

I Believe; I Can.

The Relationship Between Religiosity, General  
Self-Efficacy and Locus of Control.

P.Peter F. Byrne

Submitted in partial fulfilment of the requirements for the Higher Diploma in  
Psychology at DBS School of Arts, Dublin.

Supervisor: Dr. Sinead Eccles

March 2012

Department of Psychology

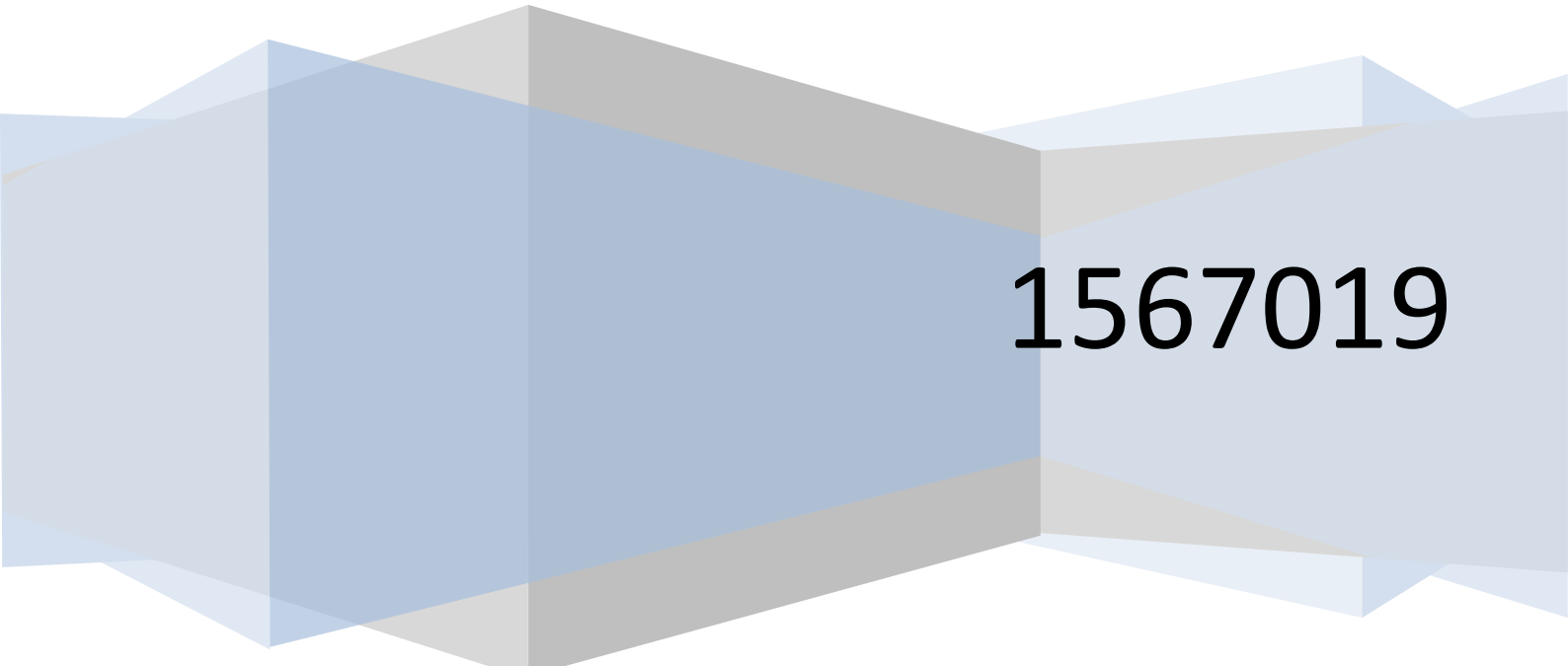
DBS School of Arts.

# I Believe; I Can.

## Religiosity, General Self-Efficacy and Locus of Control.

Student P. Peter F. Byrne L.C

Supervisor: Dr.Sinead Eccles



1567019

## Table of Contents

Acknowledgements .....	4
Abstract .....	5
Chapter 1. Literature Review.....	6
Section 1. Religion a Complex Phenomenon.....	6
Section 2. Locus of Control and Self-Efficacy: Measurable Self-Beliefs .....	11
Section 3. The Measuring of Religion as a Variable.....	15
Section 4. Possible Research and Hypothesis .....	19
Chapter 2. Method, Procedure and Methods .....	22
Chapter 3. Results .....	26
Chapter 4. Discussion .....	41
Chapter 5. Limitations of the Current Study and Implications for Future Research .....	49
Works Cited .....	52
Appendices .....	60

### Acknowledgements

Thank you to my supervisor, Dr.Eccles, for the availability, kindness and insight in guiding this project.

Thank you also to Bridie, Peter, Bernie and Matthew for the logistical support and to Fr. Sergio and Br.Dominic for translations and revisions. My DBS team, Mick, Laura and Carol-Ann gave many tips and advice for which I am most grateful. A final thank you to all at DBS and those who answered the survey.

T.T.

## **Abstract**

The research, grounded in the psychological debate on the positive or negative evaluation of religion, provided quantitative data analysis on the relationships between religiosity, general self-efficacy and locus of control for a convenience sample from 4 targeted countries (n=1158). English and Spanish versions of demographics, General Self-Efficacy (GSE), Brief Locus of Control (LOC) and Religious Orientation Scale Revised questionnaires were the research instruments. Results showed an overall significant small positive relationship between GSE and Intrinsic Religiosity ( $r(972)=.172$ ;  $p<.01$ ). Intrinsic Religiosity and internal LOC showed a significant small positive relationship ( $r(1007)=.174$ ;  $p<.01$ ). The expected gender differences in intrinsic religiosity did not emerge whereas cultural differences did. A specific type of religiosity, intrinsic, appears to correlate positively with a variable that is indicative of a constructive self-belief; general self-efficacy. These results suggest that the distinction intrinsic/extrinsic religiosity in correlational studies with variables from social cognitive theory may help to clarify the positive or negative influence of religion on psychology.

## **CHAPTER 1: Literature Review**

**INTRODUCTION:** This introduction will be divided into 4 sections. In the first section an attempt will be made to describe the historical relationship between psychology and the study of religion from the perspective of the different theoretical bases, underlining positive and negative aspects. The second section will highlight the introduction of locus of control and self-efficacy as measurable beliefs in their association with other psychological variables. The third section will consider the measuring of religiosity as an independent variable. The fourth section will propose the possible research that could emerge from the conjoint study of general GSE, locus of control and religiosity and some hypothesis arising from the introduction.

### **Section 1: Religion: A Complex Phenomenon**

Even today there is no generally accepted definition of religion (Guthrie, 1996). Cognitive, evolutionary, comfort theories as well as anthropomorphic and family explanations have been given but still religion defies boundaries (Guthrie, 1996). So for the case of this study working examples of religion were considered Protestantism, Catholicism, Judaism etc and are taken as instances of an undefined yet well studied and described reality called religion.

The lack of a definition for such a universal phenomenon has not inhibited its use. Of the nearly seven billion people on earth 90% associate themselves with a particular form of religion (Association of Religion Data Archive, 2005). 84% of Americans are affiliated with some religious body (Pew Research Center, 2012). Ireland

reports 94% of its population identify in some measure with a religion (Central Statistics Office Ireland, 2012) while for Mexico the percentage is 95.1% (Instituto Nacional de Estadística y Geografía, 2011) and Spain 72.8% (Centro De Investigaciones Sociológicas, 2011).

Not only is religion a universal reality, it is also one of the oldest. Researchers believe that Palaeolithic art and burial traditions could have shamanic, magical or religious significance (Narr, 2012; Lewis-Williams, 1997). It appears that religion, culture and humankind are always to be found together. It has even been proposed that religion has a biological and evolutionary origin and explanation (Sands, 1997).

Research in several fields suggests that religion has not only been a universal element but also a controversial one. Ritual human sacrifice and cannibalism, exemplified by the thousands of yearly human sacrifices in the Aztec religion (Ortiz de Montellano, 1978), the inquisition (Ames, 2005), massacres (Walker, Turely Jr., & Leonard, 2008), mass suicides (Robbins, 1986), slavery (Stanely, 2004), fanatic violence (Volf, 2012) are a few of the ignominious terms that have been associated with religion at different stages of history and in different cultural contexts. In contrast with these stark realities religion has also been linked to art and music (Kelly, 2009), poetry and painting (Skinner B. F., 1987), the establishment of hospitals (Golden, 2012) (Mann Wall, 1998) social work (Graham & Shier, 2009) the foundation of universities at Bologna in 1158 (Pace, 1907) and Paris in the thirteenth century (Ferret, 1911) and the founding of asylums; the first psychiatric wards being built under Islamic auspices in Baghdad and Cairo in the ninth century (U.S National Library of Medicine, 2011). Religiosity, with its positive or negative aspects, also seems to pass through phases or waves of decline and resurgence (Moghadam, 2003).

This apparent ambiguity in religious phenomenon has led to scientific discussion over the benefits or dangers of religion (Wombles, 2008). Phenomenologists and anthropologists like Durkheim proposed that religion was a positive social structure necessary for the sustenance of a particular group. The mind, religion and society were mutual constructs, the mind being essentially a religious mind (Durkheim, 1912, p. 11). A seminal work on the religious experience was Rudolf Otto's phenomenological "The idea of the Holy" (*Das Heilige*) (Otto, 1917 trans.1936) a study that proposed "awe" (p. 14) as the fundamental religious experience. This emotion when confronted by the 'Holy' (*Das Heilige*) would be the decisive feeling from which all religion evolves (p. 15). Otto invited psychology to make a better effort at the classification of such an experience as the crude division of emotions into pleasures and pains could not contain the essence of this state of mind (p. 17). Again it was a signal of the difficulty that science in general and psychology in particular would have in classifying, defining and studying religion. This lack of definition could explain why psychology from the outset took different, positive or negative perspectives, on religion.

Freud referred to the possible benefits of religion as a means of explaining the origins of the universe, the promise of protection and happiness (Freud, 1927). He affirms however that religion contradicts reason and experience; it is a fairy tale a dangerous illusion, even a delusion (Freud, 1927, p. 76). The original emotion at the root of religion was not awe or the experience of a relationship with the divine but a longing for the father (Ed. Shafranske, 1997, p. 51). Religiosity was not the form of the human mind but an infantile state that must be overcome. Freud, along with Marx, Nietzsche and other scientists and philosophers envisaged a day when the opium of the people would be vanquished by science (Aldridge, 2000, p. 62).



In 1902 William James (James, 1997) deemed religion as of positive psychological value “a new zest which adds itself like a gift to life” (p. 467) He, like Otto attempted to give a working definition for religion as an individual experience in the presence of the Divine. (James, 1997, p. 38). While this description underlines the subjective element of religion it omits social and doctrinal or cognitive aspects of religiosity (Gavril, 2006).

Jung distanced himself from Freud’s negative views on the motivation of human behaviour. For him the aim of life is individuation and transcendence and religion with its own specific numinous content offers a substratum from which the spiritual self gains positive driving force for life. Jung reveals that the mature people he has dealt with in his practice could only be cured by gaining a religious outlook on their lives. (Johnson, 1993, p. 358). Religiosity was a form of maturation, an individual stabilizer akin to Durkheim’s concept of the positive social role of religion (Durkheim, 1912). However neither Freud’s nor Jung’s contrasting theories could be verified in a rigorously scientific manner (Kihistrom, 1994).

Creelan recognises the religious influences in Watson’s writings but also explains his rejection of introspection, thought and religion, which he considers as in complete opposition to behaviourism (Creelan, 1985). While Skinner did not exclude private events (Friman, 1998) he held that mental entities had to be translated into behaviour; imagery and memory were allegories or fictions (Weidman, 2012). Psychology from this angle was not a science of consciousness but a science of behaviour (Wozniak, 1997). The human species was different from others only through the evolutionary step of bringing the vocal musculature under operant control (Skinner B. F., 1987; 1984) even culture can be explained through operant processes (Skinner B. F., *The Evolution of Behavior*, 1984) Skinner identified “superstitious” behaviour in

pigeons which he explained as an example of contingent reinforcement; he mused at the similarity between this behaviour and superstitious behaviour in humans (Skinner B. F., 1948). Skinner (Skinner B. F., 1987) proposed that religious behaviours occur because, like all behaviour, they have been reinforced. Negative reinforcement and the threat of punishment by the agents of religion is a learning explanation of religious activity (Skinner B. F., 2005).

All the principle schools of psychological theory addressed the universal reality of religion. However as the theories were based on different methods different suppositions and different definitions it resulted in the psychological discussion being the subject of a contrasting variety of interpretations. With this methodological difficulty and the dominance of behaviourism the early debates on religion within psychology diminished until the emergence of humanistic psychology. (Wombles, 2008)

This third force, born from psychoanalysis, reacted against the pessimism and determinism of its progenitor and appreciated religion as a reflection of some of its main tenets: peak experience, self actualisation, transcendence etc. (Maslow A. , 1964). Maslow considered that there was a central religious trait or core which was shared by religious people generally and that the differences between religions were not of great importance as religions were essentially the same (Nelson, 2009, p. 24). Both Rogers and Maslow regarded each individual as an active protagonist in their own development. The human person was not exclusively a product of unconscious forces or conflicts but also an individual searching for meaning, capable of overcoming basic needs and reaching aesthetic heights. (Maslow A. , 1943). Humanistic psychology had an impact on religion through the introduction of Rogerian techniques in pastoral psychology (Snodgrass, 2007). However, as with all the psychodynamic theories, it is

hard to measure the influence that humanistic constructs have had in religion given the openness in the definition of terms and the qualitative nature of their methods. In general the quality of the evidence to support humanistic theories has been questioned (Atkinson, Atkinson, Smith, Bem, & Nolen-Hoeksema, 2000, p. 473; Bandura, 2004).

