The Effects of Religiosity on Stress, Self-Efficacy and Autonomy Among College Students.

Kayliegh McEntee (student number 1570002)

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Supervisor: Dr John Hyland

Head of Department: Dr S. Eccles

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Department of Psychology

DBS School of Arts
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Abstract

It is though that an individual’s level of religiosity can have an effect on other aspects of a person’s life such as their self-efficacy, stress levels and autonomy levels. This idea was used for this research with examined the effects of religiosity on stress, self-efficacy and autonomy among college students. This study used four questionnaires, General self-efficacy scale, Perceived stress scale, Santa Clara strength of religious faith questionnaire and the Autonomy-Connectedness scale to assess the four variables within a sample of 100 college students. It was hypothesised that there would be a relationship between the four variables. It was found that there was no relationship between the variables. However there was a significant relationship between stress and autonomy.
Introduction

Stress

Stress is defined by the American Psychological Association as “A state of physiological or psychological response to internal or external stressors. Stress involves changes affecting nearly every system of the body, influencing how people feel and behave.” (APA Dictionary, 2007). Stress can be expressed in various different ways with dry mouth, tiredness and faster speech only being a few (APA Dictionary, 2007). As well as physical symptoms, stress can contribute to psychological disorders and their immune system. The immune system is the second most complicated system in the human body, as the immune system produces antibodies to defend the body against any foreign agents such as viruses, infections bacteria, and so on. (Rice, 1999, p.142). T-cells and B-cells are the two main types of cells within the immune system and are more susceptible to the effects of stress. It is thought that stress supresses these cells so therefore can leave the individual susceptible to illness and can elongate the recovery process of current illnesses.

Many things can affect stress such as salient events that do not seem as important to people but may cause more stress, for example work may be less important to some people than family, therefore work becomes more stressful; overload stems from multitasking and taking too much on at once; Ambiguous events where the person does not know what to expect. If someone knows what is going to happen during an event they can find a way to cope with it, however when a person is not prepared they must think of a coping strategy instantly on the spot; Uncontrollable events may lead to stress as the person cannot control what is going to happen (Ogden, 2007, p.227).
When students talk about stress, they speak of being under pressure from an impending deadline for an assignment or trying to bring up their grades. Much research has been done in the field of stress among college students. It was found by Hudd, Dumlao, Erdmann-Sager, Murray, Phan, Seukas, and Yokozuka (2000) that students who are more possible to be stressed are females and non-athletic types of students which leads to unhealthy eating habits and behaviour. Along with these findings they also found that students who claimed to be under a great deal of stress found themselves to be lower in their self-esteem levels (Hudd et al., 2000).

More Recently in 2012 Calderan looked at the effects of social integration on stress and risk of depression in college students. She believed that if students became more or less involved in college community their levels of depression and stress would either lower or become higher. During this study she concluded that there was no significant relationship between involvement and levels of stress (Calderan, 2012).

An experiment was conducted on college students to study the psychosocial stress on memory processes. The participants were shown a short film and were either stressed after or before the film. They were then compared to a control group of people who were not stressed. They found the stress did have an effect on the memory process (Beckner, Tucker, Deville, & Mohr, 2006).

It was found in 2012 from a study on American college students that the type of course and the difficulty level of the course also affected stress levels. May and Casazza found that students studying a hard science major in college were under more stress that those who studied soft science majors (May & Casazza, 2012). Pederson in 2012 looked at stress resulting from college and family life and examined them with the physical and mental consequences of the students. Both men and women carried stress from their family aspect of
life to college life and vice versa but in different ways. It was also found that while both male and female students did this, it affected them in physical and a perceived mental way (Pederson, 2012).

It was found that the economy adds to students stress levels. Guo, Yang, Johnson & Diaz in 2011 found that economic downturn can be adding to student stress due to the employment situation, economic outlook and also the financial burdens. The results of this study showed that all college students were affected by these stressors in one way or another, along with heightened economic stress; however this was the highest among students in a senior level (Guo et al., 2011). This is relevant to the current study as it is focusing on college students in different years of their course and as these participants are being prepared to enter the economical world after their graduation.

Hong and Lei built upon Guo et al. research later in 2011 and stated that there were four sources of stress for students, study conditions, personal factors, employment situations and economic conditions. They found that there was a positive correlation between employment situation and mental stresses, along with a positive correlation between study conditions and mental stresses. A positive correlation was also found between economic condition, personal factors and mental stresses (Hong & Lei, 2011). This study is relevant to the current study being conducted as these are issues that are related to students in third level education.
**Self-Efficacy**

