritual Well-being Scale will be included. Paloutzian and Ellison (1982) developed this measure in order to provide an overall, global assessment of individual perceptions on spiritual well-being. As stated previously, this measure is designed to include all spiritual well-being, not only religious aspects. The author thus created items with a religious well-being and an existential well-being focus. Religious well-being (RWB) can be considered to be a report of the person's perceptions of his or her status or relationship with God. Items on this scale all directly address God and religious aspects. Existential well-being (EWB) may be more "horizontal" in nature (Hill & Hood, 1999). It includes relationships with self and community. Items on this subscale do not use religious inferences.

The measure itself (see Appendix G) is a 20 item self-report assessment. Each of the two subscales (i.e., RWB and EWB) includes 10 items. All items are rate on a 6 point Likert-type scale (i.e., Strongly Agree to Strongly Disagree). An example of RWB items includes "I have a

personally meaningful relationship with God." An item found on the EWB is "I feel a sense of well-being about the direction my life is headed in."

Researchers have noted good reliability and validity (Hill & Hood, 1999). Test-reliability resulted in overall values ranging from .82 to .99. RWB showed a slightly higher reliability coefficient than EWB (i.e., .88 to .99 compared to .73 to .98, respectively). Internal consistency was also evaluated as being high for the overall measure (.89 to .94). Concerning validity, Paloutzian and Ellison (1982) performed a factor analysis which resulted in the two factors supporting the measure's subscales. The SWB has also been correlated with similar theoretical constructs. This validation resulted in positive relationships with self-confidence, intrinsic religious orientation, and having a sense of purpose. One discrepancy in the measure is the noted ceiling effect (i.e., the measure may not be sensitive when administered to some religiously active groups).

Demographic Survey

A brief demographic survey was used in order to establish the appropriate description of the sample. Demographic variables included age, gender, ethnicity, and religious affiliation (denomination). Questions about religiosity, spirituality, belief in God, and frequency of attendance at worship services were asked on this questionnaire. Please see Appendix H for a copy of this survey.

Participants

Targeted participants were adults (i.e., age 18 and above) who were identified as being religious persons, as evidenced by their affiliation with a religious organization or self-report. Examples of religious institutions included churches, mosques, synagogues, and temples. In order to provide a more generalizable community sample, including varying religious

affiliations, participants were recruited from various areas throughout the nation (e.g., Indianapolis, Atlanta, Philadelphia, Chicago, Boise).

Participants were required to be adults in order to avoid a confounding effect that may occur with adolescents who are still undergoing religious development. This age requirement also potentially allowed for participants to have more chances for experiencing flow in a religious context (i.e., the more exposure to spiritual experiences a participant has will result in a higher likelihood that he or she will have experienced religious flow). There was no exclusion toward any participant based on gender, ethnicity, socioeconomic status, or occupation.

The total number of respondents in the sample was 175. Of that number 120 (68.6%) were female and 55 (31.4%) were male. The mean age of the sample was 32.65 (see Table 2). The majority of participants were Caucasian (84.6%), while 6.9% identified as African-American. Asian-Americans and Latinos each made up 1.7% of the sample and 4.6% stated they were biracial. In terms of religious identification, the majority of the sample was Christian (83%). The main Christian denominations represented were Latter-Day Saints (28%) and Catholics (19%). Other Christian groups included Southern Baptist (9.1%), Methodist (7.4%), Other Protestant (6.9%), and Lutheran (2.9%). Additionally, 5.7% of the sample was Jewish, 1.7% were Buddhist, 1.7% were Pagan/Wiccan, 1.1% were Universal Unitarian, and 6.3% reported they identified as a member of a religion not specifically listed. Please refer to Table 1 for more information regarding the sample description.

CHAPTER 3

RESULTS

Correlations of Spiritual Flow and Mysticism

In order to test the first hypothesis addressing the relationship between mysticism and spiritual flow, a bivariate correlation was calculated between the total score of the Mysticism Scale and the total score of the Dispositional Flow Scale (DFS). This analysis produced a significant correlation ($r = .384$; $p < .001$). The moderate correlation between flow and mysticism suggests support for the hypothesis that spiritual flow exists and allowed for further analysis.

Additional bivariate correlations were conducted between the Mysticism scale and the subscales of the DFS in order to determine the likely structure of a spiritual flow experience (see Table 3). Significant correlations were found with the following flow characteristics: Autotelic Experience ($r = .518$; $p < .001$), Transformation of Time ($r = .419$; $p < .001$), Loss of Self-Consciousness ($r = .422$; $p < .001$), Merging of Action and Awareness ($r = .339$; $p < .001$), Balance of Action and Skill ($r = .297$; $p = .001$), and Concentration on the Task ($r = .292$; $p = .001$). The other DFS subscales (Clear Goals, Unambiguous Feedback, and Sense of Control) were not significantly related to mysticism. Analysis of the subscales was beneficial to understanding the basic structure of spiritual flow. However, further analyses were conducted using the total DFS score for simplicity and to determine the effect of the overall experience.

Regression Procedures

The primary question in this study was whether spiritual flow could predict well being. In order to test this, a series of stepwise regression models were analyzed. These models were identical with the exception of different criterion variables. The criterion variables included nine aspects of well-being. These were the six subscales of Ryff's Psychological Well-being Scale and the Spiritual Well-being Scale, which is divided into Religious Well-being, Existential Well-being, and a total score.

The first variables included in the models were demographics including age, sex, and ethnicity. Ethnicity was a dichotomus variable in the regression analysis. As the sample was primarily Caucasian, the ethnic information tested was white vs. non-white. In preliminary analyses, denomination was analyzed using a contrast coding technique and was found to have no significant relationship to the dependent variables. Therefore, it was not included in the regression models. The social desirability scale score was added in step two. This variable was included because it showed a significant relationship to both predictor and criterion variables in preliminary analysis. Intrinsic religious orientation was added third to determine its influence on well-being. Finally, the DFS total score was added in the last step to examine the predictive value of spiritual flow on the criterion variables. Table 4 provides the bi-variate correlates of all variables included in the regression analysis.

Regressions of Spiritual Flow to Well-being

The regression models presented follow the procedures described above. They will be presented in relation to each of the criterion variables examined.

Autonomy

Table 5 presents the regression values for autonomy as a criterion variable. After

accounting for the demographics, it appeared that there was no relationship between intrinsic religiosity and autonomy. There was, however, a consistent predictive value of social desirability on this outcome variable (i.e., Step 2 resulted in $R^2 = .178$, $\Delta R^2 = .055$). In the final model, there was a significant change ($R^2 = .162$, $\Delta R^2 = .032$). This showed a significant, but minimal, predictive value for spiritual flow on autonomy ($\beta = .184$, $p = .049$). Social desirability continued to have an effect with all other variables accounted for ($\beta = .228$, $p = .015$).

Environmental Mastery

Age showed a significant effect on this outcome variable initially, but this effect was lost as other variables were accounted for (see Table 5). The expected relationship between intrinsic religiosity and environmental mastery was not established. Social desirability was a significant predictor and in the final model resulted in $\beta = .241$ ($p = .006$). Spiritual flow also had predictive value ($\beta = .423$, $p < .001$). The final model had significant change ($R^2 = .330$, $\Delta R^2 = .171$), indicating that spiritual flow accounted a large portion of the prediction of environmental mastery.

Personal Growth

Age had a consistent predictive effect on this outcome variable and remained significant in the final model ($\beta = .287$, $p = .005$). Neither intrinsic religiosity nor social desirability were significant factors in relation to this outcome. However, spiritual flow was a significant predictor for personal growth ($\beta = .243$, $p = .008$). The final model of the regression resulted in an R^2 of .252 and ΔR^2 of .056. Table 5 provides more detail about the regression for this variable.

Positive Relations with Others

As with the previous criterion variables, though a relationship between intrinsic religious

orientation, and positive relations was expected after accounting for demographic variables, this relationship was not established through the analysis (see Table 6 for detailed information).

Social desirability had a mild effect on the outcome ($\beta = .185, p = .046$). There was a significant change for the final model, adding spiritual flow ($R^2 = .177, \Delta R^2 = .053$), and the DFS was a significant predictor of positive relations ($\beta = .235, p = .011$).

