

THE IMPACT OF KINDNESS ON PSYCHOLOGICAL WELL-BEING, HAPPINESS,
AND SOCIAL CONNECTEDNESS AMONG UNIVERSITY STUDENTS

A Dissertation Submitted in Partial Fulfilment of the Requirements for the Degree of BSc

(Honours) Applied Psychology

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Psychology and Counselling

March, 2025

DECLARATION

This work has not previously been accepted in substance for any degrees and is not being concurrently submitted in candidature for any degrees.

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<https://scholar.google.co.uk/> between the dates 10/10/2024-18/03/2025 to research and find scientific articles and journals to support my work. I used the prompt(s):

1. Kindness and Prosocial Behaviour among adults.
2. Kindness and Prosocial Behaviour among adolescents.
3. Kindness and Prosocial Behaviour among university students in the United Kingdom.
4. Well-Being scales relating to Kindness and Prosocial Behaviour.
5. Social Connectedness Scales relating to Kindness and Prosocial Behaviour.
6. Happiness scales relating to Kindness and Prosocial Behaviour.
7. Various other prompts relating to Kindness and Prosocial Behaviour among university students, suggesting for supporting and arguing cases.

Furthermore, I acknowledge the use of ChatGPT (<https://chatgpt.com/>) on 18/03/2025 to double check that the language I had used throughout the dissertation theses was in line with English UK spelling using the prompt(s):

1. Is this text all in English UK Spelling? And then I copied in by section to make sure I didn't miss anything or written anything incorrectly.

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1. What does "xyz" mean in SPSS.
2. Explaining SPSS results for dummies.

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Katherine Monk 18/03/2025

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Abstract

In any culture, the notion of kindness is a component of interpersonal interactions recognised for its psychological value. In this paper, the author examines the positive impact of kindness on a sample of university students in terms of their happiness, well-being, and relationships.

The self-determination theory and the broaden-and-build theory of positive emotion underpinned the study, asserting that prosociality results in emotional and social health.

The subjects were split into two groups. In the experimental group, the participants were asked to carry out acts of kindness daily, while the control group was not required to engage in structured kindness activities. Self-administered, standardised, and reliable questionnaires of happiness, subjective well-being, and social integration were used to collect data.

Descriptive statistics were used to compare the results across groups and over time, while inferential statistics were used to determine the probability of the results obtained by chance.

The study established that using treatment procedures that enhanced the aspect of kindness in students resulted in high levels of happiness among the students, with the experimental group noting higher levels of life satisfaction and positive impact. On the other hand, subjective well-being rose in tandem with social interconnectedness but did so marginally and not all the time. These effects suggest that although being kind can also promote feelings of the emotional self, the beneficial impacts on well-being and social inclusion may only accrue in the long run when the person continues to participate actively in such programs.

Keywords: Kindness, Prosocial Behaviour, Happiness, Well-Being, Social Connectedness, Self-Determination Theory, Positive Psychology, Psychological Well-Being, Mental Health Interventions, Reciprocity Theory.

Chapter 1: Introduction

Kindness and prosocial behaviour have long been a subject of growing interest in both psychology and sociology. In more recent years, the significance of these actions has garnered more attention than ever before, highlighting their crucial role in enhancing social connections and promoting individual well-being. Random acts of kindness, characterised by spontaneous and altruistic gestures performed without expecting a reward, are often considered essential components of social cohesion and personal happiness (Smith, 2019). Furthermore, research demonstrates that acts of kindness significantly contribute to individual and group well-being (Hosoda & Estrada, 2024), enhance social bonds (Becky & Becky, 2023), and support collective social harmony (Mastrantonio, 2023). Despite the expanding research on kindness and prosocial behaviour, a distinct gap remains in the literature regarding how these behaviours manifest within specific demographics, populations, and environments.

University students represent a unique demographic where developmental, academic, and social transitions converge, influencing the prevalence and nature of prosocial behaviours. Understanding kindness in this setting is essential, particularly as university students grapple with challenges such as mental health issues, social isolation, and academic stress. Kindness is described as a conscious and subconscious cognitive process, encompassing recognising others' needs and responding with empathy and compassion, often without conscious intent, yet visibly impacting behaviour positively (Williams & Weigand, 2022). Importantly, this definition assumes universality, failing to account for individual differences in processing and reacting to social cues, suggesting that a more nuanced approach is necessary.

According to Forester (2020), kindness involves consideration, compassion, and generosity towards others to enhance their well-being without expecting anything in return.

Psychologically, kindness is intertwined with empathy and compassion, fostering positive

emotions and reinforcing social connections (Slavich et al., 2021). It is a key element of prosocial behaviour, contributing to individual well-being and social harmony. Kindness can be intentionally cultivated, benefiting both the giver and the receiver by improving mental health, reducing stress, and strengthening relationships.

Although extensive research examines the mechanisms driving acts of kindness among university students in the United Kingdom (e.g., Jiang et al., 2021; Rosli & Perveen, 2021; Munawar et al., 2023; & Lee et al., 2024), key limitations persist. Research often zeroes in on single acts of kindness, overlooking the broad spectrum of behaviours that can differentiate various groups or individuals. Moreover, kindness is frequently approached from a narrow, unidimensional perspective when its multifaceted nature would benefit from a more prosperous, multidimensional analysis. Additionally, this area of research is hampered by the lack of reliable psychometric instruments (Shillington et al., 2020; Ciocarlan, 2022; Fox & Aspland, 2024), resulting in many studies suffering from unreliable or inconsistent measurements, complicating efforts to establish clear conclusions.

This empirical research aims to explore the psychological factors that motivate individuals to engage in diverse acts of kindness, employing a multifaceted approach that includes an experimental group and a control group, online questionnaires, and daily tasks over a week for the experimental group while the control group will not have these daily tasks. A subsequent follow-up online questionnaire will also be utilised. Although this approach allows for a broad exploration of the subject, the reliance on self-report measures, especially in online formats, raises concerns about social desirability bias, which may skew results towards more socially acceptable behaviours. By delving into these dimensions, this study aims to enhance the understanding of how psychological traits and situational influences can stimulate kindness in everyday life. Whether these psychological traits are the primary drivers of kindness or whether environmental and social factors play more significant roles

remains uncertain (Lamm et al., 2024). Additionally, this study will explore prosocial kindness from a multidimensional perspective, measuring it in terms of social connectedness, happiness, and well-being.

The study is grounded in the hypothesis that exposure to kindness-inducing stimuli, such as the proposed list of acts of kindness, will enhance participants' subconscious motivation to engage in random acts of kindness. Furthermore, it posits that individual differences in personality traits, particularly in levels of altruism and agreeableness and baseline well-being scores, will correlate with the frequency and intensity of reported kindness behaviours. By employing a pre-test/post-test design, the research aims to capture the immediate effects of the intervention while providing insights into the underlying psychological mechanisms and frequencies that drive prosocial behaviour. However, relying on a single intervention and a pre-test/post-test design may fall short of accounting for long-term behavioural changes, potentially overlooking the complexities of sustained prosocial actions.

Using an online platform for data collection is particularly relevant in today's digital age, providing broad and diverse sampling opportunities (Newman et al., 2020), thereby enhancing the generalisability of the study's findings. With the primary audience of university students, online platforms offer a convenient and efficient medium to gather data from many participants across different institutions, mitigating geographical and time-related constraints while ensuring accessibility for students with varied schedules and commitments. The anonymity provided by online surveys may encourage honest responses regarding personal experiences and motivations related to kindness, an important aspect since self-reported measures of prosocial behaviours in traditional settings are often influenced by social desirability bias (Victor et al., 2024).

This thesis is structured to provide a comprehensive examination of acts of kindness and prosocial behaviour among university students in the UK. Following this introduction,

Chapter 2 extensively reviews the literature concerning prosocial behaviour, kindness, and relevant theories, mainly related to university contexts. Chapter 3 outlines the research methodology, detailing the study's design, data collection methods, and analytical strategies adopted throughout the research project. Chapter 4 presents the study's results, providing thorough data analysis and addressing the research questions. Chapter 5 discusses the findings within existing literature and theoretical perspectives, offering insights into implications for student well-being and university policy development. Finally, Chapter 6 concludes by summarising key findings and suggesting directions for future research.

Universities worldwide bring together people from diverse cultures, social statuses, and backgrounds, creating environments that are as competitive and challenging as they are transformative. These institutions foster spaces where students navigate complex academic, social, and personal development. For many students, universities are places for pursuing higher education and arenas for significant personal, social, emotional, educational, career, professional, and moral growth (Darling-Hammond, 2021). It is during this time that individuals can be most vulnerable. Within such dynamic environments, acts of kindness and prosocial behaviour hold value, fostering positive social interactions and emotional well-being. Recent studies emphasise the benefits of prosocial behaviours, such as improved mental health (Preston & Rew, 2021), greater life satisfaction (Hirani et al., 2022), and expanded social support networks (Lazar & Eisenberger, 2021). Nonetheless, little emphasis has been placed on understanding how these behaviours unfold within university communities, particularly as students juggle academic demands, peer relationships, personal commitments, and future career goals.