The American Psychological Association defines self-efficacy as “an individual’s capacity to act effectively to bring about desired results, especially as perceived by the individual” (APA Dictionary, 2007). Self-efficacy is a person’s belief that they hold the ability to behave accordingly in any situation they may find themselves in (Rice, 1999, p.84). Bandura believed that one could improve their levels of self-efficacy through cognitive behavioural treatments. From this he developed a theory of self-efficacy (Bandura, 1977, 1989, cited in Carson, Butcher & Mineka, 2002, p. 60). This theory differentiates between efficacy expectations (the belief that one can perform a behaviour that will lead to desired outcomes) that one has and their outcome expectations. As a person grows and matures mentally they begin to develop outcome expectations and understand what actions lead to desired outcomes. We learn these through consequences of previous actions (Rice, 1999, p.84). A low level of self-efficacy can lead to one believing that an event is impossible for them to try and cope, which will in turn lead them to believe it is a stressful event which they cannot handle. As there is low self-efficacy there is also the polar opposite of people who have high self-efficacy. These people may adopt approach behaviour as they are willing to give many tasks and challenges a go as they are willing to push themselves to the limit and carry on with tasks even if it seems to go wrong. It is thought that level of self-efficacy can be increased from learning coping mechanisms (Rice, 1999, p.84).

Much research has been done in the field in self-efficacy in relation to many aspects of student life. Biscaro et al. studied self-efficacy, alcohol expectancy and problem-solving appraisal as predictors of alcohol use in college students. They built upon Broer (1996) research on alcohol use in college students and found that gender was an important predictor for drink and binge episodes in college students (Biscaro, Broer, & Taylor, 2004). Choi
studied ‘self-efficacy and self-concept as predictors of college student’s academic performance’ (Choi, 2005). They found that the closer the levels of self-efficacy and self-concept were, the stronger the relationship between grades and self-concept and self-efficacy was. However they found that neither general nor academic self-efficacy was significant (Choi, 2005). Goal orientation and self-efficacy was studied by Hsieh, Sullivan, and Guerra in 2004. They looked at this in relation to underachievement and student dropout. From this study they found that students on academic probation had lower levels of self-efficacy than those students who were doing academically well in college (Hsieh, Sullivan, & Guerra, 2004). Tong and Song in 2004 studied the effect of low socio economic situation (SES) on wellbeing and self-efficacy. They found that the students that came from a low socio economic status showed lower on levels of self-efficacy than others who came for a higher socio economic status. There was no important difference in the score between males and females, but there was a relationship between self-efficacy and wellbeing. It was found that the socio economic status that the students came from had an effect on the self-efficacy and wellbeing of the individual students (Tong & Song, 2004).

The factors that had an effect on the entrepreneurial aspirations of students were examined. It was found that self-efficacy, self-reliance and risk all had an effect on these aspirations. Brown, Beal, and White believed that if there was some kind of intervention early in the students education it would aid the students in becoming more confident and more successful in their pursuits (Brown, Beal, & White, 2011). This could be useful within research in a third level college environment to help the college students gain confidence within their work and believe that they can reach their goals. As if the individual does not believe they can make it to their goals there are lowered levels of self-efficacy which can affect other areas of the individual’s development and their coping mechanisms. A major habit and stress relief among students is smoking. Kilinc and Tezel studied nicotine addiction
among college students in 2011. They found that the student’s gender, relationship status, age of onset of smoking, level of daily smoking and willingness to quit all had an effect on the level of addiction. The researchers concluded that there was a significant relationship between the student’s level of self-efficacy and addiction to nicotine (Kilinc & Tezel, 2011).

As there are diverse spectrums of culture in colleges it was thought by Jaret and Reitzes that the ethnic identity of students may have a relationship with self-esteem, efficacy and grades. They studied how these levels would vary among white, black and Asian college students. They found that self-esteem, efficacy and grades were related to their individual ethnic identities. It was also found that these results could differ among public college and selective colleges (Jaret & Reitzes, 2009).

The variable of self-efficacy will be addressed within the current study by asking participants to fill out the Swhwarzer and Jerusalem (1995) General self-efficacy scale.

**Autonomy**

Autonomy is defined in the APA dictionary as “a state of independence and self-determination in an individual, a group, or a society” (APA Dictionary, 2007). Erikson describes autonomy verses shame and doubt as the second crisis of life which happens at about 18 months old. As this is when self-awareness emerges. Toddlers wish to have self-rule over their bodies and what they do, as without this they start to feel ashamed and doubtful. He was not oblivious to cultural differences where some cultures encourage independence in their children (Berger, 2011, p.187). As the child develops into adolescence it is expected of them to take over some of the responsibility of themselves. They are now faced with more choices for their own lives such as eating, sports, or engage in potential dangerous activities
such as smoking, drinking and sexual activities. The adolescent also develops social autonomy as they move away from their family and develop new relationships (Berger, 2011, p.136). As the adolescent moves through their education from school to college they are still faced with these problems.

