

A mixed method study on selfishness, selfism-related behaviour, and
religious, psycho-social influences

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Declaration

Declaration

'I declare that this thesis that I have submitted to Dublin Business School for the award of BA (Hons) Psychology is the result of my own investigations, except where otherwise stated, where it is clearly acknowledged by references. Furthermore, this work has not been submitted for any other degree.'

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Abstract

The current study employed a mixed method analysis to examine various hypotheses related to the notion of selfishness, as well to investigate the selfishness or selfism-related behaviours. A total of 179 adults participants undertook a survey including a total of 66 questions. It has been found no significant difference in levels of selfishness between genders or groups of internal and external locus of control. Furthermore, no significant correlation has been found between age and levels of selfishness. A significance model was revealed in the case of the fourth hypothesis, which found a cumulatively effect of locus of control, social support and religiousness commitment upon selfishness, with only the last variable presenting real significance. These finding were somewhat inconsistent with previous research. On the other hand the qualitative analysis supported the previous findings, mainly categorising selfishness related behaviours into negative behaviours, positive behaviours and emotional instability. Findings call for further research in order to better understand the phenomenon and develop real life applications.

Chapter 1: Literature review and Hypotheses

The aim of the current study is to test several hypothesis put forward regarding the level of selfishness and its association with certain demographic, religious and psychosocial variables. Furthermore it investigates what types of behaviours can be caused by selfishness. For the first section quantitative statistics will be employed, while for the second part, a qualitative thematic analysis will aim to provide the answer. The literature review below will introduce the reader to the notion of selfishness, followed by an explanation of associated variables involved in the study. Previous research related to each one of them and their proposed link to selfishness will also be discussed. Finally a summary of previous research findings will be presented and the section will be concluded by describing the hypothesis put forward, as well as the research question.

1.1 Selfishness

Humans are evolutionary inclined to exhibit a self orientated, egotistic behaviour (Diebels, Leary & Chon, 2018, p. 1).. Individuals are more concerned with their own well being, usually always looking to increase their chances of having an easier passage through life, so it is only natural that people are prone to deal with situations in ways that will benefit them (Diebels et al, 2018, p. 1). The exact dictionary definition of selfishness is "concern primarily with one's own interests" ("the definition of selfishness", 2018). Synonyms of the term would include egoism, self-centeredness, narcissism, egocentric, etc. ("the definition of selfishness", 2018). The positive and negative connotations of the notion has been debated over time and although the general view is that selfishness is viewed as negative in society, the positive aspects of it can't be overlooked. In Ayn's Rand view, as per her book "The Virtue of Selfishness" (1964), the term is most associated incorrectly with negative perception, when in fact, even the definition itself does not make references of the moral

direction (Rand & Branden, 1964, p. 1). In her view, although the negative association can't be denied in some cases, selfishness is not only necessary, but also a virtue since it concerns not only personal well being, but also personal development, which would include the acquisition of proper moral standards and as such would lay the foundation of a righteous person. As such, a person would present an overall balance and would not sacrifice others to his own desires, nor himself to others (Raibley, 2010). Still if this natural type of self oriented behaviour goes beyond personal well being concern and at certain moments, in the case of certain individuals, will elicit a detrimental effect towards others. This is the point where selfish behaviour can be seen as having negative, anti social meaning. Research of selfishness, compared to the other human behaviours and traits is still not as extensive as it would need. A recent study by Diebels et al, has identified selfishness as a sixth personality factor in addition to the Big Five. The study also reiterates the much debated idea that true altruism is a myth and that behind any pro-social behaviour there's a selfish, egoistical reason (Diebels et al, 2018, p. 1-8). Although the study uses the HEXACO Personality Inventory to assess levels of selfishness, two other shorter and reliable tools have also been established as reliable in measuring this variable. These are the Selfism Scale by Phares & Erskyn (1984) and the Self and Other Interest Inventory by Gerbasi & Prentice (2013) (Diebels et al, 2018,p. 7). The HEXACO inventory was considered to be too long to be employed for the current study. As such the Selfism Scale will be employed for the current research. The scale has been previously used in various organisation and presented a reliability and validity ranging from acceptable to strong, indicated by the Cronbach alpha coefficient value (Phares&Erskine, 1984) (Allen, 2003, p. 10; Konstam, Holmes & Levine, 2003, p. 176).

1.2 Age and selfishness

Selfish orientation across age has been also investigated to a certain extent and the findings seem to converge with the idea that these are negatively correlated. It seems that

although up to a certain stage of childhood there's no significant variation, children start to shift away from a selfish orientated behaviour towards a socially orientated one (Martinsson, Nordblom, Rützler & Sutter, 2010, pp. 1-2). These pattern is supported by several studies (e.g. Harbaugh et al., 2003; Sutter&Kocher, 2007; Fehr, Bernhard, & Rockenbach, 2008), as well as a more recent one done on a pool of 650 children and adolescents aged 10-15 from Sweden and Austria (Martinsson et al., 2010, p. 1). In addition, investigating the tendency of both self and other-orientation in individuals over life span, Gerbasi & Prentice (2013) found a non significant relationship during college age, but a positive significant one between them as age increases (Gerbasi & Prentice, 2013, p.45). Still, it is not clearly understood why this trend can't be seen in some individuals, which will either remain salient, or even detach further from a pro social direction. This may be correlated with generativity, Erickson's (1963) seventh developmental stage. One of the theories related to this involves the individual's emerging interest in future generation, both for self expansion, as well as for the prosperity of others (Gerbasi & Prentice, 2013, p. 46).

1.3 Gender and selfishness

Previous research in gender differences over egotistical, or others-orientated attitudes have generally found that women seem to be more pro social inclined, while male seem to be more self driven (Shpancer, 2011). These findings would be logically in correlation with a woman's maternal and overall caring and nurturing behaviour, as opposed to self enhancement, game winning driven male attitude (Shpancer, 2011). Gerbasi & Prentice (2013) findings are consistent with this as well. According to them the non significant difference during college years ,developed into a significant one during adulthood, revealing a more pro social orientation for women, as opposed to a higher self orientation in men (Gerbasi & Prentice, 2013, pp. 46-47). These results were further extended by Martinsson et al. (2010) which also investigated how these gender differences vary across age. They found

that at early childhood stages, females seem to be more self inclined and even envious of other's success than males. Still, at later stages, going into adolescence and then later in life, the trajectories seem to reverse and although both genders elicit a more socially inclined attitude, females shift to a much larger degree from self orientation to others orientation (Martinsson et al., 2010, p. 5).

1.4 Locus of control and selfishness

Locus of control entitles a human attribute which determines the individual's beliefs and behaviour based on his expectations and reinforcements (de Carvalho, p. 183). Locus of control can be internally or externally orientated. Individuals with an external locus of control share the belief that external forces, destiny, luck, others and other characteristics are determinants of the journey through life. On the other hand, the individuals internally orientated would consider that they are in control of what is happening to them and that they can influence this through their own actions, effort and capacity (Rotter, 2004, p. 2). Based on these two types of locus of control, individuals should exhibit different levels of selfishness, or altruist behaviour. For example a study done on ethical judgment and whistle-blowing intention suggested that individuals with internal locus of control are more inclined towards taking responsibility, as opposed to their external counterparts revealing a less selfish behaviour (Chiu, 2003, p. 68). According to Blake (1999) there are certain barriers in eliciting a pro environmental, or pro social behaviour. These are individuality, responsibility and practicality. Responsibility is viewed as the synonymous to the notion of locus of control. As such, for example the individuals won't engage in pro social behaviour and would rather act selfishly if they lack the confidence in the result of their action in a certain situation (Kollmuss & Agyeman, 2002, p. 247). From the locus of control point of view this translates into the fact that individuals with external locus of control would be much more inclined towards a protective, self centred behaviour, while the ones with an internal locus of control

would be much more prone to elicit a pro social, others orientated behaviour (Kollmuss & Agyeman, 2002, pp.255-256).

1.5 Social support and selfishness

Social support is a vital component of a well balanced life and it has been show to act as a buffer on both genetic and environmental vulnerabilities (Ozbay, Johnson, Dimoulas, Morgan, III, Charney & Southwick, 2007, p. 35). "Information from others that one is loved and cared for, esteemed and valued, and part of a network of communication and mutual obligations (Cobb, 1976; Cohen & Wills, 1985; Seeman, 1996) seems to define the social support (Kim, Sherman & Taylor, 2008, p. 518). Cultural differences studies suggest a different approach in seeking social support based on a more individualistic, or collective orientated mentality. As such, a more individualistic, others orientated culture seem to rely and seek less social support, while a more self orientated one would be more open in seeking social support (Kim et al., 2008, p. 519). A recent study looking at the costs and benefits of selfishness and otherishness for psychological well-being, health and relationships, have illustrated the fact that self directed attitude may lead to detrimental effects not only on others, but the individual itself (Crocker, Canevello & Brown, 2017, p. 318). Such, it is justified to believe that there is a strong relationship between social interaction, or social support and selfishness. In fact, other studies have flagged the fact that previous situations in which individuals have either witnessed acts of kindness, or have received help themselves, were much more inclined to move away from selfish behaviour and act pro socially, providing social support in return (Mattis, Hammond, Grayman, Bonacci, Brennan, Cowie, Ladyzhenskaya & So, 2009, p.10).

