

**Cross-cultural Analysis of Resilience, Satisfaction with Life,**

**Coping Styles and Personality Traits:**

**Ireland; Israel; The Netherlands**

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## **Abstract**

The aim of this research is to examine the demographic traits of individuals from Ireland, Israel and The Netherlands to see how they are related to resilience and Satisfaction with Life. Does being Dutch mean that you dwell on the issues, but had you been born/raised in Israel you might be better able to use your innate strengths and newly acquired skills to better cope with traumatic events? This as a correlational cross-sectional quantitative design looking to explore how personality trait, coping style, age, gender, military/police front line exposure and exercise interact with resilience and Satisfaction with Life across three countries.

Five self-administered questionnaires were distributed via Kwiksurveys.com to a convenience sample of participants (n=184) consisting of females and males from Ireland, Israel and The Netherlands/Holland.

A few relationships were found between the predictors and resilience, chiefly gender with females scoring higher than males and three of the fourteen coping strategies: Venting, Religion and the strongest influence was Self Blame. There appears to be no significant relationship between those who had experienced front-line duty and resilience. Self Blame was also a predictor of Satisfaction with Life, with Neuroticism a close second and gender also was a predictor, with males scoring higher than females. Israel scored higher on resilience than Ireland or The Netherlands, which scored lowest.

## **Introduction**

In the face of adversity, some people seem to be able to cope with what life throws at them, like they have an innate confidence that the outcome will be successful despite the mammoth hurdle before them. Bonanno (2008) describes it as the ability to sustain fairly good levels of physical and psychological health when exposed to a significantly disruptive life event. Brom & Kleber (2009) describe resilience as something that people instinctively understand and Wald et al., (2006) say it refers to their ability to regain good mental health despite exposure to significant adversity. Bonanno and Mancini (2008) believe that most people have at least one majorly traumatic event in their life. How we deal with challenges that such events bring plays a huge role in both the outcome and long term psychological consequences. Masten et al. (1990) identified resilience as “The process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances”

## **Previous Research Into Resilience**

A Dutch study by Sleijpen et al., (2013) looked at the factors that contribute to the differences in resilience of refugee adolescents and their Dutch peers. They completed a mixed-method study looking at how resilience is different from culture to culture and noted that Ehntholt & Yule (2006, as cited in Sleijpen et al., 2013) suggested that providing culturally relevant treatment was of high importance because of the high rate of mental health issues among refugee populations. Since September 2000 civilians in Israel have experienced regular bouts of terrorism in the form of suicide bombings and frequent rocket fire. A survey by Blech et al. (2003) identified that 16.4% of the population had directly

experienced a terrorist attack and 37.3% had a family member or friend who had. The Israel Center for the Treatment of Psychotrauma (ICTP) helps civilians to deal with high levels of stress and trauma has their experience has lead to their being considered world-wide as trauma experts. The ICTP has been active since 1989 and were originally set up to address the growing phenomenon of psychotrauma in Israel, which is three times the rate of that in the U.S. and other western countries (Blech et al. 2003). The Centre developed innovative programs, using advanced methods for reinforcing natural coping mechanisms and treating post-traumatic symptoms through the educational and professional (police, fire-fighter, military, paramedics) customised programs. The ICTP also trains hundreds of mental health professions to meet the diverse needs of trauma survivors and to provide an effective model to promote healing using the foundational concept of resilience.

Papazoglou and Andersen (2014) suggest that culturally relevant and evidence-based exercises can be incorporated into training for police officers to promote resilience to future stress with positive outcomes. The ICPT provides customised training courses to Israeli police, military, fire-fighters, educational settings and in the workplace. Israel started to alter the way it looked at trauma by looking at from a preventative treatment attempting to immunise civilians against trauma rather than focusing solely on post-trauma intervention (Friedman-Peleg & Goodman, 2010). Does this mean that Israelis will report higher resilience levels because they have had more persistent exposure to stressful events and en mass have been trained to handle major stress in their lives? Baum et al. (2009) found that working on resilience with teachers as agents of change affects children and developed teacher-based interventions that focuses on empowering educators to cope with their own

stressors and coping strategies and they can then bring the learnings and skills into their classroom, to the benefit of the students. An additional advantage of school-based interventions being that delivery can be on a large scale, city-wide or regional, thus creating the greatest impact on the civilian population at large. Building Resilience Intervention participant students that had teachers who participated in the BRI program reported significantly fewer post-traumatic or anxiety symptoms and as a result it has been widely implemented in Israel.

Looking at the difference in resilience levels reported, given the amount of training provided to Israelis there should be evidence to support similar resilience programmes in other countries. While the BRI was initially developed in Israel in the wake of terrorism and war it was implemented in a pilot program in the Biloxi Schools, Mississippi a year after Hurricane Katerina (Baum et al. 2009). They worked with local resources to see if the Israeli post-trauma learnings could apply to non-terrorist based trauma and found it was an excellent fit. They met with teachers and worked with them to identify their own coping mechanisms and focusing with the children to identify what resources each individual had to cope.

### **Resilience in Cultural Context**

Around the world people experience severe adversity in a range of forms, from maltreatment to natural disaster to terrorism. How do children overcome hazardous experiences to succeed in life, such as the horrific attack on the Army Public School in

Peshawar, Pakistan or the 2014 Israeli-Gaza “Summer War” where the trauma experienced was predominantly physical in Gaza and psychological in Israel? What can be done to protect people at risk from trauma, natural disasters, terror attacks, war and other adversities? Why do some manage to adapt and recover while others do not? This study seeks to identify how individuals coping mechanisms and personality traits are a determinant of how they cope in the face of adversity and how content they are with their life. Satisfaction with Life is a measure of an individual’s self-perception of how happy they are with the conditions of life, of how satisfied they are that they have achieved the important things in life, or whether given the option there are things that they would like to change. Oishi et al., (1999) suggest that there are individual, cultural and methodological differences in the information that individuals use to judge Satisfaction with Life. Suldo and Huebner (2004) stated that individual resilience can be improved by positive life-satisfaction and that it provides protection against adverse life experiences (as cited in Darling et al., 2012). Tannenbaum & Anisman (2003) looked at a relatively resilient strain of mice and identified the possibility of there being a predisposition for resilience genetically. A Kabul school-based survey of mental health focusing on understanding risk and resilience in a cultural context has suggested that the sense of cohesion and meaning to life central to resilience is a central aspect of the Afghan culture (Eggerman & Panter-Brick, 2010).

### **Front-line exposure to trauma**

Of particular interest is the resilience of individuals who have had an exposure to front-line duty either through military or law enforcement experience, on the grounds of the increased likelihood of their exposure to excess stressors/traumatic events by the very

nature of the job. Papazoglou and Andersen (2014) noted that over the course of a police-officer or soldiers career the exposure to critical incidents increases the chance that they have a high susceptibility to mental and physical health issues which could be mitigated through improved training about positive coping skills and resilience improvement. Herman (1992) noted that trauma often isolates individuals from others, so any future intervention should aim to widen individuals support base while Steinhardt and Dolbier (2008) identified that intervention appears to be effective in reducing psychological symptomatology (ie, depressive symptoms, negative affect, and perceived stress). Should school-based psychosocial intervention on resilience be part of the curriculum in children's education as postulated by Nickerson and Fishman (2013)?

### **Gender Differences**

Solomon et al. (2005) suggests that there is a gender difference in vulnerability to traumatic events, and that there are also gender differences in coping strategies in the face of a traumatic event. Block and Block (2006) put forward that resilience is a relatively stable dispositional ability showing stability in a longitudinal study up to the age of 30 with gender differences in the stability at a higher variability in women. The concept of resilience needs to be looked at from a gender-specific angle, and from different age ranges, due to the diversity of results of their study. They suggested also that the protective effects of resilience during the different age ranges would merit deeper research. Leppert and Strauß (2005) identified that there are lower levels of resilience with higher levels of depression in those aged over 70 than those between 30 and 70, and that men reported higher resilience than women when age was not taken into account. Has the impact of forced displacement

taken its toll on the elderly? Kuwert et al. (2009) suggest that there is a much under researched association between low levels of resilience and forced displacement, which should be considered in further detail given the modern forced displacement through natural/environmental events such as Hurricane Katrina or conflict induced displacement (refugees, asylum seekers, internally displaced persons). Siriwardhana et al. (2014) note that forced migrants are at a greater risk of developing mental disorders, however they highlight resilience as a key potential protective factor.

Bleich et al., (2006) found that being female and being Arab contributed significantly to the likelihood of having lower resilience levels, and the women participants in their investigations were 3.7 times less likely to be resilient than men which they state may be rooted in women's higher sense of threat, lower self-efficacy, and tendency to use less effective coping strategies than men or in the fact that women are more ready to report distress than men. They identified that Arabs were 5.9 times more likely than Jews to have low resilience. Bleich et al. (2006) suggested that lack of access to help account for their findings that immigrants were found to be less resilient than native-born Israelis (Bleich et al., 2006). Sleijpen et al., (2013) highlighted the need for a deeper understanding of the differing abilities of nations to cope with the aftereffects of war, violence, natural disaster and loss will be of personal and educational benefit to society.

Inspiration for this study is also from the Building Resilience with Law Enforcement programme run by the Israel Centre of Psychotrauma and the fact that the researcher has a personal connection with someone who lives in conflict ridden Israel, having served in the military (non-conscript) and is currently a police officer. Papazoglou and Andersen (2014) suggest that culturally relevant and evidence-based exercises can be incorporated into training for police officers to promote resilience to future stress with positive outcomes. Could such training benefit the wider international population at large? Saul (2004) suggests that by tapping into natural levels of resilience in communities can vastly improve the rate of recovery of one of its members. The study of resilience within a cultural context therefore could offer important opportunities for empowerment of at-risk or traumatised individuals and groups.

## **Coping**

Lazarus and Folkman (1984) argue that coping has two core functions – to manage problems which are causing stress, to oversee the emotions which are caused by the stress and to regulate the behaviour in response to the stress. They identified that coping is dynamic in nature, and that it is the transaction between a stressful threat, an appraisal of the threat/situation and the response. Because of this interaction between these three factors coping behaviours will change over time. They initially categorised the strategies into two: Emotion-focused and Problem-focused, with the former regularly divided further into two sub categories (Folkman & Lazarus, 1980): Avoidant and active emotion focused. Both

emotion-focused strategies are focused on managing the emotional responses to the stressors. Avoidant emotion focused coping includes items such as self-distraction, where the individual attempts to avoid the stressor and are viewed as maladaptive. Active emotion focused coping includes items such as positive reframing, where the individual attempts to view the stressor from a positive stance and are viewed as adaptive. Problem-focused coping includes any coping strategies which are focused on managing or altering the stressor (Folkman & Lazarus,1985).

According to Wei et al., (2010) internalisation is the process by which people take responsibility for stressor and “attribute the cause for discriminatory events to themselves”.