Much research has been conducted in this field. In 2012 Senturan, Kose, Sabuncy and Ozhan researched autonomy and submissive behaviour among students at the college of nursing. From this research they found that there was no meaningful correlation between the average score on the autonomy scale and the submissive behaviour scale. Self-esteem, autonomy and moral behaviour were researched in 1979 by Dickstein and Hardy. From this research it was discovered that females had a higher correlation of self-esteem, moral behaviour and attitudes towards it than males. A correlation was found between self-esteem and autonomy levels and frequency of good or bad behaviour. However there was no correlation found between autonomy and moral behaviour. In 2002 eating disturbances among female students and autonomy were investigated. Narduzzi and Jackson found that the experiences of disturbed eating in female students did not fall outside conscious awareness. The results showed bulimic experiences were exclusively related to sociotrophy but not autonomy among females (Narduzzi & Jackson, 2002). Wellman, McMillen and DiFranza researched smoking and autonomy (Wllman et al., 2008). In 2008 Wllman et al. investigated 300 students who were regular smokers and attempts to stop smoking. After controlling for the frequency of smoking they conclude that the test measure (the Hooked On Nicotine Checklist- HONC) was foretelling of the probability of failed quitting attempts (Wellman et al., 2008).
Religiosity

Religiosity is a notion that is hard to define due to its complexity for two reasons. There is no one term that is corresponding to ‘religiosity’ as there are many terms that can be dimensions of religiosity. Religiosity can be studied from many different disciplines within psychology from many different angles (Holdcroft, 2006). Recently there has been a decline in religiosity throughout the world with focus on Ireland, as the country has frequently been associated as having a strong religious connection. From a recent poll it was found that “47% of people polled said they considered themselves religious…… 10% self-identified as atheist” (Mosbergen, Huffington Post, 2012). From the poll it was discovered that worldwide only 59% of people identified themselves as religious, with 13% identifying as atheist (Mosbergen, Huffington Post, 2012).

There is said to be 6 dimensions of religiosity consisting of 3 general components which consists of 2 sub-components. They are:

Belief which consists of a traditional orthodoxy which is defined in traditional Christianity, for example God, Jesus, the Devil and the bible; and particularistic orthodoxy which is accepting or rejecting beliefs to a particular religion (Cornwall, Albrecht, Cunningham & Pither, n.d).

Commitment consists of spiritual commitment which involves personal faith; and Church commitment which is the placement of the person in the religious organization or community (Cornwall, Albrecht, Cunningham & Pither, nd).

Behaviour components are the third component which makes up the dimensions of religiosity. This consists of religious behaviour such as praying which does not enforce a membership or interaction within a community; and religious participation shown through
attendance, participation and support given to the church community (Cornwall, Albrecht, Cunningham & Pither, nd).

There is not a great deal of research within the field of religiosity and college students. However, in 2012 Luquis, Breisford and Rojas-Guyler studies religiosity in relation to spirituality, sex attitudes and behaviour. They found that gender gave differences in sexual attitudes, religiosity and gender. Attitudes, religiosity and spirituality influenced males and female’s attitudes, which in turn influenced their behaviour (Luquis, Breisford, & Rojas-Guyler, 2012). Depression, spirituality/religiosity were studied in the USA by Berry and York. It was longitudinal research seeing religiosity/spirituality as a protective factor for the students. They found that there was support for religiosity/spirituality has a buffering effect on depression but they found no evidence for the effect between stress and depression (Berry & York, 2012). In 2010 it was studied with alcohol consumption within the campus culture. Wells looked at students in university and at a religious college. He found that the students attending university had higher levels of alcohol intake than the students at the college. He concluded that students at religious colleges don’t drink as much as those at a secular university (Wells, 2010).

**Current Study**

This current study of the effects of religiosity on stress, self-efficacy and autonomy among college students builds upon previous research from both research conducted on the variables separately and also compared together in order to add some new insight to some of the variables that are being compared. Religiosity and self-efficacy among college students has been studied since the early 90’s in relation to sexual embarrassment with condom use among students, inclusion of pupils with disabilities and emotional intelligence (Kelly, 1996;
Lifshitz & Glaumas, 2002; Adeyemo & Adeleye, 2008). The role of religiosity with stress has been explored also since the early 90’s (Pragament, Smith, Koenig, & Perez, 1998; Merrill, Read, & LaCheminat, 2008; Sebena, El Ansari, Stock, Orosova, & Mikolajczyk, 2012). Stress and self-efficacy has been studied in the USA in relation to 9/11 (Barnard-Brak, Hall-Bagby, Jones, & Sulak, 2011) and also on different types of college courses (Caldwell, Harrison, Adams, Quin, & Greeson, 2010). There is research done on religiosity and autonomy, Weiss in 1996 conducted research on the attitudes of college students about physician assisted suicide where the results showed that people with higher levels of religiosity were against physician assisted suicide than those who had higher levels of autonomy. There has been a limited amount of research conducted on self-efficacy and autonomy among college students and stress and autonomy (Smith, Kirksey, Becker, & Brown, 2011; Tılfarılıoğlu & Çiftci, 2011; Federici, 2013) and this is what this research is helping to address as these have never been compared in relation to college students in previous research into the separate variables along with stress and autonomy (Morris, Ciesla, & Garber, 2010). This includes researching a student population to see if religiosity has a relationship with stress levels, if religiosity has a relationship with self-esteem levels and if religiosity has a relationship with autonomy levels. It is hypothesised from previous research on these variables that there will be a relationship between the four variables. Also that there will be a difference with the results of the variables between the gender of the participants of this study.
Method Section

Participants

For this research a sample of 100 first, second and third year full time and part time Dublin Business School college students were asked to participate. This was a convenience sample as three psychology lecturers allowed this research to be conducted on their students during particular lecture times. Participation in this research was voluntary as the students were asked if they would like to participate after the research aim was explained to them if they were 18 years old and above. The age of the participants varied between three specified age groups- 18 to 25 years old, 26 to 33 years old and 34 years old and older. From the 100 participants 29 of these were males students and 56 of these were female (with 14 of the participants not specifying gender). 49 of these participants were in the 18 to 25 year old group, 24 participants in the 26 to 33 years old, and 21 participants in the 34 years and older group (with 6 participants not specifying their age).