## **Section 2: Locus of Control and Self-Efficacy: Measurable Self-Beliefs**

Hull's social learning theory was behaviourist in origin but through Rotter and others defined psychological variables that could not be directly observed but could be inferred from behaviour.

Locus of control (LOC) (Rotter, 1966; Rotter, 1990) was one of the most studied variables originating from social learning theory (SLT). Rotter (Rotter, Some problems and misconceptions related to the construct of internal versus external control of reinforcement., 1975) expressed his surprise at the amount of research that LOC had generated but he maintained that LOC it is not the central concept of SLT but one that would help to understand how reinforcements adjust expectancies. In a given situation four combined elements seem to determine behaviour: the reinforcer itself, the psychological condition, the expectancy and particularly the value the subject attributes to the reinforcement (Rotter, 1975). Locus of control is part of an interpretation of a situation by an individual as being under external control (luck, fate, chance, powerful others) or internal control, i.e. contingent upon his own behaviour. Neither internal nor external locus of control are behaviours but rather measurable beliefs about what or who is controlling behaviour (Rotter, 1966).

LOC has been tested in different situations and demonstrates itself to be a cross cultural variable (Smith, 1995). Though Rotter considered that LOC was a neutral

variable internal locus of control has been positively associated with some beneficial health attitudes (Open Source Encyclopedia, 2012)

Bandura, though formed in behaviourism, recognized the importance of social and cognitive factors in behaviour. He reacted against some of the constraints of behaviourism (Bandura, 2004) as considered that cultural and religious practices, among others, could not be adequately explained by behaviourism's reward-punish, trial and error model (Bandura, 2005). According to Bandura learning could be achieved, not only through conditioning, but also through vicarious experience, cultural transmission and observational learning (Pajares F. , 2004) Social cognitive theory (SCT) shared with humanistic psychology an agentic perspective of human behaviour (Bandura, 1999) but maintained the scientific rigour of behaviourism and insisted in the measurement of its models and hypothesis thus offering a framework in which mental variables could be studied in a scientific way without having to be defined in behaviourist terms. Four basic aspects indicate the agentic nature of human behaviour: intentionality, forethought, self-reactiveness, and self-reflectiveness (Bandura, 2004). From this theoretical framework Bandura introduced new constructs through which human behaviour could be studied (Pajares F. , 2004; Bandura, 1999).

One of the central concepts arising from SCT is self-efficacy.

*“Among the mechanisms through which human agency is exercised, none is more pervasive or central than the beliefs of personal agency. This belief is the foundation of human agency. Unless people believe that they can produce desired effects by their actions they have little incentive to act or persevere in the face of difficulties. Whatever other factors serve as motivators, they are rooted in the core*

*belief that one has the power to produce change by one's actions"*. (Bandura, 1999, p. 28; 2004)

Although Bandura affirms that there is no general self-efficacy trait, one could be high in self-efficacy in one dimension and low in another, he also affirms that some generic self-management abilities can be used in different facets of life and from one dimension to another. Likewise he found in his review of self-efficacy in different cultures ages and functions that self-efficacy has generalized functional value regardless of the milieu in which it is studied (Bandura, 1999).

He also considers that 'powerful self- mastery experiences' can change the perceived self-efficacy over a range of functioning (Bandura, n.d.; 2004). These self-mastery experiences which are an evaluation or interpretation of one's own behaviour are one of the sources of self-efficacy belief. Vicarious experience, an evaluation of the impact of other's behaviour, verbal persuasion and physiological states are other factors that produce or adjust self-efficacy beliefs and are fundamental elements of reciprocal determinism. (Pajares F. , Current Directions in Self-efficacy Research, n.d) Self-efficacy is a belief that can be gauged on one of the many self-efficacy scales. It is a positive variable that has been used to devise self-management programs in varying health issues (Bandura, 2004) . Self- efficacy scales have been used to predict motivation and learning attitudes in students (n=163) (Prat-Sala & Redford, 2010), exercise patterns in mature adults (McAuley, et al., 2011), and the size of a loan that might be asked for in a study of fatalism in Ethiopia, (n=1192) (Bernard, Dercon, & Taffesse, 2011). Self-efficacy appears from these and other studies as a constructive self-belief related to positive motivation and behaviour (Bandura, 1995, p. 3) . The self-

efficacy scales has also been translated into many languages and used successfully in different cultures (Schwarzer, Bäßler, Kwiatek, Schröder, & Zhang, 1996)

Bandura (2003) theorized on the application of some of the central concepts of SCT to the human capacity for spirituality. Symbolization, abstract vicarious learning, forethought, self regulation, projected goals and anticipated outcomes are means through which people order the present towards the future. Other cognitive or inner forces also contribute to the development of one's life; awareness of mortality the 'metacognitive ability to reflect upon oneself, the evaluation of motivation and the meaning of life's pursuits (Bandura, 2003). Bandura, like Allport, Ross and Michael (1967), distinguished between spirituality and religion and also made the distinction between intrinsic and extrinsic elements in spirituality. He illustrates the social grounding of religion and how spiritual modelling plays a crucial role in its transmission (Bandura, 2003). He ponders on the relationship between reliance on the divine proxy agency and the direction of self efficacy and he indicates both the positive and the negative possibilities of religiosity arguing that the displacement of control to divine agency to solve one's problems can foster dependent passivity while if divine agency is viewed as a "guiding supportive partnership" it should enhance self-efficacy (Bandura, 2003). The article, however, is theoretical and offers no studies to support a positive or negative evaluation of what relationship self-efficacy could have with religiosity.

In conclusion; all the principle psychological theories have dealt with the complex and ever present phenomenon of religion. While a few, like James, tried to demarcate the religious experience (James, 1997) a definition seemed elusive and though Skinner (Skinner B. F., 1987) and Bandura (Bandura, 2003) described religion

in the framework of their theories they offered no empirical evidence to demonstrate the validity of their conjectures.

### **Section 3: The Measuring of Religion as a Variable.**

The previous sections have highlighted how psychology developed divergent explanations for religion during its history. Depending on the theoretical viewpoint it was considered a positive or negative element in the psychological development of the person. Psychoanalysis and the psychodynamic theories, possibly because of their theoretical basis didn't offer much empirical evidence to support their affirmations. These theories give greater value to the individual experience or clinical cases (Porter, 1985). The lack of empirical information may also be due to the difficulties inherent in measuring variables associated with religion. Measuring any religious phenomena is guided by a theoretical orientation (Hill & Hood Jr., 1999, p. 9) and similar religious terms have different meaning in the various religious traditions (Gunn, 2012). Dow, for example, labels religion as a folk category, recognizes the difficulties in its definition and attempts to define it as a behaviour resulting from evolutionary factors. (Dow, 2007)

Allport was one of the first to attempt to measure religious orientation against other variables (Wombles, 2008; King, 1991). His study of roots of prejudice (Allport & Ross, 1967; Allport & Kramer, 1946) showed a positive correlation between religious orientation and prejudice, with people of no religious affiliation showing less prejudice. The results surprised Allport as they challenged his theoretical framework, i.e that religious people, because of what their religion teaches, should be less prejudiced than non-religious people. He concluded that distinctions had to be made in the concept of

religious orientation (Hill & Hood Jr., 1999, p. 119) . Initially he devised a mature-immature scale but later went on to make the intrinsic/extrinsic religiosity scale which is measured on the Allport and Ross Religious Orientation Scale (Hill & Hood Jr., 1999, p. 144) What it attempts to measure is the inner experience of religion and what this means to the individual. Intrinsically orientated people view religion as being a value in its own right while those who score high in extrinsic measures would evaluate religion in its ability to offer security, social status or consolation; in this sense religion has a utilitarian value. (Allport G. W., 1967) The difference between intrinsic and extrinsic orientation would be the difference between living and using religion. (Hill & Hood Jr., 1999, p. 119) (Nelson, 2009)

Allport found, using a sample of 309 people from different religious groups, that intrinsically religious people were less prejudiced than extrinsic religious people. He also found that indiscriminate pro-religious people were more prejudiced than any of the other groups and that this group showed lower education levels than the other respondents. In this classical study religiosity appears as a negative construct as even intrinsically religiously orientated people scored higher on the prejudice scale than those who were non churchgoers. (Allport G. W., 1967)

The Religious Orientation scale and others derived from it are the most extensively used scales in the study of religion and have prompted many approaches to the investigation of religious variables (Hill & Hood Jr., 1999, p. 120). The Religious Orientation Scale Revised also used the original distinction devised by Allport of intrinsic and extrinsic religiosity but incorporated the adjustments made by Gorsuch and Venable (Gorsuch & Venable, 1983) to make it more acceptable to different educational levels. Gorsuch and McPherson (Gorsuch & McPherson, 1989)



divided the extrinsic element into personally oriented and socially oriented extrinsicness and tested the reliability on 771 students, the intrinsic dimension had a reliability of .83 , which was consistent with the original intrinsic dimension of the ROS and the extrinsic personal orientation had a .57 reliability while extrinsic social orientation had a .58 reliability (Gorsuch & McPherson, 1989; Hill & Hood Jr., 1999, p. 154) .

Religiosity<sup>1</sup> has since been measured with many variables giving positive and negative relationships. Day, while acknowledging the difficulty in the definition of terms related to the study of religion and spirituality lists over sixty present-day studies that correlate religion and spirituality with an array of variables. (Day, 2010) Jackson showed how religious people could be discriminative in their assignment of aid to people with whom they were in disagreement on lifestyle choices (Jackson, Esses, & Burris, 1997) . Lee (2005) in the critical analysis of health and religious studies comments upon the overall positive relationship between health and religion. (Lee, 2005) Deaton also reports a positive relationship between religiosity and health (Deaton, 2009). In a study of 177 English members of the Anglican Church a strong relationship was found between intrinsic religiosity and both mental and physical health. The intrinsic orientation, according to this study can be understood in a cognitive-behavioural framework (Maltby, Lewis, Freeman, Day, Cruise, & Breslin, 2010). Batson and Schoenrade (1991) proposed another dimension to the scale, besides the intrinsic-extrinsic elements, this would be the quest dimension which explored, with an additional 12 items, attitudes towards existential elements and challenges. (Batson & Schoenrade, 1991; Hill & Hood Jr., 1999) With the introduction of the quest dimension religiosity could be measured as a search, compared to extrinsic religiosity which

---

<sup>1</sup> Reber defines religiosity as an “involvement, interest or participation in religion” (Reber, Allen, & Reber, 2009). The term covers what Allport was measuring on his scale and it is used in a general way to describe what pertains to religion

envisages religion as a means and intrinsic religiosity which sees religion as an end in itself. (McClenon, n.d.)

Diener, Tay, and Myers found a positive relation between religiosity and social societal factors (Diener, Tay, & Myers, 2011). Religiosity has also been associated to loneliness and other negative feelings (Rokach, Sha'ked, & Chin, 2011). In a study of the impact of religiosity on ethics in Japanese universities religious orientated students were not found to be more honest than secular ones. (Rawwas, Swaidan, & Al-Khatib, 2006). Religious Orientation was considered important in the recovery of mental health patients in first person accounts (Hugen, 2007). Using the Age Universal Religious Orientation Scale Gordon et al. (n=113) measured the relationship between the social pressure to forgive and intrinsic or extrinsic religious orientation and verified a negative relationship between intrinsic and extrinsic religiosity and a positive relationship between intrinsic religiosity and the showing of benevolence. It also showed a lesser tendency to seek vengeance for those in the intrinsic category (Gordon, et al., 2008)

From these studies, a minor sample of those available, religiosity gives diverse positive or negative results when paired with different variables and in different circumstances. Overall these negative or positive correlations between religiosity and other variables a gender aspect emerged constantly: females score differently than males on most religious elements and females score higher than males on religious variables, across the life-span, across cultures and across religions or spiritualities. (Miller & Hoffmann, 1995) Walter, in a literature review of research on Christian congregations, concludes that women are reported to be more religious than men (Walter, 1990) Deaton found only 2 countries showing females having significant less religiosity than men, another 12 insignificant differences with men at the higher level of religiosity

while 128 countries reported women significantly more religious than men (Deaton, 2009).

Another consideration in the measuring of religious variables has been the variance in religious aspects when mediated by nationality or culture. Culture like religion is a concept that has not been easily definable (Haring, 1948; Cooper, 1998). Consequently the culture-religion relationship cannot be easily studied though there are examples of studies on their mutual influence (Bellah, 1999). Demographic questionnaires query on place of birth or nationality and may use it as a variable correlated with religion. Cooper highlights the difficulty of finding adequate cultural measures given the mobility of peoples and emigration (Cooper, 1998). Despite the challenges in the measurement of cultural or national aspects of religiosity differences have been found in the measurement of religiosity over different nations. Reimer (Reimer, 1995), to cite a case, found significant differences in religious practices, beliefs, convictions and expressions between the United States and Canada, despite their proximity, their common language and shared history. He attributes these differences to the mediating effects of culture.

#### **Section 4: Possible Research and Hypothesis.**

After examining some literature relative to the theme of religion and psychology, the question of the psychological value of religion appears to remain uncertain. As self-efficacy and internal locus of control have been shown to have positive relationships with variables associated with beneficial behaviour this project proposes to explore the empirical connection between religiosity and these variables that are indicative of constructive self-belief; GSE and LOC. Gender and place of birth

(proxy for culture) have been shown to have mediating effects on religiosity and they will also be measured.

As Bandura did not offer empirical evidence for his theories on the relationship between self-efficacy and religiosity and despite the great quantity of studies done comparing psychological variables with religious elements there is little evidence of studies comparing GSE with religiosity. Using self-efficacy as a search term on DBS electronic resources 304 articles were presented but none directly related to measures of general self-efficacy and religiosity. This seems to indicate a gap in the literature and the possibility of some research on these variables

### **Hypothesis 1. Religiosity and GSE.**

Hypothesis 1a: It is hypothesized that there will be a significant relationship between intrinsic religiosity and GSE.

Hypothesis 1b: It is hypothesized that there will be a significant relationship between intrinsic religiosity and internal locus of control.