Purpose in Life

The expected relationship of intrinsic religiosity was evident with this outcome variable. Table 6 presents results for all regression models in connection with this criterion. After accounting for all other variables, intrinsic orientation was predictive purpose in life ($\beta = .306, p = .003$). The 3rd step in the regression, adding intrinsic orientation, was significant ($R^2 = .128, \Delta R^2 = .066$). Spiritual flow was also predictive ($\beta = .295, p = .001$) and the final regression model showed significance with an R^2 of .207 and ΔR^2 of .082.

Self-Acceptance

As noted in Table 6, the significance of age was lost when the other variables were added. There was no relationship between intrinsic religiosity and well-being. Social desirability was a significant predictor and resulted in β of .204 ($p = .017$). The last model, which added spiritual flow, showed significant change ($R^2 = .334, \Delta R^2 = .192$). Spiritual flow was a significant predictor of self-acceptance ($\beta = .454, p < .001$).

Regressions of Spiritual Flow to Spiritual Well-Being

The regression models related to spiritual well-being were designed the same as the models above for Ryff's Scales of Well-being. The three forms of spiritual well-being used as criterion variables were the total score for spiritual well-being, the religious well-being scale, and the existential well-being scale.

Spiritual Well-Being Total

Table 7 reports all pertinent results for each regression model on this criterion variable. The demographic variables had some effect on spiritual well-being (see Table 7), but this predictive value disappeared while accounting for intrinsic religious orientation. Intrinsic religiosity was a strong predictor of this outcome, finally resulting in ($\beta = .695, p < .001$). The third model, which added intrinsic religiosity, showed $R^2 = .586$ and $\Delta R^2 = .385$. Spiritual flow was also predictive ($\beta = .294, p < .001$) and was a partial mediator of the relationship between intrinsic motivation and spiritual well-being ($R^2 = .667, \Delta R^2 = .081$).

Existential Well-Being

After accounting for demographic variables and social desirability (see Table 7 for more information on these variables), intrinsic orientation was significantly predictive of existential well-being ($\beta = .367, p < .001$). The final step in the regression indicated that spiritual flow was a mediator of the intrinsic religiosity-EWB relationship ($R^2 = .464, \Delta R^2 = .230$) and was also predictive of EWB ($\beta = .496, p < .001$).

Religious Well-Being

The regression model for this criterion variable showed that all potential predictive relationships (i.e., age, sex, and social desirability; see Table 7) lost their predictive value when intrinsic orientation was added. Intrinsic religiosity was highly predictive of religious well-being ($\beta = .791, p < .001$) and the third model resulted in $R^2 = .663$ and $\Delta R^2 = .461$. Spiritual flow was not significant in this model.

Qualitative Analysis

In order to explore what types of activities were likely to induce a spiritual flow experience, participants were asked open-ended questions during the Flow Q that allowed them

to describe the situation they were referencing in the Flow Q and what activities tend to create similar experiences on a more frequent basis. The question relating to the referenced situation was “Please describe a spiritual situation that would produce such an experience for you (If more than one situation would produce such an experience, please describe the one situation that has produced this experience most often).” The question concerning the activities which could produce a spiritual flow was worded, “Is there a particular spiritual activity that provides such experiences when you engage in it?” This was then followed up with a text box asking to describe the activity.

Responses from both open-ended questions were categorized based on the type of activity being described. Many categories were discovered including, but not limited to prayer, being in nature, meditation, reading sacred text, attending church/worship services, reading good books (not sacred text), listening to music, singing, dancing, running, being in solitude, feeling close to God, yoga, feeling gratitude, and many more. Some activities were later combined due to their similarity (e.g., running, dancing, and exercising were combined to physical activity). This provided for simplicity in examining the different types of activities, but may not completely reflect the nuances and aspects of specific activities. For example, though dancing may be a form of physical exercise, it also includes elements of artistry, music, relationships with other people, etc.

The number of times an activity was mentioned was added to examine what kinds of activities are more frequently reported. Many participants listed more than one activity in each question. Any mention of an activity was included in the count for the appropriate category. This meant that some participants were included in multiple categories. For instance, the response, “Experiences in prayer/meditation; moments in worship; moments walking at the

beach; holding/rocking my daughter when she was a baby” resulted in being tallied in several categories including: prayer, meditation, worship services, being in nature, and close relationships with others. A few of the respondents described specific instances in their lives, but did not identify a specific activity as much as an ideographic spiritual moment. These were categorized as “Ideographic.”

Table 8 shows all of the categories noted with the number of times each was mentioned. The categories of activities which most frequently led to reported spiritual flow were prayer (mentioned 32 times), church or worship services (29 times), meditation (25 times), reading sacred texts (14 times), physical exercise (13 times), being in nature (12 times), and listening to music (12 times). Yoga was mentioned 4 times. In a category similar to Greeley’s (1975) explanation of extraordinary or sensational experiences (i.e., seeing lights, having visions, etc.) 3 responses were made. The following also has 3 responses: doing drugs, feeling gratitude, being in solitude, teaching others about religious beliefs. There were minor (2 or fewer) responses for the following: fasting, visiting sacred places, speaking in tongues, guided imagery, having sex, writing, feeling depressed, witnessing the birth or death of loved one, yard work or gardening, being in silence, and engaging in creativity.

CHAPTER 4

DISCUSSION

Structure of Spiritual Flow

One of the primary purposes of this study was to provide evidence that a spiritual flow experience exists and that such experiences have an impact on those who have them. Hypothesis 1 stated that spiritual flow would be considered valid if there was a correlation between a spiritually adapted flow measure and a measure of mysticism. The analysis found that there is a moderate relationship between the two, supporting the first hypothesis.

It was noted that there were some differences between the traditional optimal experience characteristics and the spiritual flow found in this research. Three of the characteristics/conditions of flow were significant to the relationship between mystic experience and spiritual flow experience. The first of these was Unambiguous Feedback. As noted in the theoretical framework for this study, this concept was thought to be difficult to obtain in a spiritual/religious context. However, according to the current results, the potential lack of feedback was not enough to stop flow from occurring in these spiritual experiences. This may reflect a fundamental difference between spiritual experiences and the type of activities often studied in flow research. Much of the past flow literature has been focused on specific activities, such as recreation, which often have specific means to measure performance, such as points scored in a game. Many of the broad and personally meaningful spiritual experiences reported

by the participants in this study do not seem to incorporate direct performance feedback (e.g., listening to music or walking in nature does not require a measure of performance). However, there are some religious activities which may be more likely to include this sense of feedback, such as performing specific rites in an organized and highly structured religious service.

Another characteristic that seems to differentiate spiritual flow from other optimal experiences is a lack of clear goals for the activity. Again, some spiritually-invoking experiences may include a complete lack of goals with the exception of seeking transcendence or closeness to deity. These goals may be part of each experience, but may not be clear to the individual. Indeed, some activities prompting a spiritual flow may not have been planned by the individual ahead of time and, thus, do not include a goal related to transcendence before it occurs. For example, the individual talking a walk in nature may not have previously determined this to be a potentially meaningful spiritual experience. As with feedback, there are some highly structured religious rites and personal experiences which may have a specific goal. However, the obtainment of faith, feeling close to a deity, or finding answers to a spiritual struggles are not as clear or specific as goals found in a recreational activity (e.g., scoring points by putting the ball through a hoop, creating a poem which expresses the feeling of the author, etc).

It is also important to point out that clear goals and unambiguous feedback are two of three conditions theorized as necessary to obtain a flow state. The fact that neither aspect is necessarily part of the spiritual flow experience suggests that the conditions needed to obtain this type of flow might differ from other types of activities or experiences. Perhaps due to the intensely personal meaning of the experience/activity, spiritually oriented experiences require fewer conditions. Stace's (1960) theory of mystic experiences included characteristics specific to spirituality, such as a sacred or holy quality and contact with the divine. Another

characteristic which may induce the transcendent experience is the sacred nature or perceived sanctification of certain objects or activities (Pargament & Mahoney, 2005). Future research might focus on how to create this type of spiritual flow or what conditions are necessary or ideal to induce such experiences. This type of question may be difficult to answer due to the personal nature of sacredness or holiness which cannot always be accurately measured or operationalized.

A sense of control, theoretically an important characteristic of flow, was not a significant part of the correlation between spiritual flow and mysticism. Though I postulated that spiritual experiences are often used to obtain a sense of control, it was also noted that individuals seek spirituality to allow God to take control of what they cannot (Spilka, Shaver, & Kirkpatrick, 1985; Spilka, Hood, Hunsberger, & Gorsuch, 2003). In this sense, spiritual experiences may possibly be increased by allowing a release of control to a higher being or state.