Design

This research is based on a quasi-questionnaire correlational design as it is examining the relationship between the variables of gender (male and female) and religiosity, stress, self-efficacy and autonomy. As this is correlational research, the independent variables are gender and the dependant variables are religiosity, stress, self-efficacy and autonomy. The research groups that this research are looking at is age and gender to see if a particular age group and gender group have a relationship with the variables.
Materials

For this research four questionnaires were administered to the participants along with a demographics questionnaire. The Perceived Stress Scale by Cohen et al. (1983), the General Self Efficacy scale by Schwarzer and Jerusalem (1995), the Santa Clara Strength of Religious Faith questionnaire by Plante and Boccaccini (1997), and the Autonomy-Connectedness Scale by Bekker and Van Assen (2006) were used. Along with these four questionnaires there was also a demographics (see appendix A) scale which consisted of gender (male and female) and age (18-25, 26-33 and 34+).

General Self-Efficacy Scale (Schwarzer and Jerusalem, 1995) (See Appendix B).

This general self-efficacy scale was developed to assess perceived self-efficacy in the adult and adolescent population. It is described as the belief an individual has that they can deal with challenges that they experience (Scherbaum et al., 2006). This scale is a ten question self-report scale which is graded on a four point likert scale ranging from not at all true (1) to exactly true (4) - the higher the person scores themselves relates to higher belief in themselves. The questions on this scale assesses the individuals belief that they can deal with difficult tasks and goal setting, e.g. “I can always mange to solve difficult problems if I try hard enough.”, “I am confident that I could deal efficiently with unexpected events.”, and “I can usually handle whatever comes my way.” (Schwarzer and Jerusalem, 1995). The participants are asked to read the statements and answer on a scale of one to four how much it relates to them. This scale has been found to have high validity and reliability levels with cronbach alpha ranging from 0.75 to 0.95 across tests on 28 nations in many languages (Resource Centres for Minority Aging Research (RCMAR), n.d).
**Perceived Stress Scale (Cohen et al., 1983) (See Appendix C).**

The perceived stress scale is the most commonly used scale to measure perceived stress. This is a scale to examine what situations in life an individual finds evokes stress, and to what degree they feel like they do not have control over their lives. This scale is a ten question scale in which the participant is asked to read the statements and to answer on a five point likert scale of 0 (Never) to 4 (Very Often). The questions on this scale are very general and talk about how the individual has been feeling in the past month in relation to unexpected events, coping, problems and emotions, e.g. “In the last month, how often have you been upset because of something that happened unexpectedly?”, “In the last month, how often have you found that you could not cope with things you have to do?” and “In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?” (Cohen et al., 1983). This scale has been found to have high reliability with a cronbach alpha value of .78 (Garcia, G., N.D).

**Santa Clara Strength of Religious Faith Questionnaire (Plante, T.G., & Boccaccini, M., 1997) (See Appendix D).**

The Santa Clara Strength of Religious Faith was developed to measure religious faith but is not aimed at one specific religion. It is a ten item self-report measure which uses a four point likert scale which ranges from strongly disagree (1) to strongly agree (4). The questions on this scale ask the participant about their praying habits, “I pray daily.”, and how important religion is to the individual “My religious faith is very important to me.” and how it impacts the individuals life “My faith impacts many of my decisions.” (Plante & Boccaccini, 1997). This scale is scored form a minimum of 10 to a maximum of 40, therefore the higher the score the higher the strength of the individuals religious faith. The Santa Clara Strength of
Religious Faith questionnaire has been found to have a high level of reliability with a cronbach alpha value of .95 (Plante, Vallaey, Sherman & Wallston, 2002).

**Autonomy Connectedness Scale (Bekker, M.H.J & Van Assen, M.A.L.M, 2006) (See Appendix E).**

The autonomy connectedness scale measures autonomy resulting from separation and individualisation. Autonomy refers to the amount of freedom the individual feels they have over their life choices. This scale can also be used to measure gender linked autonomy. This scale is used with a five point likert scale which ranges from disagree (0) to agree (4) as answers to seventeen questions. This scale asks the participants to answer on how much they agree with statements on feelings in relation to themselves and their interactions with other individuals around them. The individuals answer questions such as “Usually I can dismiss other peoples misery from my mind”, “I hate detachment”, and “I often long for love and warmth” (Becker & Van Assen, 2006). With a cronbach alpha score of .85 this scale is shown to be a reliable measure of individuals’ levels of autonomy (Bekker, Croon, Van Balkom & Vermee, 2008).