### **Hypothesis 2. Religiosity and gender.**

Hypothesis 2. It is hypothesized that intrinsic religiosity between males and females will be significantly different.

### **Hypothesis 3: Religiosity, language and culture (place of birth)**

Hypothesis 3a: It is hypothesized that the significant relationship between GSE and intrinsic religiosity will not be affected when the data is split for language.

Hypothesis 3b: It is hypothesized that the significant relationship between GSE and intrinsic religiosity will be affected by nationality.

## **CHAPTER 2: Method, Procedure and Measures**

### **Method**

PARTICIPANTS: (n=1158). The total number of participants was 1158, though the number of respondents for each of the four questionnaires varied. The sample was a convenience and snowballing sample from the researcher's network. Possible respondents were invited by email to go onto the web link and answer the questionnaires. They were also asked to recommend the link to other friends or family. The answers were received through the web-links, not through email, guaranteeing that the researcher would not have access to the names of the respondents and assuring anonymity.

Initially family, friends and colleagues in the four target countries (Ireland, Mexico, Spain and USA; two Spanish speaking and two English speaking countries) were addressed but the snowballing effect brought answers from thirty nine countries. These were subsequently collapsed into English speaking, Spanish speaking and 'Other Language' categories for statistical analysis. The place of birth category, while conserving the four target countries was enhanced with an extra category titled 'other place of birth' The reasons for targeting Ireland, Spain, USA and Mexico were , besides the convenience, to conserve certain religious homogeneity in the sample as these countries are historically Christian and represent two languages, Spanish and English.

### **Procedure**

The Religiosity questionnaire was translated by two bi-lingual translators (Spanish-English, English- Spanish) General Self-Efficacy English was taken from (Schwarzer & Jerusalem, 1995) and the Spanish version was downloaded from the General Self

Efficacy web site (Schwarzer R. , General Self-Efficacy Scale (GSE), 2012) while the brief locus of control questionnaire was acquired through DBS LIBRARY, from Psychological Reports 1985 (Lumpkin, 1985). It was also translated into Spanish. The demographic questionnaire was composed and translated by the author. The questionnaires (demographics, GSE, brief LOC, and Religiosity) were renumbered from 1-45 with brief motivations and explanations for participants as they moved from one questionnaire to another. These intermissions were necessary as there were slight variations in the Likert scales that were being used for each questionnaire and also to encourage the respondents to continue responding by informing them of their progress. The questionnaire was introduced onto SurveyMonkey (Select Plan), an internet web-based survey company (SurveyMonkey, 2012). Different links for the English and for the Spanish versions were established. The majority of the surveys were answered in a period of a week. Data from the SurveyMonkey was entered into SPSS (version18)

## **Measures**

The demographic questionnaire composed for the present study investigated gender, age, place of birth, native language and religion which were later used in the statistical analysis. It also surveyed for educational levels, marital status, number of children and of siblings, country of residence, family numbers, if parents were living and the most significant organization to which the respondent belonged<sup>2</sup>. This section of the demographic data was not used in the statistical analysis of the present study. The Religious Orientation Scale Revised used the original distinction devised by Allport of intrinsic and extrinsic religiosity (Allport & Ross, 1967) but incorporated the adjustments made by Gorsuch and Venable (1983) to make it more suitable to different educational levels. Gorsuch and Mc Pherson (Gorsuch & McPherson, 1989)

---

<sup>2</sup> Data stored for future analysis

divided the extrinsic element into personally oriented and socially oriented extrinsicness and tested the reliability on 771 students (Hill & Hood Jr., 1999, p. 154). The intrinsic dimension had a reliability of .83 which was consistent with the original intrinsic dimension of the ROS (Hill & Hood Jr., 1999, p. 145) the extrinsic social scale had a .58 reliability and the extrinsic personal .57 . There are 9 items in the intrinsic dimension, and 3 each in the extrinsic-personal and the extrinsic-social dimensions. This questionnaire has 3 reversed score items among the intrinsic items. As the focus was more directly on intrinsic and extrinsic religiosity the items for the quest dimension were not included (Batson & Schoenrade, 1991).

The variable of self-efficacy is obtained from Bandura's research (Bandura, 1999; n.d.) etc. However Bandura considered that self-efficacy was domain specific (Pajares F. , Current Directions in Self-efficacy Research, n.d.) though he did propose a central processor of efficacy information (Bandura, 1977). This study has followed the theory that Schwarzer and Jerusalem offered for the usefulness of a general self-efficacy scale (Schwarzer & Jerusalem, 1995). Schwarzer suggests that it would always be better to use a domain specific questionnaire but that General Self-Efficacy can also be measured. (Schwarzer R. , Everything you wanted to know about the General Self-Efficacy Scale but were afraid to ask, 2011) (Luszczynska, Gutierrez-Dona, & Benicio, 2005) Chen, Gully and Eden (2001) correlated a new general efficacy scale with self-esteem and also argued for the benefit of using GSE scales. Scholz et al. as well as outlining possible areas where GSE might be used as a construct, particularly when people have to readapt to novel life circumstances, found that a General Self Efficacy questionnaire adapted to each language by bi-lingual translators had an internal consistency of  $\alpha = .86$  and showed variations for each country (Japan  $\alpha = .91$  and



India  $\alpha=.75$ ) for  $n=19,120$  from 25 countries (Scholz, Dona, Sud, & Schwarzer, 2002).

The ten item questionnaire is answered with a Likert response format. Schwarzer considers that a median split might serve as a division if the categories were to be established for study purposes into high and low self-efficacy categories but he does not recommend that people be divided into such classes, a suggestion followed in this study (Schwarzer R. , Everything you wanted to know about the General Self-Efficacy Scale but were afraid to ask, 2011).

The original Locus of Control questionnaire had 29 items (Rotter, Generalized expectancies for internal versus external control of reinforcement., 1966). Lumpkin however devised a shorter measure specifically for research projects where LOC was being measured with other variables and was not the central focus of attention and where the length of the questionnaire may be a concern (Lumpkin, 1985) This questionnaire has 6 items and is answered on a 5 point Likert format.

### Chapter 3: Results

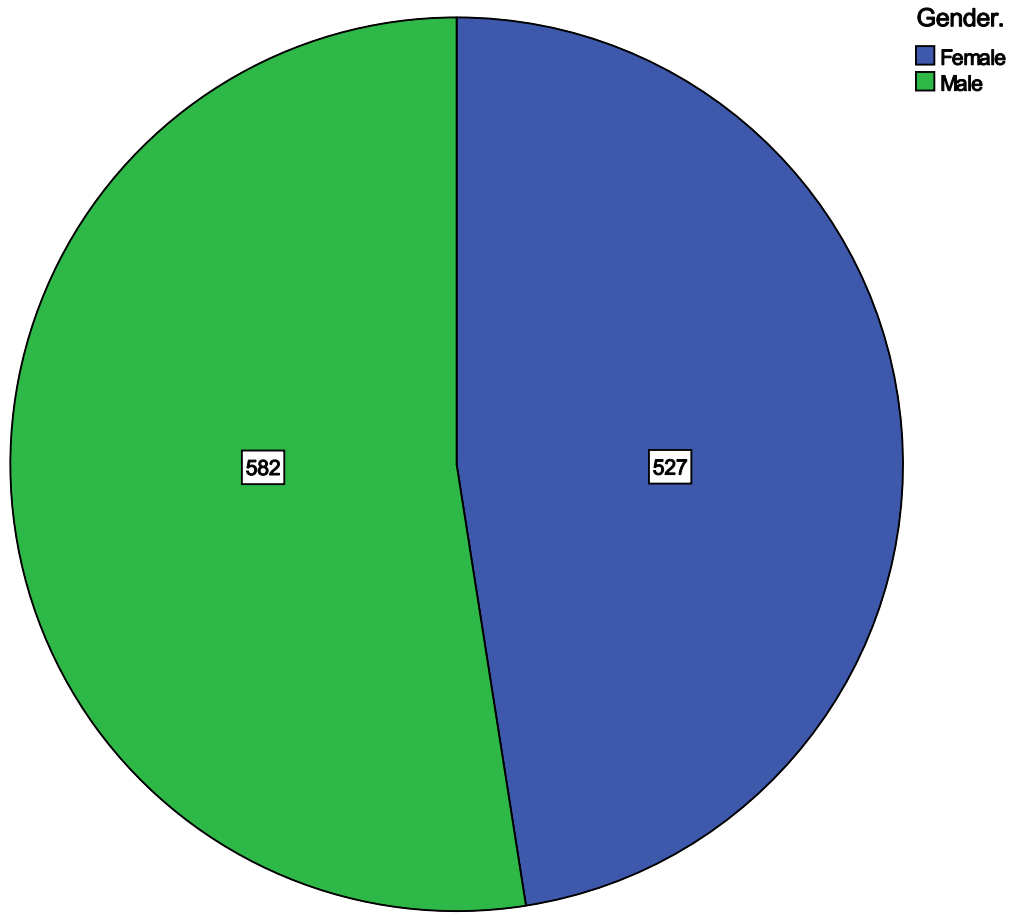
#### Descriptive Statistics:

**Table 1a: Means and Standard Deviations**

	General Self-Efficacy	Intrinsic Religiosity	External Religiosity-Social	External Religiosity-Personal	Internal Locus of Control	External Locus of Control
N Valid	1015	1023	1040	1033	1030	1032
Missing	143	135	118	125	128	126
Mean	32.6768	26.0215	7.1327	7.5198	10.9388	7.3469
Std. Deviation	4.43293	3.56455	1.86340	2.48754	1.98858	1.80897

**Table 1b: Means and Standard Deviations by Gender**

Female	Total Self Efficacy Score			485	32.6639	4.46849
	Total Intrinsic religiosity score			488	26.5451	3.34007
	Total External Rel. Social score			498	7.0422	1.77174
	Total External Rel. Personal score			494	7.7814	2.54548
	Total Internal Locus of Control			498	10.9578	2.02803
	Total External Locus of Control			501	7.2695	1.78473
	Valid N (listwise)			453		
Male	Total Self Efficacy Score			523	32.7132	4.41761
	Total Intrinsic religiosity score			531	25.5179	3.69665
	Total External Rel. Social score			537	7.2179	1.93143
	Total External Rel. Personal score			535	7.2673	2.41204
	Total Internal Locus of Control			527	10.9393	1.94802
	Total External Locus of Control			526	7.4106	1.82329
	Valid N (listwise)			486		



There were a small number of respondents for each questionnaire who didn't indicate their gender . On average 582 participants were male and 527 female.

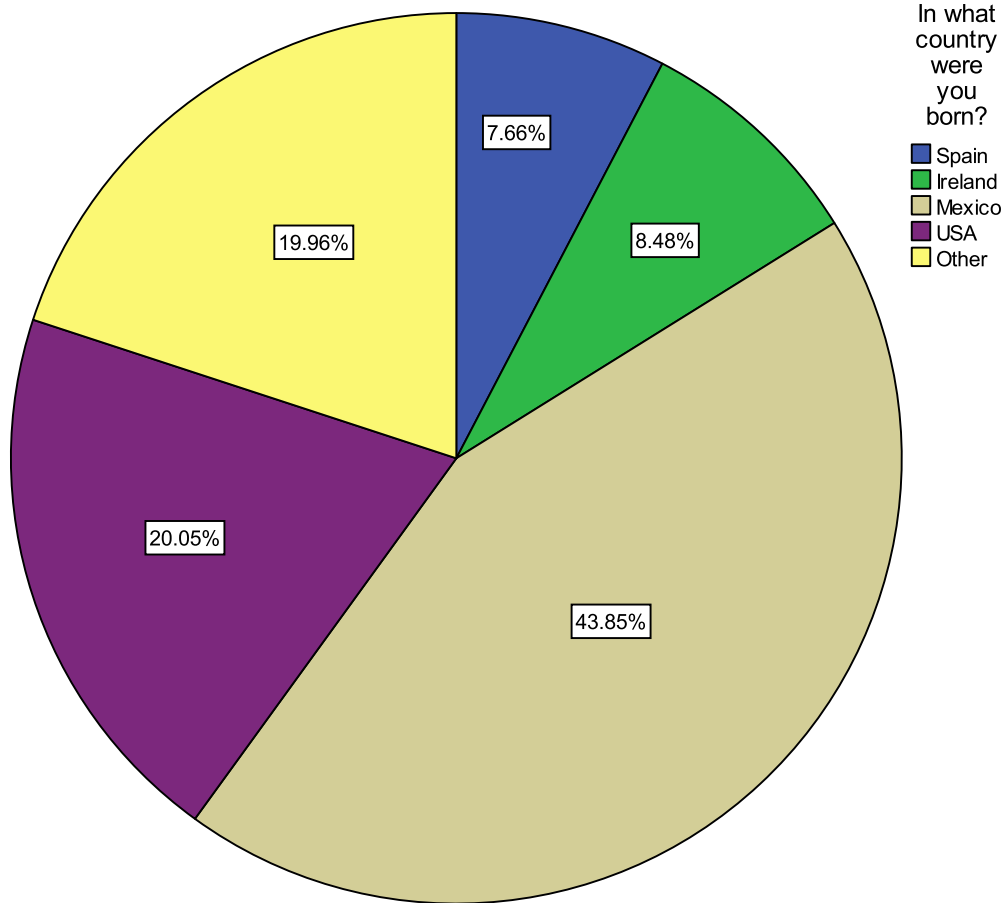
**Table 1c. Means and Standard Deviations by Language**

