Investigating the Relationship Between Self-Compassion and Health-Promoting Behaviours: Age and Gender Differences

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Abstract

Factors associated with health-promoting behaviours are worth investigating, given their association with positive health outcomes. Emerging research has linked self-compassion with health-promoting behaviours. This study aimed to examine the relationship between self-compassion and its subscales, using the Self-Compassion Scale, and health-promoting behaviours (nutrition, physical activity and stress management), using the Health-Promoting Lifestyle Profile II. From a 144 community sample, self-compassion positively correlated with all three health-promoting behaviours, with stress management generating the strongest correlation. Self-kindness, common humanity and mindfulness had a significant positive medium correlation with stress management and had either a non-significant small or no correlation with nutrition and physical activity. Self-judgement, isolation and over-identification had a significant negative medium correlation with stress management and either a small or no correlation with nutrition and physical activity. Isolation yielded the strongest negative correlation with all three health-promoting behaviours. Differences in self-compassion based on demographic information was also reported. Men scored significantly higher than women and people aged 40-64 scored substantially higher than people aged 18-29. Results suggest that self-compassionate people engage in more health-promoting behaviours, particularly stress management behaviours. Self-compassion interventions may be appropriate for promoting health behaviours, particularly group-based interventions which potentially minimise feelings of isolation.

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Investigating the Relationship Between Self-Compassion and Health-Promoting Behaviours: Age and Gender Differences

Noncommunicable diseases have been referred to as lifestyle-based diseases (Sirois et al., 2014) and are believed to sometimes be preventable by regular engagement in health-promoting behaviours. Worldwide the number of deaths associated with noncommunicable diseases continues to rise (World Health Organisation, 2022). Specific health behaviours such as a healthy diet and regular physical activity have been found to reduce the likelihood of some noncommunicable diseases such as coronary heart disease, type 2 diabetes and stroke (Chiueve et al., 2006; Penedo & Dahn, 2005; Tampfer et al., 2000; Willett, 2006). Similarly, prolonged stress has been associated with the onset of noncommunicable diseases (Cohen et al., 2007; Steptoe & Mika, 2012; McEwen & Stellar, 1993) and is believed to impact immune functioning negatively (Dhabhar, 2014; Thornton & Andersen, 2006). Many factors can influence a person's choices about their health behaviours. In recent years, self-compassion has been identified as a factor which may influence engagement in health-promoting behaviours (Gedik, 2019; Homan & Sirosis, 2017; Phillips & Hine, 2021; Sirois, 2015; Terry & Leary, 2011).

Self-Compassion

While self-compassion is a relatively new concept in Western society, it dates back centuries in Eastern philosophy in Buddhist teachings (Neff, 2003a). Self-compassion can be defined as attending to one's suffering with the intention of alleviating it (Gilbert, 2005). The majority of the empirical research on self-compassion uses the conceptualisation put forward by Neff (2003a). Neff (2003a) has suggested that self-compassion has three distinct components that influence how a person responds to suffering: self-kindness, common humanity and mindfulness. Self-kindness involves reacting to one's self with kindness rather than harsh judgemental criticism. Common humanity involves reminding ourselves that

suffering is an inevitable part of life that we all go through, making it less of an isolating experience. Finally, mindfulness can be defined as being aware of and allowing space for one's painful thoughts and feelings without over-identifying with them (Neff, 2003a; Neff, 2003b).

This construct of self-compassion has been criticised as it suggests that self-compassion is a stable trait rather than a component that can change over time and across contexts (Li et al., 2020). Li and colleagues (2020) found that levels of self-compassion fluctuate daily. The fluctuation in daily levels of self-compassion has also been reported in other studies (Breines et al., 2014; Kelly & Stephen, 2016). Neff et al. (2021) developed the State Self-Compassion Scale to measure state compassion to overcome this limitation. This will open up more opportunities for self-compassion to be researched as a state component. However, to date, self-compassion has predominately been researched as a trait variable that is relatively stable over time (Neff, 2003a; Neff, 2003b). This approach fails to capture the daily fluctuations that may occur with self-compassion. However, it has allowed for correlations to be made between self-compassionate individuals and many positive psychological outcomes, highlighting the potential benefits associated with self-compassion.

Self-compassion has been compared to self-esteem as it presents with many of the same positive psychological outcomes (Neff, 2003a; Neff & Vonk, 2009). Higher levels of happiness (Neff et al., 2007b), cognitive well-being (Zeein et al., 2015) and reduced anxiety and depressive symptoms (Neff et al., 2007b; Neff & McGehee, 2010) have been outcomes associated with higher levels of self-compassion. However, self-compassion is not associated with narcissism, self-centredness and downward social comparison, which can sometimes be negative outcomes of high self-esteem (Fein & Spencer, 1997; Leary et al., 2007; Neff,

2003b). Consequently, it has been suggested that self-compassion is a healthier alternative to self-esteem (Neff, 2003b; Neff & Vonk, 2009).

Research has highlighted the positive role that self-compassion can play in various contexts. It has been found to lower the risk of disordered eating behaviours (Phillips & Hine, 2021; Rahimi-Aradabili et al., 2018), reduce the negative psychological impact of chronic pain (Barnes et al., 2021; Edwards et al., 2019) and act as a buffer against poor body image (Braun et al., 2016; Carbonneau et al., 2020) and burnout (Hashem & Zeinoun, 2020; Neff et al., 2020). Research has recently begun to suggest an association between self-compassion and physical health (Dunne et al., 2018; Phillips & Hine, 2021). Self-compassion may impact a person's physical health by influencing their engagement with health-promoting behaviours.

Self-Compassion and Health Behaviours

Health-promoting behaviours are actions we take that can act as a protective factor against disease or facilitate recovery from illness (Spring et al., 2012). Health-promoting behaviours have also been correlated with an increase in quality of life and lower levels of psychological distress (Conry et al., 2011; Dale et al., 2014; Walsh, 2011). Despite these benefits, health risk behaviours such as a diet lacking nutritious foods, physical inactivity and long-term stress are prevalent (Salari et al., 2020; Spring et al., 2012; Willett, 2006). Some hypotheses have been made to explain how self-compassion might influence health behaviours. Terry and Leary (2011) suggest that self-compassion increases a person's involvement in health-promoting behaviours by enhancing self-regulation. They indicated that self-compassionate people likely engage in processes central to self-regulation, such as setting goals, taking action and evaluating ongoing behaviours. Self-compassion may also facilitate engagement in health behaviours through the role of affect (Cha et al., 2022; Sirosis

et al., 2014). When self-compassionate people experience failures related to health behaviours, they respond with self-kindness and a perspective that such failures are a shared human experience. This may increase their ability to engage in behavioural self-regulation and reduce the likelihood of them engaging in self-defeating and unhealthy behaviours often associated with negative affect (Malderen et al., 2020; Mayne, 1999; Sirosis et al., 2014).

Health behaviours tend to occur in clusters, with people engaging in multiple health risk behaviours or health-promoting behaviours (Berrigan et al., 2003; Conry et al., 2011; Spring et al., 2012). As health behaviours tend to form in clusters, identifying interventions that positively impact numerous health behaviours is worthwhile. Some research shows that self-compassion positively correlates with multiple health behaviours (Gedik, 2019; Holden et al., 2020; Sirosis et al., 2014). Therefore, self-compassion interventions may be appropriate for promoting health behaviours.

