

**Religiosity: Investigating its Affect on
Self-Esteem, Perceived Stress, and General Health
in Undergraduate Students.**

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Abstract

The present study was designed to explore the link between religiosity and its relationship between self-esteem, perceived stress and general health. A sample of 100 undergraduate psychology students completed the Francis Scale of Attitude toward Christianity (Francis & Stubbs, 1987) together with a self-esteem (Rosenberg, 1965), perceived stress (Cohen et al, 1983) and general health questionnaire (Goldberg, 1992). The data demonstrates that a positive attitude toward Christianity is associated with a higher level of self-esteem, and lower levels of perceived stress and general psychological ill health. These findings support those of previous studies.

Introduction

The purpose of this investigation is to examine religiosity levels (Francis & Stubbs, 1987), i.e. the strength of an individual's belief's or non belief in God and their religious involvement, and whether or not these levels relate to or have an impact on a psychology students' self-esteem (Rosenberg, 1965), perceived stress (Cohen et al, 1983), general health (Goldberg, 1992), and smoking behaviour.

Religiosity can be defined by three components: religious attitude, religious practise and religious belief. Religion has played a crucial role in human history. A nuanced history of religion would include accounts of compassion and persecution, wisdom and fundamentalism. Religion has presented visions of moral excellence and deepened social justice. It has also legitimated social oppression, generated wars, distributed power and regulated procreation. The role of religion is to provide an individual with ontological security, a sense that the world is a meaningful, ordered and coherent place.

Since Ireland is predominantly a Christian country (As of Census 2006: 3,807,031 Christian out of a population of 4,239,848), the religiosity questionnaire chosen for this investigation is the Francis Scale of Attitude Toward Christianity (Francis & Stubbs, 1987). Christianity is the world's largest religion, with about 2.1 billion followers. Christian's believe that there is only one God, but there are three elements to this one God; God the father, God the Son and The Holy Spirit. Christian holy days, such as Christmas and Easter are important milestones in the Western calendar, as they represent the birth, death and resurrection of Jesus, the Son of God.

Christianity is and has been the largest religion in Ireland for centuries, with the earliest evidence of its existence dating back to the 5th Century. The partition of Ireland in the

early 1920's, led to the formation of two states in which majorities triumphed; the Irish Free State with its strong Catholic identity and Northern Ireland with an equally strong Protestant identity. Although Ireland still remains a largely Christian country, since the 1960's, however, this religious stronghold has been in decline, largely due to the secularisation of Church and State, better education, and in some cases, the horrific treatment of members of the public under the care of Catholic leaders. These factors have led to an increasing number of people describing themselves as 'spiritual but non-religious'. This seems to be a post modern phenomenon involving the privatisation and individualisation of certain aspects of religion, particularly altered states of consciousness. These are valued as means of enabling self-transcendence and supporting personal growth.

Other than the ontological security that religion provides, members of religious institutions have performed truly altruistic work to establish and provide, care, support and awareness for the poor, disabled and many other worthy causes that find themselves on the outskirts of society.

Another factor which has led to the decline of religiosity is the acceleration of scientific theory and technology, which has attempted to prove a number of strongly held religious beliefs wrong. Subsequently, religion has come under inspection like never before. This has led to a rise in atheism and agnosticism. Atheism is the absence of belief in any God or spiritual being or event, while agnosticism is the view that the true value of claims, especially claims about the existence or non existence of any God, is unknown or unknowable. Polemical books, such as "The God Delusion" by biologist Richard Dawkins (2007) questions why intelligent human beings persist in holding beliefs that are seemingly irrational and inconsistent with empirical evidence. This 'new atheism' has also led to a rise in more psychologists becoming involved in the study of religion, as researchers, teachers or practitioners. Social psychologist, Michael Argyle, wrote an article entitled "State of the Art:

Religion” (2002), in which he proposed treating religious faith as an attitude, something with cognitive, behavioural and emotional components, and he strongly emphasised the social dimension of all of these.

In the study of psychology, religion has been a source of conflicting ideas on its essence and worth for an individual and a society. Sigmund Freud (1927), believed religion was an illusion, a universal obsessional neurosis, a childhood neurosis, a reaction formation against unacceptable impulses and a delusion. For Freud, this “illusion”, (an unrealistic belief that contradicts experience and reason), is not an error but a “wish fulfilment”. While he points out that illusion is not necessarily “false” and that “the true value of religious doctrines does not lie within the scope of psychoanalytic inquiry”, he nevertheless compares it to a “childhood neurosis”. In contrast to Freud’s belief, Robert Emmons, a leading psychologist in the field of personality, emotion and religion, offered a theory of "spiritual strivings" in his book, “The Psychology of Ultimate Concerns” (1999). With support from empirical studies, Emmons argued that spiritual strivings cultivate personality integration because they exist at a higher level of the personality.

A study by Michael Hayes and Helen Cowie (2005), entitled “Psychology and Religion: Mapping the Relationship”, looked at the association between psychology and religion, and whether there was a positive or negative interaction between the two. Hayes and Cowie postulate that “a sceptical attitude towards religion remains dominant in many circles in mainstream psychology” except for counselling psychology, which they describe as the “one domain of psychology that has for many years accepted a more positive stance towards religion and religious experience”. However, previously mentioned social psychologist Michael Argyle (2002), who has carried out extensive research on the psychology of religion, painted a less pessimistic picture of a wide range of empirical studies of religious practice and belief conducted by psychologists. He argued that survey’s on the effect of religious

belief on people's lives indicate that the greatest influence is "existential certainty" since religious faith brings with it optimism about the future and alleviation from the fear of death and dying. Hayes and Cowie also added that "religious belief plays an important part in promoting emotional health and well-being, and religious people are more likely to be involved in altruistic and helpful activities in their own communities".

There has been much research on the changes in religiosity amongst college students. As recently as 2010, Stoppa & Leftkowitz investigated such changes in their research article called "Longitudinal Changes in Religiosity Amongst Emerging Adult College Students". In this study, across three semesters, "significant declines in the behavioural aspects of religiosity were observed". In contrast, the importance of religious beliefs remained relatively constant during this time. However, variations in these patterns were observed when considered at an individual level. These variations were related to individual differences or contextual variations such as, changes upon "specific life circumstances", for example employment obligations or changes in individuals "social experiences that support their predilections".