Globally, there is increasing recognition of the mental health challenges confronting university students, including heightened stress (Halliburton et al., 2021), anxiety (Saravanan et al., 2020), and feelings of isolation (Salimi et al., 2021), underscoring the importance of

exploring the role of kindness in mitigating such challenges. Engaging in prosocial behaviours can alleviate stress, improve mood (Alvis et al., 2022), and foster a sense of belonging—critical elements for sustaining student well-being (Douwes et al., 2023). The prospect of kindness reducing the adverse effects of stress is crucial, especially as university students often report feeling overwhelmed by academic pressures and the transition into adulthood (Cage et al., 2021). Consequently, acts of kindness—directed towards peers, colleagues, faculty, staff, or any community member—have the potential to create supportive and inclusive environments that help alleviate these stressors.

Acts of kindness, whether they are small gestures or large endeavours, can have a multitude of significant effects on individuals, groups, and communities. Research suggests that even simple gestures, such as attentively listening to a friend in need, sharing notes, or holding a door open for someone, can create positive ripples that enhance the giver's and receiver's well-being (Frangieh et al., 2024). Within universities, such acts of kindness can cultivate empathy, strengthen social bonds, and promote a sense of community. These outcomes notably enhance social connectedness, overall well-being, and happiness, as kindness has been consistently linked to increased happiness and reduced loneliness, countering the social isolation many students experience. Thus, fostering environments prioritising and encouraging acts of kindness can be crucial for enhancing the mental health of university students, particularly during times of academic or personal strain. Empirical research on various acts of kindness has reinforced their positive impact on mental well-being, social connectedness, and happiness. A study conducted by Mey et al. (2023) suggested that engaging in acts of kindness was associated with reduced anxiety and depression, alongside enhanced feelings of social connectedness. However, while these findings suggest that kindness can buffer against stress, it is critical to investigate whether these benefits are sustainable over time or function primarily as short-term coping strategies. Moreover, the

study's focus during the pandemic raises questions about broader applicability in everyday circumstances, where the challenges associated with kindness may differ. Nevertheless, evidence robustly supports the notion that acts of kindness, small or large, significantly promote individual well-being and foster community cohesion.

While previous research has explored prosocial behaviour extensively within educational and workplace settings, it is only recently that researchers have begun to focus on prosocial behaviour, specifically within university environments. Universities represent unique social ecosystems that integrate academic pursuits with diverse student bodies, offering rich contexts for exploring social interactions, personal development, and the influences of prosocial behaviours on student well-being (Gál et al., 2021). In the UK, the higher education system has undergone significant changes over recent decades, marked by an influx of students from diverse socioeconomic backgrounds and cultural dynamics. Simultaneously, universities are experiencing growing pressure to provide comprehensive mental health support and foster positive campus cultures (Campbell et al., 2022). Therefore, studying kindness and prosocial behaviour among university students can yield valuable insights into how these behaviours contribute to an empathetic and supportive academic community.

The present study endeavours to fill this gap in the literature by scrutinising the nature, frequency, and impact of acts of kindness and prosocial behaviour among university students in the UK. By investigating motivations for these behaviours and their potential benefits—focusing on well-being, social connectedness, and happiness—this study contributes to understanding how kindness can be cultivated within universities to enrich student well-being and fortify social cohesion.

This research explores acts of kindness and prosocial behaviours exhibited by university students in the UK, emphasising their impact on well-being, happiness, and social connectedness. The central research question guiding this study is: How does performing

simple acts of kindness impact an individual? In addressing this, additional key questions include: What forms of prosocial behaviours, including acts of kindness, do university students in the UK engage in? What motivates them to engage in acts of kindness, and how do these motivations vary across individuals and contexts? How do acts of kindness affect students' well-being, academic performance, and social relationships? Lastly, what role does the university environment play in fostering or inhibiting prosocial behaviour among students? These questions provide a comprehensive understanding of the nature and impact of kindness and prosocial behaviour within university settings, ultimately delivering valuable insights into how universities can create environments that encourage empathy, cooperation, and social responsibility.

Several well-established scales will be employed to effectively assess the impact on well-being, happiness, and social connectedness. The Warwick-Edinburgh Mental Well-being Scale (WEMWBS) measures participants' mental wellness using items like "I have been feeling optimistic about the future" and "I have been feeling useful," rated from 1 (None of the time) to 5 (All of the time). The Oxford Happiness Scale, with responses ranging from 1 (strongly disagree) to 6 (strongly agree), evaluates subjective happiness through items such as "I have very warm feelings towards almost everyone" and "I rarely wake up feeling rested." Additionally, the Social Connectedness Scale assesses social inclusion and comfort in social settings, featuring statements like "I feel comfortable in the presence of strangers" and "I am in tune with the world," rated from 1 (Strongly disagree) to 6 (Strongly agree). These instruments will help quantify the psychological impact of kindness on well-being, happiness, and social connectedness.

These questions and psychometric scales aim to comprehensively understand the nature and impact of kindness and prosocial behaviour in the university setting. Addressing these

inquiries, the study seeks to contribute insightful perspectives on how universities can nurture environments that encourage empathy, collaboration, and social responsibility.

This study is important for several reasons, both in academic and practical realms.

Academically, it significantly enhances the growing body of literature on prosocial behaviour by targeting university students, a demographic that remains underexplored but is highly pertinent to examining social behaviours. Whereas much research on prosocial behaviour has traditionally focused on children, adolescents, or the general adult population, university students occupy a transitional life period marked by a blend of independence, exploration, and increased responsibility. As they navigate the shift from adolescence to adulthood, young adults' social behaviours, attitudes, and values continue to evolve, positioning the university context as an essential space for investigating how prosocial behaviours, like kindness, are developed and ingrained during this vital life stage.

This study's findings can inform university faculty, staff, and policymakers seeking to enhance student well-being. As universities grow increasingly aware of their student's mental health challenges, many are investing in services and programs to support emotional and psychological needs through counselling services, peer support networks, mental health workshops, student support systems, and initiatives promoting mindfulness and resilience. By exploring the role of kindness and prosocial behaviour in boosting student well-being, this research affords evidence underscoring the value of cultivating a culture of empathy, cooperation, and compassion within academic institutions.

Furthermore, investigating kindness in the university context offers broader implications for understanding social behaviours more generally. Prosocial behaviour often correlates with empathy, moral development, and the cultivation of social responsibility. By examining how kindness manifests among university students, this research contributes to understanding how young adults develop and enact essential social virtues. As society increasingly prioritises

individualism and competition, promoting prosocial behaviours in university settings could be crucial in nurturing more compassionate and cooperative societies.

Likewise, this research sheds light on how the university environment shapes students' social behaviours. Universities are not purely academic institutions; they serve as vibrant social environments where students forge lasting relationships and develop social identities. This study investigates how institutional cultures and social networks impact the frequency and nature of prosocial behaviours, offering valuable insights into how universities can either cultivate or suppress kindness and empathy among students.

Finally, this study offers the opportunity to expand our understanding of the psychological benefits of prosocial behaviour. Previous research has demonstrated that engaging in acts of kindness is associated with increased happiness, reduced stress, and improved mental health. By examining these effects specifically within the university student population, this research contributes to the growing evidence that kindness and helping behaviour are linked to enhanced well-being, particularly in high-stress settings like universities.

This study draws upon several key theoretical perspectives to grasp the nature of prosocial behaviour and acts of kindness. Prosocial behaviour is central to this research and is characterised by voluntary actions intended to benefit others without directly benefiting oneself. Theories of prosocial behaviour, including social exchange theory (Homans, 1958) and empathy-altruism theory (Batson, 1991), provide pivotal frameworks for understanding why individuals engage in acts of kindness. Social exchange theory suggests that human behaviour is motivated by a cost-benefit analysis, where individuals engage in prosocial actions because they perceive the rewards—such as social approval, personal satisfaction, or emotional reciprocation—to outweigh the costs. According to this theory, decisions to engage in acts of kindness may be influenced by anticipated tangible and intangible rewards.

Conversely, empathy-altruism theory suggests that prosocial behaviour can originate from a

genuine concern for others' well-being without expecting personal gain. When individuals experience empathy, they become more inclined to engage in altruistic acts, such as providing support or assistance to those in need. This theory underscores emotional and moral motivations for kindness, proposing that people engage in prosocial behaviour due to genuine care for others' welfare.

In addition, self-determination theory (Deci & Ryan, 1985) guides this study in exploring how kindness relates to personal motivation and well-being. Self-determination theory posits that individuals are driven to satisfy three core psychological needs: autonomy, competence, and relatedness. In this context, acts of kindness can fulfil the need for relatedness by facilitating connections and supporting relationships. Engaging in prosocial behaviour may also bolster a student's sense of competence and autonomy, contributing to overall well-being. Six primary hypotheses underpin this study: Firstly, participants in the experimental group will demonstrate improved well-being scores following a week of simple acts of kindness compared to their scores prior to the intervention. Secondly, improvements in happiness scores are expected post-intervention for the experimental group. Thirdly, the experimental group will likely show enhanced social connectedness compared to their baseline measurements. Fourthly, participants in the experimental group are expected to exhibit higher well-being, happiness, and social connectedness scores than control group participants. Fifthly, there will be interactions between well-being, happiness, and social connectedness scores within the experimental group. Lastly, similar interactions are anticipated in the control group metrics.