1.6 Religious commitment and selfishness

Religion has always played an important role in social interaction and personal behaviour. Research conducted by Sabato & Kogut (2018) with children from religious and

non-religious households, looking at the relationship between religiousness and altruism has shown that there is a positive correlation between these two variables. Children from religious families were more inclined to elicit pro social behaviour than the ones in non-religious families. Also, this trait seem to become more internalized as age increases (Sabato & Kogut, 2018, p. 1367). In contrast, although these findings are recognised and the general view is that the religious belief of a household would shape the behaviour and inclination towards altruism of the child, a recent study conducted of a pool of 1,170 children, aged 5-12 from various countries and religions, have shown that actually the children from religious households are less inclined towards altruistic behaviour. Furthermore, it has shown that the longer the exposure to such environment, the relationship between variables becomes more negative (Decety, Cowell, Lee, Mahasneh, Malcolm-Smith, Selcuk & Zhou, 2015). As such, it is valid to draw the conclusion that religiousness may play an important role in the levels of selfishness of an individual and that it would require further investigation.

1.7 Selfishness and related behaviours

As previously stated, selfishness in a more or less amount is part of every individual's being and it is vital for its survival. As evidenced from the literature review above, both positive and negative aspects are being correlated with the notion. On one hand selfishness is seen as an attitude elicited at the expense of others, but on the other hand some views are in favour of it, arguing that one should first take care of its own well being, so that he, or she can be able to provide help to others. So looking at the connotations of selfish related behaviours, the answer is not a straightforward one. If looking at manipulation, or criminal acts for example, aimed to bring benefit to the individual at the expense of the victims, then obviously there's a negative, immoral association (Johnson, 2015). Another possible situation would be that sometimes selfish acts can have neutral effects, meaning that the individual will pursue a certain personal goal without interfering in any form with the resources of

others (Johnson, 2015). This situation may be debated arguing that at any point that a resource is being used in one situation, it's not available anymore somewhere else. And finally, it may be argued that selfishness is not only a virtue, as explained by Ayn Rand (1964), but it may also be a source of positive behaviour. For example in a mutually beneficial exchange, or in a relationship where each partner makes compromises, occasionally sacrificing something, in order to obtain something else they desire (Johnson, 2015).

1.8 Summary of research findings

In conclusion, selfishness is an essential part of every individual. Recent studies have actually identified it as the sixth personality factor (Diebels et al, 2018, pp. 1-8). Behaviours related to it may have both positive and negative connotations, depending on situation and other factors (Johnson, 2015). Age seems to be negatively correlated to selfishness (Martinsson et al., 2010, pp.1-2; Gerbasi & Prentice, 2013, pp.45-46). Looking at gender differences, previous studies have revealed that males seem to be more closely related with egotistic attitudes (Gerbasi & Prentice, 2013, pp. 46-47). From the locus of control point of view this translates into the fact that individuals with external locus of control would be much more inclined towards a protective, self centred behaviour, while the ones with an internal locus of control would be much more prone to elicit a pro social, others orientated behaviour (Kollmuss & Agyeman, 2002, pp.255-256). Studies on altruism have flagged the fact that previous situations in which individuals have either witnessed acts of kindness, or have received help themselves, were much more inclined to move away from selfish behaviour and act pro socially, providing social support in return (Mattis et al., 2009, p. 10). Although findings related to the positive impact of religious over pro social behaviour are generally recognised, recent studies have shown that actually the children from religious households

are less inclined towards altruistic behaviour and consequently, more inclined towards selfishness (Decety et al., 2015).

1.9 Rationale of the study, hypothesis and research question

As concluded, selfishness, although a necessary trait for self preservation and evolution, if taken beyond a certain level, has various negative implications. As such, the study was initiated in order to further investigate the topic attempting to bring additional information to the existing research, which could be used to develop strategies that could tackle these negative effects. During this process, it has been noticed that the previous research into the topic seem to be scarce, this only revealing the need to further study.

In the first stage, the study will aim to clarify how levels of selfishness may differ between 2 groups of individuals, one with internal and another one with external locus of control. Secondly the current study aims to investigate the if there is a significant relationship between age and levels of selfishness. Thirdly, the gender differences in levels of selfishness will be looked into. This will be followed by an analysis of the cumulated effect of locus of control, social support and religiousness over the levels of selfishness. Finally an inductive qualitative measure will look into the selfishness related behaviours. This will be done by analysing responses to the following research question: "Please describe in your own words, using a few sentences, what type of behaviour would selfishness lead to".

1.10 Hypotheses

H1: A differential quantitative test will be used to determine whether there is significant difference in levels of selfishness between participants with internal locus of control and the ones with external locus of control.

H2: A quantitative correlation test will be used to determine a possible significant correlation between levels of selfishness and age.

H3: A differential quantitative test will be employed to investigate if there is a significant difference in levels of selfishness between genders.

H4: An causality analysis will be used to study the cumulated impact of levels of locus of control, social support and religiousness over the levels of selfishness.

1.11 Research question

An inductive thematic qualitative analysis will be conducted, following all 6 Braun&Clarke stages, using the responses received to the question "Please describe in your own words, using a few sentences, what type of behaviour would selfishness lead to".

Chapter 2: Methodology

2.1 Participants

The participants in this study were selected through purposive sampling from general population of various nationalities, age, education levels, etc.. These were approached through Facebook, email, LinkedIn, WhatsApp. The only selection involved the exclusion of under 18 years old participants. From a total of 187 participants, 8 were excluded based on this criteria. The age range of the remaining 179 participants was 47, with a mean of 37.27 and a standard deviation value of 9.44 (table 1.). Regarding gender, 56 were males and 123 females. Out of the whole pool of participants, only 106 fully completed the quantitative section, while for the qualitative section a total of 127 responses were received.

2.2 Design

A mixed methods survey design was employed to be able to analyse both the quantitative section, as well as the qualitative section.

In testing the first two hypotheses a cross sectional design was used. More specifically this was used for the first hypothesis to determine the difference in dependent variable, levels of selfishness, between the 2 independent variables represented by groups with different orientations of locus of control. For the second one, the same design analysed differences on the same dependent variable, between 2 other independent variables represented by genders. In the case of the third hypothesis a correlation design was used to analyse the relationship between the dependent variable, levels of selfishness and the independent variable, age. For the fourth hypothesis, a causal relation design applied to study the cumulated impact of 3 predictors represented by levels of locus of control, social support and religiousness upon the criterion level of selfishness.

The qualitative semi structured interview designed was based on 1 open ended research question. The variables of interest were selfishness and related behaviours.

2.3 Materials

The materials used in this research included two on line surveys, one in English and one in Romanian language, including 8 pages with 66 questions/statements, information sheet, consent form and debrief page. These were developed on SurveyMonkey using a Samsung R530 password protected laptop and based on the information stored on it.

First section of the surveys provided the information sheet including the consent form. These were followed by the demographic questions gathering data regarding gender and age. The open ended research qualitative question followed and then 4 sets of questionnaires measuring 4 variables. The NS-28 Selfism scale was used as a measure of selfishness. A version of Rotter's Locus of Control scale was used to measure orientation of locus of control. The Multidimensional Scale of Perceived Social Support (MSPSS) scale was used to measure levels of social support perceived by participants. The Religious Commitment Inventory-10(RCI-10) was employed to analyse the religiousness levels of the participants. The survey finished with the debrief sheet. Data based on these surveys was collected between 20/01/2019 and 10/03/2019.

The open ended question "Please describe in your own words, using a few sentences, what type of behaviour would selfishness lead to." was constructed based on Ayn's Rand opinion regarding the topic of selfishness, and the fact that people mostly associate the term with negative feelings, behaviour, as per her book "The Virtue of Selfishness" (1964) (Johnson, 2015). Participants were requested to provide their opinion in "a few sentences", in order to gather as much as possible information.