The second variable is a participant's score on the Rosenberg Self-Esteem Scale (1965). Self-esteem is a term in psychology used to reflect a person's overall evaluation or appraisal of his or her own worth. Self-esteem encompasses beliefs (e.g. 'I am worthy'), and emotions, such as, triumph, despair, pride and shame. A person's evaluation of themselves refers to self-concept, i.e. what we think about ourselves, and self-esteem is how we feel about our own self-concept. There have been many theories regarding self-esteem and its worth. Abraham Maslow, in his Hierarchy of Needs (1943), for instance, believed that psychological health is not possible unless the essential core of the person is fundamentally accepted, loved and respected by his or her self, and others. Meaning that a person with positive self-esteem (or a healthy level of self-esteem), enables them to live a fuller, richer

and more prosperous existence in all aspects undertaken. Psychologists usually regard self-esteem as an enduring personality characteristic (trait), though normal, short-term variations (state) also exist. These short-term variations can be caused by a sudden change in a person's life, such as, a death in the family.

There have been many studies that have examined the possible relationship between religion and self-esteem. In 2004, Jennifer Kushlis, after an investigation conducted by the Higher Education Research Institute at the University of California, concluded that religion improves self-esteem. 3,680 college students were surveyed, with the majority having low self-esteem and feeling depressed at least occasionally. But, the study showed that "religious students proved twice as capable" at raising their self-esteem, with "only 6% of actively religious students" feeling low, as compared to "13% of their non-religious peers". For Alyssa Bryant, research analyst of the study, religious involvement and higher levels of emotional well-being made sense, as she believed "Religion gives students a sense of purpose in life and a feeling of closeness to God". Also, of the religious students she surveyed, most admitted religion "helped shape their identities and added meaning to their lives".

Further studies have backed this theory, for example, Kanya (2000) found that religious well-being was related to higher self-esteem in a study of 105 social work graduate students. In an article by The American Counselling Association (2007), Haymen et al found similar results in their investigation on a group of first year college students. Pederson (1998) suggested a religious identity leads to more positive feeling of self worth. However, past research on the relationship between religiosity and self-esteem, has come up with some debatable results as to the strength of this affiliation. Bahr and Martin (1983), who tested high school students, indicated that only a very slight relationship existed, Donahue and Benson (1995) also documented a very small positive correlation on a survey study called "The Profiles of Student Life". Nonetheless, with this in mind, the vast majority of studies have

concluded overwhelmingly in favour of a strong positive relationship. Therefore, one hypothesis for this study is that there will be a significant, positive relationship between religiosity and self-esteem scores.

Another variable used to examine the affects of religiosity is the Perceived Stress Scale (Cohen et al, 1983). The Perceived Stress Scale was developed to measure the degree to which situations in an individual's life are appraised as stressful. Taylor et al (1998), defined stress as "a negative emotional experience accompanied by predictable biochemical, physiological, cognitive and behavioural changes that are directed either toward altering the stressful event or accompanying its effects". Stress is the body's non-specific response to any demand made on it. The important thing to remember about stress is that certain forms are normal and essential. Stress provides the means to express talents and energies, and pursue happiness, but it can also cause exhaustion and illness, either physical or psychological.

For students, their time in college can be a stressful period in their lives. The following are the most common sources of stress for a student in college: Greater academic demands; being on your own in a new environment (with new responsibilities); changes in family relations and a person's social life; financial responsibilities; exposure to new people, ideas and temptations; being away from home, often for the first time; making decisions on a higher level than a person is used to; substance abuse; awareness of a person's sexual identity and orientation; and preparing for life after graduation. The possible effects of student stress can range from elevated heart rate to insomnia. However, the symptoms of signs of stress are separated in to four distinct groups; Cognitive symptoms (e.g. memory problems, inability to concentrate and poor judgement); Emotional symptoms (e.g. moodiness, short temper and depression or general unhappiness); Physical symptoms (e.g. aches and pains, loss of sex

drive and chest pains); and Behavioural symptoms (e.g. eating more or less, sleeping too much or too little and isolating yourself from others). Coping with stress is a vital part of our daily lives. There are two main style/strategies individuals use in coping with stress; problem focused and emotion focused. Problem focused is using direct action when dealing with stress, it involves breaking down the problem that is causing the stress and being constructive to solve the problem. Emotion focused involves regulating the emotions expressed due to the stressful event and accepting that the situation must be accepted. In order to do this, a person must think positively rather than negatively to overcome the stressful event. Four religious coping methods have been described as particularly effective in relieving stress; “obtaining control of a situation by placing the responsibility on God for solving our problems (deferring religious coping); assuming that God gives us the ability to solve our own problems (self-directing religious coping); seeking control indirectly by petitioning God for help in solving problems (pleading religious coping); and seeking control by working together with God in solving problems (collaborative religious coping)”. (Pargament & Hahn, 1986; Pargament et al, 1988).

This element of the following study will examine the perceived stress levels of a group of undergraduate psychology students and compare the results to that of their religiosity scores, in seeking to uncover whether or not there is a significant relationship between religiosity and perceived stress levels. For many people, religion offers help and support in understanding and coming to terms with stressful life events. According to Pargament, Poloma and Tarakeshwar (1997), studies have shown that religious coping methods can be particularly effective in relieving stress associated with difficult situations. In an article by Merrill, Read and LeCheminant in 2008, they presented a study which looked at the influence of religiosity and the outcomes associated with stress among college students. On completing the investigation, the results seconded their hypothesis that “among the

negative outcomes associated with stress, religiosity had the greatest influence on lowering feelings of stress when things happen outside of one's control or minimising upset feelings because of an unexpected event." Additionally, Maton (1989) found that perceived religious support was positively associated with college students who experienced high levels of stress.

A study conducted by King and Schafer (1992), looked at a group of individuals within a community, significant interactions were found between their beliefs of the importance of religion, and attendance, and lower levels of perceived stress. Although many of the studies examining the relationship between religiosity and perceived stress found a positive correlation (i.e. the higher levels of religiosity, the lower levels of stress), a number of studies contradicted this theory and found no association at all between religiosity and perceived stress scores. For instance, O'Connor, Cobb and O'Connor (2003), published their findings on religiosity, stress and psychological distress and uncovered no significant relationship among a group of undergraduate students.

Based on this research as mentioned, however, another hypothesis for this study is that a positive correlation will be found amongst religiosity and perceived stress scores.

The fourth measure undertaken by participants within this study is the General Health Questionnaire (Goldberg, 1992). The General Health Questionnaire is a widely used measure to assess general well-being and distress. It was designed to detect non-psychotic psychiatric disorder in people in community and medical settings. Thus, it is constructed to identify cases, but it is also used to measure the degree of the disorder. Banks et al (2011), described the General Health Questionnaire in the Journal of Occupational and Organisational Psychology as "psychometrically sound in all cases." There are a number of non-psychotic disorders, which include depression, obsessive compulsive disorder and anxiety disorders.