Fredricksons (2001, as cited in Lyons et al., 2014) Broaden and Build theory suggests that frequent positive emotions as a coping process result in an increase in Satisfaction with Life. She (2003) identified that positive emotions play a role in the development of long term resilience and Cohn & Fredrickson (2006) believed that they lead to more satisfied lives. Stevenson & Wolfers (2009) claim that due to the changing roles of women and the need to cope with these changes in a short period of time, that the Satisfaction with Life scores for men are now higher. According to Warren et al., (1996) people with the best coping skills tend to have higher Satisfaction with Life and an important factor of coping is the ability to accept responsibility for and coming to grips with the consequences of behaviour. A positive relationship between self blame and resilience from rehabilitation

and satisfaction with life was identified by Bulman and Wortmann (1977, as cited in Warren et al., 1996).

### **Personality**

An individual's personality is made up of a set of stable traits which are a combination of five essential building blocks, known as the Big Five Trait Dimensions. The five sections, when combined can deduce an individual's personality type and predicted behaviour in a range of diverse occasions. An individual's personality is reasonably consistent at all times, and this permits the use of inventories such as The Big Five Inventory (BFI) to identify the personality trait.

## Aims and Hypotheses

As part of my research I wish to see if being male or female, if having a higher chance of being exposed to trauma in carrying out your duty on the front-line military or police, and if whether you partake in regular exercise/ do yoga/ meditate or pray determines what level of resilience you have.

- 1) Hypothesis – That there will be a significant difference in the gender difference on resilience;
- 2) Hypothesis – That there will be a significant difference in the frontline exposure on resilience;
- 3) Hypothesis – That there will be a significant difference in the exercise on resilience;
- 4) Hypothesis – That there will be a significant difference of country and gender on resilience
- 5) Hypothesis – That there will be a significant difference of country and gender on satisfaction with life

6) Hypothesis – That there will be a significant difference of country, gender and front-line exposure on resilience and Satisfaction with Life

- Hypothesis – Coping influences
- Hypothesis – Personality trait influences

## Methodology

### Participants

Independent samples of adults aged over 18 were selected via [www.kwiksurveys.com](http://www.kwiksurveys.com) from three different nationalities: Irish, Israeli and Dutch. The survey was launched on 23rd January 2015 and closed on 16th March 2015. In total there were 184 participants in total and the gender breakdown was: 45.1% were male (n=83 ) and 54.9% were female (n=101), with 54.3% identifying themselves as Irish, 25.5% as Israeli, and 20.1% as Dutch.

In term of age cohorts, 0.5% were 18-24, 21.2% were 25-34, 52.2% were 35-44, 20.1% were 45-54, 5.4% were 55-64 and 0.5% were 65+. The age categories were chosen as they supplied sufficient information as was necessary for the purpose of this research, and also to ensure protection of anonymity. The participants were queried about whether they had a front-line military or police background: military/police frontline exposure (19%, n=35) and no exposure (81%, n=149), whether they practiced exercise/yoga/prayer/meditation (64.1%, n=118 yes; 33.7%, n=62 no and 2.2%, n=4 non respond).

**Inclusion Criteria** Male and female adults from Ireland, Israel or The Netherlands.

**Exclusion Criteria** Male and female adults under the age of 18. Anyone over 18 who was not from Ireland, Israel or The Netherlands.

## **Design**

This is a cross-sectional study, descriptive in nature using quantitative correlational analysis of data involving the completion of a battery of questionnaires by volunteer participants. The purpose of the study is to explore the relationship between measured predictor variables and criterion variables listed as follows (see Appendix G):

### **Criterion Variables:**

Resilience; Satisfaction with Life

### **Predictor variables:**

Coping style; Personality traits

### **Demographic Predictor variables:**

Age; Gender; Country; Military or Police front-line exposure; Regular practice of yoga or prayer or exercise

## Materials

The materials used as part of this research were:

### Hardware:

A Samsung RV511 Laptop

Internal Processor: Intel® Core™ i3 CPU – M380 @. 2.53GHz or higher.

RAM/Memory: 4.00 GB (3.80 GB usable)

System Type: 64-bit OS

SanDisk Cruzer Facet 8GB USB Flash Drive (memory stick)

### Software

Operating system: Microsoft Windows 7 Home Premium Microsoft Office® - all files password protected with separate password to laptop logon password

Internet Explorer Ver. 8.0

IBM SPSS Statistics 22.0

[www.hotmail.com](http://www.hotmail.com); [www.gmail.com](http://www.gmail.com) ; [www.kwiksurveys.com](http://www.kwiksurveys.com)

A demographic questionnaire was used to ensure as to the following (see Appendix A)

What age group they fell into

What gender they were

What country they were from (restricted to Irish, Dutch and Israeli)

Whether participant had experienced front-line duty in the military or police force

Regularly partake in some form of exercise, do yoga, meditate or pray

The following 4 validated, widely used, self-administered closed response questionnaires were used:

**The first questionnaire** – Resilience will be assessed using The Brief Resilience Scale (Smith et al., 2008) is a 6-item Likert scale instrument which was designed as an outcome measure to assess the ability of people to bounce back or recover from stress. The questionnaire has 3 positively phrased and 3 negatively phrased questions and is measured on a five-point scale with higher scores predicting higher levels of resilience. The maximum score is 28. Smith et al., (2008) has shown this to be a reliable method of assessing resilience of an individual and their ability to 'bounce back' from stress/trauma. They also identified that it might be utilised to provide useful information about people dealing with health related stressors. Cronbach's Alpha was used to assess reliability with an internal consistency with results ranging from 0.80 – 0.91 (Smith et al., 2008). (see Appendix B)

**The second questionnaire** - Satisfaction with Life was assessed using the Satisfaction with Life Questionnaire (Diener et al. 1985). It is a short but robust 5-item instrument which consists of specific statements and participants were instructed to rate each item, on a Likert scale ranging from one (strongly disagree) to seven (strongly agree). Questions in the instrument are, for example, "I am satisfied with my life." and "So far I have gotten the important things I want in life". The higher the score result, the higher the level of Satisfaction with Life. All scores are then added up in the end and, the cut-offs for categorizing satisfaction with life, from the authors were used. The lowest score is 5-9 which is representative of an extremely

dissatisfied participant, 20 is neutral and the highest score is 31-35, representative of an extremely satisfied participant. Cronbach's Alpha was used to assess reliability with an internal consistency of 0.87 (Diener et al. 1985). (see Appendix E)

**The third questionnaire** - Coping styles was assessed using The Brief COPE scale, a survey designed to look at different coping styles used to combat stress. The COPE is a 28-item (2 x 14 strategies with a maximum score per question of 4) Likert scale instrument that is designed to measure the different strategies that people use to cope with stress (Carver et al. 1997). Participants answer out of four choices for each question. The higher the score out of 8 on a particular coping strategy, the more regularly the participant uses that particular strategy. Participants receive a score against each question according to how they selected the responses: 1 = 'I haven't been doing this at all'; 2 = 'I've been doing this a little bit'; 3 = 'I've been doing this a medium amount' and 4 = 'I've been doing this a lot'. The two portions of each question are totalled together. Cronbach's Alpha was used to assess reliability with an internal consistency of 0.93 (Carver, 1997). The BriefCope groups the answers into three categories: 'Active Emotion' strategies, such as humour, emotional support, acceptance, positive reframing; 'Avoidant Emotion' strategies such as self blame, self-distraction, behaviour disengagement, substance use; and 'Problem Focused' strategies, such as planning, active coping, instrumental support (Schnider et al. 2007). (see Appendix C)

**The fourth questionnaire** - Personality traits was assessed using The Big Five Inventory (BFI) designed to measure the key 5 personality dimensions over 44 questions. This is a self-report inventory that was designed to give a comprehensive profile of participants' behavioural and cognitive patterns (John & Srivastava, 1999). Each question represents one of the five personality domains being measured: Neuroticism; Extraversion; Openness; Agreeableness; and Conscientiousness. Participants place a number against each question according to how applicable each of the following answers was, with 1 'Strongly Disagree' being the lowest and 5 'Strongly Agree' being the highest. Reverse scoring on 4 of the questions are applied before totalling. Cronbach's Alpha was used to assess reliability with an internal consistency of 0.83 (John & Srivastava, 1999). (see Appendix D)

A cover letter was attached to the survey outlining the nature of the research and providing contact details of the researcher and the supervisor (see Appendix F)

## Data Analysis

In order to carry out analysis on the results, some descriptive statistics were employed which included frequencies, descriptive and exploratory analysis.

Analysis for the current study was completed using IBM Statistical Package for Social Sciences version 22 "SPSS-22". Preliminary analyses were initially carried out to assess for the presence of non-normality and for outliers.

For inferential statistics three two-way analysis of variance (ANOVA) were conducted. Descriptive statistics was carried out on the sample of participants to provide general information and reliability of data was as per the pre-validated Cronbach's Alpha questionnaires. Correlational analysis was carried out to ensure that the Predictor Variables were not strongly associated with each other, and whether they were correlated significantly with the Criterion Variables. In order to identify if there was any comparisons between the mean scores of the three country groups, Independent t-tests were performed. A selection of multiple regression analyses were carried out to identify which of the Predictor variables could have a significant influence the Criterion Variables Resilience and Satisfaction with Life.

One way between groups ANOVAs were carried out between the countries and ages to identify whether the Predictor Variables were influenced by any of the countries.

## **Ethical Consideration**

Ethical approval for this study was granted by the Department of Psychology Ethics Committee of Dublin Business School and all questionnaires were free to use, no author approval was required. There was no deceptions used in this research and the title on the survey was self-explanatory for clarity and there was no requirement for permission to be obtained. The second last page consisted of contact details of counselling and helpline services in each of the 3 countries, in case any of the participants were affected by anything within the questionnaire.

## **Procedure**

A proposal was submitted in October 2014 and it was given approval by the DBS School of Psychology Research Ethics Committee, all ethical principles were adhered to thereafter.

An online survey was prepared by uploading the 4 questionnaires and demographic questions into Kwiksurveys forms which produced a link to the survey. The questionnaire was in English only initially, and then a second questionnaire with English and Hebrew was launched due to the slow rate of Israeli responses on the English only. The Hebrew version was translated by a professional service and cross-checked by a native. The survey was launched 23 January 2015 and closed for data export on 16 March 2015. The first page of the survey comprised of some demographic questions (age group, gender, country of origin and frontline exposure) after an explanatory cover note, which confirmed that the study was anonymous, restricted to over aged 18 and Irish, Dutch or Israeli. These were the

only core criteria for participation. It also stated that the study was being conducted as part of the studies towards the BA(Hons) in Psychology in D.B.S.. The researcher and the supervisor's contact details were given to participants if they had any further questions. Participants were also thanked for their participation and advised it would take approximately 10 minutes to complete.

The sample was collected by convenience sampling through snowball effect, so was exponential non discriminative in nature. Participants were initially sought via the authors Facebook profile, where the link was posted with an explanation of what the survey entailed. Due to the initial shortage of Dutch and Israeli responses, the author emailed the link and cover note to native Dutch and Israeli individuals not on Facebook who forwarded on to friends/family.

Within this opening page it was outlined that the questions being asked were widely used in research and that while the survey asked some questions which might have caused some minor negative feelings, that contact information for support services/groups were included at the end of the survey. It also stated that the questions have been widely used in research. A guideline of 10 minutes for completion was stated and it clarified that there was only questions on 5 of the 7 pages. The cover note explains that the questionnaires will be securely stored, that data will be stored on a password protected laptop in electronic format and that the data would be analysed in aggregate and no individual information would be used.