Self-Compassion and Eating Behaviours

Self-compassion has been associated with healthier eating behaviours. Self-compassionate people are less likely to engage in disordered eating behaviours (Braun et al., 2016; Phillips & Hine, 2021; Rahimi-Aradabili et al., 2018) or emotional eating (Carbonneau et al., 2020; Schnepper et al., 2020). A limited number of studies have investigated self-compassion and diet quality behaviours. Carbonneau and colleagues (2021) investigated eating behaviours and self-compassion in mothers. Mothers with higher self-compassion tended to eat a more nutritious diet. Other researchers have reported similar findings that support the positive association between self-compassion and a healthy diet (Guertin et al., 2018; Rahimi-Aradabili et al., 2018;). However, a meta-analysis found that self-compassion appears to have more of an impact on decreasing disordered eating or managing existing health conditions rather than on increasing healthy eating for the sake of maintaining optimal

health (Phillips & Hine, 2021). Despite this, several studies have identified a link between self-compassion and nutrition behaviours, making it a worthy topic to investigate further. As much of this research has been conducted on samples of women, it would be valuable for future studies to be carried out on a community sample to assess whether similar results are found.

Self-Compassion and Physical Activity

A very limited amount of research directly examines the relationship between self-compassion and physical activity. Some studies investigate the relationship between self-compassion and health behaviours, including physical activity as a component. Such studies have found a positive association between self-compassion and physical activity (Gedik, 2019; Holden et al., 2020; Phillips & Hine, 2019; Sirosis, 2015).

In contrast, Li et al. (2020) studied the relationship between self-compassion and physical activity and reported no association between them based on diary entries from participants. Similarly, Halllion et al. (2018) found no significant association between self-compassion and physical activity. Both of these studies only measured physical activity over the previous seven days. There is a possibility that physical activity levels decreased temporarily over those dates recorded. Therefore, this may not have accurately represented the individuals' regular physical activity behaviours. This may have particularly been relevant to one of the studies as it was carried out in winter (Hallion et al., 2018), and poor weather has been identified as a barrier to participation in physical activity (Tucker & Gilliland, 2007). Due to the inconsistency in findings, it would be worthwhile to explore the relationship between self-compassion and physical activity further.

Self-Compassion and Stress Management

Self-compassion also appears to have a relationship with stress. Homan and Sirosis (2017) found that participants with higher levels of self-compassion presented with lower levels of perceived stress. Other studies have found similar results (Li et al., 2020; Schnepper et al., 2020). As people with higher levels of self-compassion report lower levels of perceived stress, it could be assumed that they engage in more effective forms of stress management. This conclusion could also be drawn from the association between self-compassion and the effective stress management intervention, mindfulness-based stress reduction (MBSR; Kabat-Zinn., 2003). MBSR places a significant emphasis on self-compassion (Shapiro et al., 2005), and it has been shown to have positive outcomes for various populations in reducing stress (Baer et al., 2012; Khoury et al., 2015; Sharma & Rush, 2014). Like self-compassion, mindfulness is a primary component in MBSR (Sharma & Rush, 2014). Due to the cross-over between self-compassion and MBSR, it could be hypothesised that self-compassionate people engage in stress management behaviours. However, more research is needed to support this hypothesis.

Subscales of Self-Compassion and Health-Promoting Behaviours

The vast majority of the studies investigating the relationship between self-compassion and different outcomes focus on the total score of self-compassion rather than examining the subscales of self-compassion. The literature on self-compassion and mental health outcomes has been criticised for this (MacBeth & Gumlet, 2012). The research on self-compassion and health-promoting behaviours could also be criticised for this limitation.

Gedik (2019) did investigate the association between the subscales of self-compassion and health-promoting behaviours. She found that mindfulness and self-kindness significantly predicted health-promoting behaviours. No negative association was found between self-

judgement, isolation, over-identification and health-promoting behaviours. Similarly, Holden et al. (2020) found no negative relationship between the negative subscales of self-compassion and all health-promoting behaviours measured. These findings of no negative correlation between self-judgement, isolation and over-identification and health-promoting behaviours is surprising. As self-compassion seems to present with a positive correlation with health-promoting behaviours it could be expected that its negative subscales would have a negative correlation with such behaviours.

This lack of negative association may be due to an individual's motivation to engage in health behaviours. As an example, individuals with compulsive exercise tendencies, a prominent characteristic in many eating disorders (Meyer et al., 2011), engage in physical activity usually as a way to cope with negative emotions and body image concerns (Cuesta-Zamora et al., 2022). An individual may engage in physical activity, however, self-compassion may not be a factor motivating this behaviour. Due to the lack of research, further investigation is needed to clarify the associations between self-compassion subscales and health-promoting behaviours.

Self-Compassion and Age

Many studies have begun documenting that in general self-compassion appears to increase steadily with age (Bratt & Fagerström, 2020; Brown et al., 2019; Herriot et al., 2018; Homan, 2016; Souza & Hutz, 2016; Neff & Vonk, 2009). This is in line with Erikson's stage of ego integrity, which suggests that as people age, there is a tendency for an increase in life satisfaction, wisdom and self-acceptance (Bratt & Fagerström, 2020; Tóth-Király & Neff, 2021).

Contrastingly, a study by Phillips and Ferguson (2013) found a weak and non-significant correlation between self-compassion and ageing. Another study found that age

only significantly predicted higher levels of self-compassion with specific samples (Neff & Pommier, 2013). This suggests that there are likely other factors at play which may counterbalance the increase in self-compassion that seems to be associated with ageing. Most studies investigating the relationship between self-compassion and age have used an older sample rather than a multigenerational sample (Bratt & Fagerström, 2020; Brown et al., 2019; Homan, 2016; Herriot et al., 2018; Phillips & Ferguson, 2013). This is understandable given the link between self-compassion and improved adjustment to changes associated with ageing (Brown et al., 2019). As most studies focus on an older sample, it would be valuable to investigate the relationship between self-compassion and age in a multigenerational sample.

Self-Compassion and Gender

Like many other psychological variables, gender has been identified as a possible factor influencing a person's level of self-compassion. Research findings on gender differences in self-compassion have been somewhat inconsistent. The results of several studies suggest that men tend to score higher than women on levels of self-compassion (Neff, 2003a; Yarnell et al., 2015; Yarnell et al., 2019). In contrast, some studies have reported no gender differences in levels of self-compassion (Holden et al., 2020; Murn & Steele, 2020; Neff et al., 2007). Research has found that men tend to score higher on standard measures of global self-esteem than women (Bleidorn et al., 2016; Kling et al., 1999). Self-compassion and self-esteem, although conceptually distinct, they have been found to be inter correlated (Neff, 2011). Therefore, gender difference in self-compassion may also be expected.

Hyde (2005) put forward the hypothesis of gender similarities which suggests that although gender differences is a highly active area in psychology, men and women may be more similar than different in most psychological domains. From meta-analyses on gender differences in levels of self-compassion, only a small effect size was noted (Yarnell et al.,

2015; Yarnell et al., 2019). This correlates with literature that supports the gender similarities hypothesis, which has found that differences are typically small between genders for an array of psychological variables (Zell et al., 2015). Therefore, it may be the case that gender differences are small for levels of self-compassion. However, more research is needed to draw such conclusion.

The Current Study

Rationale

There are several important implications of studying the relationship between the subscales of self-compassion and health behaviours in a community sample. From searching existing literature, only two other studies have examined the relationship between the subscales of self-compassion and health-promoting behaviours (Gedik, 2019; Holden et al., 2020). Only one of these studies used a community sample and some of their results are contrasting with the other study. Therefore, it would be beneficial to examine the association between these variables further. Understanding more about the relationship between the subscales of self-compassion and health-promoting behaviours could be valuable for guiding the design of health-promotion programs for the general public. The information may also be beneficial to health psychologists with regard to deciding which aspects of self-compassion may be best to focus on when addressing health behaviours with clients. This study will focus on three dimensions of health behaviours; nutrition, physical activity and stress management, as they have been identified as health behaviours that have the potential to impact our health positively.