However, the General Health Questionnaire also gives valuable insight into the general mental health of the participants. Mental health describes a level of psychological well-being, which can be defined as an expression of emotions, and as signifying a successful adaptation to a range of demands which all people deal with on a day to day basis. The World Health Organisation defines mental health as “a state of well-being in which the individual realises his or her own abilities, can cope with normal stresses of life, can work productively and fruitfully and is able to make a contribution to his or her own community”. In recent years in Ireland, the government and a number of charity organisations, such as, Mental Health Ireland, Headstrong and Grow, have invested a great amount of time, money and consequently effort on promoting good mental health. As well as this, they provide professional advice, care and support to those who need it. Mental health promotion still remains one of the most under developed areas of health promotion, although, the efforts of the government and charity organisations in promoting positive mental health has helped to increase public attitudes towards the understanding of mental illnesses and also highlighted the importance of maintaining positive mental health.

Many studies have examined the association between religion and mental illness, with slightly more investigations suggesting that religiosity may play a more influential role in the protection against mental illness and maintenance of positive mental health. However, there have been generally mixed results between the two measures, with indications of religion providing greater protection and maintenance of mental health (Ellison, Burr & McCall, 1997), less protection and maintenance (Bankston, Allen & Daniel, 1983), or no difference at all (Bainbridge & Stark, 1981). In 2001, Koenig, McCullough and Larson examined, among 101 studies, the association between religiosity and levels of depression, over two-thirds found lower rates of depression and/or anxiety among the participants that claimed to be more religious. Furthermore, an article by Seybold and Hill (2001) concluded that the impact

of religion on mental health is largely beneficial. Added evidence for this theory was uncovered by Francis et al (2004), in their study “Religiosity and General Health among Undergraduate Students”. They found, in a sample of 246 undergraduate students, that the data demonstrated that “a positive attitude toward Christianity is associated with a higher level of self-reported general health”.

Concluding from this research, another hypothesis is that a positive attitude towards Christianity will significantly correlate with high levels of good general psychological health.

The final part of this study is to look at smoking behaviour amongst the participants and as to whether a trend can be uncovered in relation to this behaviour with regards to religiosity, self-esteem, perceived stress, and general health.

According to the Department of Health website (2012), roughly 7,000 people die from a smoking related disease in Ireland every year, with 50% of all smokers dying from smoke related diseases. Smoking increases the risk of getting cancer (90% of lung cancers are caused by smoking), but also increases the risk of attaining heart disease, strokes, low birth weight and many other diseases. In March 2004, the Irish government became one of the first countries in the world to enforce a no smoking ban in the work place and public areas, such as, bars and restaurants. In a study conducted by the Office of Tobacco Control (2010), it showed that 23.6% of the population of Ireland were prevalent smokers, but this was a drop of 3.8% since 2008, demonstrating that since the smoking ban was introduced, smoking prevalence is on the decline. There are a number of reasons why people smoke tobacco, such as, to appear socially acceptable, reduce stress, and to feel the effects of the addictive drug, nicotine, which a smoker develops a need for.

Too few studies have assessed the relationship between smoking behaviour and religiosity. However, in a study by Sinha et al (2007), looking at risk behaviours and religion, high religiosity levels were consistently associated with decreased smoking behaviour. This study hopes to gain a better understanding of smoking behaviour and religiosity in relation to high or low levels in each measure.

Many theorists have hypothesised that low self-esteem can be consistently associated with smoking behaviour in students due to smoking's apparent social acceptability i.e. smoking can often provide a participant with better capabilities of 'fitting in' to new surroundings, environments and with peers. Greater research has been carried out examining the relationship between smoking and self-esteem, with mixed results. A study by Bonaguro and Bonaguro (1987), found a significant association between low self-esteem and prevalent smoking behaviour, while others, such as, Bruhn and Parcel (1982) have found little evidence to show that beliefs about the self are highly correlated with smoking behaviour. This statement was backed up by Byrne and Masanov (2001) who found "not strong support" for the association between smoking and self-esteem.

Although smoking has many negative attributes, since its first use it has been considered to reduce stress and commended by many of its users for its therapeutic qualities. This study is, therefore, hypothesising a positive association between higher levels of smoking and lower levels of perceived stress. Previous research has supported this theory, including Naquin and Gilbert (1996), who found "On the perceived stress scale, current smokers' mean score was significantly higher than that of students who had never smoked."

For smoking behaviour and general health, little is known of the correlation between the two due to a lack of research in this area. A study conducted by Omokhodion and Gureje (2003) on a group of students general health, noted no association between participants

general health scores and their smoking behaviour. This study hypothesises no association between participants smoking behaviour and their general health.

Hypotheses/Research Questions

Based on this research, this study will examine the strength of participant's religious beliefs and whether an association appears in relation to their self-esteem, perceived stress, and general health scores. Although this is a subject discussed by many theorists, this study hopes to gain valuable information on the relationship between these four areas. It is hypothesised that there will be a significant, positive relationship between smoking behaviours and perceived stress scores, there will be a significant, negative relationship between religiosity and perceived stress scores, and there will be a significant, negative relationship between religiosity and general health scores.

Participants smoking behaviour will be a source of interest within this survey when comparing religiosity, self-esteem, perceived stress and general health. Little research has been carried out on individuals smoking behaviour and whether there is a trend in relation to three of the mentioned measures (religiosity, self-esteem and general health). It is hypothesised that there will be a positive association between higher levels of smoking and lower levels of perceived stress and no association between smoking behaviours and religiosity, self-esteem and general health.

The final investigation this study will carry out is an examination of the three variables, self-esteem, perceived stress and general health, and their strength of predicting levels of religiosity. Based on previous research (Francis et al, 2004), it is hypothesised that general health would be the strongest predictor of levels of religiosity due to general health having the strongest association with religiosity.

Aims

1. To identify a relationship between a participants smoking behaviours with their religiosity, self-esteem, perceived stress, and general health scores.
2. To establish an association between religiosity, self-esteem, perceived stress, and general health scores.
3. To identify if self-esteem, perceived stress or general health is a better predictor of high religiosity scores.