Chapter Three: Methodology

Design –

A mixed (between-within) subjects design was used. This study employed a quasi-experimental pre-test/post-test framework, conducted entirely online. An actual randomised controlled trial (RCT) was not feasible due to institutional constraints and participant availability. Instead, a quasi-experimental approach was chosen to maintain ecological validity while allowing for between-group (experimental vs. control) and within-group (pre-test vs. post-test) comparisons. Participants were divided into two groups: an experimental group that engaged in a structured kindness challenge and a control group that did not participate in any specific intervention. This study measured three dependent variables (DVs) through online questionnaires: the Oxford Happiness Questionnaire, the Warwick-Edinburgh Mental Well-being Scale (WEMWBS), and the Social Connectedness Scale. The independent variable (IV) was the 7 days between the first and second rounds of online questionnaires. This allowed for measuring the difference in scores between participants in the control and experimental groups. Participants in the experimental group were instructed to perform at least three acts of kindness daily for seven days.

In contrast, the control group did not engage in structured kindness activities but completed the same pre- and post-test surveys. In order to answer Research Question One, "Do kindness challenges enhance prosocial behaviours among adults?", test measures were evaluated using a mixed between-within ANOVA. This analysis assessed whether participation in a kindness challenge facilitated through an online platform led to an increase in prosocial behaviours.

Participants –

Participants were members of the Discipline of Psychology and Counselling in the University of Wales Trinity Saint David (UWTSD) program, based in Swansea or Carmarthen. Sixty-four participants participated in this online study, with twenty-six participants in the control

group and thirty-eight participants in the experimental group. The sampling design followed a homogeneous group or cohort design, allowing the research to focus on a specific group of students with the common characteristic of enrolling in the Psychology and/or Psychology and Counselling course at UWTSD.

The sample consisted exclusively of psychology students, which may introduce selection bias, as these individuals might be more familiar with prosocial behaviour studies and thus more inclined to respond in a socially desirable manner. Participation was entirely voluntary, and all participants had to register for the survey through EMS, a system predominantly used by psychology students. Psychology students were selected for ease of access to the researcher; however, these findings could still be generalised beyond this group.

Each participant had their unique access code for the online Experimental Management System (EMS), which allowed for anonymisation and ensured participants were only identifiable by their unique code number. The study was conducted online, with participants completing all tasks and questionnaires remotely. All participants were over the age of 18.

UWTSD granted ethical approval before the commencement of the study.

Materials –

The study included the following materials: an information section (see Appendix 1), a list of acts of kindness (see Appendix 2), an informed consent form (blank copy) (see Appendix 3), and a memorable password for participants to link their two sessions together. Participants also completed the Oxford Happiness Questionnaire (Hills & Argyle, 2002) (see Appendix 4), the Warwick-Edinburgh Mental Well-being Scale (WEMWBS) (Warwick-Edinburgh Mental Well-being Scale, 2006) (see Appendix 5), and the Social Connectedness Scale (Lee & Robbins, 1995) (see Appendix 6). After completing these measures, participants were randomly assigned to either the control or experimental groups and given a 7-day task. At the end of the 7 days, participants received a new information sheet (for the control group, see

Appendix 1), a list of acts of kindness (see Appendix 2), and an informed consent form (blank copy) (see Appendix 3). Participants were asked to re-enter their original password and state their group assignment. They then completed the Oxford Happiness Questionnaire (see Appendix 4), the WEMWBS (see Appendix 5), the Social Connectedness Scale (see Appendix 6), and a debrief sheet (see Appendix 7). All materials were provided through an online platform.

All participants received the same online questionnaires. These psychometric scales were chosen as they had shown that they were valid and reliable in their own right. A study by Grigoriadou et al. (2024) determined that the Oxford Happiness Scale had been shown to possess good reliability and validity. The scale demonstrated high internal consistency, often with Cronbach's alpha values above 0.80 (Tavakol & Dennick, 2011), indicating that the items measured a cohesive construct. The scale also showed good stability over time, meaning that scores remained consistent when the test was repeated. The scale also correlated well with other psychometric measures of happiness and well-being, suggesting that it accurately captured the construct it aimed to measure. It has also been found to differentiate between groups based on expected criteria, such as differences in happiness levels between various demographic groups. Tennant et al. (2007) determined that the Warwick-Edinburgh Mental Well-being Scale (WEMWBS) demonstrated good reliability and validity. The WEMWBS had shown high consistency with Cronbach's alpha, with a value of 0.91, indicating that the items effectively measured the same underlying construct. The scale also showed good test-retest reliability, with scores remaining consistent. WEMWBS correlated well with other psychometric measures of mental well-being. It has also been found to differentiate between groups based on expected outcomes, such as varying levels of mental well-being in different populations. A study by Lok and Dunn (2022) determined that the Social Connectedness Scale had shown internal consistency, with Cronbach's alpha value at

0.90. This indicated that the items on the scale were measuring a cohesive construct. The scale also showed good test-retest reliability, with scores remaining consistent. The SCS had also been shown to positively correlate with other social support and well-being measures, indicating that it effectively captured the construct of social connectedness. The scale could differentiate between groups based on expected levels of social connectedness, supporting its ability to measure meaningful differences in social relationships.

Procedure -

Given ethical clearance from the University of Wales Trinity Saint David (UWTSD), this study was conducted exclusively online employing Qualtrics Survey Software. These comprised of questions from the Oxford Happiness Questionnaire (OHQ), Social Connectedness Scale (SCS), and Warwick-Edinburgh Mental Well-being Scale (WEMWBS). Recruitment was done through EMS, and participants were randomly assigned to either the experimental or control group using the Qualtrics randomiser tool.

All participants read an information sheet describing the study's purpose and a list of suggested acts of kindness that could be performed. The participants further sought their consent before the study could commence. They also added an identification password for the follow-up survey so that their answers could be matched to the models.

Pre- and post-intervention questionnaires included questions about happiness, social connectedness, and self-reported mental well-being for all participants. Higher OHQ totals of 40 and above denoted happiness and/or life satisfaction, while lower sums of 20 and below signified emotional disturbance. Likewise, higher WEMWBS above 40 out of 70 were associated with better mental health and higher resilience, while WEMWBS below 30 out of 70 indicated anxiety or depression. The SCS assessing social integration revealed a critical cut of 50+/70 for belongingness and 20-/70 for loneliness.

After the first assessment, the experimental group was given a 7-day kindness intervention where they were asked to complete at least 3 acts of kindness each day. The control group did not receive any such task. After the first phase of the study, all participants were given a debriefing sheet that helped them understand the study's purpose, the ethical considerations, and their right to withdraw from the study at any given time.

One week after the study, all participants were invited to complete a follow-up survey with the same items as the first. They had to type in their identification password to compare the answers. The tools comprised an information sheet, acts of random kindness list, consent form, questionnaire, and debriefing sheet.

The survey was administered online, and each questionnaire averaged 15 minutes in duration. The data was collected through Qualtrics and then transferred to SPSS for analysis. A mixed ANOVA was used to analyse the pre-and post-intervention scores, with the time variable as the within-subject variable and the group variable as the between-subject variable.

Chapter 4: Results

Introduction

This chapter discusses the study's findings, which relate to acts of kindness and their effects on university students' happiness, well-being, and social relationships. The findings are analysed systematically using basic statistics, significance testing, and multivariate analysis.

To support this research question, this chapter will assess whether prosocial behaviour profoundly impacts the selected psychological differences between the experimental and control groups.

General Linear Model

Descriptive Statistics				
	Please confirm to which group you were allocated:	Mean	Std. Deviation	N
Total happy time 1	1. Control Group	76.65	11.335	26
	2. Experimental Group	63.26	16.984	38
	Total	68.70	16.259	64
Total happiness time 2	1. Control Group	76.04	17.388	26
	2. Experimental Group	79.11	18.744	38
	Total	77.86	18.128	64

Table 1: Descriptive Statistics

From Table 1 above, the descriptive statistics indicate a significant difference in the happiness scores between the control and the experimental groups. Initially, the control group had a higher mean happiness score of 76.65, while the experimental group had a mean happiness score of 63.26. It is also important to note that this disparity may be due to initial differences

in the general happiness level these women may have had before the study based on personality or life experience. However, after the intervention, the experimental group had a higher level of happiness, 79.11, compared to the control group, with 76.04. This increase in happiness scores aligns with previous studies that established that performing an act of prosociality leads to increased moods and life satisfaction. The SD of the experimental group before intervention (16.98) is more expansive, demonstrating the variation in the degrees of happiness from one individual to another. After the intervention, such variability remained, and it is posited that although kindness inherently contributes to the levels of joy, the changes are not uniform across all people.