Although, self-compassion appears to increase steadily with age, most of this research has used an older sample rather than a multigenerational sample. Researching self-compassion in a sample that spans a wide age range may add to our understanding of the

populations potentially most vulnerable to low levels of self-compassion. Such populations may particularly benefit from a self-compassion intervention. Similarly, existing research has presented with contradicting evidence with regards to gender differences in self-compassion. This study aims to add to the existing literature on exploring this further.

Health promotions, particularly for physical activity and healthy eating, tend to be centred around weight loss (Mensinger et al., 2016; Tylka et al., 2014). Research has shown that behaviour modifications with weight loss intentions can contribute to adverse psychological outcomes such as poor body image and eating disorders (Ackard et al., 2002; Neumark-Sztainer et al., 2006). Self-compassion may be a more holistic alternative to such health promotions, as the research shows that being self-compassionate is positively associated with many psychological outcomes. Many health promotion attempts can also take a victim-blaming stance (Lowenberg, 1995). Using self-compassion as a health promotion model may be a healthier alternative as it takes a kinder and less judgemental view of the self.

Research Aim

The research aims are: 1) To investigate the relationship between self-compassion and health-promoting behaviours 2) To explore whether the mindfulness, self-kindness and common humanity subscales of self-compassion are correlated with engagement in health-promoting behaviours 3) To explore whether the over-identification, self-judgement, isolation subscales of self-compassion are correlated with engagement in health promoting-behaviours 4)To investigate if there is a difference in self-compassion scores for people who are aged 18-29, 30-39, 40-64 and 65 years and older 5) To investigate gender differences in levels of self-compassion. Based on previous literature, the following hypotheses were formulated for this study:

1. There will be a positive correlation between self-compassion and health-promoting behaviours.
2. There will be a positive correlation between mindfulness, self-kindness and common humanity subscales of self-compassion and health-promoting behaviours.
3. There will be a negative correlation between over-identification, self-judgement, isolation subscales of self-compassion and health-promoting behaviours.
4. There will be a significant difference in self-compassion scores with regard to age, with older participants scoring generally higher than younger participants.
5. There will be a small effect size in gender differences in levels of self-compassion, with men scoring slightly higher than women.

Methods

Participants

145 participants took part in this study. Data from 1 participant was excluded as it was deemed unreliable due to inappropriate responses. This was higher than 68, which was the minimum required sample size suggested for this study according to the software G *Power (Faul et al., 2009). The majority of the sample identified as a woman (N=102, 70.8%) as opposed to a man (N=41, 28.5%) or non-binary (N=1, 0.7%). No participants chose to self-identify their gender. Participants ranged in age from 18 to 73. The average age was 37 years (SD=13.04). Data regarding age was missing for 2 participants as they answered the question incorrectly. Most of the participants resided in Ireland (N=123, 85.4%), with some participants living in other countries such as Spain (N=4, 2.8%), Australia (N=4, 2.8%), Sweden (N=2, 1.4%) and England (N=2, 1.4%). Regarding education, most participants had an undergraduate degree or equivalent (N=56, 38.9%). Whereas the percentage of participants with a leaving certificate (N=43, 29.9%) or postgraduate qualification (N=45, 31.3%) were similar.

Design

This study implemented a cross-sectional research design, as all data was collected at a given point in time. The study was quantitative in nature, with no qualitative questions included. The first three hypotheses were tested using correlational analysis. Therefore, there were no independent or dependent variables present. A between-groups design was implemented to test the fourth and fifth hypotheses. Gender and age (independent variables) differences with regard to levels of self-compassion (dependent variable) were investigated.

Measures

Demographics

Participants completed a demographic questionnaire (See Appendix D). In this participants were asked to indicate their age, gender identity (woman, man, non-binary, prefer to self-identify), education (leaving certificate or equivalent, undergraduate degree or equivalent or postgraduate qualification) and the country that they live in.

Self-Compassion Scale

The Self-Compassion Scale (SCS; Neff, 2003b; see Appendix E) was used to measure self-compassion. The SCS is a 26-item self-report questionnaire. For each item, participants are asked to indicate how often they behave in the stated manner using a 5-point Likert-type scale ranging from 1 (Almost never) to 5 (Almost always). Examples of the items include "I'm disapproving and judgement about my own flaws and inadequacies" and "when I'm feeling down, I tend to obsess and fixate on everything that's wrong". The SCS is composed of six subscales: self-kindness, self-judgement, common humanity, isolation, mindfulness and over-identification. Higher scores on each subscale signify greater levels of engagement in that specific behaviour. In order to calculate the total self-compassion score, scores from the three negative subscales items (self-judgement, isolation and over-identification) must be reversed. Once these scores are reversed, the total self-compassion score is calculated by taking the mean of each subscale and computing a total mean.

Neff (2003b) suggests that scores between 1.0-2.49 should be considered low, between 2.5-3.5 as moderate and 3.51-5.0 as high. Past research has demonstrated good internal and test-retest reliability for SCS (Albertson et al., 2015; Neff, 2003b; Neff et al., 2005). In the present study, the overall internal consistency of the SCS demonstrated to be reliable (Cronbach's α =.90). Likewise, Cronbach's alpha for each subscale of SCS was

sufficient: (Self-kindness = .84, self-judgement = .83, common humanity = .77, isolation = .80, mindfulness = .79, and over-identification = .82).

Health-Promoting Lifestyle Profile II – Adapted

A modified version of the Health-Promoting Lifestyle Profile II (HPLP-II; Walker et al., 1995; see Appendix F) questionnaire was used to measure participants' level of self-reported engagement in health-promoting behaviours. The original version of HPLP-II consists of 52 items. The participant is asked to respond to each item by indicating the frequency in which they engage in the stated behaviour using a 4-point Likert scale ranging from 1 (Never) to 4 (Routinely). Sample items include: "Balance time between work and play" and "do stretching exercises at least 3 times per week". The original questionnaire includes six subscales. However, this study included items from only three subscales: nutrition, physical activity and stress management. It was decided to adapt the HPLP-II to avoid a lengthy questionnaire which may have discouraged participation. Nutrition, physical activity and stress management were chosen due to their association with a reduced risk of noncommunicable diseases.

After adaptation, the possible total score ranges from 1-25. The overall health-promoting lifestyle score can be obtained by calculating a mean of the individual's responses to all 25 items. A higher scores indicates higher engagement in a health-promoting lifestyle. The subscale score can be obtained by calculating the mean of the responses to the subscale items. The HPLP-II is one of the most used instruments for measuring health-promoting behaviours and has been translated into many different languages (Davis & Guzman, 2022). The overall internal consistency for the HPLP-II in this current study was reliable (Cronbach's $\alpha = .84$). Likewise, Cronbach's alpha for each subscale of HPLP-II was sufficient: (Nutrition = .78, physical activity = .80, and stress management = .72). Other

studies have shown high internal consistency and reliability for the HPLP-II and its subscales (Holden et al., 2020; Tanjani et al., 2016).

Procedure

Participants were recruited using a snowball convenience sampling strategy. A message including a brief study description and a link to the online survey was shared on the researcher's Facebook, Instagram and WhatsApp accounts (see Appendix A). The message explained that individuals could repost the message on their social media accounts if they wished to assist in recruitment. Individuals had to be over 18 and have access to the internet in order to participate.

A pilot study was conducted to receive feedback on the usability of the survey. It included two participants who were recruited through convenience sampling. Slight adjustments were made to the survey following the feedback. The data collected from the pilot study was excluded from the analysis.