Hypotheses

1. There will be no statistically significant relationship between smoking behaviours and religiosity, self-esteem, and general psychological health scores.
2. There will be a significant, positive relationship between smoking behaviours and perceived stress scores.
3. There will be a significant, positive relationship between religiosity and self-esteem scores.
4. There will be a significant, negative relationship between religiosity and perceived stress scores.
5. There will be a significant, negative relationship between religiosity and general health scores.
6. After controlling for the effects of self-esteem, perceived stress and general health, they will be able to predict a significant amount of variance in religiosity levels. General health will be the strongest predictor of levels of religiosity.

METHOD

Materials

All participants were asked to complete a booklet of measures, including: The Francis Scale of Attitude toward Christianity (Francis & Stubbs, 1987), The Rosenberg Self-Esteem Scale (Rosenberg, 1965), The Perceived Stress Scale (Cohen et al., 1983), The General Health Questionnaire (Goldberg, 1992) and a question on smoking behaviour. See Appendix 1 for a copy of the Questionnaire Booklet.

The Francis Scale of Attitude toward Christianity (Francis & Stubbs, 1987).

The Francis Scale of Attitude toward Christianity (Francis & Stubbs, 1987) is a 24-item scale concerned with attitudes towards a number of religious constructs such as, the Bible, prayer, Church, God, and Jesus. It is scored on a 5 point Likert scale ranging from 1: 'Strongly Disagree' through 3: 'Neither Agree or Disagree' to 5: 'Strongly Agree'. Scores range from 24 to 120, with the higher scores indicating a more positive attitude towards Religiosity. Examples of questions include: 'I think going to the church is a waste of my time' (Question 5), and 'I believe that God listens to prayers' (Question 17). For the religiosity scale, the internal reliability (Cronbach's Alpha) is .98.

The Rosenberg Self-Esteem Scale (Rosenberg, 1965).

The Rosenberg Self-Esteem Scale (Rosenberg, 1965) is used to gather a measurement of a person's self-esteem and consists of ten items to which the subject responds on a four-point Likert scale of agreement, (1: 'Strongly Agree', 2: 'Agree', 3: 'Disagree', and 4: 'Strongly Disagree'). Scores range from 10 to 40, with the high scores illustrating high self-esteem. Half of the items on the questionnaire are expressions of positive self-esteem (Questions 1, 3, 4, 7, 10), and half are negative (Questions 2, 5, 6, 8, 9). Examples of questions include: 'At times I think I am no good at all' (Question 2), and 'I feel I am a person of worth, at least on an equal plane with others' (Question 7). For the self-esteem scale, the internal reliability (Cronbach's Alpha) is .92.

The Perceived Stress Scale (Cohen et al., 1983).

The Perceived Stress Scale (Cohen et al., 1983) is designed to measure the degree to which situations in someone's life are appraised as stressful. There are 14 items on the full scale (PSS-14), which refer to subjective appraisals of events occurring within a one month time frame. Items are scored from 0: 'Never', through 2: 'Sometimes', to 4: 'Very Often'. Scores range from 0 to 56, with higher scores reflecting more perceived stress. Examples of questions include: 'In the last month, how often have you been upset because of something that happened unexpectedly' (Question 1), and 'In the last month, how often have you felt confident about your ability to handle your personal problems' (Question 6). For the perceived stress scale, the internal reliability (Cronbach's Alpha) is .90.

The General Health Questionnaire (Goldberg, 1992).

The General Health Questionnaire (Goldberg, 1992) is designed to assess general mental well-being and distress. The shortened version, GHQ-12 (Goldberg, 1992), consists of 12 items which asks whether the participant has experienced a particular symptom or item of behaviour recently using a 4 point Likert scale. The scores range from 0 to 36, with higher scores indicating a greater probability of mental distress. Examples of questions include: 'Have you recently felt that you are playing a useful part in things' (Question 3), and 'Have you recently been thinking of yourself as a worthless person' (Question 11). For the general health scale, the internal reliability (Cronbach's Alpha) is .91.

Question on Smoking Behaviour.

The final measure for the participants to complete was a single question on their smoking behaviour: 'Do you smoke cigarettes on a regular basis'. Respondents were asked to answer yes or no.

Participants

A total of 100 participants were involved in the present study. The participants consisted of a convenience sample of second year undergraduate psychology students. All of whom completed the experimental conditions.

Design

This study took the form of a quasi-experiment. The data was analysed using correlations in independent groups. Participant's scores on The Francis Scale of Attitude Towards Christianity (Francis & Stubbs, 1987) were used as the independent variable and this was compared to the participant's scores on The Rosenberg Self-Esteem Scale (Rosenberg, 1965), The Perceived Stress Scale (Cohen et al., 1983) and The General Health Questionnaire (Goldberg, 1992), which acted as the dependant variable. The study involved undergraduate college students completing a series of questionnaires, which took between ten and twenty minutes to complete. Groups consisted of both male and female participants.

Procedure

Two second year undergraduate psychology classes were visited in order to reach the desired number of one hundred participants. The lecturer in both second year undergraduate psychology classes were contacted by email so permission could be attained to hand out the questionnaires. Once permission was granted, a suitable time was arranged. On arrival, participants were instructed to read the cover letter (see appendix 2) and instructions on how to complete the questionnaires. Included in the cover letter, the issue of anonymity was stressed in the study. All four questionnaires, The Francis Scale of Attitude Towards Christianity (Francis & Stubbs, 1987), The Rosenberg Self-Esteem Scale (Rosenberg, 1965), The Perceived Stress Scale (Cohen et al., 1983) and The General Health Questionnaire (Goldberg, 1992), including a question on participants smoking habits, were completed by the participants simultaneously in a ten to twenty minute time period. All students were thanked for their participation in the study. Each questionnaire was collected and then transferred to a protected location, where they were stored until analysis began. No other individual, apart from the analyst, could view the questionnaires. All analysis was carried out using SPSS version 18.

Results

Descriptive statistics, including means (M) and standard deviations (SD), for each of the variables investigated in the current study are presented in Table 1.

The first hypothesis of this research project was that no statistically significant differences would be observed between smokers and non-smokers on levels of religiosity, self-esteem, general health, while the second hypothesis stated that smokers and non-smokers would differ to a statistically significant degree with regards to levels of perceived stress. In order to empirically investigate this research hypothesis a series of independent samples t-tests were conducted. In order to control for the increased likelihood of making a Type 1 error as a result of running multiple test on the same data, a Bonferonni adjustment method was applied to the significance level ($0.05 / 4$). For the first hypothesis, difference between groups would only be considered statistically significantly different below a P value of 0.01.