Table 2: Box's Test of Equality of Covariance Matrices

Box's Test of Equality of Covariance Matrices	
Box's M	6.116
F	1.964
df1	3
df2	172790.019
Sig.	.117
Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.	
a. Design: Intercept + Q65	
Within Subjects Design: factor1	

From the findings in Table 2, the p-value for Box's Test of Equality of Covariance Matrices is estimated to be 0.117. Since this value is above the critical level of .05, covariance matrices are equal in both groups. This would indicate that the standard deviations between the

Table 3 shows the multivariate test results to assess the significance of time and group in the happiness scores. There is a statistically significant result; Wilks' Lambda = 0.888, $F(1, 40) = 7.822$, $p = 0007$, and Pillai's Trace = 0.112, $F(1, 40) = 7.822$, $p = 0007$. With a partial eta squared value of 0.112, the study claims that the kindness intervention can explain 11.2% of the variation in the happiness score and has a moderate effect size. These results support the idea that performing kind acts leads to greater happiness.

Table 4: Mauchly's Test of Sphericity

Mauchly's Test of Sphericity							
Measure: MEASURE_1							
Within Subjects Effect	Mauchly's W	Approx. Chi- Square	df	Sig.	Epsilon		
					Greenhouse- Geisser	Huynh- Feldt	Lower- bound
Factor1	1.000	.000	0	.	1.000	1.000	1.000
Tests the null hypothesis that the error covariance matrix of the orthonormalised transformed dependent variables is proportional to an identity matrix.							
a. Design: Intercept + Q65 Within Subjects Design: factor1							
b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.							

Table 4 checks for the sphericity assumption required for repeated-measures analyses.

Mauchly's $W = 1.000$ corroborates the sphericity assumption, which implies that variance variations across time points do not affect the analysis. This helps provide an unadjusted comparison of within-subjects effects and increases the robustness of subsequent statistical results.

Table 5: Tests of Within-Subjects Effects

Tests of Within-Subjects Effects							
Measure: MEASURE_1							
Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Factor1	Sphericity Assumed	1789.616	1	1789.616	7.804	.007	.112
	Greenhouse- Geisser	1789.616	1.000	1789.616	7.804	.007	.112
	Huynh-Feldt	1789.616	1.000	1789.616	7.804	.007	.112
	Lower-bound	1789.616	1.000	1789.616	7.804	.007	.112
Factor1 * Q65	Sphericity Assumed	2090.616	1	2090.616	9.117	.004	.128
	Greenhouse- Geisser	2090.616	1.000	2090.616	9.117	.004	.128
	Huynh-Feldt	2090.616	1.000	2090.616	9.117	.004	.128
	Lower-bound	2090.616	1.000	2090.616	9.117	.004	.128
Error(factor1)	Sphericity Assumed	14217.603	62	229.316			
	Greenhouse- Geisser	14217.603	62.000	229.316			
	Huynh-Feldt	14217.603	62.000	229.316			

	Lower-bound	14217.603	62.000	229.316			
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As shown in Table 5, the total happiness score also significantly increased or decreased over time. The within-subjects effect of time was substantial $F(2, 60) = 7.804$, $p = 0.007$, partial eta squared = 0.112, representing a significant increase in happiness after the intervention period. Additionally, the Time x Group Assignment analysis ($F = 9.117$, $p = 0.004$, partial eta squared = 0.128) captures that this increase was significantly more significant in the experimental group. This supports the argument that kindness makes people happier, although it only has a moderate effect.

Table 6: Tests of Within-Subjects Contrasts

Tests of Within-Subjects Contrasts							
Measure: MEASURE_1							
Source	factor1	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Factor1	Linear	1789.616	1	1789.616	7.804	.007	.112
Factor1 * Q65	Linear	2090.616	1	2090.616	9.117	.004	.128
Error(factor1)	Linear	14217.603	62	229.316			

Table 6 focuses on the linearity of changes in happiness. Therefore, happiness is observed to increase in a structured manner rather than fluctuating randomly, as highlighted by the significant linear effect ($F = 7.804$, $p = 0.007$). This supports the assertion that happiness was incrementally obtained through the related acts of kindness and not by a rise-and-fall pattern.

Table 7: Levene's Test of Equality of Error Variances

Levene's Test of Equality of Error Variances					
		Levene Statistic	df1	df2	Sig.
Total happy time one	Based on Mean	4.021	1	62	.049
	Based on Median	4.102	1	62	.047
	Based on the Median and with adjusted df	4.102	1	58.471	.047
	Based on trimmed mean	4.028	1	62	.049
Total happiness time 2	Based on Mean	.632	1	62	.430
	Based on Median	.703	1	62	.405
	Based on the Median and with adjusted df	.703	1	61.121	.405
	Based on trimmed mean	.740	1	62	.393
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.					
a. Design: Intercept + Q65					
Within Subjects Design: factor1					

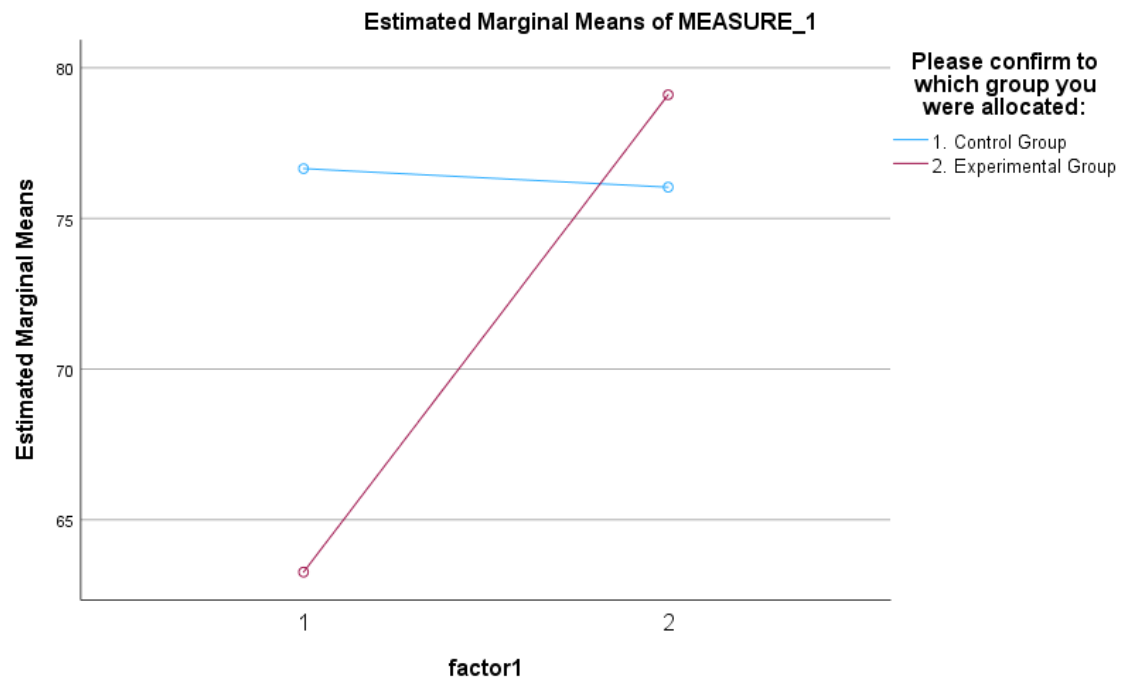
Table 7 assesses whether the variance in happiness scores was equal across groups. The pre-test happiness variance significantly differed between groups ($p = 0.049$), indicating that the control group had more homogeneous happiness scores before the intervention. However, post-test variance equality ($p = 0.430$) indicates that the intervention effectively reduced the

variability of happiness, further supporting the positive impact of kindness in regulating and enhancing mood fluctuations.

Table 8: Tests of Between-Subjects Effects

Tests of Between-Subjects Effects						
Measure: MEASURE_1						
Transformed Variable: Average						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	672000.810	1	672000.810	2059.906	.000	.971
Q65	822.685	1	822.685	2.522	.117	.039
Error	20226.190	62	326.229			

Table 8 reports the hypothesis test results comparing the mean happiness level in the control group to the experimental group. The result of the kindness intervention was only almost significant, $F = 2,522$, $p = 0.117$, partial $\eta^2 = 0,039$, meaning that although kindness increased happiness, other factors were also influential.

Figure 1: Estimated Marginal Mean of Measure 1**General Linear Model**

Within-Subjects Factors	
Measure: MEASURE_1	
factor1	Dependent Variable
1	total_well_1
2	total_well_2

Between-Subjects Factors			
		Value Label	N
Please confirm to which group you were allocated:	1	1. Control Group	26
	2	2. Experimental Group	38

Table 9: Descriptive Statistics

Descriptive Statistics				
	Please confirm to which group you were allocated:	Mean	Std. Deviation	N
Total well-being time one	1. Control Group	46.81	8.722	26
	2. Experimental Group	41.50	8.934	38
	Total	43.66	9.164	64
Total well-being time two	1. Control Group	48.81	9.948	26
	2. Experimental Group	47.74	10.412	38
	Total	48.17	10.160	64

Table 9 shifts focus to well-being scores, revealing a different pattern. Initially, the control group reported higher well-being (46.81) than the experimental group (41.50). Post-intervention, the experimental group's well-being improved (47.74), approaching the control group's mean (48.81).