All the other characteristics of flow were significantly related to mysticism. The most critical characteristic, the autotelic nature of the experience, had a significant and strong positive relationship to mysticism. It appears that as with other flow experiences, a spiritual experience is most likely transcendent and optimal when the experience is its own reward. Strong relationships were also found with transformation of time and loss of self-consciousness; while merging of action & awareness, balance of challenge & skill, and concentration on the task had moderate positive effects. The significance of these aspects of flow give light to the specific structure of the spiritual experience. Spiritual flow, in sum, is most likely experienced as a feeling of losing oneself to the experience, feeling merged (or unified) with the environment of the experience, losing a sense of time, having complete concentration, and perhaps releasing control of self, goals, or worries about performance.

Spiritual Flow and Ryff's Theory of Well-Being

The second hypothesis proposed that increased intrinsic religious motivation would be related to higher levels of well-being, but that this effect would be moderated by the experience of spiritual flow. However, in the regression analyses, the proposed link between intrinsic religiosity and well-being was absent in most cases. Intrinsic orientation was a predictor of only one of Ryff's Scales of Well-Being (i.e., Purpose in Life). The lack of support for the second hypothesis was surprising given the fact that there were significant bi-variate correlations between intrinsic religiosity and many of the well-being variables. It became apparent that entering social desirability as a control variable in the regression models significantly altered their relationship to well-being.

A post-hoc correlation between social desirability and intrinsic religiosity showed a significant positive relationship ($r = .216, p = .006$). This particular finding has been examined and discussed by a number of researchers in the psychology of religion. For example, Leak and Fish (1989) evaluated the relationship between socially desirable responding and intrinsic religious motivation, with the conclusion that those high in intrinsic motivation both consciously report positive outcomes for impression management and unconsciously deceive themselves into having these positive traits. It is important to note that intrinsic religious motivation was a moderate predictor of purpose in life, whereas social desirability did not have any significant effect on this outcome. Thus, the construct does have some merit and can be important in some aspects of well-being.

Even though intrinsic religiosity did not significantly impact the majority of well-being outcomes, spiritual flow remained a significant predictor for all six aspects of general well-being. This indicates that these type of experiences are beneficial to people, as was postulated through

the theoretical framework presented. Though spiritual flow did not mediate the effect of intrinsic religiosity, it appears to be a valid predictor of well-being itself.

The primary intent of this study was to examine the impact of spiritual flow experiences on well-being. According to the obtained data, these experiences were especially impactful on measures of self-acceptance and environmental mastery. Individuals often seek relationships with God or a higher being to help obtain a sense of control over situations where they perceive none. Assuming this feeling was obtained through spiritual experiences such as those examined in this study, this might explain why someone would feel better able to handle their environment. Additionally, as a flow experience can possibly be considered a brief form of self-actualization (see Maslow, 1943), having these types of experiences would naturally lead to a higher self-acceptance. In the context of the personally meaningful spiritual experience, this appears to be especially true.

There was also a moderate impact of spiritual flow on purpose in life and personal growth. Since religious belief and spirituality are often associated with obtaining meaning for one's life and growing into a 'better' human being, it makes sense that having a spiritual flow experience would help the individual attain these outcomes. Positive relationships with others was mildly impacted by spiritual flow. Spiritual experiences had a minimal effect on autonomy and likely do not result in this aspect of well-being often.

Spiritual Flow and Spiritual Well-Being

Intrinsic religious motivation was not a major factor in predicting general well-being. However, intrinsic religiosity was significantly predictive in relation to each aspect of Spiritual Well-Being even after controlling for social desirability. As the total spiritual well-being score is simply a combination of the two subscales, this discussion will focus on existential (EWB) and

religious well-being (RWB).

Intrinsic religious orientation was the only factor predictive of religious well-being, and this was a very strong effect. As reported previously, RWB consists of the individual's perception of their spiritual life and relationship to God. Thus, those who are intrinsically motivated are satisfied with their religious life and spiritual relationships. It appears that those who feel more satisfied with their spiritual practices and relationship with God are so primarily because of their intrinsic orientation.

On the other hand, EWB was strongly predicted by spiritual flow, with a moderate effect from intrinsic religiosity. As this outcome is based on feelings of life satisfaction and existential meaning, it appears that spiritual experiences are more beneficial to developing meaning in life than they are to gaining a stronger devotion or relationship with God. With this said, it can be concluded that the more frequent and more intense the experiences of spiritual flow, the more likely it will be that the individual gains satisfaction in terms of existential meaning. It may be that the answer to the often repeated religious questions, "Who am I?" and "Why am I here?" can be answered by the optimal spiritual experiences a person has.

Activities Resulting in Spiritual Flow

The reports of participants in this study provided qualitative data about the types of activities which frequently result in spiritual flow. That said, this initial exploration was not sufficient to make conclusions about how to induce spiritual flow through certain activities. It was noted that some activities such as prayer, worshipping, and meditation are reported more frequently than others. The frequent reporting of these activities appears to replicate findings in prior studies (see Greeley, 1975; Wuthnow, 1978). The ability to identify activities which are likely to induce spiritual flow experiences provides a potentially important contribution to

research and practical application. An understanding of these activities may be used to design future research investigating spiritual flow in one or more specific activity. This may aid to the understanding of the experiences' beneficial effects. Additionally, spiritual flow may be used to understand previous studies showing benefits of the religious activities (e.g., as a mediating factor of prayer research).

As future research is able to discover details concerning how to encourage spiritual experiences, it may be possible to help people engage in these experiences. In a practical consideration, it may be possible to encourage certain psychotherapy clients to participate in the more effective activities in order to create a higher sense of well-being.

Limitations

The current research had several limitations. The first of these was related to the recruitment of the participants. Though several methods of recruitment were used, all participants were required to complete the surveys through an online questionnaire. This naturally excludes any potential participants who do not have internet access or are not computer literate. This may potentially create an unintended sampling bias.

A second limitation of the project is the composition of the sample. First, this sample consisted primarily of females. Second, the majority of respondents were members of Christian religions, with almost one-third of respondents identifying themselves as Latter-Day Saints. Finally, the majority of participants reported being Caucasian. It may be possible that results would have been different if the sample was balanced for sex, denomination, and ethnicity. Further research may seek to confirm these findings across groups.

A final potential limitation is the attempt to evaluate such a variety of personally meaningful experiences within the structure of the measures designed to assess flow. This study

was designed to include any experience participants considered spiritually meaningful. Some participants expressed concerns with trying to evaluate their chosen spiritual experiences using the Flow Q. For example, one participant commented that the three quotes which acted as prompts for the Flow Q did not speak to her particular spiritual experiences; yet she reported having personally significant experiences. Additionally, several respondents stated that the survey questions required much thinking and self-analysis to answer adequately, presenting a perceived challenge. Though using these flow measures to evaluate spiritual experiences may never completely explain their personal impact, developing an understanding of spiritual experiences which is testable will help future researchers.

Implications

The findings that a spiritual flow experiences exist and that they are beneficial to those individuals who have them extend the research on flow into a previously unexplored domain. Since spiritual flow appears to be different than general flow in terms of the necessary conditions, it may be possible that optimal experiences occur outside of the theoretical guidelines identified in other areas. For example, spiritual experiences may result in flow regardless of whether there are clear goals or feedback. It is also apparent from the current study that spiritual flow has a significant impact on well-being across multiple domains. Therefore, this research provides important information on relationship of religion and health/mental health outcomes, by assessing a novel construct.

One of the primary purposes of professional psychology is help others obtain a sense of well-being. With the evidence that spiritual experiences can increase well-being, it may be possible to use this kind of experience to encourage others to develop greater well-being. Future research may be able to determine how to use spiritual experiences in a practical way to help

psychotherapy clients achieve some of their goals, such as seeking more meaning in life or looking to overcome general life difficulties. Additionally, the presence of spiritual flow may be act to prevent deterioration in psychological functioning or a strengthen resiliency.

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APPENDIX A

Flow Questionnaire

The following quotes describe a particular type of experience. Please read the quotes and answer the questions that follow.