What is your native language?		Total Self Efficacy Score	Total Intrinsic religiosity score	Total External Rel. Social score	Total External Rel. Personal score	Total Internal Locus of Control	Total External Locus of Control
English	N Valid	302	307	311	310	304	305
	Missing	51	46	42	43	49	48
	Mean	31.8113	24.7459	7.3633	6.7581	10.3947	7.6230
	Std. Deviation	4.02081	3.45096	1.78519	2.17135	1.84966	1.77856
Spanish	N Valid	612	612	624	621	623	624
	Missing	67	67	55	58	56	55
	Mean	33.2729	26.7843	7.0689	7.8969	11.2921	7.2163
	Std. Deviation	4.56691	3.41258	1.86805	2.54616	1.95151	1.80413
Other	N Valid	69	69	70	67	68	68
	Missing	9	9	8	11	10	10
	Mean	32.0435	25.7391	6.6143	7.9254	10.3235	7.4118
	Std. Deviation	4.12822	3.68483	2.12843	2.54245	2.04020	1.69490

**Table 1d. Means and Standard Deviation by Nationality**

In what country were you born?		Total Self Efficacy Score	Total Intrinsic religiosity score	Total External Rel. Social score	Total External Rel. Personal score	Total Internal Locus of Control	Total External Locus of Control
Spain	N Valid	78	76	78	77	78	78
	Missing	6	8	6	7	6	6
	Mean	32.0641	25.4342	7.3846	7.2078	10.5641	7.7949
	Std. Deviation	4.77640	3.58268	2.07164	1.83057	1.74020	1.53199
Ireland	N Valid	90	90	91	91	87	88
	Missing	3	3	2	2	6	5
	Mean	31.5667	25.3111	6.8571	7.4945	10.4023	8.1250
	Std. Deviation	3.54125	3.85013	2.00871	2.18771	1.80090	1.98160
Mexico	N Valid	434	443	450	447	448	448
	Missing	47	38	31	34	33	33
	Mean	33.7811	27.0271	7.0844	8.1029	11.4978	7.1451
	Std. Deviation	4.49331	3.47182	1.77635	2.52400	2.04316	1.82057
USA	N Valid	202	208	211	211	209	209
	Missing	18	12	9	9	11	11
	Mean	31.5941	24.3606	7.5877	6.3365	10.3254	7.2823
	Std. Deviation	3.72080	3.15613	1.44935	1.98459	1.87580	1.74359
other	N Valid	201	198	201	198	199	200
	Missing	18	21	18	21	20	19
	Mean	32.1194	26.0808	6.7960	7.5606	10.6683	7.3050
	Std. Deviation	4.66858	3.23897	2.19162	2.80570	1.78675	1.75710

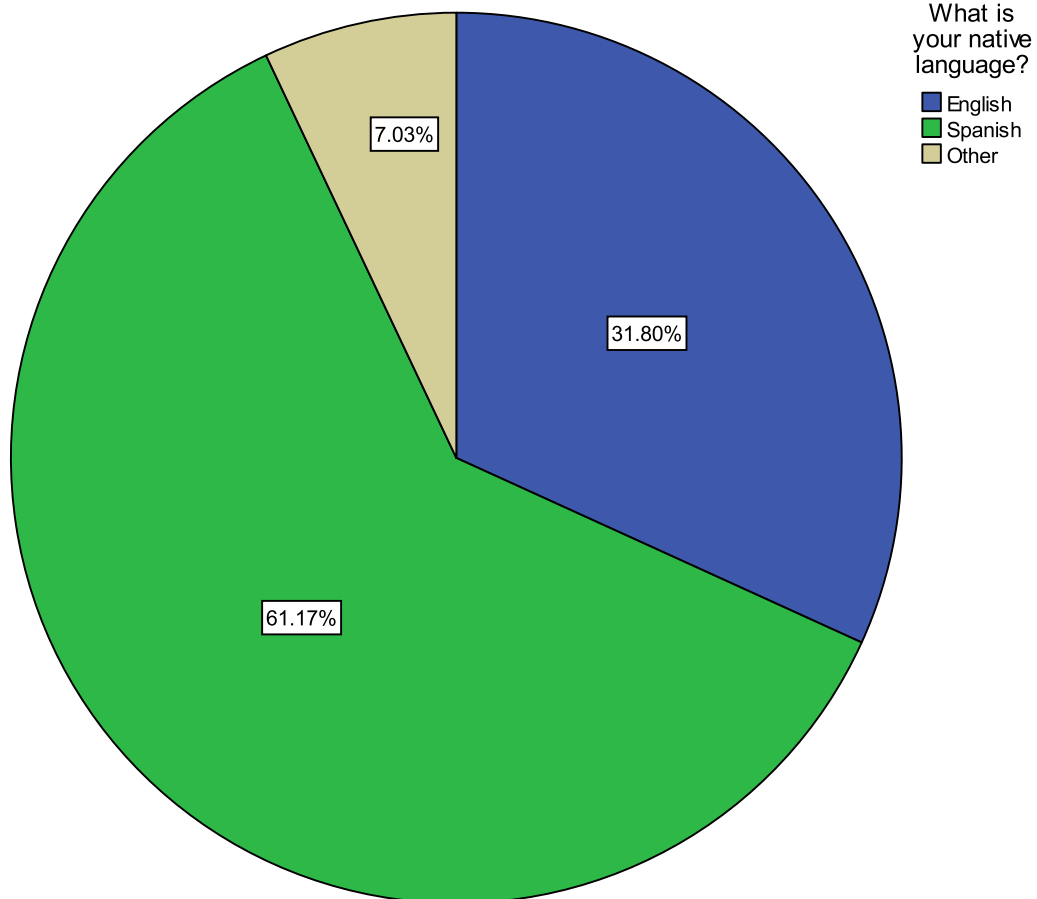
**Table 2a: Country of Origin**



The original target nations were Ireland, Spain, Mexico and USA. They were chosen for convenience reasons and because two were Spanish speaking and 2 were English speaking. In this case language and nationality could be spilt and so indicate if underlying culture factors might not be influencing the variables in the religiosity, self-efficacy and locus of control surveys. However surveys were answered from 35 nations not targeted, 12 of which were Spanish speaking 6 English speaking and the others were of various languages. This offered the opportunity of having a control group besides the

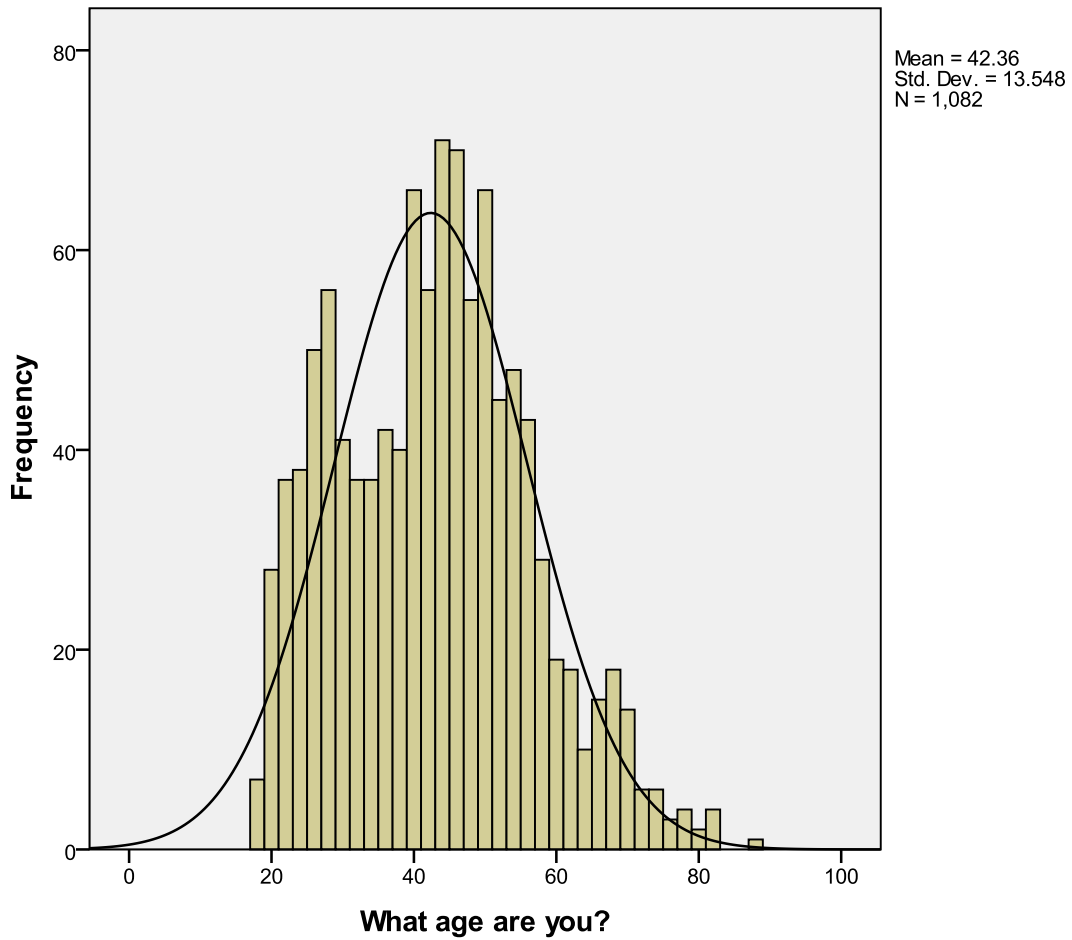
Ireland, Spain, Mexico, and USA groups and also a comparison group for the language categories.

**Table 2b: Native Language**





**Table 3: Age**



1082 respondents gave their age. Being 18 was a requirement to participate in the study and 88 was the oldest reported age. 42.36 was the mean age (42.91 for females and 41.83 for males)

**Table 4: Religions of Respondents.**

95.80% of the respondents reported belonging to the Catholic religion and 1.64% reported being agnostic or atheistic. The remainder were from Mainline Protestantism, Evangelical Protestantism, and Judaism, Islamic or other unspecified traditions.

CATHOLIC RELIGION	95.80%
AGNOSTIC/ATHEIST	1.65%
PROTESTANT, JEWISH, OTHER	2.55%
TOTAL	100%

### **Inferential Statistics:**

Having determined from p-plots that the data from GSE, religiosity and locus of control surveys (with sub-scales) had a normal distribution the Pearson's correlation test was employed to test for relationships between variables.

A person's correlation showed a significant relationship between:

1. GSE and Intrinsic Religiosity  $r(972)=.172$ ;  $p<.01$ , a significant small positive relationship
2. GSE and internal LOC  $r(973)=.313$ ;  $p<.01$ , a significant medium positive relationship
3. Intrinsic Religiosity and internal LOC  $r(1007)=.174$ ;  $p<.01$ , a significant small positive relationship
4. GSE and Intrinsic Religiosity and gender. Females:  $r(463)=.179$ ;  $p<.01$ , Males  $r(523)=.172$ ;  $p<.01$ , significant small positive relationships.
5. Intrinsic Religiosity and internal LOC  $(r(1007)=.174$ ;  $p<.01)$ , a significant small positive relationship.

6. Extrinsic Social Religiosity and Gender: Males showed no significant relationship ( $p > .05$ ) while females showed a small positive one  $r(473) = .108$ ;  $p < .05$
7. Extrinsic Personal Religiosity and Gender: Males showed a significant medium positive relationship  $r(502) = .353$ ;  $p < .01$ , females showed no significant relationship ( $p > .05$ ).
8. GSE , Intrinsic Religiosity and language
  - a. English  $r(293) = .195$ ;  $p < .01$ , significant small positive relationship
  - b. Spanish  $r(581) = .144$ ;  $p < .01$ , significant small positive relationship
9. GES and Intrinsic Religiosity and place of birth:
  - a. Ireland.  $r(88) = .248$ ;  $p < .05$ , significant small positive relationship
  - b. Mexico.  $r(417) = .133$ ;  $p < .01$ , significant small positive relationship
  - c. USA.  $r(196) = .186$ ;  $p < .01$ , significant small positive relationships<sup>3</sup>

---

<sup>3</sup> It is important to note that there were other significant correlations between variables. These are shown in charts in the appendix,

**Correlation for Gender: Females**

Gender.	Total Self Efficacy Score	Total Intrinsic religiosity score	Total External Rel. Social score	Total External Rel. Personal score	Total Internal Locus of Control	Total External Locus of Control
Female Total Self Efficacy Score	1	.179**	.108*	.060	.272**	-.066
Pearson Correlation Sig. (2-tailed)		.000	.018	.196	.000	.148
N	485	463	473	470	474	476
Total Intrinsic religiosity score	.179**	1	.098*	.410**	.208**	.147**
Pearson Correlation Sig. (2-tailed)	.000		.031	.000	.000	.001
N	463	488	484	481	485	486
Total External Rel. Social score	.108*	.098*	1	.019	.031	.060
Pearson Correlation Sig. (2-tailed)	.018	.031		.669	.492	.183
N	473	484	498	489	493	496
Total External Rel. Personal score	.060	.410**	.019	1	.137**	.200**
Pearson Correlation Sig. (2-tailed)	.196	.000	.669		.002	.000
N	470	481	489	494	491	492
Total Internal Locus of Control	.272**	.208**	.031	.137**	1	-.011
Pearson Correlation Sig. (2-tailed)	.000	.000	.492	.002		.806
N	474	485	493	491	498	497
Total External Locus of Control	-.066	.147**	.060	.200**	-.011	1
Pearson Correlation Sig. (2-tailed)	.148	.001	.183	.000	.806	
N	476	486	496	492	497	501

**Correlation for Gender: Males**

Male	Total Self Efficacy Score	Pearson Correlation Sig. (2-tailed)	1	.172**	-.028	.042	.353**	-.173**
		N	523	507	512	511	502	501
	Total Intrinsic religiosity score	Pearson Correlation Sig. (2-tailed)	.172**	1	.085	.460**	.153**	.072
		N	507	531	529	526	518	517
	Total External Rel. Social score	Pearson Correlation Sig. (2-tailed)	-.028	.085	1	-.009	-.034	.035
		N	512	529	537	532	524	523
	Total External Rel. Personal score	Pearson Correlation Sig. (2-tailed)	.042	.460**	-.009	1	.161**	.185**
	N	511	526	532	535	522	521	
Total Internal Locus of Control	Pearson Correlation Sig. (2-tailed)	.353**	.153**	-.034	.161**	1	-.203**	
	N	502	518	524	522	527	525	
Total External Locus of Control	Pearson Correlation Sig. (2-tailed)	-.173**	.072	.035	.185**	-.203**	1	
	N	501	517	523	521	525	526	

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

\* . Correlation is significant at the 0.05 level (2-tailed).