2.3.1. The Selfism scale NS-28 (Phares & Erskine, 1984) (LASA, 2018)

This scale was designed to measure the way that an individual deals the satisfaction of needs. It involves a number of 40 questions from which the 12 fillers will be removed. The responses are measured on a 5 point Likert scale ranging from "strongly disagree" to

"strongly agree". Questions include "I regard myself as someone who looks after his/her personal interests", or " In striving to reach one's true potential, it is often necessary to show concern for other people". Possible scores range from 28 to 140. A higher score reveals a more selfish way of dealing with situations, while a lower score implies a more altruistic focus. The test previously shown a good reliability and validity indicated by a Cronbach alpha coefficient ranging from .61 to .91 (Phares&Erskine, 1984) (Allen, 2003, p. 10; Konstam, Holmes & Levine, 2003, p. 176).

2.3.2. Locus of control scale (J.B. Rotter, 1966)

The locus of control scale was designed to measure the generalized expectancies as a result of internal, or external control of reinforcement. The test comprises a set of 13 questions each with 2 variables of response. The participants are scored for each version of response with either 1 point, or none. As such the scoring ranges from 0 to 13. The lower scores (0-6) indicates an internal locus of control, while the higher ones (7-13) an external locus of control. The version used is a shorter version of the initial one created by Rotter in 1966, from which the fillers have been removed, as well as another 10 questions. This version is based on the work of Mirels (1970) and Gurin, Gurin, and Morrison (1978) and it has been used before to study behaviours inside organizations (Greenberger, Strasser, Cummings, & Dunham, 1989) (Howell & Avolio, 1993, p. 894). The test previously shown an acceptable reliability and validity indicated by a Cronbach alpha coefficient of .69 (Howell & Avolio, 1993, p. 894).

2.3.3. Multidimensional Scale of Perceived Social Support(MSPSS)(Zimet, Dahlem, Zimet & Farley, 1988)

The test has been designed to measure the perceived support received from "friends", family" and "significant other", as well as the "overall perceived support". It is made up of a set of 12 questions, including " There is a special person who is around when I am in need.",

or " I can talk about my problems with my family.". Four for each subscale. The participant has 7 options of rating each response ranging from "Very strongly disagree" to "Very strongly agree". There are different options of scoring, but the option used in the current study involved the mean values ranging from 1 to 7. The lower scores meant a lower social support, while the higher means indicated a higher social support perceived. The test has previously shown strong to excellent reliability and validity indicated by the Cronbach alpha coefficient values ranging from .81 to .98 (Wongpakaran, Wongpakaran & Ruktrakul, 2011, p. 161).

2.3.4. The Religious Commitment Inventory-RCI-10 (Worthington, E. L., Jr., Wade, N. G., Hight, T. L., Ripley, J. S., McCullough, M. E., Berry, J. W., Schmitt, M. M., Berry, J. T., Bursley, K. H., & O'Conner, L., 2012)

The test has been developed to investigate the extent to which a person follows religious beliefs, values and reflects this in every aspect of his/hers existence. It comprises in a set of 10 questions, including " I often read books and magazines about my faith", or " Religious beliefs influence all my dealings in life" rated on a 5 point Likert scale ranging from "not at all true for me" to "totally true for me". The range of scoring is from 10 to 50. Higher scores are correlated with a higher degree of religiousness commitment, while the lower scores with a lower degree. The test has previously shown excellent reliability and validity indicated by the Cronbach alpha coefficient value of .96 (Worthington et al., 2003, p. 90).

2.4 Procedure

Development of the surveys started in January 2019 using a Samsung R530 password protected computer and editing them in Microsoft word. The surveys contained an information sheet (see appendix.) explaining briefly the aims of the study, the fact that it is

done as part of the final year Psychology undergraduate project. No deception was used. The participants were informed that in the information sheet that filling in the questionnaires and submitting them would mean that they consented in doing so. At the end a debrief sheet (see appendix.) would of provided ways of obtaining help, or raising concerns. Anticipating possible language barriers for some participants, a Romanian version of the survey was created as well. The Romanian version was then translated back into English by a third party and also checked through Google Translate. The outcome was finally compared with the original English version. This was done in order to ensure that the significance of each question, statement is being preserved avoiding any loss in translation. A Survey Monkey account was set later on. Two links were created based on the previously developed surveys. These went live on 20/01/2019, after being reviewed. The average time of completion of the survey was 13 minutes. The links accompanied by a brief description were posted privately on Facebook, and also posted on WhatsApp's Psychology BA(Hons) students group, initially. Later, obtaining emails of consent, the links were sent to other two private organisations. Finally the link has been shared on LinkedIn, as well. The data was collected on 10/03/2019 and exported on the same laptop as above in a Microsoft excel file. Raw data has been arranged, setting up identification numbers for the participants, removing the underage participants, translating Romanian answers into English and split into a file containing the qualitative data and another one with quantitative data. In the one containing quantitative data, the value of "-9" for missing responses was added and answers were coded into numerical values. The resulting quantitative data was subsequently imported into IBM SPSS statistics 25 software and analysed. The Microsoft excel file containing qualitative data was processed using NVivo 12. Both statistical software were provided by Dublin Business School (DBS).

2.5 Ethics

The surveys were developed in accordance with the DBS ethical guidelines and the Psychological Society of Ireland (PSI) code of professional ethics. In accordance with these guidelines, the participants were informed about the aims of the study, the reasons behind conducting it, the fact that participation is completely voluntary, their right to withdraw at any stage prior to submission. They were also notified that the data collected is anonymous, no personal information being gathered, or being able to attribute it to any of the responses. They were also explained that data will be stored on a password protected computer, in a password protected file and that it will be deleted after 6 months of sufficient responses collected. Contacts of the researcher and supervisor were also provided in case needed for further information. A debrief sheet was placed on the final page as part of the survey, providing further contacts if required. As expected, due to an uncomfortable topic, some items raised comments, but all enquires related to the survey content which were put forward to the researcher were dealt with. With the exception of the age related question, no other items necessary required an answer in order to complete the full survey. This carried the risk of missing answers, but allowed the participants to avoid uncomfortable items. All answers from participants under 18 years old were removed completely. No audio, video, or photographic data has been collected.

A research proposal including a research ethics review application was submitted to DBS commission of ethics, prior to links being uploaded online. Once full approval has been received the links were posted online. Prior to sending these through email, approval was sought from the organisations (see appendix). After revision, the study was approved by the DBS Psychology program coordinator on 12/12/2018. The links have been posted, sent only once avoiding to pressure in any way the potential participants.

2.6 Data analysis

In the case of quantitative analysis, due to the fact that some data violated the normality assumptions, both parametric and non parametric tests were used. Both descriptive statistics and inferential statistics were used to compute relevant data. Inferential statistics included independent T test, Spearman Rho test, Man-Whitney U test and multiple regression.

In conducting the qualitative research, a thematic analysis was employed. An inductive, semantic, realist and rich in description method was involved.

Chapter 3: Results

3.1 Descriptive statistics

Out of the 179 total over 18 years old participants, 114 provided valid answers to the locus of control scale, with a mean score of 6.22 (table 1. & 2.). In terms of grouping variables, 61 of these were in the internal locus of control group, while the other 53 in the external one (table 1.). Also, regarding gender groups, there were 56 male respondents and 123 female respondents (table 1.). Age was a necessary requirement to provide, so all 179 respondents provided this data, presenting a mean of 37.47 (table 1. & 2.). A total of 115 valid responses were recorded for the social support scale with an average mean scoring of 5.74 (table 1. & 2.). Similarly a total of 115 participants completed the religious inventory with a mean of 18.57 (table 1. & 2.).

Table 1. Descriptive statistics and frequencies of grouping variables

Grouping variables	N	Mode	Std. Deviation	Frequency
Locus of Control groups	114	1	.47	-
Internal Locus of Control groups	61	-	-	53.5
External Locus of Control groups	53	-	-	46.5
Gender	179	2	.5	-
Male	56	-	-	31.3
Female	123	-	-	68.7