"My mind isn't wandering. I am not thinking of something else. I am totally involved in what I am doing. My body feels good. I don't seem to hear anything. The world seems to be cut off from me. I am less aware of myself and my problems."

"My concentration is like breathing. I never think of it. I am really quite oblivious to my surroundings after I really get going. I think that the phone could ring, and the doorbell could ring, or the house could burn down or something like that. When I start, I really do shut out the whole world. Once I stop, I can let it back in again."

"I am so involved in what I am doing. I don't see myself as separate from what I am doing."

1. Have you had an experience of a religious or spiritual nature similar to the one described in the quotes?

Yes

No

If YES, please answer the following questions:

2a. How often have you had such a spiritual experience?

More than once per day

Daily

5-6 times per week

Once per week

2-3 times per month

Once per month

Several times per year

Once per year

Several times in my life

Once or twice in my life

When you participate in the activity/situation which results in such a spiritual experience, how long do you usually engage in the activity? (Please check the item which most closely represents your answer.)

a few minutes

3 hours

half an hour

half a day

1 hour

most of the day

1½ hours

a few days at a time

2 hours

a week or more

Other time period (Please Explain):

2b. Please describe a spiritual situation that would produce such an experience for you (If more than one situation would produce such an experience, please describe the one situation that has produced this experience most often):

2c. Is there a particular spiritual activity that provides such experiences when you engage in it?

Yes

No

If YES, please describe the activity in the space below.

APPENDIX B

Dispositional Flow Scale-2

Please answer the following questions in relation to your experience in [INSERT THE ACTIVITY IDENTIFIED IN ITEM #4 OF THE FLOW-Q]. These questions relate to the thoughts and feelings you may experience during participation in your activity. You may experience these characteristics some of the time, all of the time, or none of the time. There are no right or wrong answers. Think about how often you experience each characteristic during your activity and circle the number that best matches your experience.

1	2	3	4	5
Never	Rarely	Sometimes	Frequently	Always

When participating in _____ (name activity):

- | | | | | | |
|--|---|---|---|---|---|
| 1. I am challenged, but I believe my skills will allow me to meet the challenge. | 1 | 2 | 3 | 4 | 5 |
| 2. I make the correct moves without thinking about trying to do so. | 1 | 2 | 3 | 4 | 5 |
| 3. I know clearly what I want to do. | 1 | 2 | 3 | 4 | 5 |
| 4. It is really clear to me how my performance is going. | 1 | 2 | 3 | 4 | 5 |
| 5. My attention is focused entirely on what I am doing. | 1 | 2 | 3 | 4 | 5 |
| 6. I have a sense of control over what I am doing. | 1 | 2 | 3 | 4 | 5 |
| 7. I am not concerned with what others may be thinking of me. | 1 | 2 | 3 | 4 | 5 |
| 8. Time seems to alter (either slows down or speeds up). | 1 | 2 | 3 | 4 | 5 |

9. I really enjoy the experience.
1 2 3 4 5
10. My abilities match the high challenge of the situation.
1 2 3 4 5
11. Things just seem to happen automatically.
1 2 3 4 5
12. I have a strong sense of what I want to do.
1 2 3 4 5
13. I am aware of how well I am performing.
1 2 3 4 5
14. It is no effort to keep my mind on what is happening.
1 2 3 4 5
15. I feel like I can control what I am doing.
1 2 3 4 5
16. I am not concerned with how others may be evaluating me.
1 2 3 4 5
17. The way time passes seems to be different from normal.
1 2 3 4 5
18. I love the feeling of the performance and want to capture it again.
1 2 3 4 5
19. I feel I am competent enough to meet the high demands of the situation.
1 2 3 4 5
20. I perform automatically, without thinking too much.
1 2 3 4 5
21. I know what I want to achieve.
1 2 3 4 5
22. I have a good idea while I am performing about how well I am doing.
1 2 3 4 5
23. I have total concentration.
1 2 3 4 5
24. I have a feeling of total control.
1 2 3 4 5
25. I am not concerned with how I am presenting myself.
1 2 3 4 5

26. It feels like time goes by quickly.

1 2 3 4 5

27. The experience leaves me feeling great.

1 2 3 4 5

28. The challenge and my skills are at an equally high level.

1 2 3 4 5

29. I do things spontaneously and automatically without having to think.

1 2 3 4 5

30. My goals are clearly defined.

1 2 3 4 5

31. I can tell by the way I am performing how well I am doing.

1 2 3 4 5

32. I am completely focused on the task at hand.

1 2 3 4 5

33. I feel in total control of my body.

1 2 3 4 5

34. I am not worried about what others may be thinking of me.

1 2 3 4 5

35. I lose my normal awareness of time.

1 2 3 4 5

36. The experience is extremely rewarding.

1 2 3 4 5

APPENDIX C

Mysticism Scale

Instructions: The attached booklet contains brief descriptions of a number of experiences. Some descriptions refer to phenomena that you may not have experienced. In each case note the description carefully and then place a mark in the left margin according to how much the description applies to your own experience. Write +1, +2, or -1, -2, or ? depending on how you feel in each case.

- +1: This description is probably true of my own experience or experiences.
- 1: This description is probably not true of my own experience or experiences.
- +2: This description is definitely true of my own experience or experiences.
- 2: This description is definitely not true of my own experience or experiences.
- ?: I cannot decide.

Please mark each item trying to avoid if at all possible marking any item with a ?. In responding to each item, please understand that the items may be considered as applying to one experience or as applying to several different experiences. After completing the booklet, please be sure that all items have been marked - leave no items unanswered.

1. I have had an experience which was both timeless and spaceless.
2. I have never had an experience which was incapable of being expressed in words.
3. I have had an experience in which something greater than myself seemed to absorb me.
4. I have had an experience in which everything seemed to disappear from my mind until I was conscious only of a void.
5. I have experienced profound joy.
6. I have never had an experience in which I felt myself to be absorbed as one with all things.
7. I have never experienced a perfectly peaceful state.
8. I have never had an experience in which I felt as if all things were alive.
9. I have never had an experience which seemed holy to me.

10. I have never had an experience in which all things seemed to be aware.
11. I have had an experience in which I had no sense of time or place.
12. I have had an experience in which I realized that the oneness of myself with all things.
13. I have had an experience in which a new view of reality was revealed to me.
14. I have never experienced anything to be divine.
15. I have never had an experience in which time and space were nonexistent.
16. I have never experienced anything that I could call ultimate reality.
17. I have had an experience in which ultimate reality was revealed to me.
18. I have had an experience in which I felt that all was perfection at that time.
19. I have had an experience in which I felt everything in the world to be part of the same whole.
20. I have had an experience which I knew to be sacred.
21. I have never had an experience which I was unable to express adequately through language.
22. I have had an experience which left me with a feeling of awe.
23. I have had an experience that is impossible to communicate.
24. I have never had an experience in which my own self seemed to merge into something greater.
25. I have never had an experience which left me with a feeling of wonder.
26. I have never had an experience in which deeper aspects of reality were revealed to me.
27. I have never had an experience in which time, place, and distance were meaningless.
28. I have never had an experience in which I became aware of the unity of all things.
29. I have had an experience in which all things seemed to be conscious.
30. I have never had an experience in which all things seemed to be unified into a single whole.
31. I have had an experience in which I felt nothing is ever really dead.
32. I have had an experience that cannot be expressed in words.

APPENDIX D

Religious Orientation Scale - Revised

Please indicate the extent to which you agree or disagree with each item below by using the following rating scale:

1	2	3	4	5
I strongly disagree	I tend to disagree	I'm not sure	I tend to agree	I strongly agree

1. I enjoy reading about my religion.
1 2 3 4 5
2. I go to church because it helps me make friends.
1 2 3 4 5
3. It doesn't much matter what I believe so long as I am good.
1 2 3 4 5
4. It is important to me to spend time in private thought and prayer.
1 2 3 4 5
5. I have often had a strong sense of God's presence.
1 2 3 4 5
6. I pray mainly to gain relief and protection.
1 2 3 4 5
7. I try hard to live my life according to my religious beliefs.
1 2 3 4 5
8. What religion offers me most is comfort in times of trouble and sorrow.
1 2 3 4 5
9. Prayer is for peace and happiness.
1 2 3 4 5
10. Although I am religious, I don't let it affect my daily life.
1 2 3 4 5

11. I go to church mostly to spend time with my friends.
1 2 3 4 5
12. My whole approach to life is based on my religion.
1 2 3 4 5
13. I go to church mainly because I enjoy seeing people I know there.
1 2 3 4 5
14. Although I believe in my religion, many other things are more important in life.
1 2 3 4 5

APPENDIX E

Marlowe-Crowne Social Desirability Scale (M-C SDS)

Listed below are a number of statements concerning personal attitudes and traits.