The intention was to have minimum of 30 participants from each of the three countries in order to be able to make inferences or conclusions about the general population. Participation was voluntary and without incentive or reward. Age restriction was built into the age demographic question by setting lowest age range from 18 and stating the age restriction on the cover note. Contact information for both the supervisor and the researcher were provided for further information if requested.

The data was exported from Kwiksurveys into excel, and imported into SPSS were it was coded due to some reverse scoring and combined scoring questionnaires used.

## Results

### Descriptive statistics

After all data was entered into SPSS v.22, it was initially recoded and then the scores were calculated. Descriptive statistics provided some general information on the participants of the study such as the mean and standard deviation, the normality of data to see if it meets the assumptions of using parametric tests. Of the 184 participants 45.1% were male (n=83, SD = ) and 54.9% were female (n=101), with 54.3% identifying themselves as Irish (n=100), 25.5% as Israeli (n = 47), and 20.1% as Dutch (n=37)(see Table 1.1)

Table 1.1 Numbers and Percentage of Participants by Country

Country of Participant	Number	Percentage
Ireland	100	54.3%
Israel	47	25.5%
The Netherlands/Holland	37	20.1%

In term of age cohorts, 0.5% were 18-24, 21.2% were 25-34, 52.2% were 35-44, 20.1% were 45-54, 5.4% were 55-64 and 0.5% were 65+ (see Figure 1.1). The mean age lies within the age cohort 35-44 ( Figure 1.2), and a Normal Q-Q Plot confirms normal distribution of the age of participants (see Figure 1.3).

Figure 1.1

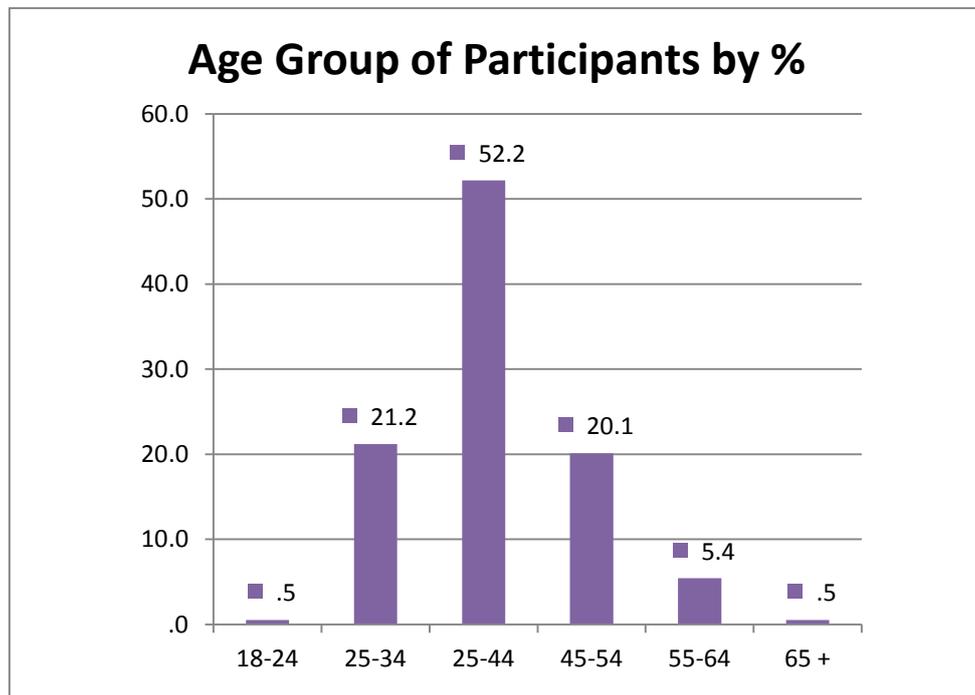


Figure 1.2

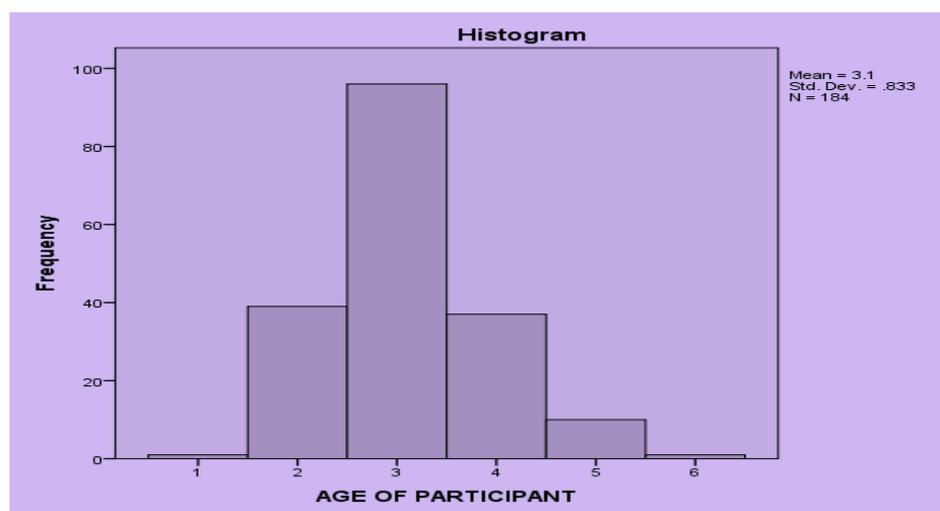
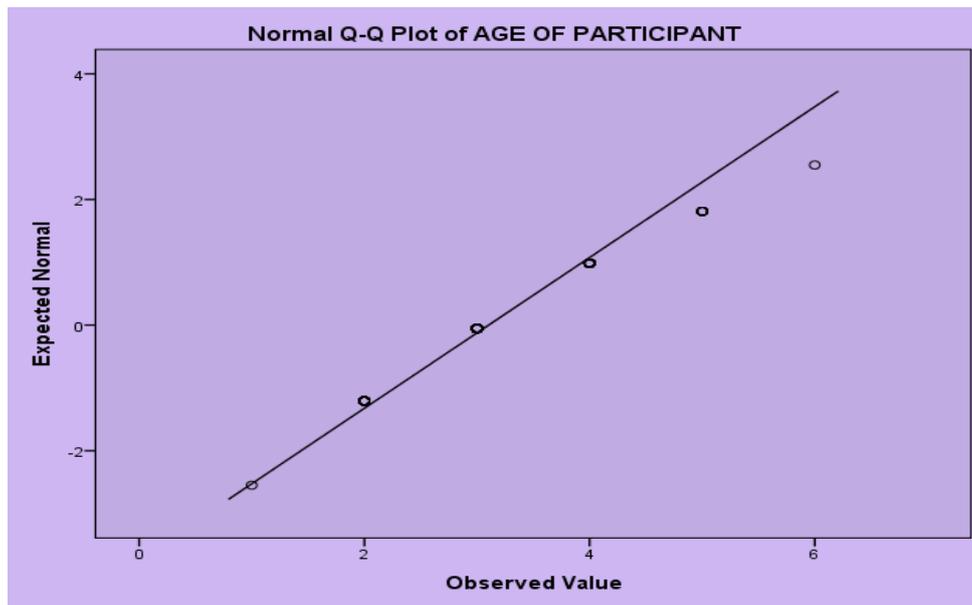
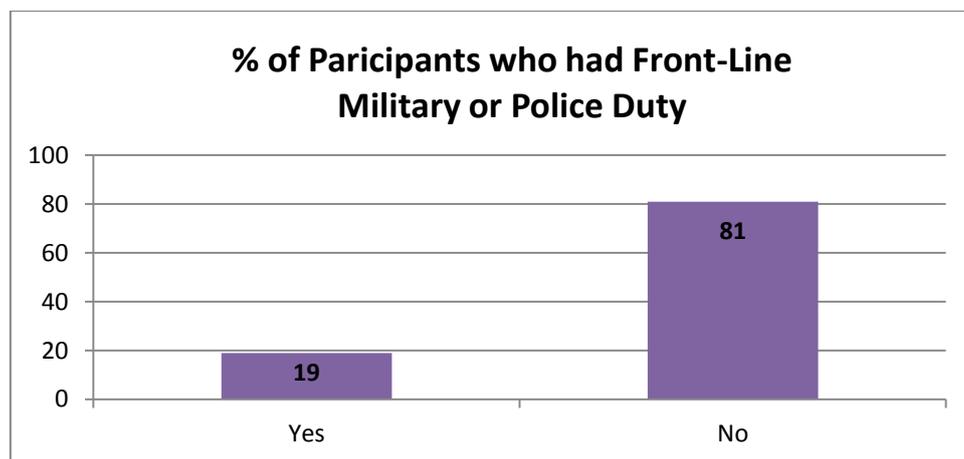


Figure 1.3



Of those who responded, 19% had previously been employed in a front-line military or police role (n=35) while 81% hadn't (n=149) (see Figure 1.4).

Figure 1.4



64.1% reported taking regular exercise, doing yoga, meditating or praying (n=118) with 33.7% saying they didn't (n=62). 2.2% did not respond to this question (n=4) (see Figure 1.5).

Figure 1.5



Descriptive statistics were conducted on the mean, standard deviation, minimum and maximum scores and range of scores for Resilience and Satisfaction with Life scores (see Table 1.2)

Table 1.2 - Skewness and Kurtosis of Satisfaction with Life and Resilience scores

Total Scores	Number	Skewness	Kurtosis
Satisfaction with Life	175	0.639	-0.441
Resilience	171	-0.295	1.011

In testing for normality of distribution of the scores for Satisfaction with Life and Resilience the following findings were made:

A positive skew value (0.63) for Satisfaction with Life indicates that a cluster of scores occurred at the higher end of the Brief Resilience Scale, and this means that the frequency of distribution is not symmetrical. A negative Kurtosis value (-0.44) indicates that the distribution does not have many extreme scores. A negative skew value (-0.30) for Resilience indicates that a cluster of scores occurred at the higher end of the Brief Resilience Scale, and this means that the frequency of distribution is not symmetrical. A positive Kurtosis value (1.014) indicates that the distribution has a number of very extreme scores.

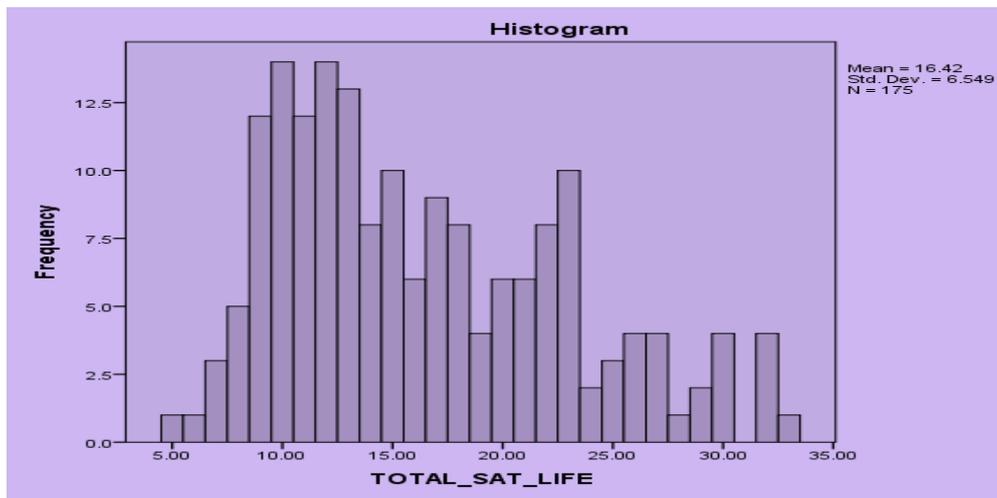
Examining the data in table 1.3 below, it can be seen that the minimum score for Satisfaction with Life is 5 and the maximum is 33, the mean Satisfaction with Life score for respondents is 16.42 (See Table 1.3) which is the lower half of the Slightly Dissatisfied category (15-19).