Table 10: Box's Test of Equality of Covariance Matrices

Box's Test of Equality of Covariance Matrices	
Box's M	5.164
F	1.658
df1	3
df2	172790.019
Sig.	.174

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept + Q65

Within Subjects Design: factor1

By comparing the covariance matrices in Table 10, it can be seen that the covariance matrices are equal across groups ($F = 1.401$, $p = 0.174$) for valid inferential tests. The non-significance implies similar variance structures, which also supports the solidity of statistical outcomes in other comparisons.

Table 11: Multivariate Tests

Multivariate Tests							
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Factor1	Pillai's Trace	.117	8.219 ^b	1.000	62.000	.006	.117
	Wilks' Lambda	.883	8.219 ^b	1.000	62.000	.006	.117
	Hotelling's Trace	.133	8.219 ^b	1.000	62.000	.006	.117
	Roy's Largest Root	.133	8.219 ^b	1.000	62.000	.006	.117
Factor1 *	Pillai's Trace	.034	2.175 ^b	1.000	62.000	.145	.034
Q65	Wilks' Lambda	.966	2.175 ^b	1.000	62.000	.145	.034

The statistical analysis in Table 11 shows that the intervention was statistically significant on well-being (Wilks' Lambda = 0.883, $p = 0.006$), though the partial eta squared = 0.117 is a small effect. This implies that, though kindness positively affects well-being, other lifestyles or psychological factors most probably define it.

Table 12: Tests of Within-Subjects Effects

Tests of Within-Subjects Effects							
Measure: MEASURE_1							
Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Factor1	Sphericity	523.683	1	523.683	8.219	.006	.117
	Assumed						
	Greenhouse- Geisser	523.683	1.000	523.683	8.219	.006	.117
	Huynh-Feldt	523.683	1.000	523.683	8.219	.006	.117
	Lower-bound	523.683	1.000	523.683	8.219	.006	.117
Factor1 * Q65	Sphericity	138.558	1	138.558	2.175	.145	.034
	Assumed						
	Greenhouse- Geisser	138.558	1.000	138.558	2.175	.145	.034
	Huynh-Feldt	138.558	1.000	138.558	2.175	.145	.034
	Lower-bound	138.558	1.000	138.558	2.175	.145	.034
Error(fact or1)	Sphericity	3950.434	62	63.717			
	Assumed						

	Greenhouse-Geisser	3950.434	62.000	63.717			
	Huynh-Feldt	3950.434	62.000	63.717			
	Lower-bound	3950.434	62.000	63.717			

Table 12 indicates that well-being assessment significantly differentiated across time ($F = 8.219, p = 0.006$), proving that kindness enhances mental health. The results further reveal that the interaction effect between time and group assignment ($F = 2.175, p = 0.145$) is nonsignificant, meaning that an increase in well-being was experienced but may not solely be attributed to the intervention.

Table 13: Tests of Within-Subjects Contrasts

Tests of Within-Subjects Contrasts							
Measure: MEASURE_1							
Source	factor1	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Factor1	Linear	523.683	1	523.683	8.219	.006	.117
Factor1 * Q65	Linear	138.558	1	138.558	2.175	.145	.034
Error(factor1)	Linear	3950.434	62	63.717			

Table 13 is a refinement of the within-subject analysis, which uses linear trends in the data.

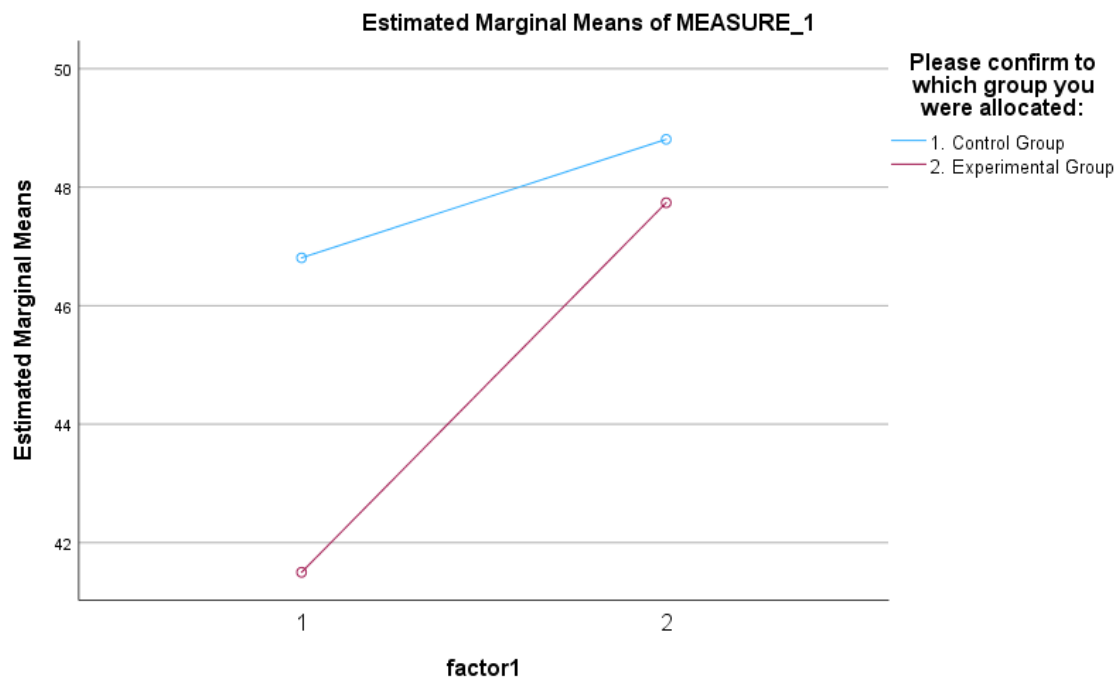
The simple regression, $F = 8.219, p = 0.006$, shows that the changes are not random but have

a constant increase in well-being. This finding supports the hypothesis that performing actions beneficial to others is associated with long-term gains in terms of psychological well-being. Nonetheless, the time-by-group interactions are not considered significant ($F = 2.175$, $p = 0.145$), which means that although well-being was enhanced, this increase was not found to be more pronounced in the experimental group compared to the control group.

Table 14: Levene's Test of Equality of Error Variances

Levene's Test of Equality of Error Variances					
		Levene Statistic	df1	df2	Sig.
Total well-being time one	Based on Mean	.016	1	62	.901
	Based on Median	.031	1	62	.861
	Based on the Median and with adjusted df	.031	1	61.847	.861
	Based on trimmed mean	.006	1	62	.938
Total well-being time two	Based on Mean	.001	1	62	.971
	Based on Median	.051	1	62	.823
	Based on the Median and with adjusted df	.051	1	61.988	.823
	Based on trimmed mean	.005	1	62	.946
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.					
a. Design: Intercept + Q65					
Within Subjects Design: factor1					

Table 14 tested whether the groups had meaningful differences in well-being scores. The analysis shows that there is no significant variation in the pre-intervention variance and post-intervention variance ($F(2, 36) = 0.901$ pre-test and $F(2, 36) = 0.971$, post-test). This means that both groups had similar fluctuations in well-being scores throughout the study.



General Linear Model

Within-Subjects Factors			
Measure: MEASURE_1			
Factor1		Dependent Variable	
1		Totalsocial_1	
2		total_social_2	
Between-Subjects Factors			
		Value Label	N
	1	1. Control Group	26

Please confirm to which group you were allocated:	2	2. Experimental Group	38
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Table 15: Descriptive Statistics

Descriptive Statistics				
	Please confirm to which group you were allocated:	Mean	Std. Deviation	N
Total social time 1	1. Control Group	41.50	7.078	26
	2. Experimental Group	35.74	11.444	38
	Total	38.08	10.244	64
Total social time two	1. Control Group	40.12	12.456	26
	2. Experimental Group	44.21	11.085	38
	Total	42.55	11.740	64

Table 15 provides means and standard deviations of social connectedness in the control and experimental groups pre-and post-intervention. At the beginning of the study, the control group reported a higher mean social connectedness score of (41,50) than the experimental group's mean score of (35,74). Nevertheless, on the post-test, the experimental group's social connectedness improved to 44.21 from the pre-test score to the experimental group's 43.92, which was higher than the control group's score of 40.12.

Table 16: Box's Test of Equality of Covariance Matrices

Box's Test of Equality of Covariance Matrices	
Box's M	8.922
F	2.865

df1	3
df2	172790.019
Sig.	.035
Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.	
a. Design: Intercept + Q65 Within Subjects Design: factor1	

Table 16 examines the validity of the assumption of homogeneity in covariance matrices.