Read each item and decide whether the statement is *true* or *false* as it pertains to you personally, and provide your response.

1. Before voting I thoroughly investigate the qualifications of all the candidates.
2. I never hesitate to go out of my way to help someone in trouble.
3. It is sometimes hard for me to go on with my work if I am not encouraged
4. I have never intensely disliked anyone.
5. On occasion I have had doubts about my ability to succeed in life.
6. I sometimes feel resentful when I don't get my way
7. I am always careful about my manner of dress
8. My table manners at home are as good as when I eat out in a restaurant.
9. If I could get into a movie without paying and be sure I was not seen I would probably do it.
10. On a few occasions, I have given up doing something because I thought too little of my ability.
11. I like to gossip at times
12. There have been times when I felt like rebelling against people in authority even though I knew they were right.
13. No matter who I'm talking to, I'm always a good listener.
14. I can remember "playing sick" to get out of something
15. There have been occasions when I took advantage of someone.

16. I'm always willing to admit when I make a mistake
17. I always try to practice what I preach.
18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people.
19. I sometimes try to get even rather than forgive and forget
20. When I don't know something I don't at all mind admitting it
21. I'm always courteous, even to people who are disagreeable
22. At times I have really insisted on having things my own way
23. There have been occasions when I felt like smashing things
24. I would never think of letting someone else be punished for my wrongdoings.
25. I never resent being asked to return a favor
26. I have never been irked when people expressed ideas very different from my own.
27. I never make a long trip without checking the safety of my car.
28. There have been times when I was quite jealous of the good fortune of others.
29. I have almost never felt the urge to tell someone off.
30. I am sometimes irritated by people who ask favors of me.
31. I have never felt that I was punished without cause.
32. I sometimes think when people have a misfortune they only got what they deserved.
33. I have never deliberately said something that hurt someone's feelings.

APPENDIX F

Scales of Psychological Well-Being (PWBS)

The following set of questions deals with how you feel about yourself and your life. Please remember that there are no right or wrong answers.

Circle the number that best describes your present agreement or disagreement with each statement.	Strongly Disagree	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Strongly Agree
1. Most people see me as loving and affectionate.	1	2	3	4	5	6
2. In general, I feel I am in charge of the situation in which I live.	1	2	3	4	5	6
3. I am not interested in activities that will expand my horizons.	1	2	3	4	5	6
4. When I look at the story of my life, I am pleased with how things have turned out.	1	2	3	4	5	6
5. Maintaining close relationships has been difficult and frustrating for me.	1	2	3	4	5	6

6. I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people.	1	2	3	4	5	6
---	---	---	---	---	---	---

	1	2	3	4	5	6
--	---	---	---	---	---	---

7. The demands of everyday life often get me down.

8. I live life one day at a time and don't really think about the future.	1	2	3	4	5	6
---	---	---	---	---	---	---

9. In general, I feel confident and positive about myself.	1	2	3	4	5	6
--	---	---	---	---	---	---

10. I often feel lonely because I have few close friends with whom to share my concerns.	1	2	3	4	5	6
--	---	---	---	---	---	---

11. My decisions are not usually influenced by what everyone else is doing.	1	2	3	4	5	6
---	---	---	---	---	---	---

12. I do not fit very well with the people and the community around me.	1	2	3	4	5	6
---	---	---	---	---	---	---

13. I tend to focus on the present, because the future nearly always brings me problems.	1	2	3	4	5	6
--	---	---	---	---	---	---

14. I feel like many of the people I know have gotten more out of life than I have.	1	2	3	4	5	6
---	---	---	---	---	---	---

15. I enjoy personal and mutual conversations with family members or friends.	1	2	3	4	5	6
16. I tend to worry about what other people think of me.	1	2	3	4	5	6
17. I am quite good at managing the many responsibilities of my daily life.	1	2	3	4	5	6
18. I don't want to try new ways of doing things - my life is fine the way it is.	1	2	3	4	5	6
19. Being happy with myself is more important to me than having others approve of me.	1	2	3	4	5	6
20. I often feel overwhelmed by my responsibilities.	1	2	3	4	5	6
21. I think it is important to have new experiences that challenge how you think about yourself and the world.	1	2	3	4	5	6
22. My daily activities often seem trivial and unimportant to me.	1	2	3	4	5	6
23. I like most aspects of my personality.	1	2	3	4	5	6

24. I don't have many people who want to listen when I need to talk.	1	2	3	4	5	6
--	---	---	---	---	---	---

25. I tend to be influenced by people with strong opinions.	1	2	3	4	5	6
---	---	---	---	---	---	---

26. When I think about it, I haven't really improved much as a person over the years.	1	2	3	4	5	6
---	---	---	---	---	---	---

27. I don't have a good sense of what it is I'm trying to accomplish in life.	1	2	3	4	5	6
---	---	---	---	---	---	---

28. I made some mistakes in the past, but I feel that all in all everything has worked out for the best.	1	2	3	4	5	6
--	---	---	---	---	---	---

29. I generally do a good job of taking care of my personal finances and affairs.	1	2	3	4	5	6
---	---	---	---	---	---	---

30. I used to set goals for myself, but that now seems like a waste of time.	1	2	3	4	5	6
--	---	---	---	---	---	---

31. In many ways, I feel disappointed about my achievements in life.	1	2	3	4	5	6
--	---	---	---	---	---	---

32. It seems to me that most other people have more friends than I do.	1	2	3	4	5	6
--	---	---	---	---	---	---

33. I enjoy making plans for the future and working to make them a reality. 1 2 3 4 5 6

34. People would describe me as a giving person, willing to share my time with others. 1 2 3 4 5 6

35. I have confidence in my opinions, even if they are contrary to the general consensus. 1 2 3 4 5 6

36. I am good at juggling my time so that I can fit everything in that needs to be done. 1 2 3 4 5 6

37. I have a sense that I have developed a lot as a person over time. 1 2 3 4 5 6

38. I am an active person in carrying out the plans I set for myself. 1 2 3 4 5 6

39. I have not experienced many warm and trusting relationships with others. 1 2 3 4 5 6

40. It's difficult for me to voice my own opinions on controversial matters. 1 2 3 4 5 6

41. I do not enjoy being in new situations that require me to change my old familiar ways of doing things.	1	2	3	4	5	6
--	---	---	---	---	---	---

42. Some people wander aimlessly through life, but I am not one of them.	1	2	3	4	5	6
--	---	---	---	---	---	---

43. My attitude about myself is probably not as positive as most people feel about themselves.	1	2	3	4	5	6
--	---	---	---	---	---	---

44. I often feel as if I'm on the outside looking in when it comes to friendships.	1	2	3	4	5	6
--	---	---	---	---	---	---

45. I often change my mind about decisions if my friends or family disagree.	1	2	3	4	5	6
--	---	---	---	---	---	---

46. For me, life has been a continuous process of learning, changing, and growth.	1	2	3	4	5	6
---	---	---	---	---	---	---

47. I sometimes feel as if I've done all there is to do in life.	1	2	3	4	5	6
--	---	---	---	---	---	---

48. I know that I can trust my friends, and they know they can trust me.	1	2	3	4	5	6
--	---	---	---	---	---	---

49. The past had its ups and downs, but in general, I wouldn't want to change it.

1	2	3	4	5	6
---	---	---	---	---	---

50. I have difficulty arranging my life in a way that is satisfying to me.

1	2	3	4	5	6
---	---	---	---	---	---

51. I gave up trying to make big improvements or changes in my life a long time ago.

1	2	3	4	5	6
---	---	---	---	---	---

52. When I compare myself to friends and acquaintances, it makes me feel good about who I am.

1	2	3	4	5	6
---	---	---	---	---	---

53. I have been able to build a home and a lifestyle for myself that is much to my liking.

1	2	3	4	5	6
---	---	---	---	---	---

54. There is truth to the saying that you can't teach an old dog new tricks.

1	2	3	4	5	6
---	---	---	---	---	---

APPENDIX G

Spiritual Well-being Scale (SWB)