**Procedure**

For the individuals to take part in this study they were told what the study was based on. The participation in this study was voluntary and the individuals were told that this study was examining the effects of religiosity on stress, self-efficacy and autonomy among college students. They were handed a questionnaire booklet which contained the four questionnaires (perceived stress scale, general self-efficacy scale, Santa Clara strength of religious faith
questionnaire and the autonomy connectedness scale), a demographics questionnaire (asking the participants' age and sex), a cover sheet (explaining the study, what they are asked to do and consenting to their data being used in the analysis of the data) (see appendix F) and a contact sheet (with contact details of the experimenter and call lines of various organisations) (see appendix G). The participants were informed that to complete the booklet it should take on average fifteen minutes and that even if they start the booklet that they can withdraw at any point if they do not wish to carry on with the study and how it is a totally anonymous survey so they are unable to withdraw their questionnaires once they have completed it. There was time allocated for when all the participants had completed the questionnaires for them to ask any questions they had about the study.
Results Section

Table 1: An Independent Samples T-test table displaying the differences between the male and female groups for the variables of Stress, Self-Efficacy, Autonomy and Religiosity.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>Male</td>
<td>21.52</td>
<td>3.17</td>
<td>-.978</td>
<td>83</td>
<td>.771</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>22.23</td>
<td>3.21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>Male</td>
<td>30.24</td>
<td>3.58</td>
<td>-.188</td>
<td>83</td>
<td>.238</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>30.41</td>
<td>4.12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td>Male</td>
<td>34.96</td>
<td>9.44</td>
<td>.937</td>
<td>77</td>
<td>.169</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>33.31</td>
<td>6.19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religiosity</td>
<td>Male</td>
<td>18.45</td>
<td>7.83</td>
<td>-1.21</td>
<td>82</td>
<td>.308</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>20.89</td>
<td>9.24</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: p significant at .05 level.

The data for the conducted independent samples t-test are shown above in table 1. It shows that overall females had higher levels of stress, self-efficacy, autonomy and religiosity than males. However these results found no statistical significance between the male and female scores.

Females (mean=22.23, SD=3.21) were found to have higher levels of stress than males (mean=21.52, SD=3.17). The 95% confidence limits shows that the mean population mean difference of the variables lies somewhere between -2.17 and .74. An independent samples t-test found that there was no statistical significant difference between the stress of males and females (t(83)=-.99, p=.331).

Females (mean=30.41, SD=4.12) were found to have higher levels of self-efficacy than males (mean=30.24, SD=3.58). The 95% confidence limits shows that the mean population mean difference of the variables lies somewhere between -1.97 and 1.63. An
independent samples t-test found that there was no statistical significant difference between the self-efficacy of males and females (t(83)=-.188, p=.852).

Females (mean=33.31, SD=6.19) were found to have higher levels of autonomy than males (mean=34.96, SD=9.44). The 95% confidence limits shows that the mean population mean difference of the variables lies somewhere between -1.86 and 5.17. An independent samples t-test found that there was no statistical significant difference between the stress of males and females (t(77)=.937, p=.196).

Females (mean=20.89, SD=9.24) were found to have higher levels of religiosity than males (mean=18.45, SD=7.83). The 95% confidence limits shows that the mean population mean difference of the variables lies somewhere between -6.45 and 1.57. An independent samples t-test found that there was no statistical significant difference between the stress of males and females (t(82)=−1.21, p=.229).

Table 2: *A Kendalls Tau b Correlation table for Stress, Self-Efficacy, Autonomy and Religiosity*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Stress</th>
<th>Self-Efficacy</th>
<th>Autonomy</th>
<th>Religiosity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>-.128</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>.214**</td>
<td>.076</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td></td>
<td></td>
<td>.101</td>
<td>.055</td>
</tr>
<tr>
<td>Religiosity</td>
<td>-.029</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* *p* significant at .05 level.

** **p** significant at .01 level.

The data for the conducted Kendalls Tau b correlation test is illustrated above in table 2. The test found that there was no significant relationship between the variables. However, there was a significant relationship between stress and autonomy. The mean score for stress was 22.13 (SD=3.32) and for autonomy was 34.31 (SD=7.36). A Kendalls Tau b correlation
found that there was a moderate positive significant relationship between stress and autonomy (tau b(93)= .214, p=.004).

A Kendalls Tau b correlation found that there was no significant association between stress and self-efficacy (tau b(98)= -.128, p=.084).

A Kendalls Tau b correlation found that there was no significant association between stress and religiosity (tau b(98)= -.029, p=.691).

A Kendalls Tau b correlation found that there was no significant association between self-efficacy and autonomy (tau b(93)= .076, p=.306).

A Kendalls Tau b correlation found that there was no significant association between religiosity and self-efficacy (tau b(98)=.101, p=.168).