Since the p-value was equal to 0.035, the homogeneity of variance assumption was violated, which implies that there are differences in the variance of social connectedness between the control and experimental groups.

Table 17: Tests of Between-Subjects Effects

Tests of Between-Subjects Effects						
Measure: MEASURE_1						
Transformed Variable: Average						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	263752.356	1	263752.356	2212.654	.000	.973
Q65	314.044	1	314.044	2.635	.110	.041
Error	7390.511	62	119.202			

Table 17 reveals a significant gain toward the targeted behaviours with a small effect size for the intervention ($F = 2.635$, $p = 0.110$, partial eta squared = 0.041).

Table 18: Multivariate Tests

Multivariate Tests							
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Factor1	Pillai's Trace	.067	4.478 ^b	1.000	62.000	.038	.067
	Wilks' Lambda	.933	4.478 ^b	1.000	62.000	.038	.067
	Hotelling's Trace	.072	4.478 ^b	1.000	62.000	.038	.067
	Roy's Largest Root	.072	4.478 ^b	1.000	62.000	.038	.067
Factor1 * Q65	Pillai's Trace	.123	8.660 ^b	1.000	62.000	.005	.123
	Wilks' Lambda	.877	8.660 ^b	1.000	62.000	.005	.123
	Hotelling's Trace	.140	8.660 ^b	1.000	62.000	.005	.123
	Roy's Largest Root	.140	8.660 ^b	1.000	62.000	.005	.123
a. Design: Intercept + Q65 Within Subjects Design: factor1							
b. Exact statistic							

The multivariate test confirms that kindness interventions enhance social connectedness ($F(1, 114) = 7.668, p = 0.005, \eta^2 = 0.123$). This supports theories of reciprocal altruism and social

bonding. Due to Box's Test violation, Pillai's Trace (0.123) is preferred, reinforcing the positive impact of kindness on social inclusion.

Mauchly's Test of Sphericity							
Measure: MEASURE_1							
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Factor1	1.000	.000	0	.	1.000	1.000	1.000
Tests the null hypothesis that the error covariance matrix of the orthonormalised transformed dependent variables is proportional to an identity matrix.							
a. Design: Intercept + Q65 Within Subjects Design: factor1							
b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.							

Table 19: Tests of Within-Subjects Effects

Tests of Within-Subjects Effects							
Measure: MEASURE_1							
Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Factor1	Sphericity	387.905	1	387.905	4.478	.038	.067
	Assumed						
	Greenhouse-Geisser	387.905	1.000	387.905	4.478	.038	.067

	Huynh-Feldt	387.905	1.000	387.905	4.478	.038	.067
	Lower-bound	387.905	1.000	387.905	4.478	.038	.067
Factor1 * Q65	Sphericity	750.155	1	750.155	8.660	.005	.123
	Assumed						
	Greenhouse-Geisser	750.155	1.000	750.155	8.660	.005	.123
	Huynh-Feldt	750.155	1.000	750.155	8.660	.005	.123
	Lower-bound	750.155	1.000	750.155	8.660	.005	.123
Error(factor1)	Sphericity	5370.814	62	86.626			
	Assumed						
	Greenhouse-Geisser	5370.814	62.000	86.626			
	Huynh-Feldt	5370.814	62.000	86.626			
	Lower-bound	5370.814	62.000	86.626			

Table 19 also shows an increase in the level of social connectedness over time ($F = 4.478$, $p = 0.038$). This is further supported by the significant time-by-group assignment interaction effect ($F = 8.660$, $p = 0.005$), suggesting that participants in the kindness-based activities reported more substantial increases in social connectedness than the control group. e, thus making the participants feel connected.

Table 20: Tests of Within-Subjects Contrasts

Tests of Within-Subjects Contrasts
Measure: MEASURE_1

Source	factor1	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Factor1	Linear	387.905	1	387.905	4.478	.038	.067
Factor1 * Q65	Linear	750.155	1	750.155	8.660	.005	.123
Error(factor1)	Linear	5370.814	62	86.626			

Table 20 also supports the hypothesis that the increase in the level of social connectedness has a linear trend ($F = 4.478$; $p = 0.038$), which means that growth has not occurred randomly. The analysis of the interaction effect also revealed that the kindness intervention was the main source of these changes: $F = 8.660$, $p = 0.005$.

Table 21: Levene's Test of Equality of Error Variances

Levene's Test of Equality of Error Variances					
		Levene Statistic	df1	df2	Sig.
1	Total social time Based on Mean	5.086	1	62	.028
	Based on Median	3.024	1	62	.087
	Based on the Median and with adjusted df	3.024	1	51.941	.088
	Based on trimmed mean	4.779	1	62	.033
two	Total social time Based on Mean	.569	1	62	.454
	Based on Median	.102	1	62	.751

	Based on the Median and with adjusted df	.102	1	55.042	.751
	Based on trimmed mean	.527	1	62	.471
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.					
a. Design: Intercept + Q65 Within Subjects Design: factor1					

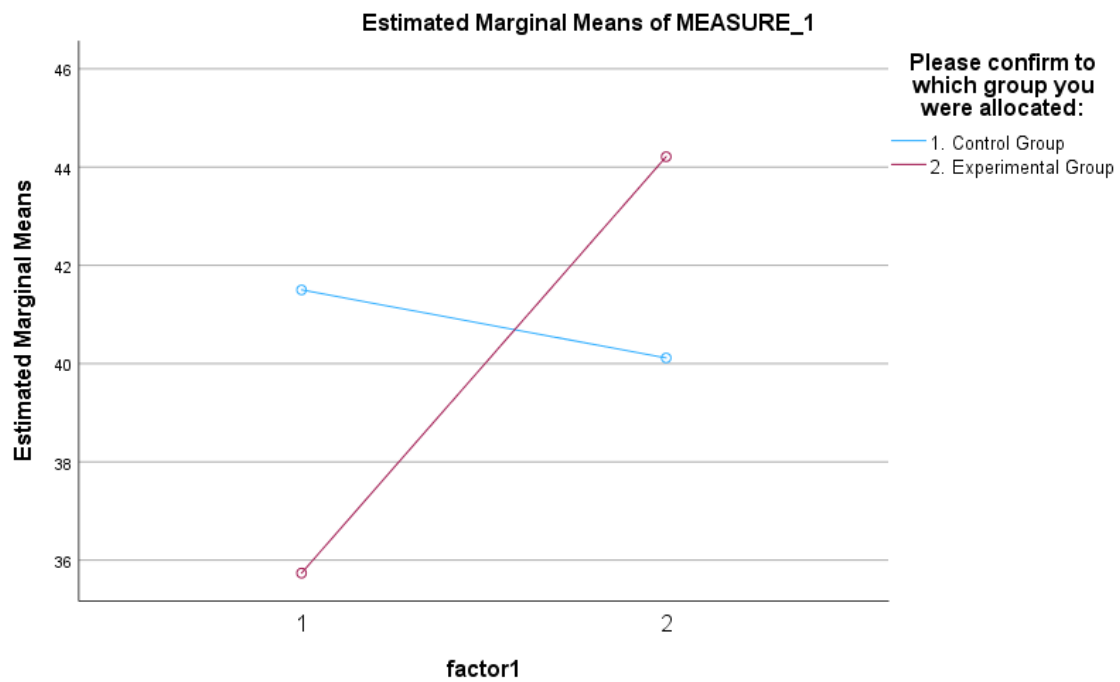
Table 21 compares the social connectedness scores across the groups. The difference in the pre-test was statistically significant ($F(1,54) = 3.86, p = 0.028$), which means that the control group had relatively stable SCL while the experimental group was more variable. The scores on social connectedness also decreased post-test variance ($F = 0.454$), showing that the intervention made the scores return to normal in all the groups.

Table 22: Tests of Between-Subjects Effects

Tests of Between-Subjects Effects						
Measure: MEASURE_1						
Transformed Variable: Average						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	201478.851	1	201478.851	1364.910	.000	.957
Q65	21.476	1	21.476	.145	.704	.002
Error	9152.024	62	147.613			

Table 22 presents findings on the analysis of between-group social connectedness during the post-test stage. The nonsignificant main effect, $F = 0.145$, $p = 0.704$, indicates that although the experimental group's performance increases, the difference is not statistically significant between the groups.

Profile Plots



Chapter 5: Discussion

5.1. Introduction

This study aimed to investigate the psychological benefits that university students get when they engage in acts of kindness, in as much as well-being and happiness, and social connectedness. In this quasi-experimental design, it was determined whether structured acts of kindness positively influenced these domains compared to the control group. The results show that happiness emerged with the largest increase while well-being and social connectedness also increased, though with smaller effect sizes. These findings support the theoretical literature on prosocial behaviour, consistent with studies that have established the relations between kindness, positive emotion, and social functioning (Hosoda & Estrada, 2024; Becky & Becky, 2023). However, the fact that between-subjects effects were mixed points to the fact that it may be challenging to determine the effect of prosocial behaviour in short-term interventions. This paper synthesises these findings relative to the theoretical and empirical literature, methodological strengths and weaknesses and contributions to future research directions.