Table 1.3 – Minimum & Maximum Scores for Satisfaction with Life & Resilience

Total Scores	Number	Minimum	Maximum	Mean
Satisfaction with Life	175	5.00	33.00	16.42
Resilience	171	11.00	24.00	17.99

Both the maximum and minimum categories were scored, suggesting some participants were either Extremely Satisfied or Extremely Dissatisfied. The mean score for resilience is 17.99 and for Satisfaction with Life is 16.42 (see Figure 1.6).

Figure 1.6 – Distribution of Satisfaction with Life Scores



A Normal Q-Q Plot confirms reasonably normal distribution of the Satisfaction with Life scores of participants (see Figure 1.7).

Figure 1.7

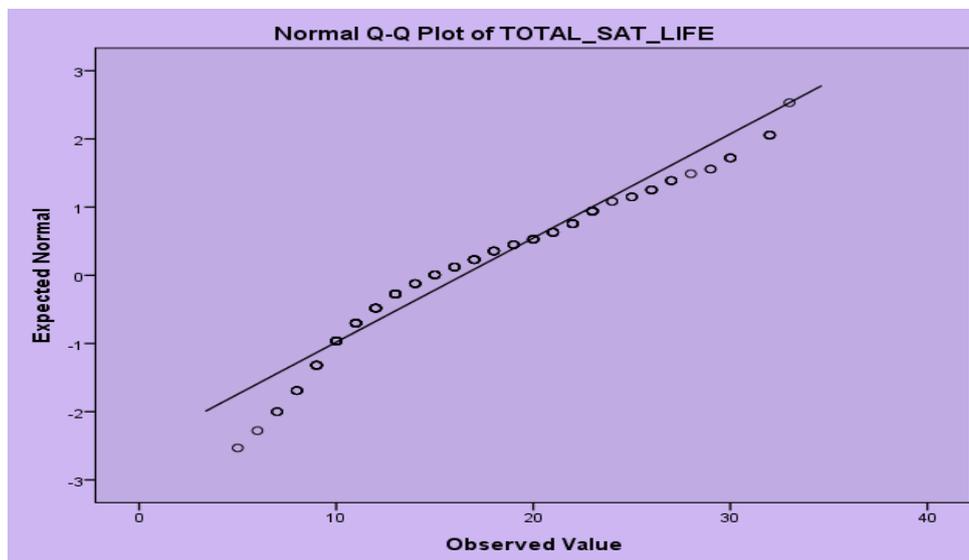
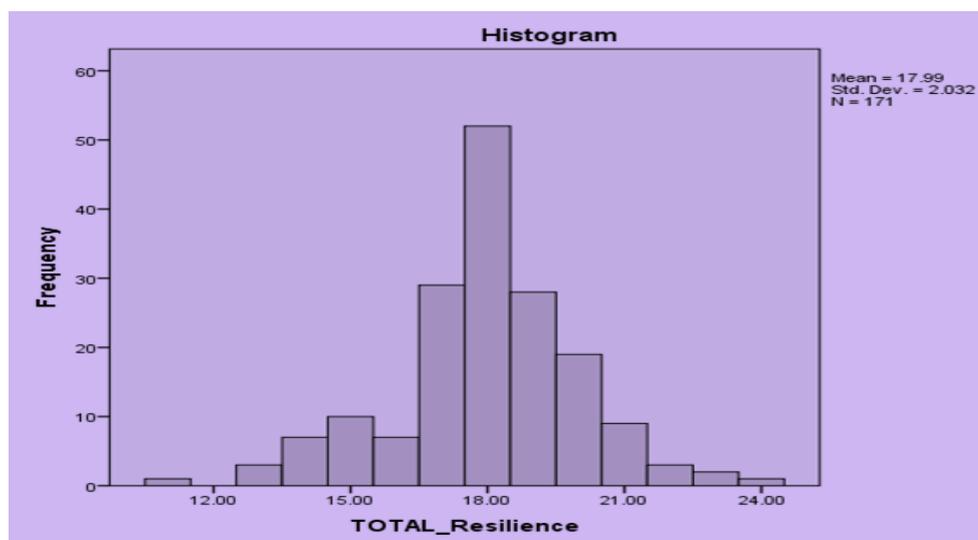
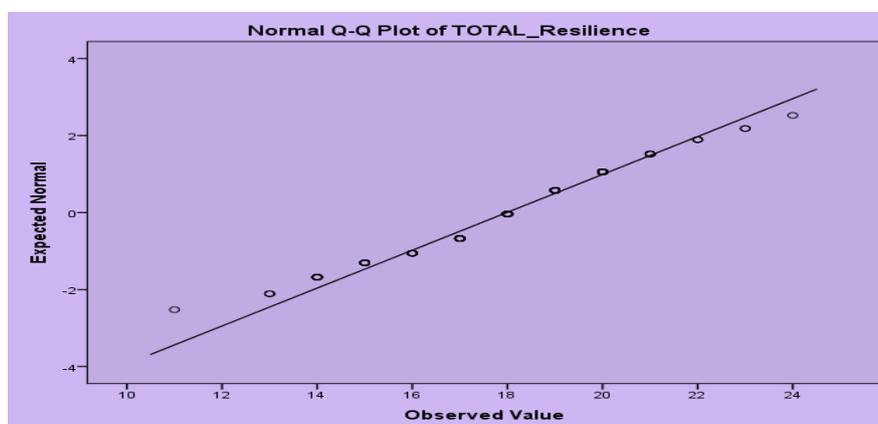


Figure 1.8 – Distribution of Resilience Scores



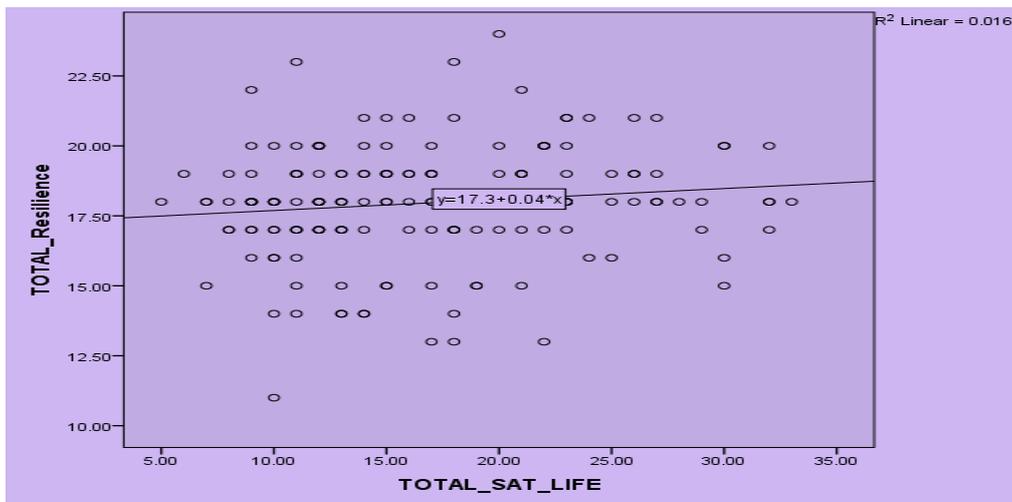
A Normal Q-Q Plot confirms normal distribution of the resilience scores of participants (see Figure 1.9).

Figure 1.9



A scatterplot with Line of Best Fit was created to display the relationship between Resilience scores and Satisfaction with Life scores (see Figure 1.10). The Correlational value of 1.6% confirmed a weak relationship, which means that Satisfaction with Life is not a good predictor of Resilience levels.

Figure 1.10

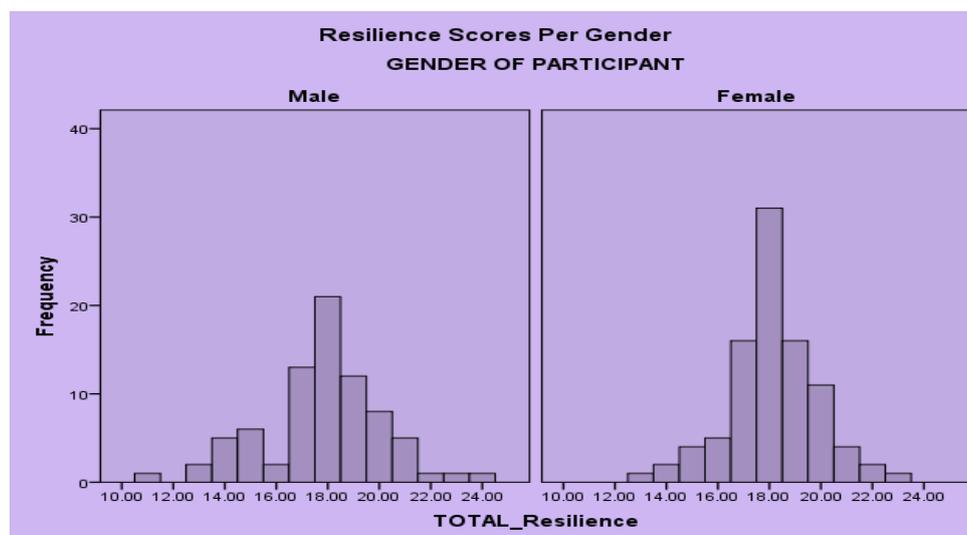


$H_1$  – That there will be a significant difference in the gender difference on resilience;

Independent sample t-tests was run to identify whether there was any significant gender difference on resilience. It was found that there was a significant difference in scores for males ( $M = 17.82$ ,  $SD = 2.33$ ) and females ( $M = 18.13$ ,  $SD = 1.75$ );  $t(140.58) = -0.966$ ,  $p = 0.34$ . The size of the difference in the means (mean difference =  $-0.31$ , 95% CI:  $-0.94$  to  $0.33$ ) was small. Significance level of Levene's test is  $p = 0.034$ , smaller than  $0.05$ , so equal variance is not assumed and the result verify that there is a moderately sized effect.

The results verify that there is a significant difference in the mean scores of resilience between males and females, with women scoring higher. The resilience score per gender is shown in Figure 1.11.

Figure 1.11 - Difference is overall scores male v. female



H<sub>2</sub> – That there will be a significant difference in the frontline exposure on resilience;

Independent sample t-tests was run to identify whether there was any difference in Yes (n=31) or No (n=140) responses on resilience. It was found that there was no significant difference in scores for Yes (M – 17.61, SD =2.4) and No (M=18.07, SD = 1.94) responses;  $t(169) = 0.114, p = 0.26$ . The size of the difference in the means (mean difference = -0.24, 95% CI: - 1.25 to 0.34) was small. Significance level of Levene’s test is  $p=0.24$ , larger than 0.05, so equal variance is assumed.