A Kendalls Tau b correlation found that there was no significant association between religiosity and autonomy (tau b(93)=.055, p=.457)

Figure 1: Scatter plot illustrating Stress grouped by age when tested with a One Way ANOVA.
When a one way ANOVA was run there was no significant results found (see Figure 1.). When we examine the mean score of each variable for each age group it can be seen that the 34 and over age group had the highest levels of stress. A one way analysis of variance showed that there was no significant difference between the three groups in terms of stress levels ($F(2, 90) = .328, p = .721$).

When we examine the mean score of each variable for each age group it can be seen that the 34 and over age group had the highest levels of self-efficacy. A one way analysis of variance showed that there was no significant difference between the three groups in terms of levels of self-efficacy ($F(2, 90) = 1.347, p = .265$).

Figure 2: *Scatter plot illustrating Autonomy grouped by age.*

When we examine the mean score of each variable for each age group it can be seen that the 18 to 25 age group had the highest levels of autonomy (see Figure 2). A one way analysis of variance showed that there was no significant difference between the three groups in terms of levels of autonomy ($F(2, 85) = 1.392, p = .254$).

When we examine the mean score of each variable for each age group it can be seen that the 34 and over age group had the highest levels of religiosity. A one way analysis of
variance showed that there was no significant difference between the three groups in terms of levels of religiosity (F(2, 90)= .896, p=.421).
Discussion

The aim of this study was to examine the effects of religiosity on stress, self-efficacy and autonomy among third level college students. This research was conducted and the data was analysed with three different tests, an independent samples t-test, a kendalls tau b correlation test and an one way anova test. These three tests were run with the variables and the results were not as hypothesised. The hypotheses that were put forward from this research were that there will be a relationship between all the variables (religiosity and stress, religiosity and self-efficacy, religiosity and autonomy, stress and self-efficacy, stress and autonomy, and self-efficacy and autonomy) and there would be a difference in the results when gender was involved in the analysis.

The results of the data analysis only found one relationship between one set of variables. It was found by a kendalls tau b correlation test that stress and autonomy had a positive significant relationship among the college student sample of participants (see Table 2). This statistical significant result partially proves the hypothesis that there will be a relationship between the variables. This was the only statistically significant result that was found in this study. A kendalls tau b correlation test was conducted for all of the variables and it was found that there was no association between stress and religiosity, self-efficacy and autonomy, religiosity and autonomy, religiosity and self-efficacy and stress and self-efficacy. However, it was shown by the kendalls tau b correlation test that the relationship between stress and self-efficacy is approaching significance.

An independent samples t-test was conducted (see Table 1) on the variables of religiosity, stress, self-efficacy, and autonomy for male and female groups within the sample. It was found that females had higher levels of stress, self-efficacy, autonomy and religiosity than males. However, these results from the independent samples t-test were not significant
as the differences between the mean and standard deviation of both male and females were not significant.

A one way ANOVA test was conducted two times, once for the overall variable looking for differences between the three age groups (18-25, 26-33, and 34 and above) of the participants and a second time to look for differences between the gender groups (male and female) and the age groups within the variables (see figure 1 and figure 2). The first conduction of the ANOVA found that the 34 years and above had the highest levels of stress, self-efficacy and religiosity, while the 18 to 15 group has the lowest levels of self-efficacy and highest levels of autonomy, and the 26 to 33 year old group has the lowest levels of stress autonomy and religiosity. The second one way ANOVA looked at the differences between the sex groups within the age groups tested. It found that for males the 26 to 33 year old age group had the highest levels of stress and 34 years and older group experiencing the lowest levels of stress. The highest levels of self-efficacy were experienced by the 34 years and older age group with the 26 to 33 year old having the lowest levels of self-efficacy along with the lowest levels of religiosity. The highest levels of religiosity were reported by males in the in the 34 years and over group and they also experienced the lowest levels of autonomy. Also finally, the 18 to 25 year old group reported experiencing the highest levels of autonomy. The female results differ from the male results as the highest levels of stress were experienced by the 18 to 25 year old group and 26 to 33 year olds having the lowest levels of stress. The results for high female self-efficacy levels were the same as the male group as the 34 years and over participants experiencing these high levels. Also the female low levels of self-efficacy were reported by the 18 to 25 year old group. The high autonomy levels for females match the levels for the males with the 18 to 25 year old participants reporting this, along with 26 to 33 group reporting low levels of autonomy along with low
levels of religiosity. Similar to the male reports for high religiosity levels, the female report was the same with the 34 years and older group experiencing these high levels.

The results that were found from the data analysed on stress and self-efficacy support the findings of the study conducted my Barnard-Brack et al. (2011) on Teaching post 9/11 student-veterans with symptoms of PTSD: The influence of faculty perceptions and self-efficacy. Barnard-Brack et al. concluded that there could be a relationship between stress and self-efficacy and the current study supports this as the results were approaching significance. It also somewhat supports the findings of Caldwell et al (2010) as the results in their study on Developing Mindfulness in College Students Through Movement-Based Courses: Effects on Self-Regulatory Self-Efficacy, Mood, Stress, and Sleep Quality found that there is a relationship between self-efficacy and mood levels when paired with movement based courses.