An independent samples t-test was conducted to compare levels of religiosity between smokers and non-smokers. Non-smokers reported higher levels of religiosity ($M = 76.87$, $SD = 24.77$) than smokers ($M = 70.02$, $SD = 27.59$), however this observed difference did not reach the level of statistical significance, $t(98) = -1.12$, $p = 0.27$, two-tailed.

An independent samples t-test was conducted to compare levels of self-esteem between smokers and non-smokers. Non-smokers reported very slightly higher levels of self-esteem ($M = 28.04$, $SD = 6.21$) than smokers ($M = 27.63$, $SD = 5.66$). Unsurprisingly this observed difference did not reach the level of statistical significance, $t(98) = -0.29$, $p = 0.77$, two-tailed.

An independent samples t-test was conducted to compare levels of general psychological health between smokers and non-smokers. In this case smokers reported very

slightly higher levels of problems with psychological health ($M = 27.33$, $SD = 6.36$) than non-smokers ($M = 26.07$, $SD = 6.72$). Once again, this observed difference between the mean scores did not reach the level of statistical significance, $t(98) = .82$, $p = 0.42$, two-tailed.

These results indicate that there were no statistically significant differences between smokers and non-smokers on any of the variables of interest, thus supporting the first hypothesis of the current study.

An independent samples t-test was conducted to compare levels of perceived stress between smokers and non-smokers. Non-smokers again reported very slightly higher levels of perceived stress ($M = 24.37$, $SD = 8.56$) than smokers ($M = 23.63$, $SD = 8.05$). Unsurprisingly this observed difference did not reach the level of statistical significance, $t(98) = -.38$, $p = .71$, two-tailed. This result fails to support the second hypothesis of the current study.

Table 1.

Descriptive statistics and group differences of each of the measured variables.

Variables	Group	N	M	SD	<i>t</i>	<i>p</i>
Religiosity	Smokers	24	70.21	27.59	-1.12	.27
	Non-Smokers	76	76.87	24.77		
Self-Esteem	Smokers	24	27.63	5.66	-.29	.77
	Non-Smokers	76	28.04	2.21		
Perceived Stress	Smokers	24	23.63	8.05	-.38	.98
	Non-Smokers	76	24.37	8.56		
Psychological Health	Smokers	24	27.33	6.36	.82	.42
	Non-Smokers	76	26.07	6.72		

Note: p significant at .01 level.

The second aim of the current study was concerned with identifying the associations that existed between religiosity and self-esteem, perceived stress and general health, respectively. For this analysis smokers and non-smokers were considered as a single homogeneous sample.

The third hypothesis stated that there would be a positive, statistically significant association between levels of religiosity and levels of self-esteem. In order to explore the relationship between religiosity and self-esteem a Pearson product-moment correlation coefficient was used. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There was a weak, positive, statistically significant correlation between the two variables, $r = 0.27$, $n = 100$, $p < 0.01$, with higher levels of self-esteem associated with higher levels of religiosity (see Table 2). This result is consistent with the study's hypothesis.

The fourth hypothesis stated that there would be a negative, statistically significant association between levels of religiosity and levels of perceived stress. In order to explore the relationship between religiosity and perceived stress a Pearson product-moment correlation coefficient was used. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There was a moderate, negative, statistically significant correlation between the two variables, $r = -0.44$, $n = 100$, $p < 0.01$, with higher levels of perceived stress associated with lower levels of religiosity (see Table 2). This result is consistent with the study's hypothesis.

The fifth hypothesis stated that there would be a positive, statistically significant association between levels of religiosity and levels of general health. In order to explore the relationship between religiosity and general health a Pearson product-moment correlation coefficient was used. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There was a moderately-strong,

negative, statistically significant correlation between the two variables, $r = -0.67$, $n = 100$, $p < 0.01$, with higher levels of general psychological ill health associated with lower levels of religiosity (see Table 2). This result is consistent with the study's hypothesis.

Table 2. *Correlations between measured variables.*

Variables	1	2	3	4
1. Religiosity	---			
2. Self-esteem	.27**	---		
3. Perceived Stress	-.44**	-.03	---	
4. Psychological Health	-.67**	-.19	.28**	---

Note: ** Correlation is significant at the .01 level (2-tailed).

The third aim of the current project sought to develop an effective predictive model to explain levels of religiosity among the current sample. As self-esteem, perceived stress, and psychological health were all statistically significant associated with religiosity these variables were retained for inclusion in a regression model. Given the wealth of evidence suggesting an association between self-esteem and religiosity, a hierarchical multiple regression analysis was selected in which self-esteem was entered into the regression equation in the first block, and perceived stress and psychological health scores were entered in the second block.

The sixth research hypothesis stated that levels of perceived stress and psychological health would predict a significant amount of variance in levels of religiosity after the effects of self-esteem have been controlled for. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. Additionally, the correlations amongst the predictor variables (self-esteem; perceived stress, and general health) included in the study were examined and these are presented in Table 2. The only correlation between the three predictor variables was that which existed between general health and perceived stress ($r = 0.28, p < 0.01$). This indicates that multicollinearity was unlikely to be a problem.

In the first step of the hierarchical multiple regression, one predictor variable was entered: self-esteem. This model was statistically significant $F(1, 98) = 7.62; p < 0.01$ and explained 7 % of variance in levels of religiosity (Table 3). After the entry of perceived stress and psychological health at Step 2, the total variance explained by the model as a whole was 54% ($F(3, 96) = 37.75; p < 0.001$). The introduction of perceived stress and psychological health explained additional 47 % of variance in levels of religiosity, after controlling for self-esteem ($R^2 \text{ Change} = .47; F(2, 96) = 49.08; p < 0.001$). In the final model all three predictor variables were statistically significant, with psychological health recording the highest Beta

value ($\beta = -.57, p < 0.001$), followed by perceived stress ($\beta = -.27, p < 0.001$) and self-esteem ($\beta = .15, p < 0.05$). These standardized beta values indicate that general health scores have a moderate predictive influence on levels of religiosity, while perceived stress and self-esteem were exerting a weak predictive effect on levels of religiosity. They also indicate that better general psychological health and higher self-esteem were predictive of higher levels of religiosity while lower levels of perceived stress were predictive of higher levels of religiosity. Overall these results are supportive of the study's final hypothesis.