The results verify that there is no significant difference in the mean scores of resilience between those who have reported front-line military or police duty and those who have not.

H<sub>3</sub> – That there will be a significant difference in the exercise on resilience;

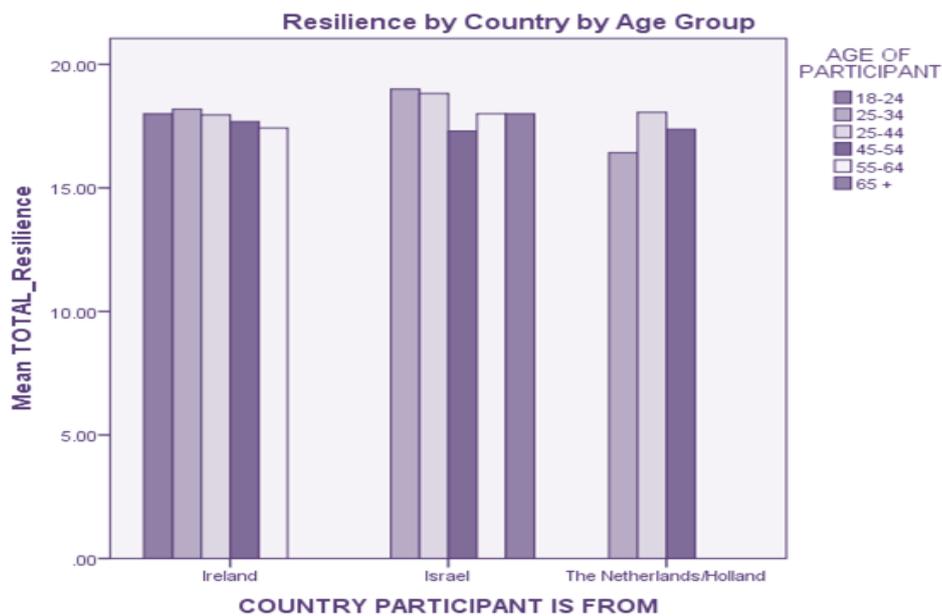
Independent sample t-tests was run on those who have reported as practicing some form of exercise, doing yoga, praying or meditating, to identify whether there was any difference in Yes (n=31) or No (n=140) responses on resilience. It was found that there was no significant difference in scores for Yes (M = 17.89, SD =2.03) and No (M=18.29, SD = 1.98) responses;  $t(165) = -1.23, p = 0.22$ . The size of the difference in the means (mean difference = -0.40, 95% CI: - 1.05 to 0.24) was small. Significance level of Levene's test is  $p=0.55$ , larger than 0.05, so equal variance is assumed.

The results verify that there is no significant difference in the mean scores of resilience between those who have reported as practicing some form of exercise, doing yoga, praying or meditating.

## Inferential statistics

Three two-way ANOVAs analysis of variance tests were carried out, to identify significant groups differences.

Figure 1.12



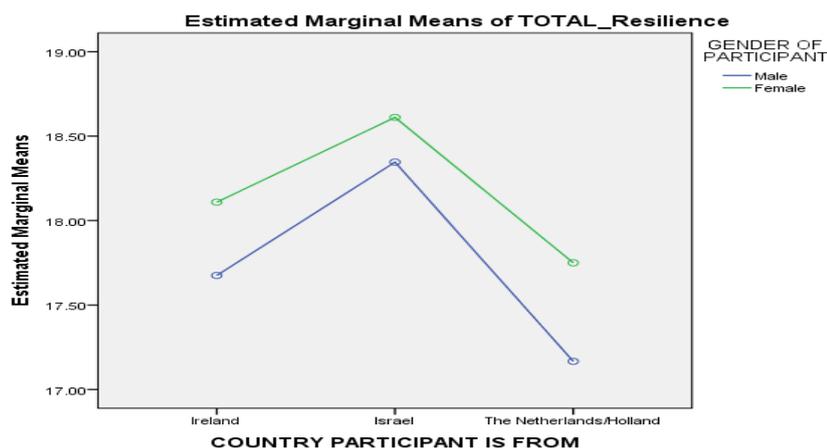
Firstly, it is interesting to note in the above graph (which is the spread of mean total Resilience scores per age groups per country) that the number of age groups represented in The Netherlands is lacking any participant aged 55 or older. The single submission in the 18-25 group was unique to Ireland (see Figure 1.12).

H4– That there will be a significant difference of country and gender on resilience

A two-way between-groups analysis of variance was conducted to explore the impact of gender and country on levels of resilience, as measured by the Brief Resilience Scale.

The interaction effect between gender and country was not statistically significant,  $F(2, 165) = 0.056$ ,  $p = 0.95$ . There was not a statistically significant main effect for gender,  $F(2,165) = 1.48$ ,  $p = 0.23$ ; however the effect size was small at partial eta squared – 0.01. This means that only 1% of the variance of gender is explained by country. Posts-hoc comparisons using the Tukey HSD test indicated that the mean score for the Males ( $M = 17.82$ ,  $SD = 2.31$ ) was not significantly different from the mean score for Females ( $M=18.13$ ,  $SD = 1.75$ ) (see Figure 1.13). The main effect for gender,  $F(2,165) = 2.364$ ,  $p = 0.1$  did not reach statistical significance as  $p > 0.05$ .

Figure 1.13

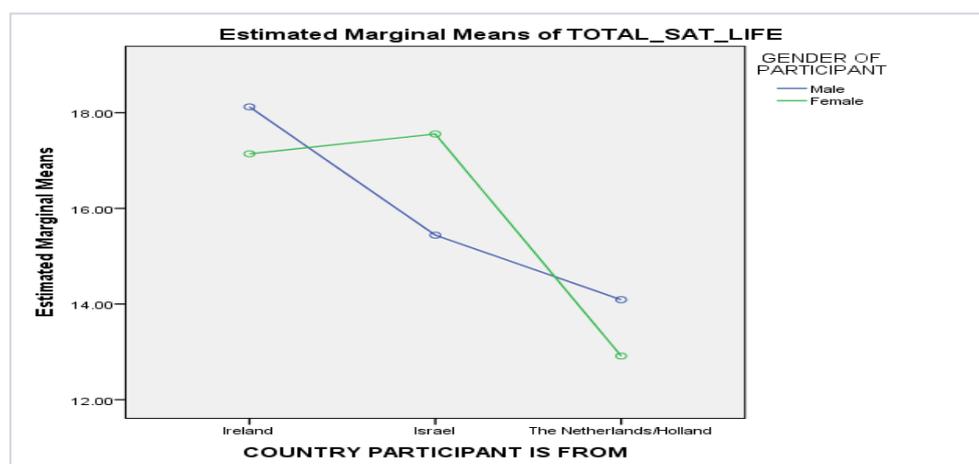


H5 – That there will be a significant difference of country and gender on Satisfaction with Life

A two-way between-groups analysis of variance was conducted to explore the impact of gender and country on levels of Satisfaction with Life, as measured by the Satisfaction with Life Scale.

The interaction effect between gender and country was not statistically significant,  $F(2, 169) = 0.99, p = 0.39$ . There was a statistically significant main effect for gender,  $F(2, 169) = 1.48, p = 0.00$ . Posts-hoc comparisons using the Tukey HSD test indicated that the mean Satisfaction with Life score for the Males ( $M = 16.68, SD = 6.13$ ) was not significantly different from the mean score for Females ( $M = 16.22, SD = 6.88$ ) (see Figure 1.14). The main effect for gender,  $F(2, 169) = 4.73, p = 0.01$  reached statistical significance as  $p < 0.05$ .

Figure 1.14



H6 – That there will be a significant difference of country and exposure to front-line duty on resilience

A two-way between-groups analysis of variance was conducted to explore the role of exposure to front-line duty and country on levels of resilience, as measured by the Brief Resilience Scale. No significant main effect was found ( $F(2, 165) = 1.03, p = 0.36$  (see Table 1.4). If this had been significant it would mean that the influence of exposure to Front-Line duty on Resilience would be dependent on the country of origin.

Table 1.4 – Test of Between-Subjects Effects – Resilience: Country and Front-Line Duty

Source	Df	F	Sig	Partial Eta Squared as a number	Squared as a %
Country	2	3.888	.022	.045	4.5%
FrontLineDuty	1	5.556	.020	.033	3.3%
Country*FrontLineDuty	2	1.031	.359	.012	1.2%
Error	165				

Posts-hoc comparisons using the Tukey HSD test indicated that the mean score for Irish ( $M = 17.93, SD = 1.99$ ) and Israel ( $M=18.45, SD = 1.74$ ) was significantly different from the mean score for The Netherlands/Holland ( $M=17.53, SD = 2.44$ ). (see Table 1.5)

Table 1.5 – Mean scores for Total Resilience per Country

Country	N	Subset
(Tukey HSD)		1
The Netherlands	32	17.53
Ireland	95	17.93
Israel	44	18.45
Sig.		0.070

There was however a statistically significant, though small, effect for country,  $F(2,165) = 3.88$ ,  $p = 0.02$ ; this means that 4.5% of the variance of resilience is explained by country (partial eta squared 0.045).

There was also a significant interaction effect, though again small, on resilience for exposure to front-line duty,  $F(1,165) = 5.556$ ,  $p = 0.2$ . This means that 3.3% of the variance of resilience is explained by whether someone has or hasn't been exposed to Front-Line Duty (partial eta squared 0.033).

Although none of the mean scores vary significantly between the three countries with  $p < 0.05$  for each country comparison, the biggest difference in mean scores is actually between Ireland ( $m = 17.93$ ,  $SD = 1.99$ ) and The Netherlands ( $M=17.53$ ,  $SD = 2.44$ ). Table 1.6 outlines the Mean Differences of resilience by country.

Table 1.6 – Multiple Comparisons: Resilience scores by country

Country Participant From	Country Participant From	Mean Difference	Sig.
Tukey HSD			
Ireland	Israel	-.5282	.32
	The Netherlands	.3951	.60
Israel	Ireland	.5282	.32
	The Netherlands	-.9233	.12
The Netherlands	Ireland	-.3951	.60
	Israel	-.9233	.12

A set of correlations were run on Resilience and separately on Satisfaction with Life (See Table 1.7 and Table 1.8) to identify of all the predictor variables which were significant. The following were the only ones reporting a significant relationship to the two criterion variables:

Table 1.7 – Correlation – Resilience / all predictor variables

Total Scores		Total Resilience
COPE_Venting	Pearsons Correlation	0.214*
COPE_Religion	Pearsons Correlation	0.201*
COPE_Self_Blame	Pearsons Correlation	0.262**

Table 1.8 – Correlation – Satisfaction with Life / all predictor variables

Total Scores		Total Satisfaction with Life
COPE_Self_Blame	Pearsons Correlation	0.367**
PER_Neuroticism	Pearsons Correlation	0.238**

The correlation confirms that about 9.1% of the scores on Resilience correlate really well with the coping variables Venting, Religion and Self Blame. If we were to generalise this to another sample, we would estimate about 11%. (See Table 1.9)

Table 1.9 – COPE\_Self\_Blame, COPE\_Religion, COPE\_Venting

Model	Model Summary for criterion Resilience	%
Adjusted R Square	0.091	9.1%
R Square	0.110	11%

Table 1.10 – Coefficients: TOTAL Resilience v. COPE Venting, Religion & Self Blame

Model	Standardized Coefficients	
	Beta	Sig.
COPE Venting	0.110	0.210
COPE Religion	0.151	0.075
COPE Self Blame	0.215	0.012

A regression is run excluding countries as this had no significant impact on predictors, and the outcome confirms that after removing the influence of Religion and Venting as they have no significant influence on the Resilience scores, that it is found that the higher the self-blame, the higher the resilience,  $p = 0.012$ . Religious coping, with a Beta value of -0.151 is almost significant, and would have a secondary influence after Self-Blame. This suggests that while ones belief system increases, so does resilience. (See Table 1.10).