When participants clicked on the shared link, they received an information sheet (see Appendix B). This included a brief description of the study and how long participation was likely to take (9 minutes). In the information sheet, they were informed that they were under no obligation to participate, that they could withdraw their consent at any time by pressing the exit button and that the study was completely anonymous and confidential. It also clarified how once they completed the survey, their data could not be withdrawn as it was unidentifiable. Participants then had to complete the consent form (see Appendix C) by confirming that they were 18 years of age or older and that they had read the consent form and wished to continue with participation. Once informed consent was given, the participants completed demographics, self-compassion and health-promoting behaviours questionnaires. Microsoft forms was used to create this survey. On average, it took 13.42 minutes to complete.

Ethical Considerations

Ethical permission to carry out this study was obtained from the ethical review board at the National College of Ireland (NCI). This study did not include participants from vulnerable groups, and informed consent was obtained before participation. The risks and benefits of participation were outlined in the information sheet, and no incentives were used to recruit participants. Therefore, this study was in line with the ethical guidelines provided by NCI. There was no obvious harm expected to result from participation. However, the website details for "Befrienders Worldwide", a volunteer service which provides contact details for helplines available in different countries, was provided in the debrief sheet, along with the contact details for the Irish 24-hour helpline centre, "The Samaritans" (see Appendix G). These were provided to support participants if the survey caused psychological distress.

Results

Descriptive Statistics

Table 1 shows the descriptive statistics of all the continuous variables within the current study. The mean total SCS score was 3.00 (SD= 0.79). The confidence intervals inform that at the 95% confidence level, the true population mean lies within the 2.88-3.13 range. According to Neff (2003b), results indicate that among the current sample, levels of self-compassion were generally moderate. The mean total HPLP-II score was 2.31 (SD=0.42). Inspection of the confidence intervals determines that at the 95% confidence level, the true population mean lies within the 2.24-2.38 range. Results indicate that health-promoting behaviours among the current sample were generally moderate. Table 1 provides further information regarding the descriptive statistics for the subscales of the measures. Mindfulness had the highest mean, whereas self-kindness had the lowest. While for health-promoting behaviours, nutrition had the highest mean and physical activity had the lowest.

Preliminary analysis indicated that SCS total scores were normally distributed with a score of .200 on the test of normality Kolmogorov Smirnov ($p > 0.5$). However, all of the six subscales were non-normally distributed. A significant result ($p < 0.5$) on the Kolmogorov-Smirnov statistic was found for HPLP-II total score. Upon inspection of the histogram and the normal probability plots, scores appeared to be reasonably normally distributed. According to the Shapiro-Wilk test, HPLP-II total score presented as normally distributed ($p>.05$). Therefore, it was concluded that health-promoting behaviours were normally distributed. All three subscales of HPLP-II presented as non-normally distributed.

Table 1

Descriptive Statistics of all Continuous Variables

	Mean (95% Confidence Intervals)	Std. Error Mean	Median	SD	Range
HPLP-II	2.31 (2.24-2.38)	.04	2.23	0.42	1-3
Nutrition	2.45 (2.36-2.53)	.04	2.44	0.49	1-4
Physical Act.	2.22 (2.11-2.32)	.05	2.13	0.64	1-4
Stress	2.27 (2.19-2.35)	.04	2.25	0.47	1-4
SCS	3.00 (2.88-3.13)	.07	2.98	0.79	1-5
Self-Kindness	2.74 (2.60-2.89)	.08	2.60	0.90	1-5
Self-Judgment	3.01 (2.85-3.17)	.08	3.00	0.96	1-5
C. Humanity	3.01 (2.86-3.16)	.08	3.00	0.91	1-5
Isolation	2.78 (2.61-2.96)	.86	2.75	1.03	1-5
Mindfulness	3.08 (2.92-3.23)	.08	3.00	0.93	1-5
Over-Id.	3.00 (2.84-3.17)	.09	3.00	1.02	1-5

Note. N=144
Physical Act. = Physical activity
C. Humanity= Common humanity
Over-Id.= Over identification

Inferential Statistics

Correlational Analyses

Prior to investigating the relationship between self-compassion and health-promoting behaviours, preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. As both self-compassion and health-promoting behaviours approximated normality, a Pearson's product-moment correlation coefficient was computed. There was a medium positive correlation between the two variables (r= .32 [95% CI= .16 - .46], n=144, p<.001). This indicates that the two variables share approximately 10% of variance in common. Results indicate that higher levels of self-compassion are associated with higher levels of engagement in health-promoting behaviours.

The subscales of HPLP-II violated normality (p>.05). Therefore, a non-parametric Spearman correlation coefficient was computed to assess the relationship between self-compassion and the health-promoting behaviours sets of variables. Self-compassion had a small correlation with nutrition and physical activity; however, only the correlation with nutrition was significant (see Table 2 for details). Self-compassion had a medium significant correlation with stress management (r=.46).

Within the self-compassion set, all variables violated normality. There, a non-parametric Spearman correlation coefficient was computed to assess the relationship between the self-compassion set and the health-promoting behaviours set of variables. As shown in Table 2, significant correlations were found between the subscales of self-compassion and health-promoting behaviours. In the interest of brevity, only the strongest correlations will be discussed. Firstly, all six subscales of self-compassion had a significant correlation with stress management. Self-kindness, common humanity and mindfulness all had a positive medium correlation with stress management. While self-judgement, isolation and over-

identification had a medium negative correlation with stress management. Isolation also had a significant small correlation with nutrition and physical activity.

Table 2

Correlations Between the Subscales of the Criterion Variable and the Predictor Variable

Variables	1	2	3	4	5	6	7	8	9	10
1. HPLP	1									
2. Nutrition	.80**									
3. Physical Activity	.84**	.48**	1							
4. Stress Management	.67**	.39**	.37**	1						
5. SCS	.32**	.19*	.15	.46**						
6. Self-Kindness	.25**	.09	.14	.46**	.84**	1				
7. Self- Judgement	-.20*	-.16	-.05	-.34**	-.84**	-.69**	1			
8. Common Humanity	.25**	.15	.09	.40**	.68**	.62**	-.37**	1		
9. Isolation	-.31**	-.26**	-.19**	-.34**	-.78**	-.51**	.68**	-.35**	1	
10. Mindfulness	.23**	.11	.14	.37**	.23**	.71**	-.52**	.67**	-.55**	1
11. Over Identification	-.15	-.09	-.05	-.32**	-.88**	-.61**	.77**	-.44**	.72**	-.70**

Note. HPLP: Total Health promoting lifestyle profile score
SCS: Self-compassion score
Statistical significance: *p < .05; **p < .01; ***p < .001

Group Differences

A one-way between-groups ANOVA was conducted to determine if there were age differences in self-compassion scores. Participants were divided into four groups according to their age (Group 1: 18-29 years; Group 2: 30-39 years; Group 3: 40-64 years; Group 4: 65 years and older). There was a statistically significant difference in levels of self-compassion scores for the four groups F (3, 138) = 3.39, p = .02. The effect size indicated a medium difference in self-compassion scores (eta squared = .07). Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 1 (M=72.75, SD= 17.60) was significantly lower (p=.01) than Group 3 (M=84.75, SD=20.85). However, there was no statistically significant difference in mean scores between the rest of the groups.

An independent samples t-test was conducted to compare levels of self-compassion between men and women. The participant who identified as non-binary was removed from this analysis as one response was deemed insufficient and not representative of this population. There was a significant difference in scores (t (141) = 3.06, p = .003), with men (M = 85.51, SD = 16.96) scoring higher than women (M = 74.38, SD = 20.61). The magnitude of the differences in the means (mean difference = 11.13, 95% CI: 3.95 – 18.31) was large (Cohen's d = .57).