For each of the following statements, circle the choice that best indicates the extent of your agreement or disagreement as it describes your personal experience:

SA = Strongly Agree

D = Disagree

MA = Moderately Agree

MD = Moderately Disagree

A = Agree

SD = Strongly Disagree

1. I don't find much satisfaction in private prayer with God.

SA MA A D MD SD

2. I don't know who I am, where I came from, or where I'm going.

SA MA A D MD SD

3. I believe that God loves me and cares about me.

SA MA A D MD SD

4. I feel that life is a positive experience.

SA MA A D MD SD

5. I believe that God is impersonal and not interested my daily situations.

SA MA A D MD SD

6. I feel unsettled about my future.

SA MA A D MD SD

7. I have a personally meaningful relationship with God.

SA MA A D MD SD

8. I feel very fulfilled and satisfied with life.

SA MA A D MD SD

9. I don't get much personal strength and support from my God.

SA MA A D MD SD

10. I feel a sense of well-being about the direction my life is headed in.

SA MA A D MD SD

11. I believe that God is concerned about my problems.

SA MA A D MD SD

12. I don't enjoy much about life.

SA MA A D MD SD

13. I don't have a personally satisfying relationship with God.

SA MA A D MD SD

14. I feel good about my future.

SA MA A D MD SD

15. My relationship with God helps me not to feel lonely.

SA MA A D MD SD

16. I feel that life is full of conflict and unhappiness.

SA MA A D MD SD

17. I feel most fulfilled when I'm in close communion with God.

SA MA A D MD SD

18. Life doesn't have much meaning.

SA MA A D MD SD

19. My relation with God contributes to my sense of well-being.

SA MA A D MD SD

20. I believe there is some real purpose for my life.

SA MA A D MD SD

APPENDIX H

Demographic Information

1. Age: _____
2. Sex: Female _____ Male _____
3. Ethnicity: (Please circle all that apply)

a. American Indian/Alaskan Native	e. White/Caucasian
b. Asian/Asian American	f. Hispanic/ Latino
c. Native Hawaiian or other Pacific Islander	g. Other _____
d. Black/African American	
4. To what extent do you consider yourself a religious person?

1. Not religious at all	4. Moderately religious
2. Slightly religious	5. Very religious
3. Somewhat religious	
5. To what extent do you consider yourself a spiritual person?

1. Not spiritual at all	4. Moderately spiritual
2. Slightly spiritual	5. Very spiritual
3. Somewhat spiritual	
6. Which of the following best describes your current belief about God?

1. I know that God does not exist	4. I am not sure what to think about the existence of God
2. I am pretty confident that God does not exist	5. I think there is probably a God
3. I think that God probably does not exist	6. I am pretty confident that God exists
	7. I know that God exists

7. How often do you attend religious services?

- | | |
|-------------------------------|-------------------------|
| 1. Never | 6. 2-3 times a month |
| 2. Less than once a year | 7. Nearly every week |
| 3. About once or twice a year | 8. Every week |
| 4. Several times a year | 9. Several times a week |
| 5. About once a month | 10. Daily |

8. If any, what is your religious affiliation? (Please select the one item that best describes your current religious identification)

1. Buddhist
2. Christian- Catholic
3. Christian- Lutheran
4. Christian- Methodist
5. Christian- Southern Baptist
6. Christian- Other Protestant (*Please indicate*) _____
7. Christian- LDS (Mormon)
8. Christian- Other Denomination (*Please indicate*) _____
9. Unitarian-Universalist
10. Hindu
11. Jewish
12. Muslim/Islam
13. Taoist
14. Pagan/Wiccan

Other (please describe)

Table 1

Sample Demographics - Frequencies

Variable	Frequency	Percent of Sample
Sex		
Male	55	31.4%
Female	120	68.6%
Ethnicity		
Asian American	3	1.7%
Black/African American	12	6.9%
White/Caucasian	148	84.6%
Hispanic/Latino	3	1.7%
Other*	8	4.6%
Denomination		
Buddhist	3	1.7%
Christian – Catholic	34	19.4%
Christian – Lutheran	5	2.9%
Christian – Methodist	13	7.4%
Christian – Southern Baptist	16	9.1%
Christian – Other Protestant	12	6.9%
Christian – LDS (Mormon)	49	28.0%
Christian – Other	13	7.4%
Denomination		
Unitarian-Universalist	2	1.1%
Jewish	10	5.7%
Pagan/Wiccan	3	1.7%
Other	11	6.3%

Note. The ‘Other’ category of the Ethnicity question was described by endorsing participants as being biracial.

Table 2

Descriptive Statistics

	Mean	Standard Deviation	Range
Age	32.65	15.99	17 – 86 years old
Intrinsic Religious Orientation	29.54	7.23	14 – 40
DFS Total	28.68	3.98	9.5 - 35.5
Autonomy*	33.55	7.41	13 – 48
Environmental Mastery*	37.74	7.81	12 – 54
Personal Growth*	41.17	7.53	23 – 54
Positive Relations with Others*	39.44	8.62	17 – 54
Purpose in Life*	41.19	7.88	23 – 54
Self-Acceptance*	40.27	8.69	14 – 54
Spiritual Well-Being Total	94.45	19.15	30 – 120
Religious Well-Being	46.97	12.16	10 – 60
Existential Well-Being	47.60	9.61	13 – 60
Social Desirability	15.88	4.84	2 – 29
Mysticism	114.81	24.38	39 – 160

Note. DFS Total refers to the total score of the Dispositional Flow Scale. Variables marked with * are subscales of Ryff's Scales of Psychological Well-Being.

Table 3

Correlations for Mysticism and Dispositional Flow

	Mysticism
DFS – Total	.384**
Balance of Challenge & Skill	.297**
Merging of Action & Awareness	.339**
Clear Goals	.105
Unambiguous Feedback	.025
Concentration	.292**
Sense of Control	.091
Loss of Self-Consciousness	.422**
Transformation of Time	.419**
Autotelic Nature	.518**

Note. DFS – Total is the combined score of all subsets of the Dispositional Flow Scale (DFS). The subsets are all listed below DFS – Total.

* $p < .05$, ** $p < .01$

Table 4

Correlations for Regression Variables

	SD	IR	DFS	A	EM	PG	PR	PL	SA	SWB	RWB	EWB
Age	.132	.336***	.204*	.267**	.255**	.426***	.234**	.277***	.226**	.238**	.240**	.168*
SD		.216**	.105	.236**	.285***	.179*	.209**	.168*	.246**	.284***	.250**	.251**
IR			.127	.117	.211**	.288***	.288***	.320***	.235**	.718***	.781***	.442***
DFS				.217*	.410***	.293**	.260**	.300**	.456***	.374***	.198*	.465***
A					.477***	.504***	.377***	.456***	.508***	.287***	.133	.410***
EM						.549***	.572***	.748***	.810***	.597***	.326***	.748***
PG							.599***	.695***	.601***	.500***	.323***	.593***
PR								.611***	.618***	.519***	.341***	.616***
PL									.688***	.575***	.384***	.675***
SA										.605***	.320***	.803***
SWB											.904***	.844***
RWB												.534***

Note. All scale names have been abbreviated with the following: SD = Social Desirability; IR = Intrinsic Religios Orientation; DFS = Dispositional Flow Scale Total Score; A = Autonomy; EM = Environmental Mastery; PG = Personal Growth; PR = Positive Relations with Others; PL = Purpose in Life; SA = Self-Acceptance; SWB = Spiritual Well-Being Total; RWB = Religious Well-Being; EWB = Existential Well-Being.