**Table of Results for Mexico** <sup>4</sup>

Mexico Total Score	Self Efficacy	Pearson Correlation	1	.133**	.030	-.074	.285**	-.122*
		Sig. (2-tailed)		.006	.540	.128	.000	.012
		N	434	417	423	421	421	421
Total religiosity score	Intrinsic	Pearson Correlation	.133**	1	.165**	.433**	.148**	.155**
		Sig. (2-tailed)	.006		.000	.000	.002	.001
		N	417	443	440	437	439	437
Total Social score	External Rel.	Pearson Correlation	.030	.165**	1	.071	.061	.086
		Sig. (2-tailed)	.540	.000		.136	.199	.070
		N	423	440	450	443	444	444
Total Personal score	External Rel.	Pearson Correlation	-.074	.433**	.071	1	.090	.278**
		Sig. (2-tailed)	.128	.000	.136		.058	.000
		N	421	437	443	447	442	441
Total of Control	Internal Locus	Pearson Correlation	.285**	.148**	.061	.090	1	-.024
		Sig. (2-tailed)	.000	.002	.199	.058		.619
		N	421	439	444	442	448	446
Total of Control	External Locus	Pearson Correlation	-.122*	.155**	.086	.278**	-.024	1
		Sig. (2-tailed)	.012	.001	.070	.000	.619	
		N	421	437	444	441	446	448

<sup>4</sup> The complete tables for Spain, Ireland, Mexico, USA and Other nationalities can be found in the appendix.

**Summary of the Results According to the Hypothesis (These findings to be explained in the discussion chapter)**

Hypothesis 1: The relationship between intrinsic religiosity, GSE, and LOC.

Hypothesis 1a: It is hypothesized that there will be a significant relationship between intrinsic religiosity and GSE: the above analysis supported the hypothesis.

Hypothesis 1b: It is hypothesized that there will be a significant relationship between intrinsic religiosity and internal locus of control: the above analysis supported the hypothesis.

Hypothesis 2. Religiosity and gender.

Hypothesis 2a. It is hypothesized that intrinsic religiosity between males and females will be significantly different. Both males and females had significant relationship between the religiosity and self efficacy variables. The hypothesis was rejected.

Hypothesis 3: Religiosity, language and culture (place of birth)

Hypothesis 3a: It is hypothesized that the significant relationship between GSE and intrinsic religiosity will not be affected when the file is split for language. Both English  $r(293)=.195$ ;  $p<.01$ , and Spanish  $r(581)=.144$ ;  $p<.01$ , showed small significant relationships but Other Languages didn't ( $n=66$ ). The hypothesis was rejected.

Hypothesis 3a: It is hypothesized that the significant relationship between GSE and intrinsic religiosity will be affected by nationality. While Ireland  $r(88)=.248$ ;  $p<.05$ , Mexico  $r(417)=.133$ ;  $p<.01$  and USA  $r(196)=.186$ ;  $p<.01$  had significant small relationships between GSE and intrinsic religiosity Spain ( $n= 75$ ) and Other Countries ( $n=190$ ) was not significant. The above analysis supported the hypothesis.



## **Chapter 4: Discussion**

The objective of this project was to measure core psychological variables that are indicative of constructive self-belief, taken from SCT, with religiosity. Of particular interest was the statistical relationship between GSE and intrinsic religiosity and the mediating effects that gender, language and place of birth might have on the results.

### **General Self-Efficacy and Intrinsic Religiosity.**

GSE and Intrinsic Religiosity  $r(972)=.172$ ;  $p<.01$ , showed a significant small positive relationship, thus confirming the main hypothesis. The significance was maintained when the data was split for gender: females  $r(463)=.179$ ;  $p<.01$  and males  $r(507)=.172$ ;  $p<.01$ , when the data was split for language as the native language it held for English speakers  $r(293)=.195$ ;  $p<.01$ , for Spanish speakers  $r(581)=.144$   $p<.01$ , and for native speakers of other languages  $r(66)=.049$ ;  $p<.01$ . When split for place of birth, it held for Spain  $r(75)=.093$ ;  $p<.01$ , for Ireland  $r(88)=.248$ ;  $p<.05$ , for Mexico  $r(417)=.133$ ;  $p<.01$ , for USA  $r(196)=.186$ ;  $p<.01$ . The general hypothesis was not supported in the case of those born outside the 4 target countries ( $n=190$ ). A total of 35 countries entered into the category of “other countries”<sup>5</sup>.

The relationship between GSE and intrinsic religiosity was predicted by Bandura but not verified in research (Bandura, 2003). In his commentary he considers that the concept of partnered proxy agency rather than the displacement of control to a Divine agency would forecast personal efficacy. Allport had defined intrinsic religiosity as a living of a religion as distinct from using a religion and the adjustment of life to the creed one has embraced. (Allport & Ross, 1967). Bandura echoes this description of intrinsic religiosity as essentially living one’s religion in the diverse aspects of life

---

<sup>5</sup> For list of other countries see appendix

(Bandura, 2003). As the correlation was found with 9 factors (overall, male, female, Spanish speakers, English Speakers, speakers of other languages, and Spain, Ireland, Mexico, USA as places of birth) it could be argued that language and cultural variables might not play a mediating role in the relationship between GSE and intrinsic religiosity and that the people who formed the sample may share a similar vision of what Divine agency and human agency is and perceive no conflict between them.

GSE and internal LOC  $r(973)=.313$ ;  $p<.01$ , had a significant medium positive relationship while Intrinsic Religiosity and internal LOC  $r(1007)=.174$ ;  $p<.01$ , showed a significant small positive one. As LOC signals where an individual's belief on causality lies, internally or externally (Rotter, Generalized expectancies for internal versus external control of reinforcement., 1966) the relationship with intrinsic religiosity was investigated to verify if intrinsically religious people have a sense of control over their lives. Schieman (2008) in his study of the relationship between personal control and the religious role considered that the concepts of LOC and GSE overlapped. These results appear to be supported in the findings from the current study. He found that people who reported being more strongly dedicated to their religious role also showed higher scores in measures of personal control i.e. they were personally empowered by their religiosity (Schieman, 2008).

Bandura also considered cases when self-efficacy and internal locus of control could have negative relationships (Bandura, 1977), this again could arise because of Bandura's opinion that self-efficacy was domain specific. This negative correlation did not arise in the present study as the positive relationship between GSE and internal LOC was confirmed. The results showing a medium positive correlation between GSE and internal locus of control  $r(979) =.313$ ;  $p<.01$  and a small negative correlation with

external locus of control  $r(980) = -.121$ ;  $p < .01$ . Internal and external locus of control were negatively correlated  $r(1027) = -.114$ ;  $p < .01$ .

This suggests that intrinsically religious people consider that they are in general control of their lives and that although religion is of central importance to them they believe that self-efficacy and locus of control is within their sphere of agency. However the current study also found that external LOC  $r(1007) = .099$ ;  $p < .01$  also had a small significant relationship with intrinsic religiosity a possible indication of indiscriminate pro-religious behaviour (Allport & Ross, 1967).

As self-efficacy has been found to correlate significantly with positive behaviours: correct health behaviour (McAuley, et al., 2011) positive study behaviour (Prat-Sala & Redford, 2010) reduction in recurrence of depressive episodes (Yamashita & Okamura, 2011) to note a few and religiosity has also been related to positive aspects of health management (Day, 2010) in recovery from severe mental illness (Hugen, 2007), in coping with negative life events (Pargament, Olsen, Reilly, Falgout, Ensing, & Van Haitsma, 1992) it was probable that the relationship between intrinsic religiosity and GSE would show some positive correlation. It is noteworthy, however, that in the studies cited each one used dimension specific questionnaires and not the GSE questionnaire.

The finding, in the context of the introduction to this research project, shows that the same construct, religiosity, measured with the same Religious Orientation Scale, and different criterion variables, prejudice in the case of Allport (Allport & Ross, 1967) and GSE in the case of this study, can continue to give positive or negative impressions of religion. In the case of Allport intrinsically religious people were shown to be prejudiced and in this study they are shown to have significant levels of GSE. While

doubtlessly prejudiced people can have significant GSE this research underlines again the elusiveness of the religious phenomenon and the diverse interpretations of its benefits or dangers depending on the variable that is measured.

### **General Self-Efficacy, Intrinsic Religiosity and Gender:**

In the hypothesis on the differences that males and females should exhibit in intrinsic religiosity the present study followed the theories of Miller and Hoffman (1995) in their attempt to explain pervasive gender differences in religiosity through the concept of risk aversion and the many studies these authors cite that consistently show women score higher than men in religious activities and systems. Walter (1990) in a literature review also indicates some of the areas where females are more religious than males in the British Isles and the literature that attempts to explain the differences. Deaton in the very recent review of data from 145 countries involving 332, 712 people who answered a religiosity question and 335,005 who answered a worship question found that females score significantly higher than men in 131 countries in both questions and men only score significantly higher than women in two countries and insignificantly in another twelve. (Deaton, 2009).

However in the correlation between GSE and intrinsic religiosity this difference was not confirmed as GSE and Intrinsic Religiosity and Females:  $r(463)=.179$ ;  $p<.01$ , Males  $r(523)=.172$ ;  $p<.01$ , showed a significant small positive relationship. As well as showing that there may be some religious dimensions where there are no gender differences it also possibly indicates that gender has to be combined with other elements to explain religious differences in males and females. For example in extrinsic social religiosity and gender, males ( $n=512$ ) showed an insignificant negative correlation while females showed a significant small positive one  $r(473)=.108$ ;  $p<.05$ . It is possible

that in this research where intrinsic religiosity is measured males and females have a similar pattern of self-beliefs and religious orientation but are different in extrinsic dimensions. As the overall number of male (n=582) and female participants (n=527) was evenly balanced the sample sizes would not be conjectured to make a significant difference. The result might also reflect the bias created by convenience sampling and reflect the religiosity of persons within the network of the researcher. Clarity on this result may come from the analysis of results when gender by nationality is compared to GSE and religiosity and is a possible implication for future research (see future research section)

### **General Self-Efficacy, Intrinsic Religiosity, Language and Place of Birth (Proxy for Culture).**

The grouping by languages of GSE and Intrinsic Religiosity confirmed the general hypothesis again and then allowed for a distinction between language and place of birth. This could illustrate if there were any national differences between the four target nations. English  $r(293)=.195$ ;  $p<.01$ , and Spanish  $r(581)=.144$ ;  $p<.01$ , both showed significant small positive relationships. Eleven Other languages (n=66) showed no significant relationship ( $p>.05$ ) between the variables<sup>6</sup>. As Spanish and English represented two different countries each this factor would be inadequate to indicate cultural or national differences. The grouping of the variables under place of birth might indicate national or cultural factors mediating the variables. Ireland.  $r(88)=.248$ ;  $p<.05$ , showed a significant small positive relationships, as did Mexico.  $r(417)=.133$ ;  $p<.01$ ,

---

<sup>6</sup> List of Other Languages in Appendix

and the USA.  $r(196)=.186$ ;  $p<.01$ .<sup>7</sup>Spain ( $n=75$ ) however showed a non significant result ( $p>.05$ ) indicating that national or cultural elements might influence the GSE - religiosity relationship. Speaking Spanish predicted a significant relationship between the variables being Spanish did not predict the same relationship.

The terms “Spanish” or “Mexican” or “American” can describe a whole range of demographic realities, and though employed in this study as a remote proxy for culture they have to be used with caution. Mexico, for example has 68 Indian languages (Instituto Nacional de Lenguas Indigenas, 2010) representing a diversity in tribes and religious terms and practices. USA has many nationalities forming the 6 ethnicities that make up the general population (Central Intelligence Agency, 2012). Having made this clarification there are some surprising results. The external personal religiosity correlates significantly with intrinsic religiosity in all the groups including the Other group ( $n=190$ ) which has shown a non significant score in the relationship between GSE and Intrinsic religiosity. Spain  $r(75)=.365$ ;  $p<.01$ . Ireland  $r(90)=.251$ ;  $p<.05$ , Mexico  $r(437)=.433$ ;  $p<.01$ , USA  $r(207)=.398$ ,  $p<.01$  and Other  $r(194)=.433$ ,  $p<.01$ . This seems to indicate a strong relationship between the two variables, which are sub-scales of the religiosity questionnaire. Hill comments that the two extrinsic scales have a lower reliability (.57 and .58 compared to the .83 of the intrinsic religiosity items) possibly because of the brevity of the scales (Hill & Hood Jr., 1999). However the same effect does not apply for the extrinsic social religiosity, which has the same number as items as the extrinsic personal dimension, showing non-significant relationships in the Spain, Ireland, the USA, and Other categories ( $p>.05$ ) but Mexico shows a significant small positive relationship  $r(440)=.165$ ,  $p<.01$  between intrinsic and extrinsic social religiosity.

---

<sup>7</sup> It is important to note that there were other significant correlations between variables. These are shown in charts in the appendix,

In fact the Mexican scores show other interesting correlations that seem to indicate some particular understanding of the questions not shared by the participants from the other four national groups. Mexico scores significantly when intrinsic religiosity is correlated with the LOC on the external  $r(437)=.155, p<.01$  and the internal scales  $r(439)=.148, p<.01$ . The model predicts that internal and external LOC of control should not correlate as in fact happens in with the other 4 nationalities. Overall Mexico correlates significantly with GSE, extrinsic religiosity social, extrinsic religiosity personal, LOC internal and LOC external when measured with intrinsic religiosity. Allport (Allport & Ross, 1967) in his original study described an indiscriminate pro-religious group who answer positively questions that contradict each other (for example: Item 38. My whole approach to life is based on my religion. Item 40. Although I believe in my religion, many other things are important in my life.) These were also the least educated respondents of his survey. Though the educational levels were surveyed for in this research the results have not been analysed so Allport's explanation of different educational levels as a factor in indiscriminate answering might explain the surprising result.