Table 1.11 – Multiple Comparisons: Satisfaction with Life scores by country

Country Participant From	Country Participant From	Mean Difference	Sig.
Tukey HSD			
Ireland	Israel	1.2254	.549
	The Netherlands	4.2569	.003
Israel	Ireland	-1.2254	.549
	The Netherlands	3.0315	.101
The Netherlands	Ireland	-4.2569	.003
	Israel	-3.0315	.101

About 21.9% of the scores on Satisfaction with Life correlate really well with the coping variable Self-Blame and personality trait Neuroticism. If we were to generalise this to another sample, we would estimate about 23.5%. (See Tables 1.11 and 1.12)

Table 1.12 – COUNTRY PARTICIPANT IS FROM, COPE Self Blame, PER Neuroticism

Model	Model Summary for criterion Satisfaction with Life	%
Adjusted R Square	0.219	21.95%
R Square	0.235	23.5%

Table 1.13 – Coefficients: TOTAL Satisfaction with Life v. COPE Venting, Religion &amp; Self Blame

Model	Standardized Coefficients	
	Beta	Sig.
COPE Self Blame	0.374	0.000
PER Neuroticism	0.104	0.194
Country of Participant	-.286	0.000

A regression is run, and the outcome confirms that Self Blame with a Beta value of 0.374, still correlate with Satisfaction with Life even when we removed the influence of neuroticism and country of origin. Country of origin, with a Beta value of -0.286 also still correlates with Satisfaction with Life even when we removed the influence of neuroticism and Self Blame. (See Table 1.13) Neuroticism is not significant at this point.

Therefore, we are finding that as Self Blame increases, total Satisfaction with Life and resilience increases.

## Discussion

The primary aim of this study was to examine if gender, culture, prior front-line military/police exposure or whether participants undertook exercise/ did yoga/ meditated or prayed could predict resilience and Satisfaction with Life levels.

Solomon et al. (2005) suggests that there is a gender difference in vulnerability to traumatic events, and that there are also gender differences in coping strategies in the face of a traumatic event. The results support the findings of Block and Block (2006) who put forward that resilience is a relatively stable dispositional ability showing stability in a longitudinal study up to the age of 30 with gender differences in the stability at a higher variability in women, con. Analysis confirmed that women's mean score was higher than men, although just under 22% of participants were in the 18-24, 25-34 age cohorts, future research might use differing age ranges to accommodate the 30 year old threshold.

As the results did not identify a relationship between the mean scores of resilience of those who have reported front-line military or police duty and those who have not, it was not possible to identify whether Papazoglou and Andersens (2014) research regarding mitigation of exposure to critical incidents (for police-officer or soldiers through improved training about positive coping skills and resilience improvement) was effective or not. As only 19% reported having had previously been employed in a front-line military or police role, a larger sample and an additional question around access to training/resilience intervention may have yielded results which would have supported the hypothesis.

Interestingly enough, while there was no significant difference found between the resilience scores of those who have reported as practicing some form of exercise, doing yoga, praying or meditating, the mean scores for the No responses was higher than the Yes.

In analysing whether country and gender had any effect on resilience scores, it was identified that country alone did not impact resilience scores but that taking gender into account there was a small impact of about 1% variance, with females mean scores being higher than males as established during the analysis of the first hypothesis. When doing the same analysis for impact on Satisfaction with Life, again there is only a significant impact on scores if taking gender alone, but not when also taking country into account. This time males mean scores were higher than females, though the scores were not significantly different. This supports Stevenson & Wolfers (2009) claim that due to a decline in female happiness, men are now reporting higher Satisfaction with Life.

While significant but only small, 4.5% of the difference in mean scores of Resilience is down to country with Israel recording the highest and The Netherlands the lowest, and 3.3% of was attributable to whether someone had been exposed to Front-Line duty. It is interesting to note that the biggest difference in mean scores for Resilience is actually between Ireland and The Netherlands (even though Israel scored higher than Ireland), though the variance is not significant.

A correlation confirms that about 9.1% of the scores on Resilience correlate really well with the coping variables Venting, Religion and Self-Blame and about 21.9% of the scores on Satisfaction with Life correlate really well with the coping variable Self-Blame and personality trait Neuroticism. It is interesting to note that there is no relationship between the Big Five Personality traits and Resilience. When the influence of Religion and Venting are removed, it is found that the higher the Self Blame, the higher the Resilience. When including Religion, which would have a secondary

influence after Self Blame, it suggests that as a person's faith increases, so does their resilience. It was also identified that Self Blame has an influence on Satisfaction with Life, even after we exclude the secondary influencer of Country. Neuroticism has no significant impact on Satisfaction with Life after Self Blame or Country.

### **Limitations/weaknesses of the Study**

The results of the study should be considered in light of a few limitations. As with all self-report surveys there are inherent limitations, however the surveys used were previously published and possess valid psychometric properties and the use of self-report may be the most appropriate method to examine internal process such as coping strategies, Satisfaction with Life and resilience. The survey was translated into Hebrew (with English along side) due to the slow response rate and on the advice of a key contact in Israel. The response rate improved drastically once the Hebrew/English version was released. The fact that there was not a Dutch/English version might have influenced the outcome of the scores, notably the fact that the language of some of the questions may have been taking for granted a certain level of fluency in English. If this study was to be repeated, it would be best to issue in native language.

As correlations were used in analysis therefore causation cannot be determined. The sample size was small (100 from Ireland, 47 from Israel and 37 from The Netherlands) with a potential imbalance over the countries. A larger and more balanced sample could have contributed to a stronger/more comprehensive result. The gender mix was largely balanced (45.1% respondents were male, and 54.9% were female).

As participation was via the internet it was therefore necessary for a participant to have access to a computer which may have excluded some sections of the population and as collection was by snowball effect it is not possible to ascertain if it was a good sample of the general population.

It was necessary for a participant to have a computer which might have excluded some sections of the population from taking part. It was, however, a well-balanced sample gender wise with 45.1% males and 54.9% females which was excellent representation since gender was the main variable being tested. Other than the requirement for each participant to be over the age of eighteen, there were no age restrictions.

### **Further Research**

Owing to the fact that previous research (Bleich et al., 2006; and Sleijpen et al., 2013) found a difference between natives and immigrants, future research might differentiate between native and immigrant groups within a much larger pool of participants from the relevant Country, and inclusion of wealth question would address the point that "Resource deprivation may help account for their findings that immigrants were less resilient than native-born Israelis" (Bleich et al., 2006).

### **Conclusion**

This research has found that as self-blame increases, total Satisfaction with Life and resilience increases with a small effect depending on country but that personality traits have little or no influence on either scores. The findings of this research support the belief that there is a positive relationship between an ability to blame oneself as an aspect of coping and levels of resilience and satisfaction with life (Bulman and Wortmann (1977, as cited in Warren et al., 1996).

## References

Andersen, J. P., & Papazoglou, K. (2014). Friends under fire: Cross-cultural relationships and trauma exposure among police officers. *Traumatology, 20*(3), 182-190.

doi:10.1037/h0099403

Baum, N. L., Rotter, B., Reidler, E., & Brom, D. (2009). Building Resilience in Schools in the Wake of Hurricane Katrina. *Journal Of Child & Adolescent Trauma, 2*(1), 62-70.

doi:10.1080/19361520802694323

Baum, N. L. (2005). Building Resilience: A School-Based Intervention for Children Exposed to Ongoing Trauma and Stress. *Journal Of Aggression, Maltreatment & Trauma, 10*(1/2), 487-

498. doi:10.1300/J146v10n01\_08

Bayoni, A., Koochecky, A., & Goodarzi, H. (2007). The reliability and validity of the satisfaction with life scale. *Journal of Iranian psychology, 3*(11), 259-265.

Beutel, M. E., Glaesmer, H., Wiltink, J., Marian, H., & Brähler, E. (2010). Satisfaction with Life, anxiety, depression and resilience across the life span of men. *The Aging Male, 13*(1),

32-39.

Bleich, A., Gelkopf, M., & Solomon, Z. (2003). Exposure to terrorism, stress-related mental health symptoms, and coping behaviors among a nationally representative sample in Israel. *Jama, 290*(5), 612-620.

Bleich, A., Gelkopf, M., Melamed, Y., & Solomon, Z. (2006). Mental health and resiliency following 44 months of terrorism: a survey of an Israeli national representative sample. *BMC medicine, 4*(1), 21.

Bonanno, G. A. (2008). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *Psychological Trauma: Theory, Research, Practice, and Policy, 5*(1), 101–113.

Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the Brief COPE. *International Journal of Behavioral Medicine, 4*, 92-100.

Cohn, M. A., & Fredrickson, B. L. (2006). Beyond the moment, beyond the self: Shared ground between selective investment theory and the broaden-and-build theory of positive emotions. *Psychological Inquiry, 39-44*.

Darling, C.A., Coccio, C., & Senatore, N. (2012). Women in midlife: Stress, health and Satisfaction with Life. *Stress and Health: Journal of The International Society For The Investigation Of Stress*, 28 (1), 31-10. DOI:10.1002/SMI.1398

Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of personality assessment*, 49(1), 71-75.

Des Rivières-Pigeon, C., Saurel-Cubizolles, M. J., & Romito, P. (2003). Psychological distress one year after childbirth A cross-cultural comparison between France, Italy and Quebec. *The European Journal of Public Health*, 13(3), 218-225.

Eggerman, M., & Panter-Brick, C. (2010). Suffering, hope, and entrapment: Resilience and cultural values in Afghanistan. *Social science & medicine*, 71(1), 71-83.

Fletcher, D., & Sarkar, M. (2013). Psychological resilience: A review and critique of definitions, concepts, and theory. *European Psychologist*, 18(1), 12-23. doi:10.1027/1016-9040/a000124

Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior*, 120, 219-239.

Folkman, S., & Lazarus, R. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology, 48*, 150–170.

Fredrickson, B. L. (2003). The value of positive emotions" *American Scientist* 91, 330-335

Friedman-Peleg, K., & Goodman, Y. C. (2010). From posttrauma intervention to immunization of the social body: Pragmatics and politics of a resilience program in Israel's periphery. *Culture, Medicine, and Psychiatry, 34*(3), 421-442.

Goel, K., Amatya, K., Jones, R., & Ollendick, T. (2014). Child and Adolescent Resiliency Following a Residential Fire: The Role of Social Support and Ethnicity. *Journal Of Child & Family Studies, 23*(3), 537-547. doi:10.1007/s10826-013-9715-4

Helzer, J. E., Robins, L. N., & McEvoy, L. (1987). Post-traumatic stress disorder in the general population. *New England Journal of Medicine, 317*(26), 1630-1634

Herman, J. (1992). Trauma and recovery: The aftermath of violence from domestic violence to political terror. *Violence in War and Peace: An Anthology*, 368-371.