Discussion

This study aimed to examine the relationship between self-compassion and health-promoting behaviours and explore gender and age differences in self-compassion. The first hypothesis was supported as a moderate positive correlation between self-compassion and health-promoting behaviours was found. This finding is consistent with the growing body of research, which has found a positive association between these two variables (Dunne et al., 2018; Gedik, 2019; Holden et al., 2020; Sirosis et al., 2014).

The second hypothesis was supported as a significant small positive correlation between self-kindness, common humanity and mindfulness with health-promoting behaviours was found. This correlates with findings from previous research (Gedik, 2019; Holden et al., 2020). Upon closer inspection, self-kindness, common humanity and mindfulness only had a significant positive medium correlation with stress management and had either a non-significant small or no correlation with nutrition and physical activity. This contradicts Holden and colleagues' (2020) study which reported a strong positive correlation between the three positive subscales of self-compassion and all health-promoting behaviours.

The third hypothesis was supported as a negative correlation was found with over-identification, self-judgement and isolation and health-promoting behaviours. Upon closer inspection, self-judgement, isolation and over-identification had a significant negative medium correlation with stress management and either a small negative or no correlation with nutrition and physical activity. Isolation yielded the strongest negative correlation with all three health-promoting behaviours. Gedik (2019) also found that some of the negative subscales of self-compassion had no correlation with health-promoting behaviours. While, Holden and colleagues (2020) found a strong negative correlation between the negative

subscales of self-compassion and nutrition. Gedik (2019) even found a positive correlation between self-judgement and isolation with stress management.

The differences in why a person might be motivated to engage in health-promoting behaviours may offer one plausible explanation for these contradicting findings between this study and previous studies. Self-determination theory (Ryan & Deci, 2000) has suggested that there are different types of motivation. A central distinction that has arisen from this theory is between autonomous and controlled motivation. People are autonomously motivated when they engage in a behaviour to satisfy basic psychological needs. Whereas, with controlled motivation, one's behaviour is a function to meet an external standard or receive social affirmation (Deci & Ryan, 2008). Autonomous motivation appears to produce better psychological health and greater long-term behavioural maintenance than controlled motivation (Hagger et al., 2014; Ntoumanis et al., 2021; Williams et al., 2002). As a negative correlation was found between isolation, self-judgement and over-identification and health-promoting behaviours in this study, it could be hypothesised that engagement in health-promoting behaviours was led more so by autonomous motivation.

The total self-compassion score and each of the subscales of self-compassion yielded the strongest correlation with stress management. This finding is consistent with previous literature, which has documented that individuals with higher levels of self-compassion tend to present with lower levels of perceived stress (Homan & Sirosis, 2017; Li et al., 2020; Schnepper et al., 2020) and manage stress more effectively (Alkema et al., 2008; Vigna et al., 2017).

There are several plausible explanations for why self-compassion was positively associated with stress management behaviours. Firstly, Allen and Leary (2010) posited that self-compassionate people might use more adaptive, problem-focused coping strategies,

which may lead to the experience of lower levels of stress. Some research has supported this theory by linking self-compassion to greater use of adaptive rather than maladaptive coping strategies (Ewert et al., 2021; Neff et al., 2005; Sirois et al., 2015). Secondly, according to Neff (2003a), mindfulness is a core component of self-compassion. Much research has documented the benefits of mindfulness in reducing stress levels (Baer et al., 2012; Chiesa & Serretti, 2009; Khoury et al., 2015). It should be clarified that mindfulness involved in self-compassion is narrower in scope when compared to how mindfulness is more generally defined (Neff & Germer, 2013). However, as mindfulness is a core component of self-compassion, it may help explain the medium significant correlation found in this study between self-compassion and stress management behaviours.

The fourth hypothesis was supported as significant difference in self-compassion scores was noted between the age groups. The results suggested that older individuals, on average, have higher levels of self-compassion than younger individuals. This finding correlates with previous research (Bratt & Fagerström, 2020; Brown et al., 2019; Herriot et al., 2018; Homan, 2016; Souza & Hutz, 2016; Neff & Vonk, 2009). In this study, the people aged 40-64 had the highest average level of self-compassion, while people aged 18-29 scored the lowest. Another study that used a multigenerational sample reported a similar result as they found self-compassion to be highest among the ages 31 to 66 (Souza & Hutz, 2016). It has been suggested that ageing often leads to a greater sense of perspective and wisdom (Bluth & Blanton, 2014), a shift in goals and values and stronger connections with others (Neff & McGehee, 2010) which all may nurture self-compassion. The oldest group did not yield the highest levels of self-compassion as expected considering that self-compassion seems to increase with age. However, their scores were likely not generalisable as there was a very limited number of participants in this group.

The final hypothesis was partially supported as gender differences were found with self-compassion. In this sample, men scored significantly higher in self-compassion than women. This finding is congruent with meta-analytic research (Yarnell et al., 2015; Yarnell et al., 2019). This study found a large effect size in gender differences in self-compassion. However, much of the research has reported only a small effect size (Yarnell et al., 2015; Yarnell et al., 2019;). Most of the participants in this study were women (70.8%). This demographic could have had an impact on the findings.

There are some plausible explanations for the gender differences in levels of self-compassion found. The Response Styles Theory (Nolen-Hoeksema, 1987) hypothesised that women tend to engage in rumination more frequently in response to depressed states than men. There have been numerous studies that support this theory (Johnson & Whisman, 2013; Tamres et al., 2002). Rumination has been defined as repetitive self-focused attention on a depressed mood (Spasojević & Alloy, 2002). Over-identification appears to present similarly to rumination, as it has described it as obsessing and fixating on negative emotions or events (Neff, 2016). Women also seem to score higher in the subscale over-identification than men (Neff, 2003b). This theory could offer a plausible explanation as to why women tend to score lower than men on self-compassion.

Gender role stereotypes may influence the presentation of gender differences in levels of self-compassion. Large gender differences in empathy have been found when self-report measures are used, indicating greater empathy in women (Eisenberg & Lennon, 1983). However, in studies which used more objective measures of empathy, none or only a small effect size has been found (Baez et al., 2017; Ickes et al., 2000). Women may have higher levels of motivation to present themselves as highly empathic to be consistent with the gender-role stereotype (Ickes et al., 2000). As a self-report self-compassion measure was

used in this study, it could be hypothesised that gender role stereotypes influenced the women's responses. The societal stereotype of being self-sacrificing has been associated with women (Yarnell et al., 2019). Women may view self-compassion as being selfish and, therefore, not favourable in society.

Interestingly, Yarnell and colleagues (2019) found that having a masculine gender role orientation had a larger positive impact on levels of self-compassion than self-identified gender. This suggests that socialisation appears to strongly influence a person's tendency to engage in self-compassion. However, the current study measured self-identified gender rather than gender role orientation. Therefore, it cannot be concluded that the gender differences in self-compassion was influenced by gender role orientation.

Major Implications

The results from this study suggest that self-compassion interventions may be an appropriate adjunct treatment that can be offered to patients by healthcare professionals. Health promotions, particularly for physical activity and healthy eating, can tend to be centred around weight loss in society (Mensinger et al., 2016; Tylka et al., 2014). Behaviour modifications with weight loss intentions often are not maintained (Greenway, 2015; McGuire et al., 1999), may not be effective for improving long-term health (Brown & Kuk, 2015; Tomiyama et al., 2013) and have been associated with poor body image and eating disorders (Ackard et al., 2002; Neumark-Sztainer et al., 2006). Self-compassion interventions may offer a more holistic alternative to weight-centred health promotions, as research has documented many positive psychological outcomes associated with self-compassion (Albertson et al., 2015; Ferrari et al., 2019; Zeein et al., 2015).