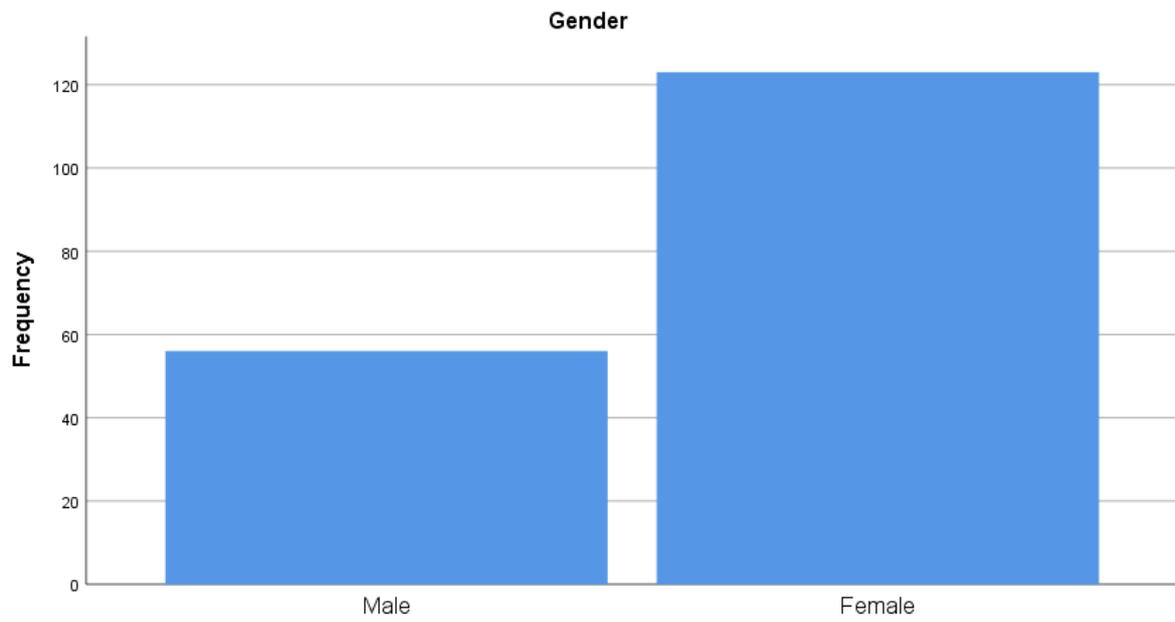


Figure 1.

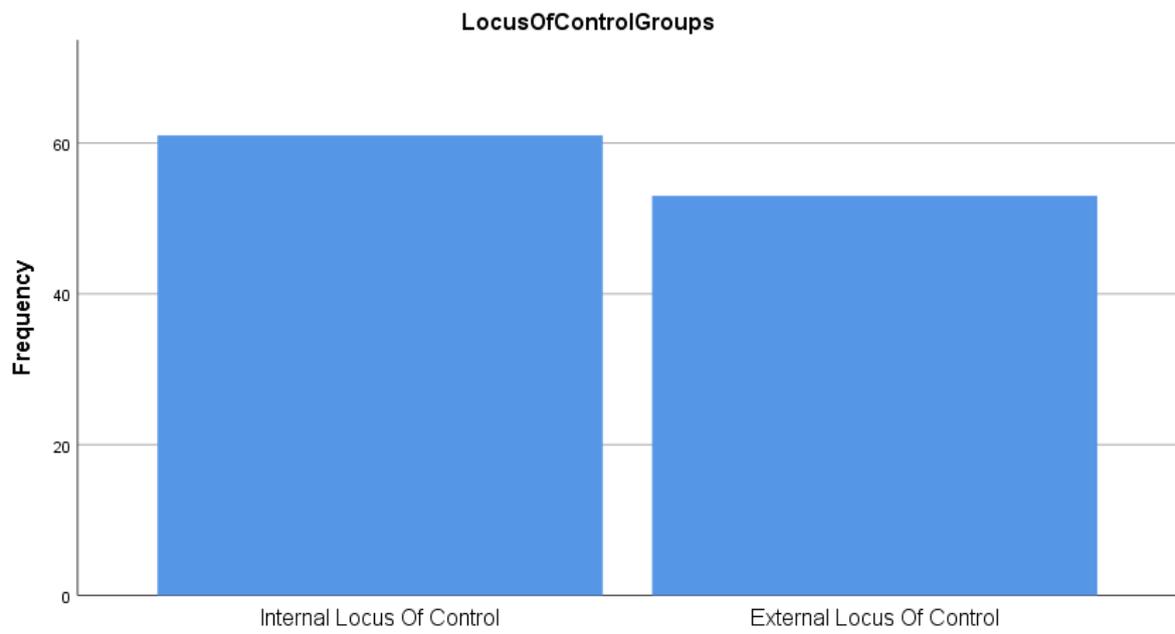


Figure 2.

Table 2. Descriptive statistics of independent/predictor and dependent/criterion variables

IV/predictor, DV/criterion	N	Mean	Median	SD	Variance	Min	Max	Skewness	Kurtosis
Age	179	37.47	36	9.44	89.01	18	65	.77	.33
Selfism total	114	86.91	86	13.95	194.66	62	120	.46	-.2
Locus of Control Total	116	6.22	6	2.1	4.42	2	11	.02	-.85
Social support Mean	115	5.74	5.92	1.09	1.2	1.25	7	-1.48	3.18
Religiousness Total	115	18.57	14	10.63	112.97	10	50	1.46	1.34

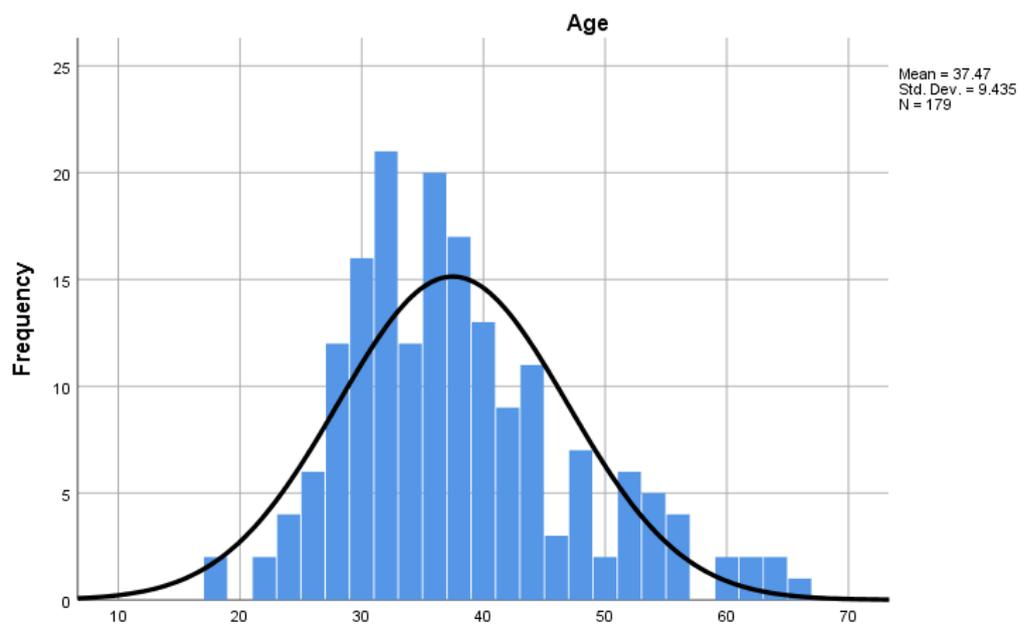


Figure 3.

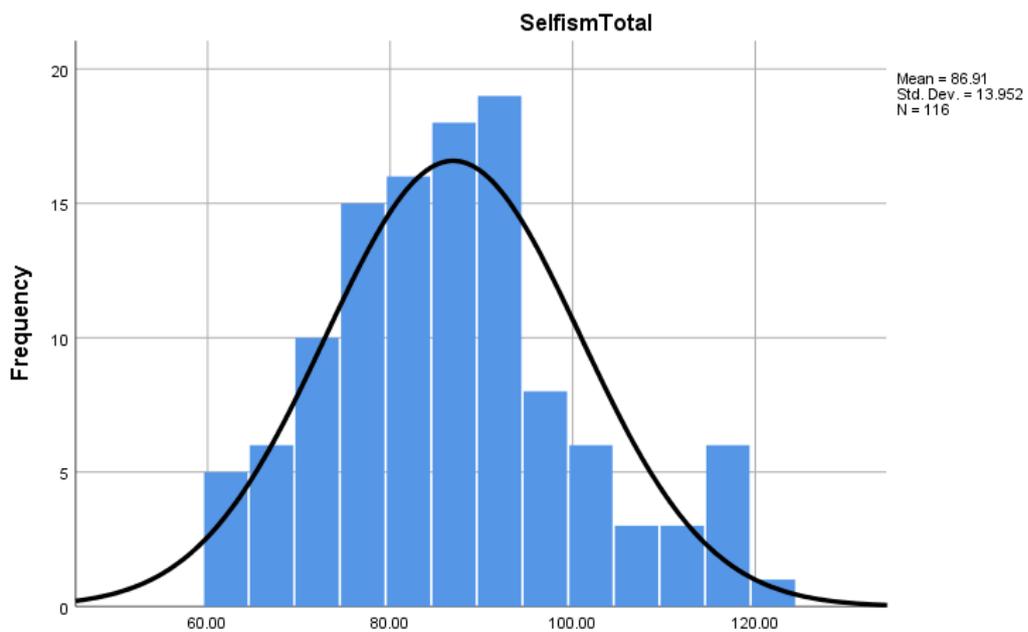


Figure 4.