The Impact of Kindness on Happiness

This research indicated that there were gains in happiness among the participants who were asked to do acts of kindness. The experimental group was found to have a significantly higher post-test happiness level than the control group in support of evidence that helping others leads to increased well-being (Lee et al., 2024). Results obtained from the Oxford Happiness Scale supplemented the general understanding that practicing daily kindness enhances life satisfaction (Hui et al., 2020).

These findings are consistent with the self-determination theory (Deci & Ryan, 1985) that asserts that meeting basic psychological needs results in better mental health. It helps to develop positive emotions, foster social connections, and the perception of personal efficacy

through gratitude from the recipient (Karman, 2019). According to Lyubomirsky et al. (2005), positive emotions promote prosocial behaviour, enhancing social relationships and self-esteem. This is by the broaden-and-build theory by Fredrickson (2001), where performing kind acts enhances the positive self-image and reduces negative emotions.

According to the social reciprocity theory by Gouldner (1960), the increase in happiness can be explained. The expectation or experience of being reciprocated increases feelings of belongingness and pleasure (Algoe et al., 2008). However, it should be noted that the effects within subjects were more significant overall than those between subjects. This proposes the idea of regression to the mean in which the individuals with comparatively low happiness scores had more significant gains (Lyubomirsky, 2008).

Hedonic adaptation (Diener et al., 2006) is another important factor. It rose somewhat in the first phase but seemed to fade away quickly. Participants' well-being was back to normal after one week, implying that more extended-duration programs may be needed for lasting changes in well-being. Research that has involved longer intervention durations, like the one done by Ouweneel and colleagues in 2014, suggests that the longer an individual engages in prosocial behaviour, the longer they experience happiness gain.

There are also reasons why kind acts may not work across cultures, and cultural differences might even affect the success of kindness interventions. In collectivist cultures, where people prioritise interdependence and affiliation, the positive effects may be more significant than in individualist cultures (Jiang et al., 2021). Since the study participants come from diverse backgrounds, cultural differences in the perception of kindness may have affected their responses. Future research should also explore how cultural identity might buffer or enhance the relationship between kindness and happiness, especially in diverse populations.

They also include contextual factors. The study focused more on the individuals' acts of kindness to people they knew or others they encountered daily, not in an organised setting.

While single acts of kindness may give a temporary burst of happiness, consistent participation in programs, like volunteering, may produce longer-term positive impacts (Rosli & Perveen, 2021). Further research should focus on how one-time occurrences are different from well-planned ones.

Furthermore, personality characteristics may interact with kindness interventions in some way. It has been proposed that people with high agreeableness and extraversion gain more from doing kindness activities (Munawar et al., 2023). Extroverts will likely derive satisfaction from social relations, while introverts may not feel the same way. Future investigations should incorporate personality assessments as moderating variables in the intervention's treatment.

Well-Being and Psychological Benefits of Kindness

While the results showed that kindness positively correlated with happiness, the same was not true of well-being. The changes in the well-being scores for the experimental group were further compared to a control group using the Warwick-Edinburgh Mental Well-being Scale (WEMWBS). The impact was not as significant as that seen in the case of happiness. This finding agrees with Ciocarlan (2022), who noted that while acts of kindness could help to make people feel good in the short term, the other aspects of well-being are a product of practice. These findings can be understood by acknowledging that well-being is a complex emotional, psychological, and social phenomenon and might be why the kindness interventions were not as effective for this construct.

Well-being is the overarching, enduring state of the person's psychological health, while happiness relies on short-term conditions. Diener et al. (2017) revealed that subjective well-being depends on dispositional, socio-structural, and value factors. Thus, while short-term mood enhancement may be attained through performing altruistic acts, long-term improvement in well-being is achieved when individuals change their behaviour patterns and

the way they think about the world. This concurs with Layous et al. (2012), who posited that while STK boosts mood, the impact on well-being is profound in those who practice it as a steady behavioural change, not a one-time exercise.

Furthermore, well-being is far more a matter of meaning and purpose, not feelings and moods. Self-awareness measures that encourage people to think about what they are doing and why can be more beneficial for individuals than occasional altruistic behaviours. In their study, Steger et al. (2008) described the positive effect of performing purposeful acts of kindness like volunteering for a cause that one has values and preferences for, a finding that showed that participants who committed purposeful acts of kindness had higher subjective well-being than those who only performed isolated acts of kindness. The development of subsequent studies should focus on the motivation for the act of kindness rather than how often it occurs.

These findings are consistent with Deci and Ryan's self-determination theory (1985), which states that human beings are motivated to satisfy basic psychological needs of autonomy, competence, and relatedness in order to attain optimal well-being. Prosocial behaviour might increase positive mental health through increased feelings of relatedness due to social contact and mastery in helping others.

However, the findings indicate that it is the kind of acts that positively impact well-being regardless of whether the choice is self-determined or made by somebody else. Weinstein and Ryan 2010 stated that young adults who engaged in kindness for personal reasons reported a higher level of well-being than those who engaged in the act for reasons of perceived pressure. This could be why some of the participants in the experimental group were more likely to report more significant well-being gains than others; intrinsic motivation helped to boost the effects of kindness.

Thus, one has to agree that personality characteristics significantly influence the effects of kindness on well-being. Munawar et al. (2023) investigated how agreeableness and extraversion personality traits contribute to perceived reactions to prosocial behaviour. Kindness interventions may benefit agreeable persons since they are predisposed towards cooperation and positive interactions. In the same way, heavy social interactors, such as extroverts, will likely experience a more significant boost in well-being than introverts, who might feel drained by the constant social interaction. Therefore, since the present research did not consider personality variations, future studies should examine how such approaches enhance the well-being of different personalities.

Lastly, the roles of biology may explain why kindness leads to well-being. Moll et al. (2006) have found that prosocial behaviour engages the reward circuits in the brain, such as the ventral striatum and prefrontal cortex. Kindness activities increase the production of dopamine and oxytocin, which are associated with social connectedness and positive feelings. However, the effectiveness of prophylactic neurochemical changes regarding sustained well-being enhancement remains inconclusive.

Kindness and Social Connectedness

The literature has established links between kindness and social connectedness, whereby performing acts of kindness enhances interpersonal relationships and the individual's feelings of belonging (Becky & Becky, 2023; Hui et al., 2020). The results from this study support previous research, as participants in the experimental group reported an improvement in perceived social connectedness since the intervention phase of the program. While Time 1 comparisons within the subject group showed an improvement in scores over time, inter-group differences did not attain statistical significance. This implies that although acts of inclusion improve the individual's perception, group-level effects might need more formal approaches.

One way to explain how kindness leads to connection is through the theory of reciprocity.

According to the social reciprocity theory, as postulated by Gouldner in 1960, kind behaviours elicit similar positive responses, thereby maintaining social relationships. Some of the participants in this study could have been encouraged by the positive feedback they received from the other students, making them feel connected. Algoe et al. (2008) discovered that gratitude increases relationship closeness, but the level of reciprocity of participants may have affected the level of relationship improvement in social connectedness.

One more reason for social connectedness may be the sense of identification that goes along with positive emotions. According to the broaden-and-build theory by Fredrickson (2001), positive emotions expand the available repertoire and resources and enhance social relatedness. Acting altruistically likely creates positive social experiences, which can be valuable for university students when constructing relationships (Rosli & Perveen, 2021). Nevertheless, the degree to which social feedback can help moderate these effects is still a mystery, which calls for more research.

It was found that the type of prosocial acts may influence the effectiveness of kindness interventions. It was found that FS directed towards friends and family is far more important for the level of social connectedness than positive actions towards strangers (Aknin et al., 2013). In this study, participants selected the target of their kindness interventions, which may have involved individuals of differing levels of relatedness. Those helping people with whom they already share a relationship may have potentially received more substantial benefits compared to helping strangers. Therefore, future studies should explore whether the outcomes of other structured approaches that leverage social networks are more profound. Cultural factors may also determine how kindness enhances social integration. Jiang et al. (2021) reported that those from collectivistic backgrounds are likely to show greater levels of connectedness when the participants are engaged in random acts of kindness than those from

individualistic backgrounds. There was also a possibility that due to the differences in their cultural setting, cultures could have influenced students' reactions to the intervention. Future research should elaborate on whether collectivist-oriented interventions yield more significant societal advantages.

Another moderator is the temporal length of the intervention – how long the intervention will last before its effects cease. Although short-term positive behaviour changes can enhance self-reported mood and short-lived interpersonal interactions, forming a long-term social network may take time (Beelman & Heeren, 2020). Research works like those of Kok and Fredrickson (2013) established that extended participation in activities enhances long-term social inclusion. It is possible that extending interventions will increase the impact of the interventions themselves.

Other individual differences include personality traits, which can also influence the effects of kindness. Munawar et al. (2023) postulated that because extroverts require social contact, they might obtain more significant increases in connectedness than those gained by introverted participants, who could provide connectedness by engaging in less conspicuous acts of kindness. Subsequent research should examine how different personality factors enhance or hinder acts of kindness.