However, caution must be taken when interpreting the results from this study. Although self-compassion yielded a positive medium correlation with stress management,

only a small correlation was found with nutrition and physical activity behaviours. The correlation with physical activity was also non-significant. Additionally, this study did not measure mediating variables which may have been underlying the relationship between self-compassion and health-promoting behaviours.

This study found that feelings of isolation had the strongest significant negative correlation with health-promoting behaviours, albeit with a small negative correlation with nutrition and physical activity. Self-compassion interventions can be delivered using a variety of mechanisms, including group workshops or training sessions and individual therapy (Sirosis, 2014). The finding from this study suggests that group-based self-compassion interventions may be most beneficial for promoting health behaviours. Group-based self-compassion interventions have also been found to have a stronger effect than individual delivery modes (Ferrari et al., 2019). According to Neff (2016), sharing personal failures with others can soften feelings of isolation. A group-based delivery may lessen feelings of isolation as they offer an experience of connection with others, which according to this study, may be beneficial for promoting health behaviours.

In this study, self-compassion had the strongest positive correlation with stress management behaviours. It has been suggested that self-compassion is a learned skill (Germer & Neff, 2013). According to this study, self-compassion interventions may benefit individuals who need help managing stress more effectively. The Mindful Self-Compassion (MSC; Germer & Neff, 2013) intervention is an 8-week group-based course designed to enhance self-compassion. Significant increases in self-compassion and mindfulness have been documented following MSC and at follow-up dates (Bluth et al., 2016; Finlay-Jones et al., 2018; Neff & Germer, 2013; Torrijos-Zarcero et al., 2021).

It could be argued that MSC is reductant in comparison to the popular MBSR program (Kabat-Zinn, 2003), which already seems to cultivate self-compassion (Shapiro et al., 2005). However, MBSR only spends a short amount of time explicitly teaching self-compassion skills (Neff & Germer, 2013). MSC has been found to increase self-compassion levels by 43% (Neff & Germer, 2013), whereas a review of the literature on five MBSR studies resulted in an average increase of 19% in self-compassion (Germer & Neff, 2013). Thus, self-compassion training, like MSC, may be more helpful in maximising the potential benefits of self-compassion, particularly concerning stress management, as suggested by the findings of this study.

According to this study, women and people aged 18-29 years are most vulnerable to experiencing low levels of self-compassion. Some research has also reported a higher incidence of depression and anxiety symptoms among women (Albert; 2015; Egloff & Schmukle, 2003; Kessler, 2003; Zender & Olshansky, 2009) and younger people (Christensen et al., 1999; Kessler et al., 2010). It could be hypothesised that lower levels of self-compassion are one of the many factors contributing to this higher incidence of depression and anxiety symptoms. Given that higher levels of self-compassion have been associated with many positive psychological outcomes, including lower levels of anxiety and depression (Neff & Germer, 2013; Raes, 2011), self-compassion interventions may be particularly helpful for women and people aged 18-29 years.

Strengths and Limitations

This study aids the development of a more in-depth discussion of self-compassion and health-promoting behaviours by including the subscales of self-compassion in the correlational analysis. Most previous studies do not provide specific information on how each subscale of self-compassion is associated with health-promoting behaviours. Further insight

into such information is worthwhile as it helps to identify which components of self-compassion are most strongly associated with specific health-promoting behaviours. Such research may help develop interventions that target specific components of self-compassion to promote health behaviours.

Secondly, although a growing body of research is emerging on self-compassion and health-promoting behaviours, many of these studies researching these two variables focus on specific populations, e.g. with specific health conditions. A strength of this study is that it used a community sample. To the author's knowledge, only one other study (Holden et al., 2020) has examined the relationship between the components of self-compassion and health-promoting behaviours in a community sample. The number of noncommunicable diseases affecting the general population is growing (World Health Organisation, 2022). As specific health behaviours may reduce the likelihood of such noncommunicable diseases (Chiueve et al., 2006; Penedo & Dahn, 2005), it seems important to research ways health behaviours can be promoted in the general population.

Several limitations to this study should be noted. This study may be susceptible to the risk of being over-simplistic, considering that it was a correlational study and no potential mediating or moderating variables were measured. However, Curtis and colleagues (2016) argue that correlational research provides invaluable information which directs future research and aids the development of health services.

Self-report questionnaires were used in this study. These measures may lack ecological validity due to the influence of the social desirability effect, which may have led to an overestimation in reporting health-promoting behaviours and self-compassion. It has been noted that participants often misreport health behaviours, such as physical activity, in self-reported questionnaires (Prince et al., 2008; Prince et al., 2020). The potential for inaccuracy

in self-report questionnaires is acknowledged. However, these measurements have been used by other researchers (Gedik, 2019; Holden et al., 2020), allowing for the findings of this study to be comparable to previous research.

This study examined gender differences in self-compassion. Only men and women were included in the analysis as there was not a sufficient amount of participants that identified as non-binary to be considered representative. This is a limitation of the study as it fails to capture differences in self-compassion across varies different gender identities. Exclusion of the data from the non-binary participant could be perceived as contributing to the invisibility of non-binary identities in research. Although it is common practice to include two categories for gender measurement in psychology (Cameron & Stinson, 2019), it seems problematic considering that the concept of gender has evolved and is no longer limited to just man or woman (Bass et al., 2018). Including a more diverse range of gender identities in studies may help promote inclusivity and equity in research.

The HPLP-II questionnaire (Walker et al., 1995) could be criticised based on its questions regarding nutrition behaviours. The questions appear to be based on the nutritional recommendations in the Food Guide Pyramid released by the U.S. Department of Agriculture (USDA) in 1992 (Davis et al., 2001). However, since being released, the USDA pyramid has elicited much criticism (Nestle, 1998). It has been criticised for not encouraging healthy fats consumption and not differentiating between whole grains and refined carbohydrates (Willet & Stamper, 2003). Another concern is that nutritional recommendations may not be appropriate for plant-based diets (Venti & Johnston, 2002) which are becoming increasingly popular (Boukid et al., 2021). It could be argued that this measure does not reflect the nutrition science advances or the changes in eating behaviours that have been made since its release. This may impact the reliability of the HPLP-II for measuring nutrition behaviours.

Despite this, it has been recognised as one of the most used instruments for measuring health-promoting behaviours (Davis & Guzman, 2022). Consequently, it seemed like the most appropriate measure to use for assessing health-promoting behaviours, despite its potential limitations.

Future Recommendations

The significant relationship between self-compassion and health-promoting behaviours should be investigated further. Future studies may investigate the mediating factors which may explain the association between self-compassion and health-promoting behaviours. Some mediating factors have already been suggested, such as the role of positive and negative affect (Sirois et al., 2014) and by promoting self-regulation (Terry & Leary, 2011). However, other causal factors that link self-compassion to health-promoting behaviours have yet to be explored. Although the findings from this study and other studies provide preliminary evidence to guide future research, longitudinal and experimental work may help to bring more clarity around the association between health-promoting behaviours and self-compassion. Future experimental work may track the progress of the use of the MSC program (Germer & Neff, 2013) in promoting health behaviours to test its validity. Finally, researchers may address the limitations this study mentioned previously, such as the use of self-reported measures and an unbalanced sample in terms of demographics when conducting similar future studies.

Conclusion

The findings from this study support the emerging body of research that documents a positive correlation between self-compassion and health-promoting behaviours. This study suggests that self-compassion may be a quality worth cultivating to heighten engagement in health-promoting behaviours in a non-clinical population. The findings suggest that self-

compassion may be particularly valuable for the promotion of stress management behaviours. Self-compassion interventions may be a valuable addition to the repertoire of tools available to health practitioners for facilitating health behaviour changes. Much research has already documented the positive psychological outcomes associated with self-compassion (MacBeth & Gumley, 2012; Neff et al., 2007a). Findings from this study and previous research suggest that taking a kinder, more accepting and noncritical view of oneself may positively impact engagement in health-promoting behaviours.