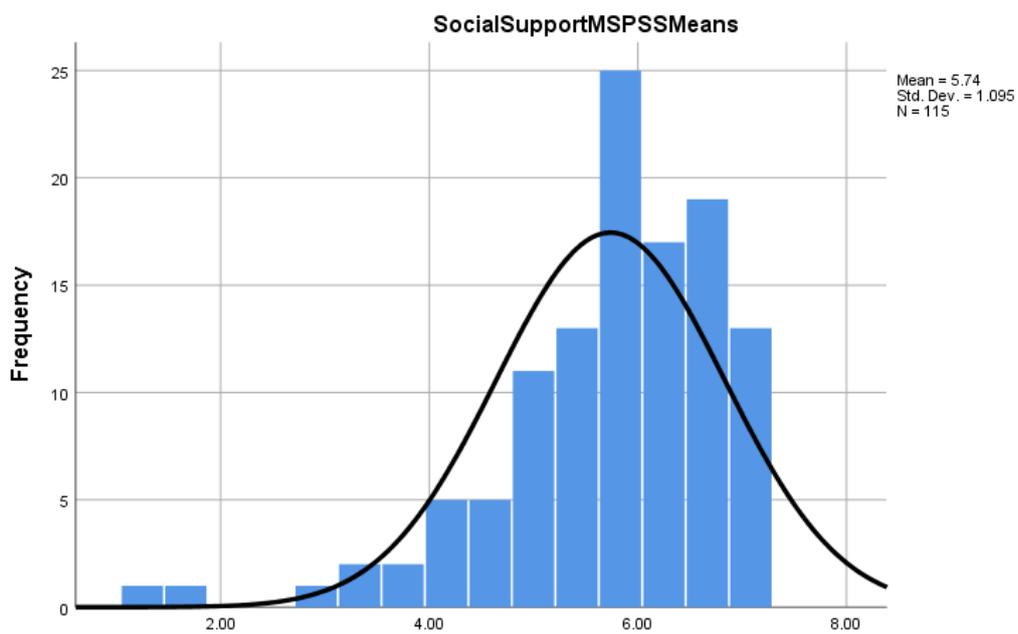


Figure 5.

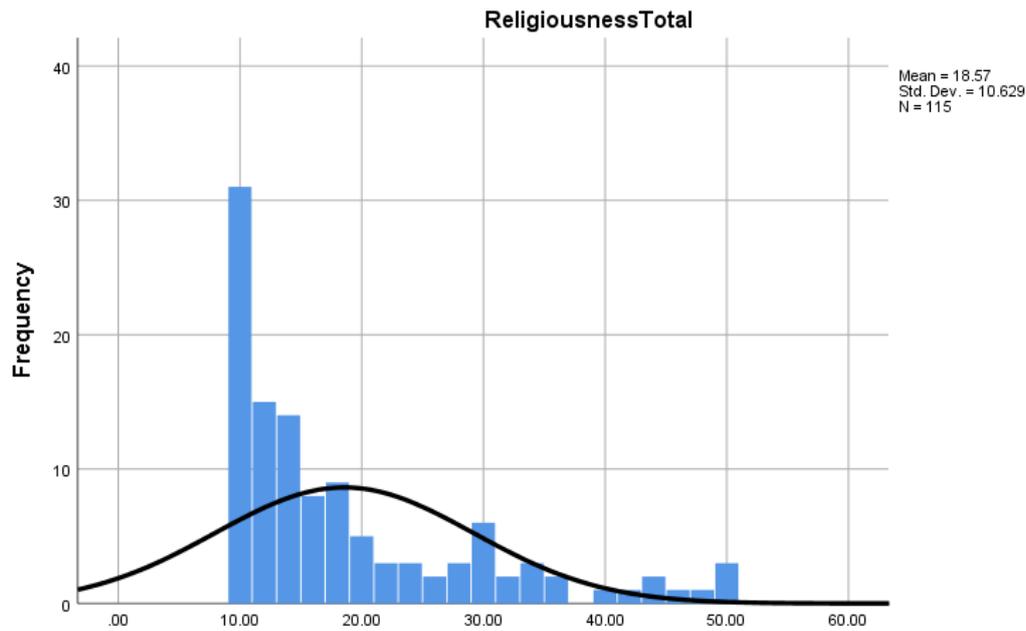


Figure 6.

The reliability of each scale was assessed using the Chronbach alpha coefficient value. All scale presented strong to excellent reliability and validity, except for the Locus of Control scale, who reached a value of .41 (table 3.).

Table 3. Reliability data related to scales used

Scale	N of participants	N of items	Cronbach alpha
NS-28 Selfism scale	114	28	.78
Locus of Control scale	116	13	.41
MSPSS scale	115	12	.94
RC-10 Religious commitment inventory	115	10	.96

3.2. Inferential statistics

This section will present the inferential statistical results extracted from the analysis of the 4 hypotheses put forward, as well as additional findings.

3.2.1. Hypothesis 1

An independent T test was used to test the first hypothesis. There were 109 valid responses related to this hypothesis. Previous analysis was conducted to check assumptions. Normality of scores distribution was confirmed by the Shapiro-Wilk coefficient values which scored .425 for internal locus of control group and .076 for the external locus of control group.

The test found no statistically significant difference between levels of selfishness of the group with internal locus of control ($M = 85.98$, $SD = 12.76$) and the group with external locus of control ($M = 88.77$, $SD = 14.73$) ($t(107) = -1.33$, $p = .188$, $CI (95\%) = 8.71 \rightarrow 1.73$). Therefore the null hypothesis was accepted.

3.2.2. Hypothesis 2

The second hypothesis was tested conducting a Spearman Rho test. There were 116 valid responses related to this hypothesis. Previous analysis was conducted to check for assumptions of normality and linearity. Assumptions were violated confirmed by the Shapiro-Wilk coefficient values which scored .011 for selfism total and .002 for age, indicating that the non parametric test above was appropriate.

The test found that there was no statistically significant correlation between levels of selfishness and age ($r_s(116) = -.14$, $p = .145$). Therefore the null hypothesis was accepted.

3.2.3. Hypothesis 3

In testing the third hypothesis a Man-Witney U test was used. There were 116 valid responses related to this hypothesis. Previous analysis was conducted to check for assumptions of normality. Assumptions were violated confirmed by the Shapiro-Wilk

coefficient values which although scored acceptable with a value of .235 for male group, it broke the rule by scoring .024 for female group, indicating that the non parametric test above was appropriate.

The test revealed that the male group (mean rank = 50.82) and the female group (mean rank = 61.3) did not differ significantly in levels of selfishness ($U = -1.49$, $p = .137$). Therefore the null hypothesis was accepted.

3.2.4. Hypothesis 4

The fourth hypothesis was analysed using a multiple regression. There were 106 valid responses related to this hypothesis. This met the sample size requirements of 15 to 40 participants per predictor. Further analysis checked and confirmed the analysis meeting the assumptions for normality, linearity and lack of multicollinearity and singularity. Still, when looking at Mahalanobis coefficient of 17.29, over the maximum admitted value of 16.27 indicating the presence of outliers. As such the outliers were removed from the raw data and the analysis ran again. Finally, after another exclusion of 2 outliers the Mahalanobis coefficient dropped at the value of 10.92, well under the maximum accepted limit.

The multiple regression analysis was employed to study whether locus of control, social support and religiousness were predictors of the selfishness criterion. The results of the regression revealed a significant impact of the 3 predictors ($p = .009$), which explained 8% of the variance ($R^2 = .08$, $F(3, 100) = 4.04$, $p = .009$) (table 4 & 5). It was found that locus of control did not significantly predicted levels of selfishness ($\beta = .17$, $p = .088$, $CI (95\%) = -.17 \rightarrow 2.38$), as well as social support who did not predict levels of selfishness ($\beta = .02$, $p = .884$, $CI (95\%) = -2.71 \rightarrow 3.15$). However religiousness was a significant predictor of levels of selfishness ($\beta = .28$, $p = .005$, $CI (95\%) = .11 \rightarrow .58$) (table 4).

Table 4. Summary of overall impact of predictors over the criterion

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2045.53	3	681.85	4.04	.009
Residual	16884.84	100	168.85		
Total	18930.38	103			

Table 5. Summary of multiple regression for variables predicting Selfishness

Variable	B	SE	B	Sig.	CI(95%)	
					Lower Bound	Upper Bound
Locus of Control	1.1	.64	.17	.088	-.17	2.38
Social Support	.22	1.48	.02	.884	- 2.7	3.15
Religiousness	.35	.12	.28	.005	.11	.58
R ²				.08		

3.3 Research question

For the qualitative analysis the data provided was introduced into NVivo 12. Following the 6 stages of thematic analysis, the data was reviewed in order to familiarise with it. This was followed by the inductive coding of it in order to create nodes and child nodes where necessary. Themes were created, reviewed and refined. In the end these were named and defined. Finally the report was generated by creating word cloud and thematic map. The following themes were defined in relation to the way respondents viewed the selfishness related behaviours: "negative behaviour", "positive behaviour" and "emotional instability" (figure 7.).