However it could also be argued that the questionnaires needed verification in the Mexican cultural and linguistic context and the results may indicate underlying problems of interpretation. It is also possible that these results represent some cognitive formulation on religiosity shared by many of the Mexican respondents. Culture, according to Bargh and Morsella (2008) is a subconscious construct which makes one adapt to the local social conditions into which one is born. The unique pattern of responding of the Mexican sample may not be other than a reflexion of those local social conditions. Of the sample countries Mexico is the one with the largest indigenous population, it is also immersed in the Aztec and Mayan cultural traditions distinct from

the European ones represented by Ireland, Spain and USA. It could also represent a desire to endorse any element that seems religious and as such may represent a confirmation of a high intrinsic religiosity or religious world view. It might also be interpreted as a cognitive-behavioural framework unique to people born in Mexico.

In the original research verifying the difference between the two extrinsic scales a sample of college students was used (n=771). (Gorsuch & McPherson, 1989) Though they were in religious and non-religious universities the sample was more homogenous than the sample used for the present study. Gorsuch and McPherson comment on the relatively low reliability of the two extrinsic factors and they also indicate that more research is needed and possibly more items necessary to increase the validity of the scale (Gorsuch & McPherson, 1989). The results of the present research corroborate the need for more investigation into the extrinsic elements of the scale.

Overall this research, in continuity with the on-going debate on the positive or negative psychological evaluation of religion, ascertained that a specific type of religiosity, intrinsic, appears to correlate positively with a variable that is indicative of a constructive self-belief; general self-efficacy .



## **Chapter 5: Limitations of the Current Study and Implications for Future Research**

**The method:** Biernacki and Waldorf indicate some of the caution necessary in the use of snowballing sampling through social networks; the method used in the present study. It can be questioned if the variations in the results represent the variations in the population (Biernacki & Waldorf, 1981). Convenience snowballing sampling has the benefit of allowing college researchers to go beyond the confines of a student sample. It also can reach a larger sample. The target for this study was 400 and over a thousand valid responses were received. This form of sampling is also more time and cost effective. (Biernacki & Waldorf, 1981)

**The sample:** This study does not reflect the religious composition of the countries targeted. While 95.8% of the respondents report being of Catholic religion Mexico reports an 89% Catholic population, Spain a 94%, Ireland 88.4% and the USA 24%. (NationMaster, 2012). This probably reflects the composition of the network of the researcher. Allport in his original study of prejudice and religious orientation considered that his sample did not necessarily represent the different religious groups from where the surveys were taken so he relabelled them using letters instead of the name of the congregation. (Allport G. W., 1967)

Allport reported that a possible limitation of his study on prejudice and religiosity was the fact that the people being surveyed knew that it was a religious orientation survey and this might have produced bias in their answers (Allport G. W., 1967). The same may apply to this study as through the introductory letter and some of the demographic questions the participants knew that religion was an important part of the study and could have primed their responses.

**The measures:** The questionnaires were produced in Spanish and English. There are differences in the English spoken in Ireland and the USA. The Spanish spoken in Spain, North, Central and South America can have significant variants. In Spain the use of the Likert scale was found to be generally consistent in the different regions though the use of one word (*nunca*, never ) generated significant differences in one region. (Cañadas Osinski & Sánchez Bruno, 1998). These possible linguistic differences were not taken into consideration in the elaboration of the instruments and may have been a cause of some of the scoring differences.

### **Implications for Future Research**

In the demographic questionnaire people reported their age, if they had living parents, family size, marital status, educational levels, and the most important organization to which they belonged. This data could be converted into scale variables and used to give greater understanding of the small significant positive relationship that was found between GSE and intrinsic religiosity. It also might help to explain the other many significant relationships and some of the surprises found in the study. Especially relevant may be the educational levels as these have been reported to be of considerable importance in religious studies. Allport in his original paper found a correlation between low level of studies and indiscriminate answering (Allport G. W., 1967).

The socioeconomic aspect was considered important in Schieman's study of the religious role and its relation to personal control. (Schieman, 2008) Diener et al also analysed this aspect in their study within the states of the United States and between nations and reported that religiosity was negatively correlated with well-being.

(Diener, Tay, & Myers, 2011). In future research this dimension may contribute to a greater understanding of the results. In this project respondents had to have a computer

and access to internet so they probably represented different socioeconomic levels depending on the country from where they answered : USA has 166.6 broadband subscribers per 1000 while Mexico has 22.4 per thousand a difference of 600% (Ireland 65.1 per thousand and Spain 115.1 per thousand) (NationMaster, 2012).

The relationship between GSE and Intrinsic religiosity could be explored in many directions. As 95.8% of the respondents reported being Catholic, the results would have to be verified in similar Catholic samples and the research would have to be repeated in samples where other religions predominate.

Diverging from the samples from Spain, Ireland, USA and Mexico the sample from other countries (n=190) did not correlate significantly with GSE and intrinsic religiosity. This requires future investigation as it represents 16.5% of the sample. As this 190 was composed of 35 nationalities a bigger sample from each one of these nations will probably be needed in order to explain the differences.

Surprisingly intrinsic religiosity correlated significantly with both external locus of control and internal locus of control in this research  $r(1007)=.174$ ;  $p<.01$  and  $r(1007)=.099$ ;  $p<.01$  respectively. This contrasts with the result of the correlation of internal and external LOC which is a significant small negative relationship  $r(1027)=-.114$ ;  $p<.01$ . Why the religiosity variable has this mediating effect on LOC is also a theme that could be further explored. It may be the effect discussed in relation to the Mexican sample and described by Allport as the indiscriminate pro-religious group (Allport G. W., 1967).

The use of Batson's 'Quest' scale (Batson & Schoenrade, 1991) could help future studies identify people who are intrinsically religious or searching but not affiliated to a particular church or creed and explore what kind of self-beliefs they have in comparison to the intrinsic/extrinsic religiosity categories.

## Works Cited

- Aldridge, A. (2000). *Religion in the Contemporary World*. Cambridge: Polity Press/Blackwell Publishing.
- Allport, G. W. (1967). Personal religious orientation and prejudice. *Journal Of Personality And Social Psychology*, 5(4) , 432-443. doi:10.1037/h0021212.
- Allport, G. W., & Kramer, B. M. (1946). Some Roots of Prejudice. *Journal of Psychology: Interdisciplinary and Applied*, 22 , 9-39.
- Allport, G. W., & Ross, J. M. (1967). Personal Religious Orientation and Prejudice. *Journal of Personality and Social Psychology*, Vol 5(4), Apr , 432-443.
- Ames, C. (2005). Does Inquisition Belong to Religious History? *American Historical Review*, 110(1) , 11-37.
- Association of Religion Data Archive. (2005). *World Religions* . Retrieved Jan 2012, from The Association of Religion Data Archives.: [http://www.thearda.com/QuickLists/QuickList\\_125.asp](http://www.thearda.com/QuickLists/QuickList_125.asp)
- Atkinson, R. L., Atkinson, R. C., Smith, E. E., Bem, D. J., & Nolen-Hoeksema, S. (2000). *Hilgard's Introduction to Psychology* (13th ed.). London: Harcourt College Publishers.
- Bandura, A. (n.d.). *Guide for Constructing Self-Efficacy Scales*. Retrieved Mar 2012, from Emory University: Division of Educational Studies: <http://www.des.emory.edu/mfp/014-BanduraGuide2006.pdf>
- Bandura, A. (2003). On the Psychosocial Impact and Mechanisms of Spiritual Modeling. *The International Journal For The Psychology of Religion*,13(3) , 167-173 downloaded 2011 from <http://des.emory.edu/mfp/Bandura2003IJPR.pdf>.
- Bandura, A. (2003). On the Psychosocial Impact and Mechanisms of Spiritual Modeling. *The International Journal for the Psychology of Religion* 13 (3) , 167-173.
- Bandura, A. (1995). *Self efficacy in Changing Societies*. New York: Cambridge University Press.
- Bandura, A. (1977). Self-efficacy: Toward a Unifying Theory of Behavioral Change. *Psychological Review*, 84(2) , 191-215. doi:10.1037/0033-295X.84.2.191.
- Bandura, A. (1999). Social Cognitive Theory: An Agentic Perspective. *Asian Journal of Social Psychology* 2 , 21-41 .
- Bandura, A. (2004). Swimming against the mainstream: the early years from chilly tributary to transformative mainstream. *Behaviour Research and Therapy* 42 , 613-630.
- Bandura, A. (2005). The Evolution of Social Cognitive Theory. In K. G. Smith, & M. A. Hitt (Eds.), *Great Minds in Management* (pp. 9-35). Oxford: Oxford University Press.

- Bargh, J. A., & Morsella, E. (2008). The Unconscious Mind. *Perspectives on Psychological Science Vol 3* , 73-79.
- Batson, C., & Schoenrade, P. A. (1991). Measuring Religion as Quest: 2) Reliability Concerns. *Journal For The Scientific Study Of Religion*, 30(4) , 430-447.
- Bellah, R. H. (1999 ). Religion and the Shape of National Culture. *America Vol. 181 Issue 3* , 9-15.
- Bernard, T., Dercon, S., & Taffesse, A. S. (2011). Beyond Fatalism- An Empirical Exploration of Self-Efficacy and Aspirations Failure in Ethiopia. *Center for the Studies of African Economies* , 1-24.
- Biernacki, P., & Waldorf, D. (1981). Snowballing Sampling. Problems and Techniques of Chain Referreal Sampling. *Sociological Methods and Research* , 141-146 .
- Cañadas Osinski, I., & Sánchez Bruno, A. (1998). Categorías de Respuesta en Escalas Tipo Likert. *Psicothema*, Vol. 10, nº 3 , 623-631.
- Central Intelligence Agency. (2012, Mar 12). *North America: The United States*. Retrieved Mar 2012, from C.I.A The World Factbook: <https://www.cia.gov/library/publications/the-world-factbook/geos/us.html>
- Central Statistics Office Ireland. (2012, Jan). *Population classified by Religion and Nationality 2006* . Retrieved Jan 26, 2012, from Central Statistics Office: <http://www.cso.ie/en/statistics/population/populationclassifiedbyreligionandnationality2006/>
- Centro De Investigaciones Sociologicas. (2011, Oct). *Estudio nº 2.914. Barómetro de octubre p15 ¿Cómo se define Ud. en materia religiosa: católico/a, creyente de otra religión, no creyente o ateo/a?* Retrieved Jan 2012, from Centro de Investigaciones Sociologicas: BARÓMETRO DE OCTUBRE: [http://datos.cis.es/pdf/Es2914mar\\_A.pdf](http://datos.cis.es/pdf/Es2914mar_A.pdf)
- Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a New General Self-Efficacy Scale. *Organizational Research Methods* 4(62) , 62-83 DOI 10.1177/109442810141004.
- Cooper, C. R. (1998). Theories Linking Culture and Psychology: Universal and Community-Specific Processes. *Annu. Rev. Psychol.* 1998. 49 , 559-584.
- Creelan, P. (1985). Watson as Mythmaker: The Millenarian Sources of Watsonian Behaviorism. *Journal For The Scientific Study Of Religion*, 24(2) , 194-216.
- Day, J. M. (2010). Religion, spirituality, and positive psychology in adulthood: A developmental view. *Journal Of Adult Development*, 17(4) , 215-229. doi:10.1007/s10804-009-9086-7.
- Deaton, A. (2009, July). *Aging, Religion and Health*. Retrieved 2012, from Princeton University: [http://www.princeton.edu/~deaton/downloads/Religion\\_and\\_Health\\_All\\_August09.pdf](http://www.princeton.edu/~deaton/downloads/Religion_and_Health_All_August09.pdf)
- Diener, E., Tay, L., & Myers, D. G. (2011). The Religion Paradox: If Religion Makes People Happy, Why Are So Many Dropping Out? *Journal of Personality and Social Psychology Vol. 101*, No. 6 , 1278-1290.

- Dow, J. (2007, Feb 19). *A Scientific Definition of Religion*. Retrieved Mar 2012, from Anapere.net: <http://www.anpere.net/2007/2.pdf>
- Durkheim, E. (1912). *Elementary Forms of Religious Life*. Retrieved Jan 2012, from Duke University: <http://www.duke.edu/web/secmod/primarytexts/Durkheim-ElementaryForms.pdf>
- Ed. Shafranske, E. P. (Ed.). (1997). *Religion and the Clinical Practice of Psychology*. Washington: American Psychological Association.
- Feret, P. (1911). *University of Paris*. Retrieved Mar 2012, from The Catholic Encyclopedia: New Advent: <http://www.newadvent.org/cathen/11495a.htm>
- Freud, S. (1927). *The Future of an Illusion*. Retrieved October 10, 2011, from Thomas Jefferson High School for Science: <http://www.tjhsst.edu/~jlamb/img090.pdf>
- Friman, P. C. (1998). Behavior Analysis of Private Events is Possible, Progressive and Non-Dualistic: A Response to Lamal. *Journal of Applied Behavior Analysis*.31 No.4 , 707-708.
- Gavril, I. E. (2006). Religious Criticism in Contemporary Philosophical Reflexiion: Charles Taylor. *European Journal of Science and Theology, December, Vol.2, No.4* , 15-28.
- Golden, G. (2012). *The Historic Hospitals of Europe*. Retrieved Jan 2012, from U.S National Library of Medicine: <http://www.nlm.nih.gov/hmd/pdf/historic.pdf>
- Gordon, K., Froussakis, N. N., Dixon, L. J., Willett, J. M., Christman, J. A., Furr, R. E., et al. (2008). Intrinsic/Extrinsic Religious Orientation, Forgiveness, and the Role of Social Pressure. *Journal Of Psychology & Christianity, 27(4)* , 311-319.
- Gorsuch, R. L., & McPherson, S. E. (1989). Intrinsic/extrinsic Measurement I/E-revised and single-item scales. *Journal for the Scientific Study of Religion 28 (3)* , 348-354.
- Gorsuch, R. L., & Venable, G. D. (1983). Development of an 'age universal' I-E Scale. *Journal for the Scientific Study of Religion, 22* , 181-187.
- Graham, J. R., & Shier, M. (2009). Religion and Social Work: An Analysis of Faith Traditions, Themes, and Global North/South Authorship. *Journal of Religion & Spirituality in Social Work: Social Thought, 28* , 215-233.
- Gunn, T. J. (2012). *The Complexity of Religion and the Definition of " Religion" in International Law*. Retrieved Mar 2012, from Harvard Law School: <http://www.law.harvard.edu/students/orgs/hrj/iss16/gunn.pdf>
- Guthrie, S. (1996). Religion: What Is It? *Journal For The Scientific Study Of Religion, 35(4)* , 412-419.
- Haring, D. G. (1948). Is Culture Definable? *American Sociological Review* , 26-32.
- Hill, P. C., & Hood Jr., R. W. (1999). *Measures Of Religiosity*. Birmingham, Alabama: Religious Education Press.