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Appendices

Appendix A

Message for Social Media Accounts

Hi, I am carrying out a research study as part of my final year in psychology at the National College of Ireland. It is about self-compassion and health-promoting behaviours. I would really appreciate if you could take the time to complete the survey. It should only take 10-15 minutes to complete and your answers will be anonymous. You can access the survey via the link. If interested, you are welcome to repost this message on your account to help with recruitment. Thanks!

https://forms.office.com/Pages/ResponsePage.aspx?id=wUnbbnK_6k6LP6f9CiW2jOwjlFF-t8NJiarnrl6tjp1UMVc5OEo0UlpMUzlMVklZWTVVRENKNkxRUS4u

Appendix B

Information Sheet

Participant Information Sheet

The following information is provided so that you can decide whether you wish to participate in the study.

What is this study about? I am a final year student in the BA in Psychology programme at National College of Ireland. For my research project I am exploring self-compassion and health promoting behaviours. This project will be supervised by Dr. Amanda Kracen, a lecturer at National College of Ireland.

What will taking part in the study involve? You will be asked to complete an online survey which should take approximately 10-15 minutes.

Who can take part? You can take part in this study if you are aged over 18.

Do I have to take part? Participation in this study is completely voluntary. You have the right to refuse to participate or to withdraw from the study without any consequences. You can withdraw from participation at any time by exiting the browser. It will not be possible to withdraw your data once you have submitted your questionnaire as the data is not identifiable.

What are the possible risks and benefits of taking part? The information gathered will contribute to research on these topics. There is a small risk that some of the questions may cause minor distress. If you experience this, you are free to discontinue participation.

Will taking part be confidential and what will happen to my data? Responses to the questionnaire will be fully anonymised and it is not possible to identify a participant based on their responses. The data will be stored in a password protected file on the researcher's computer. Data will be retained and managed in accordance with the NCI data retention policy. Note that anonymised data may be archived on an online data repository, and may be used for secondary data analysis.

What will happen to the results of the study? The results of this study will be presented in my final dissertation. The results of the project may be presented at conferences and/or submitted to an academic journal for publication.

Who should you contact for further information? If you have any questions about this study, please do not hesitate to contact Georgina Brady via email at x19125640@student.ncirl.ie or the supervisor of this research project Dr. Amanda Kracen at Amanda.kracen@ncirl.ie.

Appendix C

Consent Form

In agreeing to participate in this research, I understand the following:

- I may refuse to participate or withdraw at any stage by exiting my browser.
- Once my participation has ended, I cannot withdraw my data as it will be fully anonymised.
- I have been informed as to the general nature of the study and agree voluntarily to participate.
- My anonymised data will be stored on a password-protected file on the researcher's laptop for five years following the submission of the project.
- My anonymised data may be archived in an online data repository and used for secondary data analysis.
- After my participation, any questions or concerns I have will be fully addressed.

By clicking the "I agree" button below you are confirming that you have read the above information and that you would like to participate. You are also acknowledging that you are 18 years of age or older.

□ I Agree

Appendix D

Demographic Questionnaire

Instructions: Please answer the following questions

1. Age

2. Gender: To which gender identity do you most identify?

□ Man
□ Woman
□ Non-binary
□ Prefer to self-identify

3. Education: What is the highest level of education completed?

□ Leaving certificate or equivalent
□ Undergraduate degree or equivalent
□ Postgraduate qualification

4. What country do you live in?

Appendix E

Self-Compassion Scale Short Form (SCS)

How I typically act towards myself in difficult times

Directions: Please read each statement carefully before answering. For each item, indicate how often you behave in the stated manner, using the following 1-5 scale. Please answer according to what really reflects your experience rather than what you think your experience should be.

Almost never				Almost always
1	2	3	4	5

1. I’m disapproving and judgmental about my own flaws and inadequacies.

2. When I’m feeling down I tend to obsess and fixate on everything that’s wrong.

3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.

4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.

5. I try to be loving towards myself when I’m feeling emotional pain.

6. When I fail at something important to me I become consumed by feelings of inadequacy.

7. When I'm down, I remind myself that there are lots of other people in the world feeling like I am.

8. When times are really difficult, I tend to be tough on myself.

9. When something upsets me I try to keep my emotions in balance.

10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.

11. I’m intolerant and impatient towards those aspects of my personality I don't like.

12. When I’m going through a very hard time, I give myself the caring and tenderness I need.

13. When I’m feeling down, I tend to feel like most other people are probably happier than I am.

14. When something painful happens I try to take a balanced view of the situation.

15. I try to see my failings as part of the human condition.

16. When I see aspects of myself that I don’t like, I get down on myself.

17. When I fail at something important to me I try to keep things in perspective.

18. When I’m really struggling, I tend to feel like other people must be having an easier time of it.

19. I’m kind to myself when I’m experiencing suffering.

20. When something upsets me I get carried away with my feelings.

21. I can be a bit cold-hearted towards myself when I'm experiencing suffering.

22. When I'm feeling down I try to approach my feelings with curiosity and openness.

23. I’m tolerant of my own flaws and inadequacies.

24. When something painful happens I tend to blow the incident out of proportion.

25. When I fail at something that's important to me, I tend to feel alone in my failure.

26. I try to be understanding and patient towards those aspects of my personality I don't like.

Scoring Key

Self-Kindness Items: 5, 12, 19, 23, 26

Self-Judgment Items (reverse scored): 1, 8, 11, 16, 21

Common Humanity Items: 3, 7, 10, 15

Isolation Items (reverse scored): 4, 13, 18, 25

Mindfulness Items: 9, 14, 17, 22

Over-identification Items (reverse scored): 2, 6, 20, 24

To reverse score items (1=5, 2=4, 3=3, 4=2, 5=1).

To compute a total self-compassion score, first reverse score the negative subscale items – self-judgment, isolation, and over-identification. Then take the mean of each subscale, and compute a total mean (the average of the six subscale means). When examining subscale scores, higher scores on the self-judgment, isolation and over-identification scale indicate less self-compassion before reverse-coding, and more self-compassion after reverse coding. You can choose to report subscale scores with or without reverse-coding, but these three negative subscales must be reverse coded before calculating a total self-compassion score.

Norms and Significance Scores

There are no clinical norms or scores which indicate that an individual is high or low in self-compassion. Rather, SCS scores are mainly used in a comparative manner to examine outcomes for people scoring higher or lower in self-compassion. As an ad hoc rubric, however, you can consider scores 1.0-2.49 to be low, between 2.5-3.5 to be moderate, and 3.51-5.0 to be high. When trying to determine whether self-compassion levels are high or low relevant to a particular sample, some researchers use a median split.