3.3.1. Negative behaviour

Negative behaviour theme included further subthemes. These were defined as "disregard for others", "extreme behaviour", "flawed behaviour" and "self centred behaviour" (figure 7.).

Disregard for others was further seen careless behaviour, infidelity, lack of empathy, laziness and poor communication (figure 7.): "careless regarding others" (respondent 103), "infidelity" (respondent 3), "lack of empathy & understanding of others" (respondent 8), "lazy" (respondent 6), "poor communication" (respondent 82).

Extreme behaviour included ideas of aggressiveness and suicide (see Figure 7.): "Selfishness could generate hatred, conflict, and then violence" (respondent 150), "Suicide" (respondent 52).

Flawed behaviour included notions of greed and envy (figure 7.). Examples of responses included " Thinking of the belongings of others or wishing to be in someone else's place" (respondent 154) and "greed" (respondent 79).

The theme of self centred behaviour was constructed on the ideas of arrogant behaviour, biased processing, narcissism, narrow thinking and sense of entitlement (figure 7.): "arrogant" (respondent 151), " a type of unhealthy behavior that means we are not aware of our defects but we see them easily in others" (respondent 167), "narcissistic tendencies" (respondent 60), "limited" (respondent 10), " When you think you are entitled to everything" (respondent 109).

3.3.2. Positive behaviour

Positive behaviour related to selfishness was viewed as protective behaviour, self sufficient behaviour and success driven behaviour (figure 7.). This could be extracted from responses like "protective regarding self" (respondent 6), "living a more independent life" (respondent 27), "always want to win" respondent 151).

3.3.3. Emotional instability

Emotional instability included notions of cowardice, erratic behaviour, negative mood, poor mental health and self sabotage. Self sabotage was further split into isolation and relationship breaker (figure 7.). Responses like "cowardice" (respondent 138), "an unstable behaviour now happy and in a short while angry" (respondent 170), "depression" (respondent 33), "isolation" respondent 24), "poor relationships" respondent 82) revealed these notions.

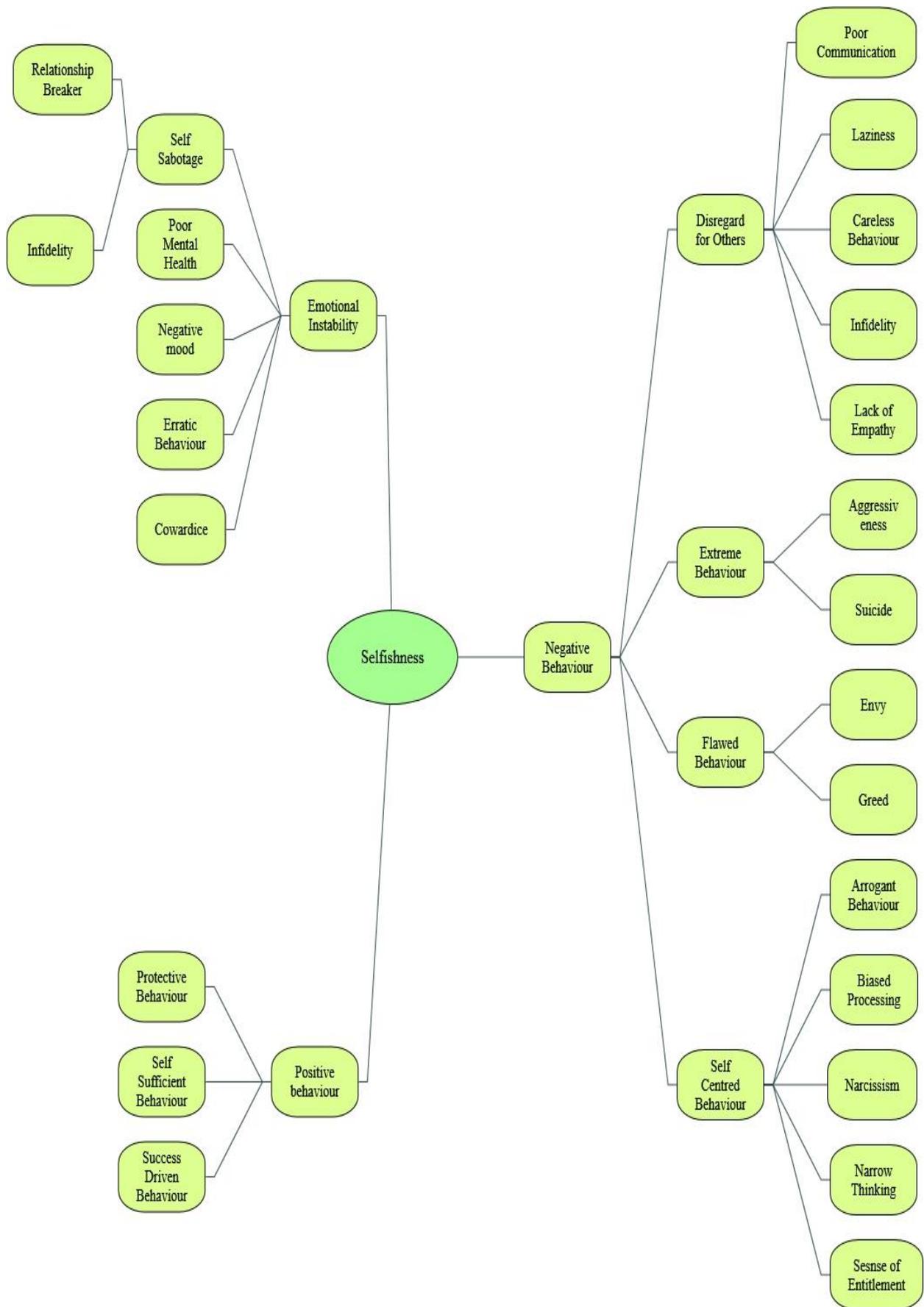


Figure 7.

Chapter 4: Discussion

4.1 Aim of the study

The purpose of the current study was to investigate the possible differences in levels of selfishness between genders and groups of people with either internal or external locus of control. Furthermore a possible significant correlation between levels of selfishness and age was examined. An analysis was also run in order to determine a possible prediction of selfishness levels by the cumulated effect of locus of control, social support and religiousness levels. Finally the study looked at selfishness-related behaviours.

4.2 Analysis by hypothesis and research question

Hypothesis 1

Examining the first hypothesis no statistically significant difference between levels of selfishness of the group with internal locus of control ($M = 85.98$, $SD = 12.76$) and the group with external locus of control ($M = 88.77$, $SD = 14.73$) ($t(107) = -1.33$, $p = .188$, $CI (95\%) = 8.71 \rightarrow 1.73$). The result obtained do not correlate with the previous findings of the studies conducted by Chiu (2003) and Kollmuss & Agyeman (2002). According to Rotter (2004, p. 2), people with internal locus of control share the idea that they can actively influence the outcome of a situation. As such, these are more inclined to take ownership and responsibility, breaking more easily the barriers described by Blake (1999) that stand in the way of engaging in a pro social, selflessness behaviour. At the other end of the spectrum, the individuals with external locus of control seem to be more self-protective orientated (Kollmuss & Agyeman, 2002, pp. 247-256). The difference between these findings and the ones of the current study might be explained on one hand by the different models used in the analysis, but even more, by the lack or presence of other barriers that would prevent a person from engaging in a pro social behaviour, exhibiting a selfless behaviour. For example barriers like quality of life, external or internal reinforcers, values (Kollmuss & Agyeman, 2002, p. 246), as well as others

would be most likely different for each participant, as they belonged to various nationalities, so different cultural values, environments. This might have interfered with the responses received for the selfism scale, thus interfering with the outcome of the analysis.

Hypothesis 2

The test investigating the second hypothesis found that there was no statistically significant correlation between levels of selfishness and age ($r_s(116) = -.14, p = .145$). Again this does not support previous findings of Martinsson et al. (2010), Harbaugh et al. (2003), Sutter&Kocher (2007), Fehr et al. (2008), Gerbasi & Prentice (2013) which found a positive correlation between age and selfishness in the case of adults. The possible reason behind this inconsistency might be again related to the use of different measurement materials, as well as the presence of other interfering factors like cultural differences, social status, but also the uneven distribution between the gender of participants, which were in an overwhelming proportion females.