Hooberman, J., Rosenfeld, B., Rasmussen, A., & Keller, A. (2010). Resilience in trauma-exposed refugees: The moderating effect of coping style on resilience variables. *American Journal Of Orthopsychiatry*, 80(4), 557-563. doi:10.1111/j.1939-0025.2010.01060.x

Hui-Ching, W. (2011). The protective effects of resilience and hope on quality of life of the families coping with the criminal traumatising of one of its members. *Journal Of Clinical Nursing*, 20(13/14), 1906-1915. doi:10.1111/j.1365-2702.2010.03664.x

John, O. P., & Srivastava, S. (1999). The Big Five Trait Taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of Personality: Theory and Research* (2nd ed., pp. 102-138), New York: Guilford Press.

Karam, E., & Ghosn, M. B. (2003). Psychosocial consequences of war among civilian populations. *Current Opinion in Psychiatry*, 16(4), 413-419.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.

Lee, J., Nam, S., Kim, A., Kim, B., Lee, M., & Lee, S. (2013). Resilience: A Meta-Analytic Approach. *Journal Of Counseling & Development, 91*(3), 269-279. doi:10.1002/j.1556-6676.2013.00095.x

Leppert, K., & Gunzelmann, T. S. J., Strauss, B., & Brahler, E.(2005). Resilience as a protective personality characteristic in the elderly.*Psychotherapy Psychom Medical Psychology, 55*(8), 365-390.

Lyons, M. D., Otis, K. L., Huebner, E. S., & Hills, K. J. (2014). Satisfaction with Life and maladaptive behaviors in early adolescents. *School Psychology Quarterly, 29*(4), 553-566. doi:10.1037/spq0000061

Masten, A. S., Best, K. M., & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Development and psychopathology, 2*(04), 425-444.

Morano, C. (2010). Resilience and Coping With Trauma: Does Gender Make a Difference?. *Journal Of Human Behavior In The Social Environment, 20*(4), 553-568. doi:10.1080/10911350903275358

Muller, L., & Spitz, E. (2002). [Multidimensional assessment of coping: validation of the Brief COPE among French population]. *L'encéphale, 29*(6), 507-518.

Nickerson, A. B., & Fishman, C. E. (2013). Promoting mental health and resilience through strength-based assessment in US schools. *Educational & Child Psychology, 30*(4), 7-17.

Orr, J., King, R., Hawke, P., & Dalgleish, J. (2013). Can we text you? A qualitative exploration of young unemployed job-seekers' attitudes to receiving resilience-building SMS messages. *Advances In Mental Health, 11*(3), 268-285. doi:10.5172/jamh.2013.11.3.268

Oishi, S., Diener, E. F., Lucas, R. E., & Suh, E. M. (1999). Cross-cultural variations in predictors of Satisfaction with Life: Perspectives from needs and values. *Personality and social psychology bulletin, 25*(8), 980-990.

Papazoglou, K., & Andersen, J. P. (2014). A guide to utilizing police training as a tool to promote resilience and improve health outcomes among police officers. *Traumatology: An International Journal, 20*(2), 103-111. doi:10.1037/h0099394

Pietrzak, R. H., & Cook, J. M. (2013). PSYCHOLOGICAL RESILIENCE IN OLDER U. S. VETERANS: RESULTS FROM THE NATIONAL HEALTH AND RESILIENCE IN VETERANS STUDY. *Depression & Anxiety (1091-4269), 30*(5), 432-443. doi:10.1002/da.22083

Salzman, M. B. (2001). Cultural Trauma and Recovery Perspectives from Terror Management Theory. *Trauma, Violence, & Abuse*, 2(2), 172-191.

Sarason, I. G., Sarason, B. R., Shearin, E. N., & Pierce, G. R. (1987). A Brief Measure of Social Support: Practical and Theoretical Implications. *Journal Of Social & Personal Relationships*, 4(4), 497-510. doi:10.1177/0265407587044007.

Saul, J. L. J. (2004). Facilitating family and community resilience in response to major disaster. *Living beyond loss: Death in the family*, 285.

Schnider, K. R., Elhai, J. D., & Gray, M. J. (2007). Coping Style Use Predicts Posttraumatic Stress and Complicated Grief Symptom Severity Among College Students Reporting a Traumatic Loss. *Journal of Counseling Psychology*, 54(3), 344-350. doi:10.1037/0022-0167.54.3.344

Siriwardhana, C., Ali, S. S., Roberts, B., & Stewart, R. (2014). A systematic review of resilience and mental health outcomes of conflict-driven adult forced migrants. *Conflict And Health*, 8(1), 13.

Sleijpen, M., ter Heide, F. J. J., Mooren, T., Boeije, H. R., & Kleber, R. J. (2013). Bouncing forward of young refugees: a perspective on resilience research directions. *European journal of psychotraumatology*, 4.

Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The Brief Resilience Scale: Assessing the ability to bounce back. *International Journal of Behavioral Medicine, 15*, 194-200.

Solomon, Z., Gelkopf, M., & Bleich, A. (2005). Is terror gender-blind? Gender differences in reaction to terror events. *Social psychiatry and psychiatric epidemiology, 40*(12), 947-954.

Steinhardt M, Dolbier C. Evaluation of a Resilience Intervention to Enhance Coping Strategies and Protective Factors and Decrease Symptomatology. *Journal Of American College Health* [serial online]. January 2008;56(4):445-453. Available from: Academic Search Complete, Ipswich, MA. Accessed December 20, 2014.

Stevenson, B., & Wolfers, J. (2009). The paradox of declining female happiness (No. w14969). *National Bureau of Economic Research*.

Tannenbaum, B., & Anisman, H. (2003). Impact of chronic intermittent challenges in stressor-susceptible and resilient strains of mice. *Biological psychiatry, 53*(4), 292-303.

Taylor, L. K., Merrilees, C. E., Cairns, E., Shirlow, P., Goeke-Morey, M., & Cummings, E. (2013). Risk and resilience: The moderating role of social coping for maternal mental health in a setting of political conflict. *International Journal Of Psychology, 48*(4), 591-603.  
doi:10.1080/00207594.2012.658055

Tugade, M. M., & Fredrickson, B. L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of personality and social psychology, 86*(2), 320.

Warren, L., Wrigley, J. M., Yoels, W. C., & Fine, P. R. (1996). Factors associated with Satisfaction with Life among a sample of persons with neurotrauma. *Journal of rehabilitation research and development, 33*, 404-408.

Wei, M., Alvarez, A. N., Ku, T. Y., Russell, D. W., & Bonett, D. G. (2010). Development and validation of a Coping with Discrimination Scale: factor structure, reliability, and validity. *Journal of Counseling Psychology, 57*(3), 328.

## Appendix

### Demographic Questions

What country are you from? Ireland\_\_\_\_ Netherlands\_\_\_\_ Israel\_\_\_\_

What is your Gender? Male\_\_\_\_ Female \_\_\_\_

What is your Age? \_\_\_\_18-24

\_\_\_\_25-34

\_\_\_\_35-44

\_\_\_\_45-54

\_\_\_\_55-64

\_\_\_\_65 +

Have you ever had front-line duty in the military or police force (Yes/No) \_\_\_\_

**Brief Resilience Scale**

Instructions: Use the following scale and circle one number for each statement to indicate how much you disagree or agree with each of the statements.

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

**Questions:**

- |  |           |
|--|-----------|
| 1. I tend to bounce back quickly after hard time               | 1 2 3 4 5 |
| 2. I have a hard time making it through stressful event        | 1 2 3 4 5 |
| 3. It does not take me long to recover from a stressful event  | 1 2 3 4 5 |
| 4. It is hard for me to snap back when something bad happens   | 1 2 3 4 5 |
| 5. I usually come through difficult times with little trouble  | 1 2 3 4 5 |
| 6. I tend to take a long time to get over set-backs in my life | 1 2 3 4 5 |
- 

The scale is scored by reverse coding items 2, 4, and 6 and finding the mean of the six items.

### Brief COPE Scale

These items deal with ways you've been coping with the stress in your life. There are many ways to try to deal with problems. These items ask what you've been doing to cope with this one. Obviously, different people deal with things in different ways, but I'm interested in how you've tried to deal with stress. Each item says something about a particular way of coping. I want to know to what extent you've been doing what the item says. How much or how frequently. Don't answer on the basis of whether it seems to be working or not—just whether or not you're doing it. Use these response choices:

1 = I haven't been doing this at all

2 = I've been doing this a little bit

3 = I've been doing this a medium amount

4 = I've been doing this a lot

Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can. Think about what you usually do when you are under a lot of stress for example, exam stress, assignment deadlines approaching, family or relationship problems, and rate each item accordingly.

#### Questions:

1. I've been turning to work or other activities to take my mind off things\_\_
2. I've been concentrating my efforts on doing something about the situation I'm in\_\_
3. I've been saying to myself "this isn't real"\_\_
4. I've been using alcohol or other drugs to make myself feel better\_\_
5. I've been getting emotional support from others\_\_
6. I've been giving up trying to deal with it\_\_
7. I've been taking action to try to make the situation better\_\_
8. I've been refusing to believe that it has happened\_\_
9. I've been saying things to let my unpleasant feelings escape\_\_
10. I've been getting help and advice from other people\_\_
11. I've been using alcohol or other drugs to help me get through it\_\_
12. I've been trying to see it in a different light, to make it seem more positive\_\_
13. I've been criticizing myself\_\_
14. I've been trying to come up with a strategy about what to do\_\_
15. I've been getting comfort and understanding from someone\_\_
16. I've been giving up the attempt to cope\_\_
17. I've been looking for something good in what is happening\_\_
18. I've been making jokes about it\_\_
19. I've been doing something to think about it less, such as going to movies/TV, reading, daydreaming, sleeping, shopping\_\_
20. I've been accepting the reality of the fact that it has happened\_\_
21. I've been expressing my negative feelings\_\_
22. I've been trying to find comfort in my religion or spiritual beliefs\_\_
23. I've been trying to get advice or help from other people about what to do\_\_
24. I've been learning to live with it\_\_
25. I've been thinking hard about what steps to take\_\_
26. I've been blaming myself for things that happened\_\_

27. I've been praying or meditating\_\_\_  
 28. I've been making fun of the situation\_\_\_

The Brief COPE is the shortened version of the COPE inventory and allocates responses into fourteen subscales all assessing different coping dimensions: According to Muller & Spitz (2002) the coping dimensions are: active coping, using instrumental support; using emotional support; planning; venting, self-blame; self-distraction; behavioural disengagement; positive reframing; acceptance; denial; acceptance; humor; religion, and substance use.