Appendix F

Health Promoting Lifestyle Profile II

Directions: This questionnaire contains statements about your present way of life or personal habits. Please respond to each item as accurately as possible, and try not to skip any item. Indicate the frequency with which you engage in each behaviour by circling:

N for never, S for sometimes, O for often, or R for routinely

1. Choose a diet low in fat, saturated fat, and cholesterol.
2. Follow a planned exercise program.
3. Get enough sleep.
4. Limit use of sugars and food containing sugar (sweets).
5. Exercise vigorously for 20 or more minutes at least three times a week (such as a brisk walk, bicycling, aerobic dancing, using a stair climber).
6. Take some time for relaxation each day.
7. Eat 6-11 servings of bread, cereal, rice and pasta each day.
8. Take part in light to moderate physical activity (such as sustained walking 30-40 minutes 5 or more times a week).
9. Accept those things in my life which I cannot change.
10. Eat 2-4 servings of fruit each day.
11. Take part in leisure-time (recreational) physical activities (such as swimming, dancing, bicycling).
12. Concentrate on pleasant thoughts at bedtime.
13. Eat 3-5 servings of vegetables each day.
14. Do stretching exercises at least 3 times per week.
15. Use specific methods to control my stress.
16. Eat 2-3 servings of milk, yoghurt or cheese each day.
17. Get exercise during usual daily activities (such as walking during lunch, using stairs instead of elevators, parking car away from destination and walking).
18. Balance time between work and play.
19. Each only 2-3 servings from the meat, poultry, fish, dried beans, eggs, and nuts group each day.
20. Check my pulse rate when exercising.

21. Practice relaxation or meditation for 15-20 minutes daily.
22. Read labels to identify nutrients, fats, and sodium content in packaged food.
23. Reach my target heart rate when exercising.
24. Pace myself to prevent tiredness.
25. Eat breakfast.

Scoring Instructions

Items are scored as Never (N) = 1 Sometimes (S)= 2 Often (O) = 3 Routinely (R) = 4. A score for overall health-promoting lifestyle is obtained by calculating a mean of the individual's responses to all items; subscale scores are obtained similarly by calculating a mean of the responses to subscale items. The use of means rather than sums of scale items is recommended to retain the 1 to 4 metric of item responses and to allow meaningful comparisons of scores across subscales. The items included on each scale are as follows:

Health-Promoting Lifestyle 1 to 25

Physical Activity 2,5,8,11,14,17,20,23

Nutrition 1,4, 7,10,13,16,19,22,25

Stress Management 5,6,9,12,15,18,21,24

Appendix G

Debriefing Form

Thank you for participating in this study. The responses that you provided will remain anonymous and your information will be unidentifiable.

In the event that you felt distress as a result of taking part in this survey, you are encouraged to speak out to your family and/or friends. Below are two links to websites that offers support services for mental health if required.

Support Service

"Befrienders Worldwide": https://www.befrienders.org/

The Samaritans: https://www.samaritans.org/ireland/samaritans-ireland/ (01) 116 123

Contact Information

If you have any questions regarding this study please contact the researcher, Georgina Brady, via email at x19125640@student.ncirl.ie or the supervisor of this research project Dr. Amanda Kracen at Amanda.kracen@ncirl.ie.

Appendix H

Evidence of Collected Data

ID	What age are you?	What is your gender ide	What is the highest leve
1	28	Woman	Undergraduate degree o
2	62	Woman	Undergraduate degree o
3	61	Woman	Undergraduate degree o
4	28	Woman	Postgraduate qualificatio
5	50	Non-binary	Undergraduate degree o
6	67	Woman	Undergraduate degree o
7	62	Woman	Leaving certificate or equ
8	52	Woman	Undergraduate degree o
9	59	Man	Leaving certificate or equ
10	38	Woman	Leaving certificate or equ
11	27	Woman	Postgraduate qualificatio
12	59	Man	Leaving certificate or equ
13	54	Woman	Undergraduate degree o
14	36	Woman	Postgraduate qualificatio
15	28	Woman	Undergraduate degree o
16	29	Woman	Undergraduate degree o
17	21	Woman	Undergraduate degree o
18	38	Woman	Leaving certificate or equ
19	27	Man	Postgraduate qualificatio
20	25	Woman	Undergraduate degree o
21	27	Woman	Postgraduate qualificatio
22	2	Woman	Undergraduate degree o
23	26	Man	Undergraduate degree o
24	28	Woman	Postgraduate qualificatio
25	28	Woman	Undergraduate degree o
26	44	Woman	Postgraduate qualificatio
27	28	Woman	Leaving certificate or equ
28	27	Woman	Leaving certificate or equ
29	46	Woman	Undergraduate degree o
30	28	Woman	Leaving certificate or equ
31	39	Woman	Undergraduate degree o
32	29	Woman	Leaving certificate or equ
33	26	Man	Undergraduate degree o
34	28	Man	Postgraduate qualificatio
35	28	Woman	Postgraduate qualificatio
36	28	Man	Postgraduate qualificatio
37	27	Woman	Postgraduate qualificatio
38	40	Woman	Undergraduate degree o
39	47	Woman	Postgraduate qualificatio
40	28	Woman	Postgraduate qualificatio
41	28	Woman	Postgraduate qualificatio
42	28	Woman	Undergraduate degree o
43	29	Woman	Undergraduate degree o
44	32	Woman	Postgraduate qualificatio
45	30	Man	Undergraduate degree o
46	29	Man	Postgraduate qualificatio
47	60	Man	Leaving certificate or equ
48	40	Woman	Postgraduate qualificatio
49	33	Man	Leaving certificate or equ

What country do you liv	SCS1	SCS2	SCS3
Ireland	Fairly Often	About half the time	Fairly Often
Ireland	Occasionally	Occasionally	About half the time
Ireland	Occasionally	Occasionally	Almost always
Ireland	Occasionally	Occasionally	Fairly Often
Ireland	Occasionally	Almost never	Almost always
Ireland	About half of the time	Occasionally	About half the time
Ireland	Fairly Often	Fairly Often	About half the time
Ireland	Occasionally	Almost never	About half the time
Ireland	Occasionally	Occasionally	Almost always
Ireland	Occasionally	Occasionally	Fairly Often
Ireland	About half of the time	Almost always	About half the time
Ireland	Occasionally	Almost never	Fairly Often
Ireland	About half of the time	Fairly Often	About half the time
Ireland	Almost always	Almost always	Almost never
Ireland	Occasionally	Occasionally	Occasionally
Ireland	Almost always	Fairly Often	Occasionally
Ireland	Occasionally	Fairly Often	Almost always
Ire	Occasionally	Occasionally	About half the time
Ireland	Almost always	Almost always	Fairly Often
Ireland	Fairly Often	Almost always	About half the time
North of Ireland	Fairly Often	Fairly Often	About half the time
Ireland	Fairly Often	Fairly Often	Almost never
Ireland	Fairly Often	About half the time	Fairly Often
Ireland	Almost never	Occasionally	Almost always
Ireland	Fairly Often	Fairly Often	About half the time
Ireland	Fairly Often	Fairly Often	Occasionally
Ireland	About half of the time	Fairly Often	Fairly Often
Ireland	Almost always	Almost always	About half the time
Ireland	Fairly Often	Fairly Often	Occasionally
Ireland	About half of the time	Fairly Often	Occasionally
Ireland	Occasionally	Occasionally	Almost always
Dublin	Occasionally	About half the time	About half the time
Ireland	Almost always	Occasionally	Almost always
Ireland	Occasionally	Fairly Often	Almost always
Ireland	Occasionally	About half the time	About half the time
Sweden	About half of the time	About half the time	Fairly Often
Sweden	Almost always	Almost always	About half the time
Ireland	Almost always	Almost always	Fairly Often
Ireland	About half of the time	About half the time	Fairly Often
Ireland	Almost always	Fairly Often	About half the time
Ireland	Fairly Often	Fairly Often	Occasionally
Ireland	Occasionally	About half the time	Almost always
Ireland	Fairly Often	Fairly Often	About half the time
Ireland	Occasionally	About half the time	About half the time
Ireland	Fairly Often	About half the time	Occasionally
New Zealand	About half of the time	Occasionally	Fairly Often
Ireland	Occasionally	Almost never	Occasionally
Ireland	Occasionally	Fairly Often	Occasionally
Ireland	Occasionally	Occasionally	About half the time