As there is very little studies conducted on stress and autonomy among students, there is not much to compare the current finding to. However, we must note the studies that have been conducted on these two variables. One such study was conducted by Morris, Ciesla and Garber (2011) on stress autonomy and stress sensitization among adolescents. They found that stress levels could be predictive of depression later in life. There was also a report on why autonomy reduces stress (Informededucation.com, 2011) and it was found that by taking control over situations in ones life the individual reduces their stress, but it must be noted that this report was conducted in the workplace and the current study was conducted in a college environment. The results of the current study conflict with the conclusion of this article as the results of this study found a relationship between stress and autonomy, however this relationship showed that as an individual feels they have more control over what happens (autonomy) the higher their stress levels are.
Previous studies that were conducted on religiosity and stress have found some significant relationship between the variables. Pragment et al. (1998) found that through the religious coping methods individuals found positive ways to cope with life stressors, therefore there was a relationship between religiosity and stress. It was concluded by Merrill at al. (2008) that religiosity promoted the feeling of being able to cope with stress through elevated confidence, hence the results show that there is again a relationship between religiosity and stress. However, conflicting results of the current study do not support the findings of previous research.

The results of the Merrill et al. (2008) study can be applied to the variables of religiosity and self-efficacy. They found that religiosity raised the confidence that an individual had in themselves to overcome major life stressors. Also that a higher level of religiosity gave rise to the potential to prevent negative outcomes and also promote positive outcomes from stress. Again the results from the current study conflict with these findings as the study found no significant results between these variables.

The results of the current study contradicts the previous research as previous research has found a positive relationship between self-efficacy and autonomy (Smith et al., 2011; Tifarlioglu & Ciftci, 2011; Federic, 2013) as there was no significant relationship found in the analysis of the current study.

There are a number of possibilities as to why the current studies results conflict with previous research. As there has not been much research conducted on these variables and college students, there is not a significant amount of findings to directly compare them to. Previous research has been conducted on environments such as hospitals, work environments, and secondary schools and also it has been conducted in many different countries such as
America and the UK. This current study was conducted on one population of college students attending college in Dublin City Centre.

When evaluating this research it must be noted that there was a number of limitations that may have been a causal for the insignificant results that were obtained. As the data for this study was gathered from the same DBS college population it could have affected the results of this study. Also a number of the participants did not answer some questions on the questionnaire booklet; therefore, there was a number of missing values (gender, age group, and various questions) which were included in the analysis of the data. In the population that was used to gather the data there was an uneven number of males and females which would have affected the data to lead to an unrepresentable view of the student population, so these findings may not be applicable to the overall student population. As there are some weaknesses for this study there are a number of strengths also. This research is representable of the student population of the Dublin Business School psychology department students as this was the sample used. The questionnaires used for this study measured what they were meant to as they measured levels of autonomy, religiosity, stress and self-efficacy.

There are a number of changes that could be made to this study for future replicas. As there was such a small sample of students used in future research the sample could be expanded not only to more students in the same college but also the study could be expanded a number of different colleges. If the sample size is expanded, the more the results can be applicable to the whole Irish student population. If there was further research into this area it would be advised that there were an equal number of males and female students in each age group. The results may change in future research as the sample is extended and an even number of participants in each group. From the analysis of the results further research would be valuable on stress and autonomy as this result was significant along with stress and self-efficacy to determine if there is a possible association between them. In future research it
would be advisable that the age groups were minimised so there are more age brackets and
possibly an indication of significant age results in relation to the variables. If these results had
been approaching significance they may have been applicable to the development of coping
methods for stress in students.

In conclusion to this research, this study has provided evidence for a relationship
between stress and autonomy levels within a student population. It has also provided
evidence that there could be a relationship between stress and self-efficacy. The findings of
this research for the most part contradict previous findings with only one test of stress and
autonomy gaining the same results of previous research. Further research should examine
these variables with changes made to the gender and age groups. These changes should be
made by gaining access to equal numbers of males and females in each age group and
altering the age groups that were used in this current study. The information and insight to
stress and self-efficacy can be used by various educational institutions to develop stress
management courses. These would be of great use to college environments for students
dealing with a great amount of stress.
References


Appendix

Appendix A
Please Circle

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>18-25</td>
<td>26-33</td>
</tr>
</tbody>
</table>
Appendix B

Please read the sentences below and select an answer for each statement which indicates how much the statement applies to yourself.