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 5
Prediction of Autonomy, Environmental Mastery, and Personal Growth by Demographics, Social Desirability, Intrinsic Religiosity and Spiritual Flow

Variable	Autonomy ^a (n = 105)			Environmental Mastery ^b (n = 105)			Personal Growth ^c (n = 104)		
	B	SE B	β	B	SE B	β	B	SE B	β
<i>Step 1</i>									
Age	.144	.048	.284**	.133	.049	.262**	.209	.047	.410***
Sex	-2.238	1.591	-.132	1.219	1.660	.071	.418	1.590	.024
Ethnicity	-3.832	2.015	-.178	-1.189	2.018	-.057	-.039	1.989	-.002
<i>Step 2</i>									
Age	.125	.047	.246**	.109	.047	.216*	.200	.047	.391***
Sex	-2.375	1.549	-.140	1.084	1.598	.063	.332	1.587	.019
Ethnicity	-3.557	1.963	-.165	-8.71	1.945	.041	.100	1.986	.005
Social Desirability	.393	.152	.238*	.452	.150	.282**	.192	.154	.116
<i>Step 3</i>									
Age	.123	.051	.242*	.089	.052	.175	.172	.051	.337***
Sex	-2.429	1.641	-.143	.490	1.711	.028	-.375	1.660	-.022
Ethnicity	-3.583	1.989	-.167	-1.137	1.964	-.054	-.257	1.994	-.012
Social Desirability	.391	.154	.237*	.421	.153	.263**	.157	.155	.094
Intrinsic Orientation	.011	.105	.011	.107	.110	.971	.147	.106	.146
<i>Step 4</i>									
Age	.104	.051	.204*	.052	.047	.102	.147	.051	.287**
Sex	-2.374	1.617	-.140	.827	1.536	.048	-.348	1.609	-.020
Ethnicity	-3.510	1.960	-.163	-1.136	1.762	-.054	-.143	1.933	-.007
Social Desirability	.376	.152	.228*	.386	.138	.241**	.140	.150	.084
Intrinsic Orientation	.011	.104	.011	.094	.099	.093	.146	.103	.145
DFS Total	.347	.174	.184*	.808	.161	.423***	.464	.172	.243**

^a $R^2 = .123$ for Step 1 ($p < .01$); $\Delta R^2 = .055$ for Step 2 ($p < .05$); $\Delta R^2 = .000$ for Step 3 ($p > .05$); $\Delta R^2 = .032$ for Step 4 ($p < .05$).

^b $R^2 = .073$ for Step 1 ($p > .05$); $\Delta R^2 = .077$ for Step 2 ($p < .01$); $\Delta R^2 = .008$ for Step 3 ($p > .05$); $\Delta R^2 = .171$ for Step 4 ($p \leq .001$).

^c $R^2 = .167$ for Step 1 ($p \leq .001$); $\Delta R^2 = .013$ for Step 2 ($p > .05$); $\Delta R^2 = .016$ for Step 3 ($p > .05$); $\Delta R^2 = .056$ for Step 4 ($p < .01$).

* $p < .05$. ** $p < .01$, *** $p \leq .001$.

Table 6
Prediction of Positive Relations, Purpose in Life, and Self-Acceptance by Demographics, Social Desirability, Intrinsic Religiosity, and Spiritual Flow

Variable	Positive Relations ^a			Purpose in Life ^b			Self-Acceptance ^c		
	(n = 105)			(n = 105)			(n = 102)		
	B	SE B	β	B	SE B	β	B	SE B	β
<i>Step 1</i>									
Age	.159	.054	.273**	.153	.051	.291**	.168	.057	.284**
Sex	3.992	1.806	.206*	.492	1.692	.028	2.112	1.954	.103
Ethnicity	2.905	2.289	.119	-.298	2.143	-0.13	-4.035	2.444	-.158
<i>Step 2</i>									
Age	.140	.054	.241*	.141	.051	.267**	.144	.056	.242*
Sex	3.787	1.773	.195*	.338	1.685	.019	1.745	1.896	.085
Ethnicity	3.105	2.245	.127	-.188	2.131	-.008	-3.788	2.367	-.148
Social Desirability	.377	.167	.209*	.241	.161	.144	.476	.173	.259**
<i>Step 3</i>									
Age	.131	.059	.225*	.082	.054	.156	.119	.061	.200
Sex	3.536	1.885	.182	-1.165	1.715	-.066	1.092	1.992	.053
Ethnicity	2.979	2.276	.122	-.911	2.077	-.041	-4.082	2.382	-.160
Social Desirability	.366	.170	.202*	.155	.158	.093	.443	.175	.241*
Intrinsic Orientation	.049	.122	.043	.314	.112	.301**	.131	.124	.114
<i>Step 4</i>									
Age	.103	.058	.178	.050	.052	.095	.054	.055	.091
Sex	3.548	1.834	.183	-1.085	1.636	-.061	1.177	1.752	.058
Ethnicity	3.019	2.214	.123	-.809	1.981	-.036	-3.832	2.095	-.150
Social Desirability	.334	.166	.185*	.110	.152	.066	.376	.155	.204*
Intrinsic Orientation	.054	.119	.047	.319	.107	.306**	.136	.109	.118
DFS Total	.507	.197	.235*	.580	.176	.295***	1.001	.185	.454***

^a $R^2 = .128$ for Step 1 ($p < .01$); $\Delta R^2 = .042$ for Step 2 ($p < .05$); $\Delta R^2 = .001$ for Step 3 ($p > .05$); $\Delta R^2 = .053$ for Step 4 ($p < .05$).

^b $R^2 = .084$ for Step 1 ($p < .05$); $\Delta R^2 = .020$ for Step 2 ($p > .05$); $\Delta R^2 = .066$ for Step 3 ($p < .01$); $\Delta R^2 = .082$ for Step 4 ($p = .001$).

^c $R^2 = .107$ for Step 1 ($p < .05$); $\Delta R^2 = .065$ for Step 2 ($p < .01$); $\Delta R^2 = .010$ for Step 3 ($p > .05$); $\Delta R^2 = .192$ for Step 4 ($p \leq .001$).

* $p < .05$, ** $p < .01$, *** $p \leq .001$

Table 7

Prediction of Spiritual Well-Being, Religious Well-Being, & Existential Well-Being by Demographics, Social Desirability, Intrinsic Religiosity, and Spiritual Flow

Variable	Spiritual Well-Being Total ^a			Religious Well-Being ^b			Existential Well-Being ^c		
	(n = 102)			(n = 106)			(n = 103)		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
<u>Step 1</u>									
Age	.397	.116	.319***	.278	.074	.342***	.117	.060	.190
Sex	9.757	4.030	.227*	5.456	2.542	.196*	4.104	2.046	.195*
Ethnicity	2.752	4.826	.053	2.734	3.094	.081	.521	2.482	.020
<u>Step 2</u>									
Age	.354	.114	.284**	.248	.073	.305***	.099	.060	.161
Sex	9.172	3.926	.213*	5.088	2.488	.183*	3.902	2.016	.186
Ethnicity	3.571	4.705	.069	3.143	3.027	.093	.852	2.449	.033
Social Desirability	.944	.368	.236*	.563	.232	.220*	.392	.191	.198*
<u>Step 3</u>									
Age	.004	.091	.003	.007	.052	.008	-3.404	.061	.000
Sex	.194	2.995	.004	-1.041	1.707	-.037	1.289	1.987	.061
Ethnicity	-.466	3.430	-.009	-.026	1.995	-.001	-.276	2.297	-.011
Social Desirability	.527	.270	.132	.255	.154	.099	.276	.181	.140
Intrinsic Orientation	1.082	.191	.726***	1.275	.109	.792***	.511	.128	.417***
<u>Step 4</u>									
Age	-.048	.082	-.039	-.009	.053	-.011	-.044	.052	-.072
Sex	1.830	2.271	.043	-1.026	1.691	-.037	2.760	1.687	.131
Ethnicity	-.492	3.092	-.010	-.011	1.977	.000	-.334	1.932	-.013
Social Desirability	.440	.244	.110	.238	.153	.093	.199	.152	.101
Intrinsic Orientation	1.725	.173	.695***	1.274	.108	.791***	.450	.108	.367***
DFS Total	1.566	.326	.294***	.301	.180	.099	1.303	.203	.496***

^a $R^2 = .147$ for Step 1 ($p < .01$); $\Delta R^2 = .054$ for Step 2 ($p < .05$); $\Delta R^2 = .385$ for Step 3 ($p \leq .001$); $\Delta R^2 = .081$ for Step 4 ($p \leq .001$).

^b $R^2 = .156$ for Step 1 ($p < .01$); $\Delta R^2 = .047$ for Step 2 ($p < .01$); $\Delta R^2 = .461$ for Step 3 ($p > .05$); $\Delta R^2 = .009$ for Step 4 ($p > .05$).

^c $R^2 = .070$ for Step 1 ($p > .05$); $\Delta R^2 = .038$ for Step 2 ($p > .05$); $\Delta R^2 = .127$ for Step 3 ($p \leq .001$); $\Delta R^2 = .230$ for Step 4 ($p \leq .001$).