Hypothesis 3

Investigation of the third hypothesis revealed that the male group (mean rank = 50.82) and the female group (mean rank = 61.3) did not differ significantly in levels of selfishness ($U = -1.49, p = .137$). This result contrasts with the findings presented in the above literature review. Studies of Shpancer (2011), Gerbasi & Prentice (2013) support the idea that women are more prone to selfless behaviour as oppose to men who engage more intensely in winning games, exhibiting a more self-related behaviour. Furthermore Martinsson et al. (2010) found that females will shift away from selfish behaviours in adulthood. Still, consistent with the current study's results, Dawes et al. (1977), Stockard et al. (1988), Orbell et al.(1994) and Mason et al. (1991) found no significant difference between genders in levels of selfishness. Again, the environmental factors seem to be playing a major role in these mixed results

(Eckel & Grossman, 1998, pp. 727-728). The imbalance of female participants compared to the male participants might of had also a role in inconsistent findings.

Hypothesis 4

The multiple regression analysis was employed to study the fourth hypothesis, namely whether locus of control, social support and religiousness were predictors of the selfishness criterion. The results of the analysis revealed a significant impact of the 3 predictors ($p = .009$), which explained 8% of the variance ($R^2 = .08$, $F(3, 100) = 4.04$, $p = .009$) (see table 4 & 5). It was found that locus of control did not significantly predicted levels of selfishness ($\beta = .17$, $p = .088$, $CI (95\%) = -.17 \rightarrow 2.38$), as well as social support who did not predict levels of selfishness ($\beta = .02$, $p = .884$, $CI (95\%) = -2.71 \rightarrow 3.15$). However religiousness was a significant predictor of levels of selfishness ($\beta = .28$, $p = .005$, $CI (95\%) = .11 \rightarrow .58$) (see table 4). Although previous studies presented in this work have found that locus of control play a role in levels of selfishness along other factors (Chiu, 2003, p. 68; Kollmuss & Agyeman, 2002, pp.255-256), the current study wasn't consistent with these results, a non significant impact ($p = .088$) being revealed. Again other environmental factors might of influenced these results. Furthermore results of Mattis et al. (2009) revealed a positive significant correlation between social support and pro social behaviour, which are not in accordance with the analysis above. This might be a result of uneven distribution in levels of social support, almost all participants reporting a high support received (see table 2. & figure 5.). Findings related to religious commitment's impact over levels of selfishness were in accordance with previous recent study of Decety et al. (2015), which revealed a positive direction. This might be a reflection of the fact that although religious education tend to guide the individual towards a positive, selflessness direction, the religious congregations might offer help mostly inside their group.

Research question

The thematic qualitative analysis investigated participant's view on selfishness related behaviours. In order to do this the open-ended statement "Please describe in your own words, using a few sentences, what type of behaviour would selfishness lead to" was put forward. Consistent with previous works of Rand & Branden (1964) selfishness was overwhelmingly associated with negative connotations revealed through a strong relationship with negative behaviours ranging from flawed behaviour, disregard for others, self-centred behaviour to extreme behaviours, including aggressiveness and suicide (figure 7.). Interestingly, the suicide is being viewed as a selfish act. Indeed, this seems to be consistent with the idea that the ones affected by bereavement in these situations, may experience feelings of resentment, not being able to find the answer to the question "why?" (Pompili, Shrivastava, Serafini, Innamorati, Milelli, Erbuto, Ricci, Lamis, Scocco, Amore, Lester, Girardi, 2013, p. 256). Another facet of selfism-related behaviours described by respondents fall under the theme of positive behaviours. This theme included the ideas of protective behaviour, self-sufficient behaviour and success driven behaviour (figure 7.). Again these ideas were consistent with Rand & Branden's (1964) observations, that selfishness is not only necessary, but also a virtue that provides the tools to personal development and well-being. In addition to these findings another theme emerge that illustrated the notion of emotional instability, represented further by ideas of self sabotage, relationship breaker, infidelity, poor mental health, negative mood, erratic behaviour and cowardice (figure 7.). Congruent with this, the findings of revealed the fact that self-centred individuals experience a fluctuating state of happiness and afflictive affects as "hostility towards other", "jealousy", "personal frustration", "angry", "fear" and "threat" (Dambrun, 2017, pp. 11-19).

4.3 Limitations & Strengths

A number of limitations can be found in the current study. One of them lies in the self assessment questionnaires which obviously are deemed to be subjective. Another one is that additional environmental factors have not been controlled for. The limited options for responses, as flagged by one respondent in particular, without the option of alternatives is another limitations of the study. Furthermore, the participants were largely females (table 1.), so an uneven of gender representation was present. Also, from the point of social support received, the participants largely reported a high support. Another similar uneven sample representation was recorder for the religious commitment inventory. In this case most of the respondents were not significantly religiously involved. A low Crombach alpha coefficient value recorded for the 13 item version of Rotter's Locus of Control scale, did not provide sufficient reliability and validity for the measurement tool, as well. Although the other scales recorded strong to excellent Crombach alpha values, these also recorded some low negative values in the coefficient items table. Still, this has no relationship with a possible failed recoding, as no recoding was necessary. It might just be related with the uneven representation among participants. Finally, during the codification process in NVivo 12 it was noted that one of the answers from the Romanian natives participants was missed during translation process (respondent 105). Unable to edit in this software once data imported, an annotation was made with the appropriate translation, followed by continuation of coding process.

Still the study presents strengths, as well. One of these is represented by a large sample of participants. The variety of sample including participants from different levels of social status, culture, education, etc. was an important aspect of the study. Another aspect would be the fact that despite the partial limitation in options of responding of the

questionnaires, an inductive qualitative thematic analysis was involved in order to gather richer data, improving the clarity around the notion of selfishness.

4.4 Future research

A direction of future research might involve supplementary studies which would choose alternative, possibly more reliable scales of measurement. Also, the environmental factors to be controlled for would be another important aspect. An more even representation regarding gender, social support received and religiousness commitment would bring more reliability of results of a future study. Furthermore the idea of self and others-orientated convergence, previously studied by Gerbassi & Prentice (2013) would be another idea that would deserve attention, especially attempting to figure out why not all adults seem not to experience this convergence.

4.5 Implications and applications

The study contributed to previous research, either through validating or not previous findings, or even contradicting them, as in the case of Sabato & Kogut's (2018) study on correlation between religion and altruism. Furthermore although that previous studies shown results regarding correlations between individual variables and selfishness, but the current study investigated the cumulated effect of these variables upon selfishness, revealing an overall significant model. As well as that the thematic analysis further supported previous findings.

Based on the findings of selfishness related studies, including the current one, several applications are developed and applied in everyday's life. For example aiming to develop different methods of increasing well being of individuals, personal development the positive aspects of selfishness are being used. For example common example of application of positive healthy selfishness can be seen in an airplane cabin crew's directions "put on your oxygen mask before you put on your child's". As well as that by further understanding of the

phenomenon and the underpinning elements, factors impacting on selfishness, will understandably provide further support to develop new strategies and influence society towards a pro-social behaviour.

4.6 Conclusion

Considering the notion of selfishness, a mixed method study aimed to examine possible statistically significant differences between certain groups of participants, correlations or even prediction of it based on other variables, as well as possible causality for other behaviours. More specifically the first hypothesis placed forward in the quantitative study examined the whether there's a significant difference in levels of selfishness between groups of people with internal locus of control and the ones with external locus of control. It has been concluded that there's no such difference in this instance ($t(107) = -1.33$, $p = .188$, $CI(95\%) = 8.71 \rightarrow 1.73$), the results contradicting previously presented studies. The second hypothesis investigated a possible significant correlation between selfishness and age. The results indicated the lack of significance ($r_s(116) = -.14$, $p = .145$), not being consistent with previous research. Not supporting most of previous research, which indicated a difference in levels of selfishness between genders, most specifically, women acting more selflessness in adulthood, the current study did not find a significant result on the matter ($U = -1.49$, $p = .137$). Finally, the fourth hypothesis looked and possible significant prediction of selfishness, by the cumulated effect of locus of control, social support and religiousness. Despite the fact that the model was found to be significant, ($R^2 = .08$, $F(3, 100) = 4.04$, $p = .009$) (see table 4 & 5), explaining 8% of the variance, neither locus of control or social support seem to have a significant impact. Religiousness was the only significant predictor of selfishness, indicating a positive direction, this supporting some recent studies, but contradicting others. The thematic qualitative analysis revealed and confirmed once more the association of selfishness with an overwhelming negative perception. Negative behaviours that were rooted in the idea

of selfishness included flawed behaviour, disregard for others, self-centred behaviour to extreme behaviours, including aggressiveness and suicide (figure 7.) The positive aspect also came to light in the form of protective behaviours, self-sufficient behaviours and success driven behaviours (figure 7.), also being congruent with previous observations. In addition, the third theme in the form of emotional instability, including concepts like self sabotage, relationship breaker, infidelity, poor mental health, negative mood, erratic behaviour and cowardice (figure 7.), came to light, also being consistent with previous findings.