Table 3. Hierarchical Regression Model of Religiosity

	<i>R</i>	<i>R</i> ²	<i>R</i> ² <i>Change</i>	<i>B</i>	<i>SE</i>	β	<i>t</i>
<i>Step 1</i>	.27	.07**					
Self-Esteem				1.13	.41	.27**	2.76
<i>Step 2</i>	.74	.54***	.47***				
Self-Esteem				.64	.30	.15*	2.16
Perceived Stress				-.82	.22	-.27***	-3.77
Psych Health				.28	.28	-.57***	-7.74

Note. Statistical significance: * $p < .05$; ** $p < .01$; *** $p < .001$

Discussion

In the current study, the statistical analysis of the data supported five out of the six hypotheses. The current research study looked at smoking differences in relation to the issues of religiosity, self-esteem, perceived stress and general health. This research study also examined participant's religiosity levels and whether there was an association between these levels and participants scores on the self-esteem, perceived stress and general health measures. The final investigation in this study sought to develop an effective predictive model to explain levels of religiosity among the current sample. This test was undertaken on the hypothesis that self-esteem, perceived stress and general health would all be statistically significantly associated with religiosity. It was thought that general health would be the strongest predictor of levels of religiosity within the current sample.

The first hypothesis of this research project was that no statistically significant differences would be observed between smokers and non-smokers on levels of religiosity, self-esteem and general health. An independent samples t-test was used to compare these levels. Results from this test showed that the data supports the first hypothesis.

For religiosity, the observed difference did not reach the level of statistical significance, $t(98) = -1.12$, $p = 0.27$, two tailed, even though non-smokers reported slightly higher levels of religiosity ($m = 76.87$, $SD = 24.77$) than smokers ($m = 70.02$, $SD = 27.59$). These findings contradict the research carried out by Sinha et al (2007), who found high religiosity levels were consistently associated with decreased smoking behaviour.

For self-esteem, non-smokers reported very slightly higher levels of self-esteem ($m = 28.04$, $SD = 6.21$) than smokers ($m = 27.63$, $SD = 5.66$), but this observed difference did not

reach the level of statistical significance, $t(98) = -0.29$, $p = 0.77$, two-tailed. These findings support the research carried out by Bruhn and Parcel (1982) and also by Byrne and Masanov (2001) who found “not strong support” for the association between smoking and self-esteem.

For general health, the independent samples t-test found that, unlike religiosity and self-esteem levels, it was smokers who reported slightly higher levels of problems with general health ($m = 27.33$, $SD = 6.36$) than non-smokes ($m = 26.07$, $SD = 6.72$). However, once again, this observed difference between the scores did not reach the levels of statistical significance, $t(98) = 0.82$, $p = 0.42$, two tailed. Based on the findings conducted by Omokhodian and Gureje (2003), this studies result supported their research on the basis they noted no significant association between participants general health scores and smoking behaviour.

Results from this study, therefore, indicated that there were no statistically significant differences between smokers and non-smokers on any of the variables of interest, thus, supporting the hypothesis.

The second hypothesis stated that there will be a significant, positive relationship between smoking behaviours and perceived stress scores. An independent samples t-test was conducted to compare these levels. The data from this test indicated that non-smokers reported only very slightly higher levels of perceived stress ($m = 24.37$, $SD = 8.56$) than smokers ($m = 23.63$, $SD 8.05$). Therefore, the observed difference did not reach the level of statistical significance, $t(98) = -0.38$, $p = 0.71$, two-tailed. This result fails to support the second hypothesis of the current study. This results also contradicts previous research which has supported this hypothesis, such as, Naquin and Gilbert (1996), who found “On the

perceived stress scale, current smokers' mean score was significantly higher than that of students who had never smoked.”

The second aim of this study sought to establish an association between religiosity, self-esteem, perceived stress and general health. In order to explore the relationship between religiosity and self-esteem, religiosity and perceived stress, and religiosity and general health, a Pearson product-moment correlation coefficient was performed.

The third hypothesis stated that there will be a significant, positive relationship between religiosity and self-esteem scores. Results from the Pearson product-moment correlation coefficient showed that there was a weak, positive, statistically significant correlation between the two variables, $r = 0.27$, $n = 100$, $p < 0.01$, with higher levels of self-esteem associated with higher levels of religiosity. This result is consistent with previous research, such as, Bryant (2004), whose findings led her to believe “Religion gives students a sense of purpose in life and a feeling of closeness to God.” Also, Kamyra (2000), who found that religious well-being was related to higher self-esteem in a study of 105 social work graduate students. The third hypothesis is supported by the data.

The fourth hypothesis, that there will be a significant, negative relationship between religiosity and perceived stress scores was also supported by the data. A Pearson product-moment correlation coefficient found that there was a moderate, negative statistically significant correlation between the two variables, $r = -0.44$, $n = 100$, $p < 0.01$, with higher levels of perceived stress associated with lower levels of religiosity. This result is consistent with the study's hypothesis. This result also supports the findings of previous research. In an article by Merrill, Read and LeCheminant (2008), they presented a study which looked at the influence of religiosity and the outcomes associated with stress among college students. On

completing the investigation, their results found that “among the negative outcomes associated with stress, religiosity had the greatest influence on lowering feelings of stress.” Maton (1989) seconded this theory, when his study found that perceived religious support was positively associated with college students with college students who experienced high levels of stress.

The fifth hypothesis stated that there would be a significant, negative relationship between religiosity and general health scores. This current study found, through the use of a Pearson product-moment correlation coefficient, that there was a moderately strong, negative, statistically significant correlation between the two variable, $r = 0.67$, $n = 100$, $p < 0.01$, with higher levels of psychological ill-health, associated with lower levels of religiosity. Subsequently, this result supports the study’s hypothesis. This result is also consistent with previous research carried out in this area. Francis et al (2004), in their study “Religiosity and General Health among Undergraduate Students”, found that in a sample of 246 undergraduate students, the data demonstrated that “a positive attitude toward Christianity is associated with a higher level of self-reported general health”. Added evidence for this theory came from a study conducted by Seybold and Hill (2001), who concluded that the impact of religion on mental health is largely beneficial.

The final aim of the current research project was concerned with which variable, self-esteem, perceived stress, or general health, would be the strongest predictor of levels of religiosity amongst the current sample. After controlling for the effects of self-esteem, perceived stress and general health, and finding that these three variables are all significantly associated with religiosity; the variables were retained for inclusion in a regression model. A hierarchical multiple regression analysis was selected in which self-esteem was entered in to the

regression equation in the first block, and perceived stress and general health scores were entered into the second block. It was hypothesised that general health would be the strongest predictor of levels of religiosity due to general health having the strongest association with religiosity.