Hugen, B. (2007). The Role of Religious Orientation in the Recovery process of persons with a Severe Mental Illness. *Social Work & Christianity*, 34(4) , 400-420.

Instituto Nacional de Estadística y Geografía. (2011, Mar 3). *Volumen y porcentaje de la población según profese alguna religión y tipo de religión, 1950 a 2000*. Retrieved Jan 2012, from INEGI: <http://www.inegi.org.mx/sistemas/sisept/default.aspx?t=mrel01&s=est&c=22443>

Instituto Nacional de Lenguas Indígenas. (2010). *Catálogo de las Lenguas Indígenas Nacionales*. Retrieved Mar 2012, from Intituo Nacional de Lenguas Indígenas: <http://www.inali.gob.mx/clin-inali/>

Jackson, L. M., Esses, V. M., & Burriss, C. T. (1997). Of Scripture and ascription: The relation between religious fundamentalism and intergroup helping. *Personality and Social Psychology Bulletin*, 27 , 893-906.

James, W. (1997). The Variety Of Religious Experience. *PSU's Electronic Classics Site* . <http://www2.hn.psu.edu/faculty/jmanis/wjames/Varieties-Rel-Exp.pdf>.

Johnson, L. M. (1993, Spring). Jung's Answer to Modern Man:a long analytical essay on Jung's understanding of ideology and religion. *The Political Science Reviewer Vol. 22, Spring* , 327-369. .

Kelly, T. (2009). The Art and Architecture of Faith. *The Australasian Catholic Record* , 416-425.

Kihstrom, J. F. (1994). Commentary: Psychodynamics and Social Cognition--Notes on the Fusion of Psychoanalysis and Psychology. *Journal Of Personality*, 62(4) , 681-696. doi:10.1111/1467-6494.ep9501250106.

King, M. B. (1991). Is Scientific Study of Religion Possible? *Journal For The Scientific Study Of Religion*, 30(1) , 108-113.

Lee, B. Y. (2005). Religion and Health: A Review and Critical Analysis. *Zygon: Journal Of Religion & Science*, 40(2) , 443-468 doi:10.1111/j.1467-9744.2005.00674.x.

Lewis-Williams, J. D. (1997). Harnessing the Brain: Vision and Shamanism in Upper Paleolithic Western Europe. *Beyond Art: Pleistocene Image and Symbol* , 321-242 Downloaded Mar 2012 from <http://genealogyreligion.net/wp-content/uploads/2011/06/Brain-Shamanism-Paleolithic.pdf>. (M. Conkey, O. Softer, D. Stratmann, & N. G. Jablonski, Eds.)

Lumpkin, J. R. (1985). Validity of a Brief Locus of Control Scale for Survey Research. *Psychological Reports*, 57 , 655-659.

Luszczynska, A., Gutierrez-Dona, & Benicio. (2005). General self-efficacy in various domains of human functioning: Evidence from five countries. *International Journal of Psychology*, 40 (2) , 80-89.

Maltby, J., Lewis, C. A., Freeman, A., Day, L., Cruise, S. M., & Breslin, M. J. (2010). Religion and health: the application of a cognitive-behavioural framework. *Mental Health, Religion & Culture Vol. 13, Nos. 7-8, November-December* , 749-759.

Mann Wall, B. (1998). *The History of Hospitals*. Retrieved Mar 2012, from University of Pennsylvania: School of Nursing :  
<http://www.nursing.upenn.edu/nhhc/Welcome%20Page%20Content/History%20of%20Hospitals.pdf>

Maslow, A. (1943). A Theory of Human Motivation. *Psychological Review*, 50(4) , 370-396.  
doi:10.1037/h0054346.

Maslow, A. (1964). *Religions, Values, and Peak Experiences*. (1. b. Limited, Ed.) The Viking Press. Penguin Books Ltd.

McAuley, E., Mailey, E. L., Mullen, S. P., Szabo, A. N., Wójcicki, T. R., White, S. M., et al. (2011). Growth trajectories of exercise self-efficacy in older adults: Influence of measures and initial status. *Health Psychology* 30(1) , 75-83 doi:10.1037/a0021567.

McClenon, J. (n.d.). *Batson, C. Daniel*. (W. J. Swatos Jr., Ed.) Retrieved Mar 2012, from Encyclopedia of Religion and Society: <http://hrr.hartsem.edu/ency/batson.htm>

Miller, A. S., & Hoffmann, J. P. (1995). Risk and Religion: An Explanation of Gender Differences in Religiosity. *Journal for the Scientific Study of Religion* 34 (1) , 63-75.

Moghadam, A. (2003, August). *A Global Resurgence of Religion?* Retrieved Mar 2012, from Harvard University:  
[http://www.wcfia.harvard.edu/sites/default/files/723\\_\\_Moghadam03\\_03.pdf](http://www.wcfia.harvard.edu/sites/default/files/723__Moghadam03_03.pdf)

Narr, K. J. (2012). *Prehistoric Religion*. Retrieved Jan 2012, from Encyclopædia Britannica:  
<http://concise.britannica.com/oscar/print?articleId=109434&fullArticle=true&toCId=52333>

NationMaster. (2012, Mar 08). *NationMaster*. Retrieved Mar 08, 2012, from Nation Master:  
<http://www.nationmaster.com/index.php>

Nelson, J. M. (2009). *Psychology, Religion and Spirituality*. New York: Springer.

Open Source Encyclopedia. (2012, Jan). *Internal locus of control*. Retrieved Jan 2012, from Med Library: [http://medlibrary.org/medwiki/Internal\\_locus\\_of\\_control](http://medlibrary.org/medwiki/Internal_locus_of_control)

Ortiz de Montellano, B. R. (1978, May 12). Aztec Cannibalism: An Ecological Necessity? *Science* , pp. 611-617.

Otto, R. (1917 trans.1936). *The Idea of the Holy*. (J. W. Harvey, Trans.) London: Oxford University Press.

Pace, E. (1907). *The University of Bologna*. Retrieved Mar 2012, from The Catholic Encyclopedia. : New Advent: <http://www.newadvent.org/cathen/02641b.htm>

Pajares, F. (2004). *Albert Bandura: Biographical sketch*. Retrieved Mar 2012, from Emory University. Division of Educational Sciences: <http://www.des.emory.edu/mfp/bandurabio.html>



Pajares, F. (n.d). *Current Directions in Self-efficacy Research*. (M. Maehr, & P. R. Pintrich, Eds.) Retrieved Mar 2012, from Emory University: Division of Educational Studies: <http://des.emory.edu/mfp/effchapter.html>

Pajares, F. (n.d.). Current Directions in Self-efficacy Research. In M. Maehr, & P. R. Pintrich (Eds.), *Advances in motivation and achievement*. (Vol. 10, pp. 1-49). Greenwich, CT: JAI Press.

Pargament, K. I., Olsen, H., Reilly, B., Falgout, K., Ensing, D. S., & Van Haitsma, K. (1992). God Help Me (II): The Relationship of Religious Orientations to Religious Coping with Negative Life Events. *Journal For The Scientific Study Of Religion*, *31(4)* , 504-513.

Pew Research Center. (2012, Jan). *Religious affiliation*. Retrieved Jan 2012, from The Pew Forum on Religion and Public Life: <http://religions.pewforum.org/reports>

Porter, R. (1985). Editorial: Scientific Status of Psychodynamic Theory. *Journal of the Royal Society of Medicine Vol 78 September* , 705-706.

Prat-Sala, M., & Redford, P. (2010). The interplay between motivation, self-efficacy, and approaches to studying. *British Journal Of Educational Psychology*, *80(2)* , 283-305.

Rawwas, M., Swaidan, Z., & Al-Khatib, J. (2006). Does Religion Matter? A Comparison Study of the Ethical Beliefs of Marketing Students of Religious and Secular Universities in Japan. *Journal of Business Ethics*, *65(1)* , 69-86. doi:10.1007/s10551-006-0023-4.

Reber, A. S., Allen, R., & Reber, E. S. (2009). *Penguin Dictionary of Psychology*. London: Penguin Books.

Reimer, S. H. (1995). A Look at Cultural Effects on Religiosity: A Comparison Between the United States and Canada. *Journal For The Scientific Study Of Religion*, *34(4)* , 445- 457.

Robbins, T. (1986). Religious Mass Suicide before Jonestown: The Russian Old Believers . *Sociological Analysis*, *47(1)* , 1-20.

Rokach, A., Sha'ked, A., & Chin, J. (2011). How Does Religiosity Affect Loneliness? *Psychology Journal Vol. 8, No. 3* , 110-117.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General And Applied*, *80(1)* , 1-28. doi:10.1037/h0092976.

Rotter, J. B. (1990). Internal versus external control of reinforcement: A case history of a variable. *American Psychologist*, *45(4)* , 489-493. doi:10.1037/0003-066X.45.4.489.

Rotter, J. B. (1975). Some problems and misconceptions related to the construct of internal versus external control of reinforcement. *Journal Of Consulting And Clinical Psychology*, *43(1)* , 56-67. doi:10.1037/h0076301.

Sands, R. R. (1997). Guest Editor's Introduction: The Science of God: Natural Origins of Religion in an Evolutionary Perspective. *Journal for the Study of Religion, Nature and Culture*. , 437-457

- Schieman, S. (2008). The Religious Role and the Sense of Personal Control. *Sociology of Religion* 69;3 , 273-296.
- Scholz, U., Dona, B. G., Sud, S., & Schwarzer, R. ( 2002). Is General Self-Efficacy a Universal Construct? *European Journal of Psychological Assessment [PsycARTICLES]*; 18, 3; *PsycARTICLES* , 242-251.
- Schwarzer, R. (2011, May 30). *Everything you wanted to know about the General Self-Efficacy Scale but were afraid to ask*. Retrieved Mar 2012, from Freie Universität Berlin : [http://userpage.fu-berlin.de/~health/faq\\_gse.pdf](http://userpage.fu-berlin.de/~health/faq_gse.pdf)
- Schwarzer, R. (2012, Feb 12). *General Self-Efficacy Scale (GSE)*. Retrieved Dec 2011, from Freie Universität Berlin : <http://userpage.fu-berlin.de/health/selfscal.htm>
- Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston, *Measures in health psychology: A user's portfolio. Causal and control beliefs (pp. 35-37)*. Windsor, UK : NFER-NELSON.
- Schwarzer, R., Bäßler, J., Kwiatek, P., Schröder, K., & Zhang, J. X. (1996). The Assessment of Optimistic Self-Beliefs: Comparison of the German, Spanish, and Chinese Versions of the General Self-Efficacy Scale. *Applied Psychology: An International Review* , Downloaded 9 Mar 2012 from [http://web.fu-berlin.de/gesund/gesu\\_engl/lingua5.htm](http://web.fu-berlin.de/gesund/gesu_engl/lingua5.htm).
- Skinner, B. F. (2005). *Science and Human Behavior*. Retrieved Jan 2012, from The B.F. Skinner Foundation.: [http://www.bfskinner.org/BFSkinner/Society\\_files/Science\\_and\\_Human\\_Behavior.pdf](http://www.bfskinner.org/BFSkinner/Society_files/Science_and_Human_Behavior.pdf)
- Skinner, B. F. (1948). *Superstition in the Pigeon*. Retrieved Jan 2012, from Classics in the History of Psychology: <http://psychclassics.yorku.ca/Skinner/Pigeon/>
- Skinner, B. F. (1984). The Evolution of Behavior. *Journal of the Experimental Analysis of Behaviour* 41, No.2 , 217-221.
- Skinner, B. F. (1987). *What Religion means to me*. Retrieved Jan 2012, from Instituto Sinergia de Análise do Comportamento: [http://www.isac.psc.br/wp-content/uploads/skinner/Skinner\\_\(sd\)\\_What\\_Religion\\_Means\\_to\\_Me.pdf](http://www.isac.psc.br/wp-content/uploads/skinner/Skinner_(sd)_What_Religion_Means_to_Me.pdf)
- Smith, P. B. (1995). The Rotter Locus of Control Scale in 43 Countries: A Test Of Cultural Reality. *International Journal Of Psychology*, 30(3) , 377.
- Snodgrass, J. (2007). From Rogers to Clinebell: Exploring the History of Pastoral Psychology. *Pastoral Psychology*, 55(4) , 513-525. doi:10.1007/s11089-007-0066-1.
- Stanely, A. D. (2004). Wages, Sin, and Slavery Some Thoughts on Free Will and Commodity Relations. *Journal of the Early Republic*, 24 , 279-288.
- SurveyMonkey. (2012, Feb). *SurveyMonkey*. Retrieved Feb 2012, from SurveyMonkey: <http://www.surveymonkey.com/>

U.S National Library of Medicine. (2011, December 15). *Islamic Culture and the Medical Arts*. Retrieved Mar 2012, from U.S National Library of Medicine: Hospitals: [http://www.nlm.nih.gov/exhibition/islamic\\_medical/islamic\\_12.html](http://www.nlm.nih.gov/exhibition/islamic_medical/islamic_12.html)

Volf, M. (2012). *Christianity and Violence*. Retrieved Mar 2012, from Yale University: [http://www.yale.edu/faith/downloads/x\\_volf\\_violence.pdf](http://www.yale.edu/faith/downloads/x_volf_violence.pdf)

Walker, R. W., Turely Jr., R. E., & Leonard, G. M. (2008). *Massacre at Mountain Meadows. An American Tragedy*. Oxford: Oxford University Press.