* $p < .05$. ** $p < .01$, *** $p \leq .001$

Table 8

Reported Activities Resulting in Spiritual Flow

Category	Times Mentioned	Category	Times Mentioned
Prayer	32	Being in Solitude	3
Church/Worship Services	29	Teaching about God	3
Meditation	25	Engaging in Creativity	2
Reading Sacred Texts	14	Being in Silence	2
Physical Exercise*	13	Visiting Sacred Sites	2
Running/Walking	6	Journal Writing	2
Dancing	4	Birth/Death of Loved one	2
General exercise	3	Participating in Holy Days	2
Being in Nature	12	Yardwork/Gardening	2
Listening to Music	12	Ideographic Experiences [*]	2
Being with Family/Friends	6	Guided Imagery	1
Singing	5	Fishing	1
Feeling God's Presence	4	Speaking in Tongues	1
Yoga	4	Fasting	1
Reading (not sacred text)	4	Having Sex	1
Using Drugs	3	Writing	1
Feeling Gratitude	3	Feeling Depressed	1
Extraordinary experiences [^]	3		

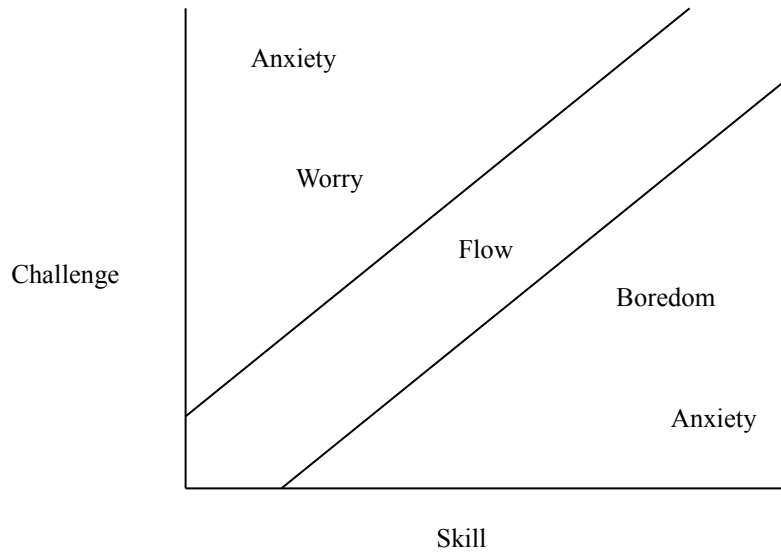
Note. The number of reports (n = 198) reflects the number of different activities mentioned and not the number of responses provided by participants.

^{*}Physical exercise is a category created by combining the 3 categories below it (Running/Walking, Dancing, General Exercise).

[^]Extraordinary experiences include sensational aspects such as seeing lights, visitations of deceased persons, visions etc).

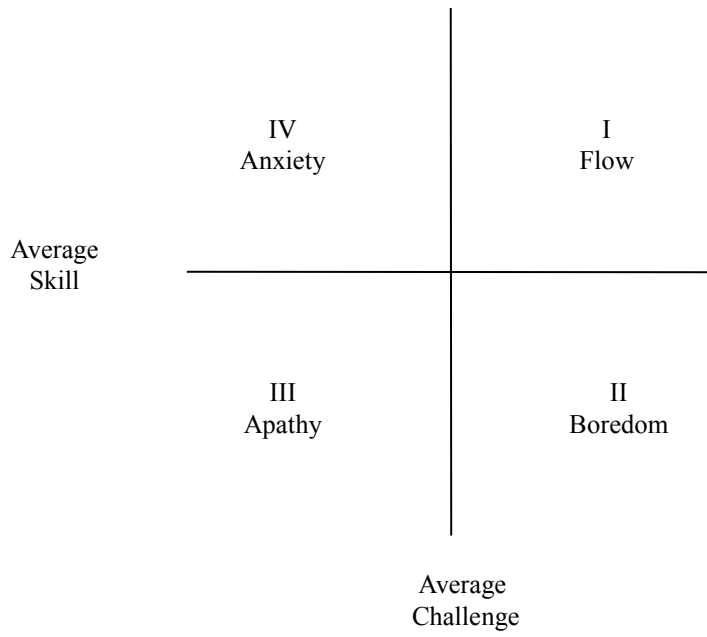
^{*}Ideographic experiences are activities which do not have information sufficient to categorize.

Figure 1. Basic Model of Flow



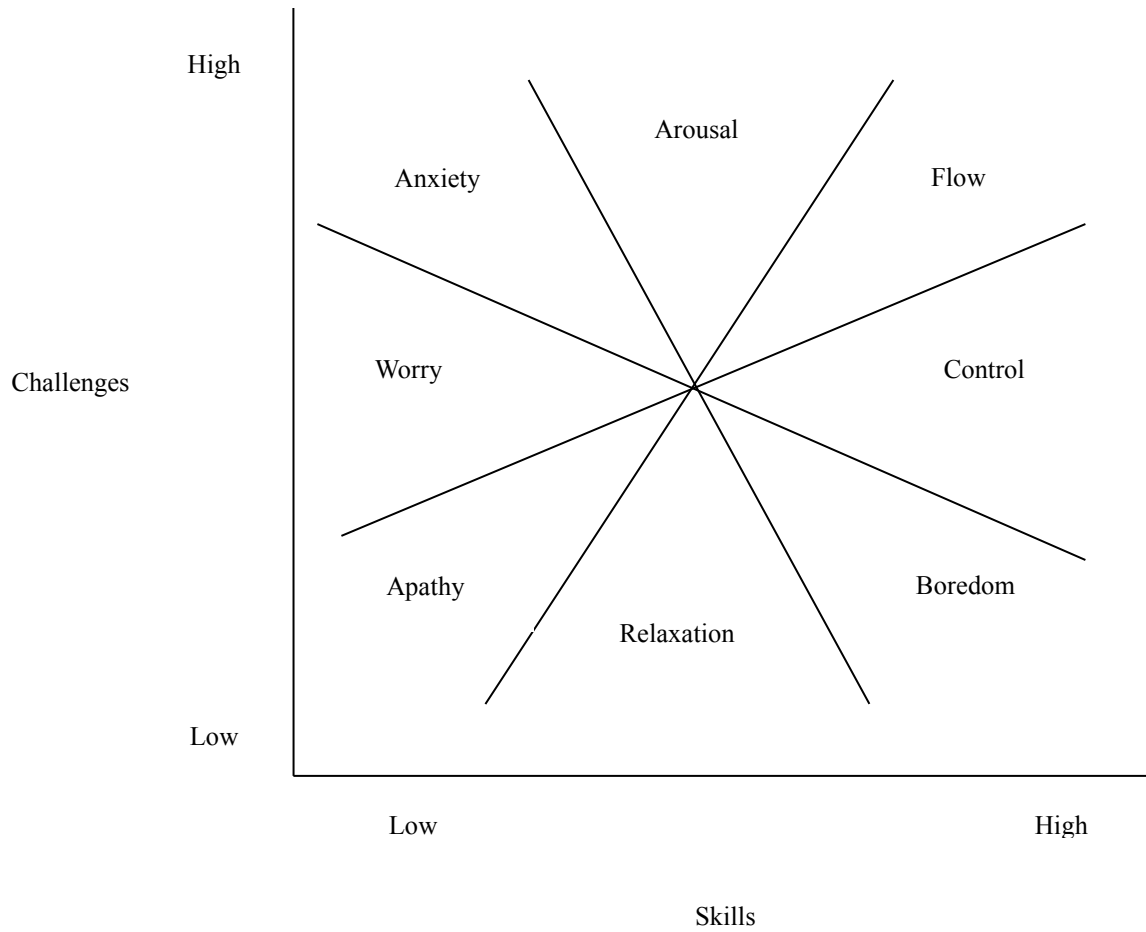
Note: Basic (channel) model of flow experiences (Csikszentmihayli, 1975a).

Figure 2. Four Channel Model of Flow



Note: Four Channel model of flow (LeFevre, 1988).

Figure 3. Eight Channel Model of Flow



Note: Eight Channel model of flow (Massimini & Carli, 1988). Note that the middle sections of both the Challenges and Skills axes include a moderate level.