The results showed that the only correlation between the three predictor variables was that which existed between general health and perceived stress ($r = 0.28, p < 0.01$). In the first step of the hierarchical multiple regression, one predictor variable was entered: self-esteem. This model was statistically significant $F(1, 98) = 7.62; p < 0.01$ and explained 7% of variance in levels of religiosity. After the entry of perceived stress and psychological health at Step 2 the total variance explained by the model as a whole was 54% ($F(3, 96) = 37.75; p < 0.001$). The introduction of perceived stress and general health explained an additional 47% of variance in levels of religiosity, after controlling for self-esteem ($R^2 \text{ Change} = 0.47; F(2, 96) = 49.08; p < 0.001$). In the final model, all three predictor variables were statistically significant, with general health recording the highest Beta value ($\beta = -0.57, p < .001$), followed by perceived stress ($\beta = -0.27, p < .001$) and self-esteem ($\beta = 0.15, p < .05$). These standardized beta values indicate that general health scores have a moderate predictive influence on levels of religiosity, while perceived stress and self-esteem were exerting a weak predictive effect on levels of religiosity. The results also indicate that better general health and higher self-esteem was predictive of higher levels of religiosity while lower levels of perceived stress were predictive of higher levels of religiosity. Overall these results are supportive of the study's final hypothesis.

There was no previous research available to compare the results of this test with. Hopefully, this test can now shed more light on this little known area.

Problems and Limitations

Whilst conducting the current study, one potential problem is that it relied on self-report questionnaires. All of the questionnaires were handed out in a class room situation, with participants sitting close to one another. Due to the sensitive nature of some of the questions asked, there may have been some untrue answers to the questions. Also, the time it took to fill out the booklet of measures, roughly ten to twenty minutes, may have played a part in participants answering untruthfully or hurriedly in order to complete it quicker.

The participants were made up of college students from Undergraduate Psychology classes, so our sample did not represent the whole population, therefore, results from this study cannot be generalised. The sample size of 100 participants was also small in terms of giving a general reflection of Irish society. Thus, this study can only represent those that have taken part, and cannot be seen as a general consensus of views or beliefs within Irish society.

On reflection, this study could of added gender differences and/or age differences which would have given the study more details about the participants and added greater variety on the evidence collected. It also would have been interesting to note whether there was differences between gender and age amongst the participants, and how these two variables would have been affected by the variables of religiosity, self-esteem, perceived stress, general health and smoking behaviour.

Another potential problem with this study was the question on smoking behaviour, “Do you smoke cigarettes on a regular basis?” In hindsight, more information should of been asked for, such as, “If yes, how many do you smoke a day?” and “How long have you been smoking for?” Greater information on this behaviour could have led to more scope and a better understanding of participant’s habits which could have been reflected in the results.

It is also important to note that very few studies have been conducted in Ireland in relation to the measures that were studied in this investigation. Almost all of the previous research was from overseas countries, such as the U.K. and the U.S.A. Because of this, cultural differences, in regards to family upbringing, environment and social aspects could have impacted on this research proposal's results when compared to previous research that has been carried out.

Future Research

Future research could ask participants more detailed question about their smoking behaviour, for example, in regards to their reasons as to why they smoke and so perhaps test the results from that against their religiosity self-esteem, perceived stress and general health scores.

Age and gender differences could be tested against this current research study's variables, adding a new dimension to the study, which could provide greater information about the participants and possibly establish a better understanding of the affects religiosity levels have on participant's self-esteem, perceived stress and general health levels. Age and gender differences could also be tested in regards to participants smoking behaviour. The results of which could be compared against previous research (e.g. Francis et al, 2004) already carried out in this field.

In this study, the Francis Scale of Attitude toward Christianity (Francis & Stubbs, 1987) was the only measure used to collect religious score. Future research could potentially add other religions, such as Islam or Judaism, or even separate Christianity into Catholic and Protestants, gathered from new or previous research, and compare and contrast participant's

religious order and their results of self-esteem, perceived stress, general health and smoking behaviour scores.

Another potential research project would be to enlarge the current sample of participants to gather a greater knowledge of the general population. This could be done by conducting the study on a number of colleges and also places of work, to get a better understanding of the general population and its results on religiosity, self-esteem, perceived stress, general health and smoking behaviours.

The lack of research undertaken in Ireland regarding the variables within this study was also a limitation during the course of this research proposal. It proved finding valuable, appropriate and relevant research difficult. Cultural differences could also have affected the hypotheses and results. It is with hope that theorists in Ireland can partake in greater research within the area of religiosity, and also in regards to self-esteem, perceived stress, general health and smoking behaviours.

The current research findings open the door for more research on reasons why a higher level of religiosity is associated with a higher level of self-esteem, and a lower level of perceived stress and general psychological ill health. Such research could also expand on what role smoking behaviour has to play on the research measures within this study.

Conclusions

To conclude, the current study was designed to examine the relationship between religiosity, self-esteem, perceived stress and general health. The results indicated that there was a significant relationship between higher levels of religiosity, higher levels of self-esteem, and lower levels of perceived stress and general psychological ill health. The results

from this study not only supported the hypotheses but they also supported the previous research carried out. This study, therefore, indicates that a stronger belief in God may enhance your quality of life by raising your self-esteem, and lowering stress and psychological ill health. Further research and an expansion on the current sample could add greater evidence and support for this theory. The current study should make a good addition to the literature on religiosity, self-esteem, perceived stress and general psychological health, especially considering the little research that has been carried out in this area in Ireland. Much of the previous research on religiosity and its effect on these measures concentrated on college students, such as Kama (2000), Merrill, Read and LeCheminant (2008) and Francis et al (2004). This research proposal sought to expand on the work done by these theorists and others. But no previous study carried out exactly the same measures that were used in this investigation. Thus, previous studies were individually analysed and used as research and guidance where appropriate.

Smoking behaviours were also examined in relation to its effect on religiosity, self-esteem, perceived stress and general psychological health. Although no significant association was found, there were a number of studies, such as, Sinha et al (2007), who discovered significant correlations between the variables. Bruhn and Parcel (1982) on the other hand found little significance. The data supported the first hypothesis, that there would be no statistically significant differences observed between smokers and non-smokers on levels of religiosity, self-esteem and general health, but failed to support the second hypothesis that there would be a significant, positive relationship between smoking behaviours and perceived stress scores. In light of this, further studies would need to be carried out in order to clarify smoking behaviours relationship with religiosity, self-esteem, perceived stress and general psychological health.