Subscale	Items	First portion	Second Portion
Self-distraction	1 + 19	1. I've been turning to work or other activities to take my mind off things___	19. I've been doing something to think about it less, such as going to movies/TV, reading, daydreaming, sleeping, shopping___
Active coping	2 + 7	2. I've been concentrating my efforts on doing something about the situation I'm in___	7. I've been taking action to try to make the situation better___
Denial	3 + 8	3. I've been saying to myself "this isn't real"___	8. I've been refusing to believe that it has happened___
Substance use	4 + 11	4. I've been using alcohol or other drugs to make myself feel better___	11. I've been using alcohol or other drugs to help me get through it___
Use of emotional support	5 + 15	5. I've been getting emotional support from others___	15. I've been getting comfort and understanding from someone___
Use of instrumental support	10 + 23	10. I've been getting help and advice from other people___	23. I've been trying to get advice or help from other people about what to do___
Behavioural disengagement	6 + 16	6. I've been giving up trying to deal with it___	16. I've been giving up the attempt to cope___
Venting	9 + 21	9. I've been saying things to let my unpleasant feelings escape___	21. I've been expressing my negative feelings___
Positive reframing	12 + 17	12. I've been trying to see it in a different light, to make it seem more positive___	17. I've been looking for something good in what is happening___
Planning	14 + 25	14. I've been trying to come up with a strategy about what to do___	25. I've been thinking hard about what steps to take___
Humour	18 + 28	18. I've been making jokes about it___	28. I've been making fun of the situation___
Acceptance	20 + 24	20. I've been accepting the reality of the fact that it has happened___	24. I've been learning to live with it___
Religion	22 + 27	22. I've been trying to find comfort in my religion or spiritual beliefs___	27. I've been praying or meditating___
Self-blame	13 + 26	13. I've been criticizing myself___	26. I've been blaming myself for things that happened___

Subscale	Items	Marks part 1	Marks part 2	TOTAL
Self-distraction	1 + 19			
Active coping	2 + 7			
Denial	3 + 8			
Substance use	4 + 11			
Use of emotional support	5 + 15			
Use of instrumental support	10 + 23			
Behavioural disengagement	6 + 16			
Venting	9 + 21			
Positive reframing	12 + 17			
Planning	14 + 25			
Humour	18 + 28			
Acceptance	20 + 24			
Religion	22 + 27			
Self-blame	13 + 26			

### The Brief Coping Scale Scoring

The Brief COPE scale yields a number of subscale scores covering how much the person uses various coping methods. To calculate the total for each subscale add together the scores from the items listed below for the appropriate subscale.

The higher the total the greater the use of that coping method. (note that the scale does not yield an overall total but instead rates how much the person uses the different coping strategies).

1 = I haven't been doing this at all

2 = I've been doing this a little bit

3 = I've been doing this a medium amount

4 = I've been doing this a lot

**Overall score** \_\_\_\_\_

### Reference

Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the Brief COPE. *International Journal of Behavioral Medicine*, 4, 92-100.

### Big Five Inventory

How I am In general.....Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

- 1: Disagree Strongly
- 2: Disagree a Little
- 3. Neither agree nor disagree
- 4. Agree a little
- 5. Agree Strongly

Questions: **I am someone who.....**

- |   |   |
|---|---|
| 1. ____ Is talkative                            | <b>2. ____ Tends to find fault with others</b>          |
| 3. ____ Does a thorough job                     | 4. ____ Is depressed, blue                              |
| 5. ____ Is original, comes up with new ideas    | <b>6. ____ Is reserved</b>                              |
| 7. ____ Is helpful and unselfish with others    | <b>8. ____ Can be somewhat careless</b>                 |
| <b>9. ____ Is relaxed, handles stress well.</b> | 10. ____ Is curious about many different things         |
| 11. ____ Is full of energy                      | <b>12. ____ Starts quarrels with others</b>             |
| 13. ____ Is a reliable worker                   | 14. ____ Can be tense                                   |
| 15. ____ Is ingenious, a deep thinker           | 16. ____ Generates a lot of enthusiasm                  |
| 17. ____ Has a forgiving nature                 | <b>18. ____ Tends to be disorganized</b>                |
| 19. ____ Worries a lot                          | 20. ____ Has an active imagination                      |
| <b>21. ____ Tends to be quiet</b>               | 22. ____ Is generally trusting                          |
| <b>23. ____ Tends to be lazy</b>                | <b>24. ____ Is emotionally stable, not easily upset</b> |
| 25. ____ Is inventive                           | 26. ____ Has an assertive personality                   |
| <b>27. ____ Can be cold and aloof</b>           | 28. ____ Perseveres until the task is finished          |
| 29. ____ Can be moody                           | 30. ____ Values artistic, aesthetic experiences         |
| <b>31. ____ Is sometimes shy, inhibited</b>     | 32. ____ Is considerate and kind to almost everyone     |
| 33. ____ Does things efficiently                | <b>34. ____ Remains calm in tense situations</b>        |
| <b>35. ____ Prefers work that is routine</b>    | 36. ____ Is outgoing, sociable                          |
| 37. ____ Is sometimes rude to others            | 38. ____ Makes plans and follows through with them      |
| 39. ____ Gets nervous easily                    | 40. ____ Likes to reflect, play with ideas              |
| <b>41. ____ Has few artistic interests</b>      | 42. ____ Likes to cooperate with others                 |
| <b>43. ____ Is easily distracted</b>            | 44. ____ Is Sophisticated in art, music or literature   |

**Scoring: Reverse coding coloured in red font as checked.** BFI scale scoring ("R" denotes reverse-scored items):

Extraversion: 1, 6R, 11, 16, 21R, 26, 31R, 36

1. \_\_\_\_ Is talkative
6. \_\_\_\_ Is reserved
11. \_\_\_\_ Is full of energy
16. \_\_\_\_ Generates a lot of enthusiasm
21. \_\_\_\_ Tends to be quiet
26. \_\_\_\_ Has an assertive personality
31. \_\_\_\_ Is sometimes shy, inhibited

Agreeableness: 2R, 7, 12R, 17, 22, 27R, 32, 37R, 42

2. \_\_\_\_ Tends to find fault with others
7. \_\_\_\_ Is helpful and unselfish with others
12. \_\_\_\_ Starts quarrels with others
17. \_\_\_\_ Has a forgiving nature
22. \_\_\_\_ Is generally trusting
27. \_\_\_\_ Can be cold and aloof
32. \_\_\_\_ Is considerate and kind to almost everyone
37. \_\_\_\_ Is sometimes rude to others
42. \_\_\_\_ Likes to cooperate with others

Conscientiousness: 3, 8R, 13, 18R, 23R, 28, 33, 38, 43R

3. \_\_\_\_ Does a thorough job
8. \_\_\_\_ Can be somewhat careless
13. \_\_\_\_ Is a reliable worker
23. \_\_\_\_ Tends to be lazy
28. \_\_\_\_ Perseveres until the task is finished
33. \_\_\_\_ Does things efficiently
38. \_\_\_\_ Makes plans and follows through with them
39. \_\_\_\_ Gets nervous easily
43. \_\_\_\_ Is easily distracted

Neuroticism: 4, 9R, 14, 19, 24R, 29, 34R, 39

4. \_\_\_\_ Is depressed, blue
9. \_\_\_\_ Is relaxed, handles stress well.
14. \_\_\_\_ Can be tense
19. \_\_\_\_ Worries a lot
24. \_\_\_\_ Is emotionally stable, not easily upset
29. \_\_\_\_ Can be moody
34. \_\_\_\_ Remains calm in tense situations
39. \_\_\_\_ Gets nervous easily

Openness: 5, 10, 15, 20, 25, 30, 35R, 40, 41R, 44

5. \_\_\_\_ Is original, comes up with new ideas
10. \_\_\_\_ Is curious about many different things
15. \_\_\_\_ Is ingenious, a deep thinker
20. \_\_\_\_ Has an active imagination
25. \_\_\_\_ Is inventive
30. \_\_\_\_ Values artistic, aesthetic experiences
35. \_\_\_\_ Prefers work that is routine
40. \_\_\_\_ Likes to reflect, play with ideas
41. \_\_\_\_ Has few artistic interests
44. \_\_\_\_ Is Sophisticated in art, music or literature

**The big five personality traits can be summarized as follows:**

Neuroticism - A tendency to easily experience unpleasant emotions such as anxiety, anger, or depression.

Extroversion - Energy, surgency, and the tendency to seek stimulation and the company of others.

Agreeableness - A tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others.

Conscientiousness - A tendency to show self-discipline, act dutifully, and aim for achievement.

Openness to experience - Appreciation for art, emotion, adventure, and unusual ideas; imaginative and curious.

### Satisfaction with Life Questionnaire

Below are five statements that you may agree or disagree with. Using the 1 - 7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

- \* 7 - Strongly agree
- \* 6 - Agree
- \* 5 - Slightly agree
- \* 4 - Neither agree nor disagree
- \* 3 - Slightly disagree
- \* 2 - Disagree
- \* 1 - Strongly disagree

- \_\_\_\_ In most ways my life is close to my ideal.
- \_\_\_\_ The conditions of my life are excellent.
- \_\_\_\_ I am satisfied with my life.
- \_\_\_\_ So far I have gotten the important things I want in life.
- \_\_\_\_ If I could live my life over, I would change almost nothing.

Scoring:

- \* 31 - 35 Extremely satisfied
- \* 26 - 30 Satisfied
- \* 21 - 25 Slightly satisfied
- \* 20 Neutral
- \* 15 - 19 Slightly dissatisfied
- \* 10 - 14 Dissatisfied
- \* 5 - 9 Extremely dissatisfied

Ask the "I am satisfied with my life" question a 2<sup>nd</sup> time, in reverse, to check for consistency

\_\_\_\_ I am dissatisfied with my life.

Reference:

Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of personality assessment*, 49(1), 71-75.

## Cover note on survey on Kwiksurveys.com

My name is Joanne Corbett I am conducting research in the Department of Psychology at Dublin Business School exploring cross-cultural differences in resilience. This research is being conducted as part of my studies and will be submitted for examination.

If you are over 18 and are Irish, Dutch or Israel, you are invited to take part in this study and participation involves completing this 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 by clicking on the link provided on the last page of this survey.

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.

The questionnaires will be securely stored, data from the questionnaires will be in electronic format and stored on a password protected computer.

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 Joanne Corbett [xxxxx@mydbs.ie](mailto:xxxxx@mydbs.ie). My research supervisor is Dr. Chris Gibbons, and he can be contacted at [xxxxx@dbs.ie](mailto:xxxxx@dbs.ie).

Thank you for taking the time to complete this survey.

### **Selection of Questionnaires used**

**Resilience** will be assessed using The Brief Resilience Scale (Smith et al., 2008) which was designed as an outcome measure to assess the ability of people to bounce back or recover from stress.

**Satisfaction with Life** will be assessed using the Satisfaction with Life Questionnaire (Diener et al. 1985), which is available in English, Dutch and Hebrew

**Coping styles** will be assessed using The Brief COPE scale, a survey designed to look at different coping styles used to combat stress. The COPE is a 28-item instrument that is designed to measure the different strategies that people use to cope with stress (Carver et al. 1989).

**Personality traits** will be assessed using The Big Five Inventory (BFI) designed to measure the key 5 personality dimensions. This is a self-report inventory that was designed to give a comprehensive profile of participants' behavioural and cognitive patterns (John & Srivastava, 1999).

**Predictor variables (PV)****Criterion Variable (CV)**

Personality traits

Resilience

Coping style

Satisfaction with Life

**Demographic Predictor variables (PV)**

Age

Gender

Country/Nationality

Military or Police front-line exposure

Regular practice of yoga/prayer/exercise