1 = Not at all true  2 = Hardly true  3 = Moderately true  4 = Exactly true

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I can always manage to solve difficult problems if I try hard enough.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>If someone opposes me, I can find the means and ways to get what I want.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>It is easy for me to stick to my aims and accomplish my goals.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I am confident that I could deal efficiently with unexpected events.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Thanks to my resourcefulness, I know how to handle unforeseen situations.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>I can solve most problems if I invest the necessary effort.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I can remain calm when facing difficulties because I can rely on my coping abilities.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>When I am confronted with a problem, I can usually find several solutions.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>If I am in trouble, I can usually think of a solution.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>I can usually handle whatever comes my way.</td>
<td></td>
</tr>
</tbody>
</table>
**Scoring**

Add the scores together from all 10 items. The higher the total the greater the person’s generalized sense of self-efficacy.
Appendix C

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 circle one of the following options:
0 = never  1 = almost never  2 = sometimes  3 = fairly often  4 = very often

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the last month, how often have you been upset because of something that happened unexpectedly?</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>2</td>
<td>In the last month, how often have you felt that you were unable to control the important things in your life?</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>3</td>
<td>In the last month, how often have you felt nervous and stressed?</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>4</td>
<td>In the last month, how often have you felt confident about your ability to handle your personal problems?</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>5</td>
<td>In the last month, how often have you felt that things were going your way?</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>6</td>
<td>In the last month, how often have you found that you could not cope with all the things you had to do?</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>7</td>
<td>In the last month, how often have you been able to control irritations in your life?</td>
<td>0 1 2 3 4</td>
</tr>
</tbody>
</table>
Scoring

Reverse the scores for the positively worded items (4, 5, 7 & 8) eg 0=4, 1=3, 2=2,3=1,4=0.

Add the reversed scores together with the original scores for the remaining items (1, 2, 3, 6, 9 & 10).

The higher the overall total score the greater the amount of perceived stress the person is experiencing.

References

Appendix D

Santa Clara Strength of Religious Faith Questionnaire

Thomas G. Plante and Marcus Boccaccini

Santa Clara University


Please answer the following questions about religious faith using the scale below.

Indicate the level of agreement (or disagreement) for each statement.

1 = strongly disagree 2 = disagree 3 = agree 4 = strongly agree

_____ 1. My religious faith is extremely important to me.
_____ 2. I pray daily.
_____ 3. I look to my faith as a source of inspiration.
_____ 4. I look to my faith as providing meaning and purpose in my life.
_____ 5. I consider myself active in my faith or church.
_____ 6. My faith is an important part of who I am as a person.
_____ 7. My relationship with God is extremely important to me.
_____ 8. I enjoy being around others who share my faith.
_____ 9. I look to my faith as a source of comfort.
10. My faith impacts many of my decisions.

To score, add the total scores. They will range from 10 (low faith) to 40 (high faith)
Appendix E

Each item has five ordered answer categories (0 = disagree, 1 = slightly disagree, 2 = agree nor disagree, 3 = slightly agree, 4 = agree). The items are shown in the table below. An “N” indicates a negatively worded item. The scores on the negatively worded items were reversed.

1. Usually I can dismiss another person's misery from my mind N
2. If I have things my own way against the will of others, I usually get very restless
3. I hate detachment
4. I am seldom occupied with the feelings and experiences of others N
5. I easily put aside other people's comments N
6. I am rarely occupied with other people's view of me N
7. If I imagine myself having to say goodbye to a beloved person, I feel brokenhearted in advance
8. I am seldom inclined to ask other people's advice N
9. I often go deeply into other people's feelings
10. I often wonder what other people think of me
11. When I take important decisions about my life, I leave other people's wishes and opinions out of consideration N
12. I can hardly bear it when other people are angry with me
13. Somebody else's experiences leave a strong mark on my own moods
14. I feel a strong need for other people's advice and guidance

15. If I do something that bothers other people, I can easily dismiss that from my mind

16. I often long for love and warmth

17. I can easily back out of things that people who are important to me want me to do

Source

Data were kindly made available by M. H. J. Bekker and M. A. L. M. van Assen from the Tilburg University.
Appendix F

Dear student,

I am a final year student and I am conducting research on the Effect of Religiosity on Stress, Self-Efficacy and Autonomy in College Students.

I will be asking you to fill out a number of surveys:

1. Demographics (Age, Sex, and Consent to take part in the survey).
2. Perceived Stress Scale
3. General Self-Efficacy Scale
4. Santa Clara Strength of Religious Faith Questionnaire
5. Autonomy Scale

These should take approx. 15mins to complete.

You can at any time withdraw from the survey, it is your choice to participate or not. If you do wish to participate you **MUST BE 18 YEARS OLD OR OLDER**.

If you wish to participate please tick the appropriate box below.

After I have conducted the research and analysed the data I will be happy to let you know how the findings turned out if you wish to know.

Thank you very much for taking the time to complete this questionnaire, your participation is greatly appreciated.

Thank you

Kayliegh McEntee

3rd year Psychology Undergraduate Student.

**I am 18 years old or older and wish to participate in this study**
Appendix G

Help Lines  (Feel free to take this page)

Dublin Samaritans  Tel: 1850 60 90 90
SOSAD Cavan Tel: 049 4326339
SOSAD Drogheda Tel: 041 9348754
SOSAD Navan Tel: 046 9031855
SOSAD Dundalk Tel: 042 9327311
SOSAD Kingscourt Tel: 042 9668992
AWARE Helpline Tel: 01 2834963

My contact information
Kayliegh McEntee
1570002@dbs.ie

Thank you for your participation.