The final aim of this study was to look at which of the three variables (self-esteem, perceived stress or general health) would be the strongest predictor of levels of religiosity. Due to general health having the strongest correlation with religiosity out of the three variables, it was hypothesised that general health would also be the strongest predictor. Results from the hierarchical multiple regression test found this to be the case. The results also indicate that better general health and higher self-esteem was predictive of higher levels of religiosity while lower levels of perceived stress were predictive of higher levels of religiosity. Overall these results were supportive of the study's final hypothesis.

In summary, the aims of this study have been fulfilled, with the statistical analysis of the data supporting five out of the six hypotheses. The study highlights the importance of further understanding the relationship between religiosity, self-esteem, perceived stress and general health. Due to the expansion of work carried out in this field, specifically religiosity, the current research study can add weight to an area that, according to Collicut (2011) "has come under inspection like never before".

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Appendix 1

The Francis Scale of Attitude toward Christianity (Francis & Stubbs, 1987)

Please number the box on the right hand side (1-5) which is relevant to you.

Strongly Disagree Agree	Disagree	Neither Agree Or Disagree	Agree	Strongly
1	2	3	4	5

1	I find it boring to listen to the bible	
2	I know that Jesus helps me	
3	Saying my prayers helps me a lot	
4	The church is very important to me	
5	I think going to the church is a waste of my time	
6	I want to love Jesus	
7	I think church services are boring	
8	I think people who pray are stupid.	
9	God helps me to lead a better life	
10	I like to learn about God very much	
11	God means a lot to me	
12	I believe that God helps people	
13	Prayer helps me a lot	
14	I know that Jesus is very close to me	
15	I think praying is a good thing	
16	I think the bible is out of date	
17	I believe that God listens to prayers	
18	Jesus doesn't mean anything to me	
19	God is very real to me	
20	I think that saying prayers does no good	
21	The idea of God means much to me	

22	I believe that Jesus still helps people	
23	I know that God helps me	
24	I find it hard to believe in God	

The Rosenberg Self-Esteem Scale (Rosenberg, 1965)

Instructions: Below is a list of statements dealing with your general feelings about yourself.

If you strongly agree with the statement circle SA.

If you agree circle A.

If you disagree circle D.

If you strongly disagree circle SD.

- | | | | | |
|---|----|---|---|----|
| 1. On the whole I am satisfied with myself | SA | A | D | SD |
| 2. At times I think I am no good at all | SA | A | D | SD |
| 3. I feel that I have a number of good qualities. | SA | A | D | SD |
| 4. I am able to do things as well as most other people | SA | A | D | SD |
| 5. I feel I do not have much to be proud of. | SA | A | D | SD |
| 6. I certainly feel useless at times. | SA | A | D | SD |
| 7. I feel I am person of worth, at least on equal plane
with others. | SA | A | D | SD |
| 8. I wish I could have more respect for myself. | SA | A | D | SD |
| 9. All in all, I am inclined to feel that I am failure. | SA | A | D | SD |
| 10. I take a positive attitude towards myself. | SA | A | D | SD |

The Perceived Stress Scale (Cohen et al., 1983)

Instructions

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way.

For each question choose from the following alternatives and place a number along the right hand column:

0 = **never**

1 = **almost never**

2 = **sometimes**

3 = **fairly often**

4 = **very often**

1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you felt that you were unable to control the important things in your life?
3. In the last month, how often have you felt nervous and stressed?
4. In the last month, how often have you successfully dealt with irritating life hassles?
5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?
6. In the last month, how often have you felt confident about your ability to handle your personal problems?
7. In the last month, how often have you felt that things were going your way?
8. In the last month, how often have you found that you could not cope with all the things you had to do?
9. In the last month, how often have you been able to control irritations in your life?

10. In the last month, how often have you felt that you were on top of things?

11. In the last month, how often have you been angered because of things that happened that were outside of your control?

12. In the last month, how often have you found yourself thinking about things that you have to accomplish?

13. In the last month, how often have you been able to control the way you spend your time?

14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

The General Health Questionnaire (Goldberg, 1992)

Please read this carefully.

Please answer **ALL** the questions simply by circling the answer which you think most nearly applies to you. Remember that we want to know about present and recent complaints, not those that you had in the past.

HAVE YOU RECENTLY:

1 -Been able to concentrate on whatever you're doing?	Better than usual	Same as usual	Less than usual	Much less usual
2 - Lost much sleep over worry?	Not at all	No more than usual	Rather more than usual	Much more than usual
3 -Felt that you are playing useful part in things?	More so than usual	Same as usual	Less useful usual	Much less useful
4 -Felt capable of making decisions about things?	More so than usual	Same as usual	Less so than usual	Much less Capable
5 -Felt constantly under strain?	Not at all	No more than usual	Rather more than usual	Much more than usual
6 -Felt you couldn't overcome your difficulties?	Not at all	No more than usual	Rather more than usual	Much more than usual
7 -Been able to enjoy your normal day-to-day activities?	More so than usual	Same as usual	Less so than usual	Much less than usual
8 -Been able to face up to your problems?	More so than usual	Same as usual	Less able than usual	Much less able than usual
9 -Been feeling unhappy and depressed?	Not at all	No more than usual	Rather more than usual	Much more than usual
10 -Been losing confidence in yourself?	Not at all	No more than usual	Rather more than usual	Much more than usual

11 -Been thinking of yourself as a worthless person?	Not at all	No more than usual	Rather more than usual	Much more than usual
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12- Been feeling reasonably happy, all things considered?	More so than usual	About same as usual	Less so than usual	Much less than usual
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Smoking Behaviour

Please answer the following question and circle the one that is relevant you.

Do you smoke cigarettes on a regular basis?

Yes

No

Appendix 2

Cover Letter

Dear Participant,

My name is James Lynch, I am currently in my final year in Dublin Business School and I am studying Psychology. I am conducting my thesis on religiosity, and its affect on self-esteem, perceived stress, general health, and smoking behaviour within a group of undergraduate students.

This booklet of measures has four questionnaires and one single question on your smoking behaviour. It should take you no longer than twenty minutes to complete; please answer all questions if you can. All information given today will be treated with the strictest confidence and your anonymity will be up held and all times, no names, age, sex or place of address will be asked for. Once your answers have been inputted into the appropriate data base, all questionnaires will be destroyed.

If you feel you are uncomfortable answering any of the questions, you are free to stop the survey at any time. If you have any enquiries, please don't hesitate to contact me on [REDACTED]. Once my study has been completed, I would be very happy to make the thesis available to you.

Thank you for your help and co-operation, it's very much appreciated.

Yours Sincerely,

James Lynch

Final Year Student, DBS.