Walter, T. (1990). Why are Most Chuchgoers Women. A Literature Review. *Vox Evangelica* (20) , 73-90 downloaded 2012 from [http://biblicalstudies.org.uk/pdf/vox/vol20/women\\_walter.pdf](http://biblicalstudies.org.uk/pdf/vox/vol20/women_walter.pdf).

Weidman, N. (2012). *Behaviorism - Neobehaviorism (1930–1955)*. Retrieved Jan 2012, from Science Encyclopedia: <http://science.jrank.org/pages/8448/Behaviorism-Neobehaviorism-1930-1955.html>

Wombles, K. (2008, May 28). *A brief History of The Psychology of Religion*. Retrieved from Science: [http://www.science20.com/science\\_autism\\_spectrum\\_disorders/brief\\_history\\_psychology\\_religion](http://www.science20.com/science_autism_spectrum_disorders/brief_history_psychology_religion)

Wozniak, R. H. (1997). *Commentary on "Psychology as the Behaviorist View It" John B. Watson (1913)*. (C. D. Greene, Ed.) Retrieved Jan 2012, from Classics in the History of Psychology: <http://psychclassics.yorku.ca/Watson/commentary.htm>

Yamashita, M., & Okamura, H. (2011). Association between Efficacy of Self-Management to Prevent Recurrences of Depression and Actual Episodes of Recurrence: A Preliminary Study. *International Journal Of Psychological Studies*, 3(2) , 217-226. doi:10.5539/ij.

**APPENDICES:**

**Correlations for Place of Birth**

In what country were you born?			Total Self Efficacy Score	Total Intrinsic religiosity score	Total External Rel. Social score	Total External Rel. Personal score	Total Internal Locus of Control	Total External Locus of Control
<b>Spain</b>	Total Self Efficacy Score	Pearson Correlation Sig. (2-tailed) N	1  78	.093 .427 75	.138 .231 77	.016 .891 76	.310** .006 77	-.196 .087 77
	Total Intrinsic religiosity score	Pearson Correlation Sig. (2-tailed) N	.093 .427 75	1  76	.001 .995 76	.365** .001 75	.142 .220 76	.174 .134 76
	Total External Rel. Social score	Pearson Correlation Sig. (2-tailed) N	.138 .231 77	.001 .995 76	1  78	-.178 .122 77	.000 .998 78	.009 .939 78
	Total External Rel. Personal score	Pearson Correlation Sig. (2-tailed) N	.016 .891 76	.365** .001 75	-.178 .122 77	1  77	.110 .341 77	.091 .429 77
	Total Internal Locus of Control	Pearson Correlation Sig. (2-tailed) N	.310** .006 77	.142 .220 76	.000 .998 78	.110 .341 77	1  78	-.190 .096 78
	Total External Locus of Control	Pearson Correlation Sig. (2-tailed) N	-.196 .087 77	.174 .134 76	.009 .939 78	.091 .429 77	-.190 .096 78	1  78

<b>Ireland</b>	Total Self Efficacy Score	Pearson Correlation	1	.248 <sup>+</sup>	-.020	.089	.331 <sup>**</sup>	-.228 <sup>+</sup>
		Sig. (2-tailed)		.020	.850	.404	.002	.035
		N	90	88	89	89	85	86
	Total Intrinsic religiosity score	Pearson Correlation	.248 <sup>+</sup>	1	.064	.251 <sup>+</sup>	.052	.088
		Sig. (2-tailed)	.020		.549	.017	.635	.420
		N	88	90	89	90	85	86
	Total External Rel. Social score	Pearson Correlation	-.020	.064	1	.162	-.006	-.043
		Sig. (2-tailed)	.850	.549		.128	.956	.691
	N	89	89	91	90	86	87	
Total External Rel. Personal score	Pearson Correlation	.089	.251 <sup>+</sup>	.162	1	.202	.124	
	Sig. (2-tailed)	.404	.017	.128		.062	.253	
	N	89	90	90	91	86	87	
Total Internal Locus of Control	Pearson Correlation	.331 <sup>**</sup>	.052	-.006	.202	1	-.448 <sup>**</sup>	
	Sig. (2-tailed)	.002	.635	.956	.062		.000	
	N	85	85	86	86	87	86	
Total External Locus of Control	Pearson Correlation	-.228 <sup>+</sup>	.088	-.043	.124	-.448 <sup>**</sup>	1	
	Sig. (2-tailed)	.035	.420	.691	.253	.000		
	N	86	86	87	87	86	88	

<b>USA</b>	Total Self Efficacy Score	Pearson Correlation	1	.186**	.009	.117	.227**	-.136
		Sig. (2-tailed)		.009	.899	.101	.001	.055
		N	202	196	199	199	198	198
	Total Intrinsic religiosity score	Pearson Correlation	.186**	1	.056	.398**	.051	.061
		Sig. (2-tailed)	.009		.421	.000	.471	.385
		N	196	208	208	207	205	205
	Total External Rel. Social score	Pearson Correlation	.009	.056	1	.246**	-.016	-.081
		Sig. (2-tailed)	.899	.421		.000	.817	.246
		N	199	208	211	210	208	208
	Total External Rel. Personal score	Pearson Correlation	.117	.398**	.246**	1	.104	.251**
	Sig. (2-tailed)	.101	.000	.000		.136	.000	
	N	199	207	210	211	208	208	
Total Internal Locus of Control	Pearson Correlation	.227**	.051	-.016	.104	1	-.072	
	Sig. (2-tailed)	.001	.471	.817	.136		.298	
	N	198	205	208	208	209	209	
Total External Locus of Control	Pearson Correlation	-.136	.061	-.081	.251**	-.072	1	
	Sig. (2-tailed)	.055	.385	.246	.000	.298		
	N	198	205	208	208	209	209	

<b>Other</b>	Total Self Efficacy Score	Pearson Correlation	1	.057	.080	.058	.211**	.010
		Sig. (2-tailed)		.436	.265	.423	.003	.895
		N	201	190	194	192	192	192
	Total Intrinsic religiosity score	Pearson Correlation	.057	1	.130	.433**	.156*	.162*
		Sig. (2-tailed)	.436		.069	.000	.030	.023
		N	190	198	196	194	194	195
	Total External Rel. Social score	Pearson Correlation	.080	.130	1	-.147*	-.059	.143*
		Sig. (2-tailed)	.265	.069		.040	.412	.044
	N	194	196	201	196	197	198	
Total External Rel. Personal score	Pearson Correlation	.058	.433**	-.147*	1	.061	.072	
	Sig. (2-tailed)	.423	.000	.040		.399	.314	
	N	192	194	196	198	195	195	
Total Internal Locus of Control	Pearson Correlation	.211**	.156*	-.059	.061	1	-.142*	
	Sig. (2-tailed)	.003	.030	.412	.399		.045	
	N	192	194	197	195	199	199	
Total External Locus of Control	Pearson Correlation	.010	.162*	.143*	.072	-.142*	1	
	Sig. (2-tailed)	.895	.023	.044	.314	.045		
	N	192	195	198	195	199	200	

\*. Correlation is significant at the 0.05 level (2-tailed).

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

**Correlations for Native Language**

What is your native language?			Total Self Efficacy Score	Total Intrinsic religiosity score	Total External Rel. Social score	Total External Rel. Personal score	Total Internal Locus of Control	Total External Locus of Control
English	Total Self Efficacy Score	Pearson Correlation	1	.195**	-.014	.138*	.321**	-.159**
		Sig. (2-tailed)		.001	.813	.018	.000	.006
		N	302	293	297	296	291	292
	Total Intrinsic religiosity score	Pearson Correlation	.195**	1	.135*	.429**	.101	.092
		Sig. (2-tailed)	.001		.018	.000	.082	.111
		N	293	307	307	306	299	300
	Total External Rel. Social score	Pearson Correlation	-.014	.135*	1	.187**	.017	-.042
		Sig. (2-tailed)	.813	.018		.001	.763	.467
	N	297	307	311	309	303	304	
Total External Rel. Personal score	Pearson Correlation	.138*	.429**	.187**	1	.138*	.176**	
	Sig. (2-tailed)	.018	.000	.001		.017	.002	
	N	296	306	309	310	302	303	
Total Internal Locus of Control	Pearson Correlation	.321**	.101	.017	.138*	1	-.150**	
	Sig. (2-tailed)	.000	.082	.763	.017		.009	
	N	291	299	303	302	304	303	
Total External Locus of Control	Pearson Correlation	-.159**	.092	-.042	.176**	-.150**	1	
	Sig. (2-tailed)	.006	.111	.467	.002	.009		
	N	292	300	304	303	303	305	



Spanish	Total Self Efficacy Score	Pearson Correlation	1	.144**	.086*	-.023	.297**	-.093*
		Sig. (2-tailed)		.000	.037	.575	.000	.024
		N	612	581	592	590	591	591
	Total Intrinsic religiosity score	Pearson Correlation	.144**	1	.139**	.407**	.176**	.121**
		Sig. (2-tailed)	.000		.001	.000	.000	.003
		N	581	612	606	604	606	605
	Total External Rel. Social score	Pearson Correlation	.086*	.139**	1	-.033	.037	.095*
		Sig. (2-tailed)	.037	.001		.413	.364	.018
	N	592	606	624	614	616	617	
Total External Rel. Personal score	Pearson Correlation	-.023	.407**	-.033	1	.109**	.224**	
	Sig. (2-tailed)	.575	.000	.413		.007	.000	
	N	590	604	614	621	615	614	
Total Internal Locus of Control	Pearson Correlation	.297**	.176**	.037	.109**	1	-.044	
	Sig. (2-tailed)	.000	.000	.364	.007		.277	
	N	591	606	616	615	623	621	
Total External Locus of Control	Pearson Correlation	-.093*	.121**	.095*	.224**	-.044	1	
	Sig. (2-tailed)	.024	.003	.018	.000	.277		
	N	591	605	617	614	621	624	

<b>Other</b>	Total Self Efficacy Score	Pearson Correlation	1	.049	-.068	.011	.071	-.038
		Sig. (2-tailed)		.694	.587	.931	.573	.763
		N	69	66	67	65	65	65
	Total Intrinsic religiosity score	Pearson Correlation	.049	1	-.199	.422**	.012	.213
		Sig. (2-tailed)	.694		.101	.000	.923	.083
		N	66	69	69	66	67	67
	Total External Rel. Social score	Pearson Correlation	-.068	-.199	1	-.144	-.176	-.029
		Sig. (2-tailed)	.587	.101		.244	.152	.812
		N	67	69	70	67	68	68
	Total External Rel. Personal score	Pearson Correlation	.011	.422**	-.144	1	.200	.047
		Sig. (2-tailed)	.931	.000	.244		.111	.710
		N	65	66	67	67	65	65
	Total Internal Locus of Control	Pearson Correlation	.071	.012	-.176	.200	1	-.190
		Sig. (2-tailed)	.573	.923	.152	.111		.120
		N	65	67	68	65	68	68
	Total External Locus of Control	Pearson Correlation	-.038	.213	-.029	.047	-.190	1
		Sig. (2-tailed)	.763	.083	.812	.710	.120	
		N	65	67	68	65	68	68

\*. Correlation is significant at the 0.05 level (2-tailed).

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

**Table of Correlations**

		General Self- Efficacy	Intrinsic Religiosity	External Religiosity- Social	External Religiosity- Personal	Internal Locus of Control	External Locus of Control
General Self-Efficacy	Pearson	1	.173**	.036	.051	.313**	-.121**
	Correlation						
	Sig. (2- tailed)		.000	.259	.112	.000	.000
N		1015	972	988	983	979	980
Intrinsic Religiosity	Pearson		1	.085**	.445**	.174**	.099**
	Correlation						
	Sig. (2- tailed)			.007	.000	.000	.002
N			1023	1017	1011	1007	1007
External Religiosity- Social	Pearson			1	-.001	-.004	.050
	Correlation						
	Sig. (2- tailed)				.965	.908	.112
N				1040	1025	1022	1024
External Religiosity- Personal	Pearson				1	.147**	.185**
	Correlation						
	Sig. (2- tailed)					.000	.000
N					1033	1017	1017
Internal Locus of Control	Pearson					1	-.114**
	Correlation						
	Sig. (2- tailed)						.000
N						1030	1027
External Locus of Control	Pearson						1
	Correlation						
	Sig. (2- tailed)						
N							1032

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

**List of languages and countries of participants.**

LIST OF OTHER LANGUAGES OF PARTICIPANTS:

Cantonese	Chinese	French	German	Hebrew	Hungarian
Irish	Italian	Japanese	Portuguese	Polish	Slovak

LIST OF OTHER PLACES OF BIRTH:

England	France	Italy	Germany	Poland	Hungary
Slovak R.	Argentina	Bolivia	Brasil	Ecuador	El Salvador
Guatemala	Canada	Colombia	Japan	Australia	N.Zealand
Chile	Venezuela	Peru	Honduras	Costa Rica	Austria
Hong Kong	South Africa	Panama	Israel	Phillipines	Switzerland
Norway	Belgium	Netherlands	Mauritius	Other	