Further research was suggested in order to better understand the complex mechanisms underpinning the idea, in order to further develop and deliver more effective strategies in guiding society towards a more selflessness approach in life, which was found to be associated with a state of harmony, bringing benefits to both the individual on a personal level, including a authentic, durable state of happiness, emotional stability and well being, but also on the society (Dambrun, 2017, p. 3).

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6. Appendices:

6.A. Cover sheet for anonymous survey (information sheet and consent form)

My name is Florin Ghidut and I am conducting research in the Department of Psychology at Dublin Business School (DBS) that explores the impact of certain variables on selfishness, differences between groups in levels of selfishness and possible related behaviours . This research is being conducted as part of my studies and will be submitted for examination.

You are invited to take part in this study and participation involves completing and submitting the attached anonymous survey. While the survey asks some questions that might cause some minor negative feelings, it has been used widely in research. If any of the questions do raise difficult feelings for you, contact information for support services are included on the final page.

Participation is completely voluntary and so you are not obliged to take part.

Participation is anonymous and confidential. Thus responses cannot be attributed to any one participant. For this reason, it will not be possible to withdraw from participation after the questionnaire has been collected. This data will be permanently deleted after a period of 6 months from sufficient responses collected for the study.

The questionnaires will be securely stored and data from the questionnaires will be transferred to electronic format and stored on a password protected computer and password protected file.

It is important that you understand that by completing and submitting the questionnaire that you are consenting to participate in the study.

Should you require any further information about the research, please contact

Florin Ghidut, xxxxxxxx. My supervisor, John Hyland, can be contacted at xxxxxxxx.

Thank you for taking the time to complete this survey. Your feedback is important.

We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement by ticking the appropriate answer.

1 Strongly Disagree

2 Mildly Disagree

3 Neutral

4 Mildly Agree

5 Strongly Agree

In times of shortages it is sometimes necessary for one to engage in a little hoarding	1	2	3	4	5
Thinking for yourself first is no sin in this world today	1	2	3	4	5
The prospect of becoming very close to another person does not bother me	1	2	3	4	5
The really significant contributions in the world have very frequently been made by people who were preoccupied with themselves	1	2	3	4	5
The most important thing in life is to leave a legacy for other people, parents or posterity	1	2	3	4	5
I regard myself as someone who looks after his/her personal interests	1	2	3	4	5
The trouble with getting too close to people is that	1	2	3	4	5

they start making emotional demands on you					
Having children keeps you from engaging in a lot of self-fulfilling activities	1	2	3	4	5
It is best to live for the present and not to worry about tomorrow	1	2	3	4	5
Call it selfishness if you will, but in this world today we all have to look out for ourselves first	1	2	3	4	5
It seems impossible to imagine the world without me in it	1	2	3	4	5
You can hardly overestimate the importance of selling yourself in getting ahead	1	2	3	4	5
The difficulty with marriage is that it locks you into a relationship	1	2	3	4	5
If it feels right, it is right	1	2	3	4	5
Taking breaks in life take precedence over pursuing your self interests aggressively	1	2	3	4	5
An individual's worth will often pass unrecognized unless that person thinks of herself or himself first	1	2	3	4	5
Getting ahead in life depends mainly on thinking of yourself first	1	2	3	4	5
In general, couples should seek divorce when they find the marriage is not a fulfilling one	1	2	3	4	5
In striving to reach one's true potential, it is often necessary to show concern for other people	1	2	3	4	5
When choosing clothes, I generally consider style	1	2	3	4	5

before comfort or durability					
I believe people have the right to live any way they please	1	2	3	4	5
Owing money is bad if it's the only way to live without depriving yourself of unnecessary extravagances	1	2	3	4	5
Not enough people live for the present	1	2	3	4	5
I don't see anything wrong with people spending a lot of time and effort on their personal appearance	1	2	3	4	5
Volunteers Abroad is a good way to get started along the road to a personal career	1	2	3	4	5
It simply does not pay to become sad or upset about friends, loved ones or events that don't turn out well	1	2	3	4	5
Birth control devices have permitted sexual pleasure to replace any responsibilities for life	1	2	3	4	5
In this world one has to look out for others before worrying about oneself	1	2	3	4	5

6.C. Survey - 13 item Locus of Control scale

For each question select the statement that you agree with the most

1.

- a. Many of the unhappy things in people's lives are partly due to bad luck.
- b. People's misfortunes result from the mistakes they make.

2.

- a. One of the major reasons why we have wars is because people don't take enough interest in politics.
- b. There will always be wars, no matter how hard people try to prevent them.

3.

- a. In the long run people get the respect they deserve in this world
- b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries

4.

- a. The idea that teachers are unfair to students is nonsense.
- b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

5.

- a. Without the right breaks one cannot be an effective leader.
- b. Capable people who fail to become leaders have not taken advantage of their opportunities.

6.

- a. No matter how hard you try some people just don't like you.
- b. People who can't get others to like them don't understand how to get along with others.

7.

- a. I have often found that what is going to happen will happen.
- b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

8.

- a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
- b. Many times exam questions tend to be so unrelated to course work that studying in really useless.

9.

- a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
- b. Getting a good job depends mainly on being in the right place at the right time.

10.

- a. The average citizen can have an influence in government decisions.
- b. This world is run by the few people in power, and there is not much the little guy can do about it.

11.

- a. When I make plans, I am almost certain that I can make them work.

b. It is not always wise to plan too far ahead because many things turn out to- be a matter of good or bad fortune anyhow.

12.

- a. In my case getting what I want has little or nothing to do with luck.
- b. Many times we might just as well decide what to do by flipping a coin.

13.

- a. What happens to me is my own doing.
- b. Sometimes I feel that I don't have enough control over the direction my life is taking.

6.D. Survey - Multidimensional Scale of Perceived Social Support

We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement by ticking the appropriate answer.

1 Very Strongly Disagree

2 Strongly Disagree

3 Mildly Disagree

4 Neutral

5 Mildly Agree

6 Strongly Agree

7 Very Strongly Agree

There is a special person who is around when I am in need.	1	2	3	4	5	6	7
There is a special person with whom I can share my joys and sorrows.	1	2	3	4	5	6	7
My family really tries to help me.	1	2	3	4	5	6	7
I get the emotional help and support I need from my family.	1	2	3	4	5	6	7
I have a special person who is a real source of comfort to me.	1	2	3	4	5	6	7
My friends really try to help me.	1	2	3	4	5	6	7
I can count on my friends when things go wrong.	1	2	3	4	5	6	7
I can talk about my problems with my family.	1	2	3	4	5	6	7
I have friends with whom I can share my joys and	1	2	3	4	5	6	7

sorrows.							
There is a special person in my life who cares about my feelings.	1	2	3	4	5	6	7
My family is willing to help me make decisions.	1	2	3	4	5	6	7
I can talk about my problems with my friends.	1	2	3	4	5	6	7

6.E. Survey - The Religious Commitment Inventory

Read each of the following statements. Using the scale to the right, CIRCLE the response that best describes how true each statement is for you.

1 Not at all true for me

2 Somewhat true for me

3 Moderately true for me

4 Mostly true for me

5 Totally true for me

I often read books and magazines about my faith	1	2	3	4	5
I make financial contributions to my religious organization.	1	2	3	4	5
I spend time trying to grow in understanding of my faith	1	2	3	4	5
Religion is especially important to me because it answers many questions about the meaning of life	1	2	3	4	5
My religious beliefs lie behind my whole approach to life	1	2	3	4	5
I enjoy spending time with others of my religious affiliation	1	2	3	4	5
Religious beliefs influence all my dealings in life	1	2	3	4	5
It is important to me to spend periods of time in private religious	1	2	3	4	5

thought and reflection					
I enjoy working in the activities of my religious affiliation	1	2	3	4	5
I keep well informed about my local religious group and have some influence in its decisions	1	2	3	4	5

6.D. Survey - Research question

"Please describe in your own words, using a few sentences, what type of behaviour would selfishness lead to"

6.E. Debrief sheet

Thank you for your participation in this study. If you have further questions about the study, please contact Florin Ghidut at xxxxxxxx. In addition, if you have any concerns about any aspect of the study, or you wish to seek support regarding any negative feelings raised due to participation in this study, please contact:

Aware.ie

Tel.1800804848

Mon-Fri 10am-10pm

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