Neuroscientific proof also further confirms the importance of kindness in the development of social relations. Moll and colleagues (2006) suggest that prosocial behaviour stimulates areas of the brain connected with bonding, reward, and trust, which are brought about by oxytocin and dopamine. However, the neurochemical changes that occur in the long term remain ambiguous and should be researched further.

Lastly, institutional support may help promote kindness interventions. Cognitive interventions such as structured kindness programs, including peer relationships and gratitude interventions, are elements that enhance social connectedness (Hui & Kogan, 2022).

Integrating kindness into institutional culture can help individuals build lasting relationships beyond momentary interactions.

Methodological Considerations and Limitations

However, it is important to note the following methodological limitations in this study.

Another potential shortcoming is that the data collection method is based on self-reports, which can be influenced by factors such as desirability. Respondents may have overestimated the time spent on such acts or even the extent to which they benefited from increased well-being. Nevertheless, as the use of online data collection increases accessibility, the eligibility of participants is often unknown to the researchers, and they may not always follow through with the assigned intervention.

Another limitation of the study is the relatively short period of observation. To begin, it is crucial to note that although the present study found positive immediate implications of practising kindness on happiness, the lasting impact on well-being and social relationships is yet unknown. Prior studies have indicated that extended positive involvement in prosocial activity increases the stability of psychic gain (Maier et al., 2021). Further research should employ follow-up measurements to establish the sustainability of the detected changes.

Consequently, certain sample parameters may have affected the study's outcome. This study was carried out with psychology students, a population that may have more awareness about prosocial behaviour. Therefore, the study's applicability to other groups of students is not clear. Further research on the topic should be conducted with other academic disciplines and universities to determine whether the same effects can be achieved in other universities.

Implications for Future Research and Practice

Such discoveries have several implications for future research and university policy. First, the findings indicate that intervention based on kindness increases happiness and, to some extent, well-being as well as social relatedness. Universities should incorporate kindness-related

activities into student support services and use the lack of social connection and increased stress, particularly in the current generation, as a reason for implementing them.

Specifically, future research should investigate the longitudinal outcomes of the studies on Kindness and determine how consistent participation in acts of prosocial conduct enhances its positive impact. Further studies should examine the potential mediators and moderators of the effects of kindness on well-being and social relationships, including personality traits, cultural background, and the length of the intervention.

Conclusion

This study investigated the effects of kindness interventions on university students' psychological well-being, happiness, and perceived social connectedness. This way, the study shows that performing acts of kindness significantly increases happiness and contributes to moderate increases in well-being and feelings of connectedness. These findings are consistent with self-determination theory, broaden-and-build theory, and other theories on the benefits of performing prosocial behaviours. However, the study also reveals some of the challenges of assessing the impact of kindness over the long term, especially in the area of integration into society and psychological well-being.

The significant rise in happiness scores implies that kindness creates positive emotional reactions on the spot, possibly linked to the brain's release of dopamine and oxytocin.

However, well-being and social connectedness changes were not as significant, meaning these aspects might need more substantial, reproducible, or structured interventions to demonstrate substantial long-term impact. Altruism – Well-being seems to be most responsive to and enhanced by conscious and profound giving, more so than random acts of kindness. Likewise, though kindness effectively creates interpersonal connections at the individual level, societal inclusion may be influenced by mutual exchange, personality disposition, and culture.

These results point to the effectiveness of kindness as a psychological and social intervention and the requirement for extended and organised ones to reach their full potential. Scientific studies have shown that institutions such as universities and workplaces can improve happiness and the general well-being of individuals or society by promoting kindness in their cultures through mentorship, gratitude, and community service. Future studies must consider the long-term outcomes of kindness interventions and how person-specific factors could moderate the change. Cultivation of kindness can be a valuable approach to preventing and treating various psychological disorders and enhancing human relationships.

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Appendices

Appendix 1: Study Information Page

This document provides key information regarding the study and provides details about what will be expected of you as a participant. Therefore, please read this information carefully before providing consent to take part. This study explores factors that help shape and influence kindness and prosocial behaviour among university students.

During this study, you will be required to do the following:

- Read and agree to a series of statements relating to consent, confidentiality, and anonymity to show that you understand what is expected of you and are willing for your responses to be used for this study.
- Answer a 43-item survey at week 1.
- You will be randomly allocated to either the experimental or control groups for one week. The experimental group will involve you completing at least three simple acts of kindness each day for one week. If you are allocated to the control group, you will not need to do anything in the following week.
- Create a unique password and include this on your survey when prompted. Please do not use a password that you use for any other purposes. This password is required to link your responses from week 1 to week 2 and will be replaced with a number once your data has been linked.
- Submit your 43-item survey answers using the EMS portal system at week 1.
- At the end of the one week, you will be asked to enter the second link on EMS, where you will answer the same 43-item survey as before, regardless of what group you were assigned to (this is week 2).
- On completing the 43-item survey, you will be directed to a debriefing page allowing you to withdraw from the study at both week 1 and week 2.

You are free to withdraw from this study at any point until the end of the survey in week 2.

After that, once your data is submitted, it will be anonymised and cannot be traced back to you. No personal data will be recorded, and all data received will be stored confidentially and anonymously in line with the UWTSD research data management protocol and the BPS ethical code of conduct.

Examples of the types of questions included in the survey are:

1. In the last week, how true is this sentence? “I have been feeling interested in other people.”

2. To what extent is this statement true? “I find most things amusing”.

3. To what extent is this statement true? “I see people as friendly and approachable.”

If you feel this study is not something you wish to participate in or you might feel distressed answering questions about your social connectedness, well-being, or happiness, please close your browser now and do not continue the survey.

If you have any questions, please feel free to contact the researcher or supervisor at the email addresses provided below:

Katherine Monk – researcher: 2220232@student.uwtsd.ac.uk or Karen Eaton – Thomas – supervisor: k.eatonthomas@uwtsd.ac.uk

If you are happy to proceed with the survey, please click next to continue to the consent page.

Appendix 2: List of various acts of kindness

1. Call a friend that you haven't spoken to for a while
2. Send a letter to a grandparent
3. Send flowers to a friend
4. Offer to pick up some groceries for your elderly neighbour
5. Send someone a handwritten note
6. Offer to babysit for a friend
7. Walk your friend's dog
8. Tell your family members how much you love and appreciate them
9. Help your parents with household chores
10. Help a friend get active
11. Make someone laugh
12. Offer to cook for a friend or family member
13. Make a cup of tea for a friend or family member
14. Help with a household chore at home or for a friend
15. Host an informal get together and invite your neighbours to get to know each other
16. Tell someone you know that you are proud of them
17. Tell someone you know why you are thankful for them
18. Send a motivational text to a friend who is struggling
19. Send someone you know a joke to cheer them up
20. Send someone you know a picture of a cute animal
21. Send an inspirational quote to a friend
22. Send an interesting article to a friend
23. Put a surprise note or drawing on someone's desk
24. Contact someone you haven't seen in a while and arrange to meet face to face

25. Engage in conversation with a shop assistant when paying at the till
26. Spend time playing with your pet
27. Sign up to do voluntary work in your local community
28. Reach out to spend time with a friend, family member or neighbour who is experiencing loneliness
29. Have a clear out and take items to a charity shop
30. Make and send a care package to someone who needs it
31. Make a donation to a charity
32. Offer to pick up a friend or family member from work
33. Make a cup of tea for your colleagues
34. Get to know the new staff member
35. Lend your ear - listen to your colleague who is having a bad day
36. Say good morning
37. Bake a cake for your colleagues
38. Give praise to your colleague for something they've done well
39. If it's raining – lend someone your umbrella
40. Take someone out for lunch instead of eating at your desk
41. Give up your seat to an elderly, disabled or pregnant person
42. Let someone jump the queue at the supermarket
43. Take a minute to help someone who is lost
44. Have a conversation with someone who is experiencing homelessness
45. Help a mother carrying her push chair down the stairs or hold the door for her
46. Let a fellow driver merge into your lane
47. Pick up some rubbish lying around in the street

48. Smile and say hello to people you may pass every day, but have never spoken to before

49. Return a lost item to its owner

50. Pop into a coffee shop and ask to pay for a coffee for them to give to someone later that day for free

Appendix 3: Consent form

Study Consent Form

Please read the statements below, and if you agree with them, please click the corresponding circle alongside them.

1. I understand that this research study is being carried out by a 3 rd year Psychology Student for their Level 6 Thesis.	☐
2. I understand that participating in this study will involve completing an online survey twice: once at the beginning and again after a week has passed.	☐
3. I understand that I will be randomly allocated to either an experimental condition, where I agree to engage in simple acts of kindness at least three times a day for one week, or to a control condition, where I will not have to perform any acts of kindness during the one week.	☐
4. I understand that I can withdraw my data from this study at any time during the study and until I submit my responses at the end of the week after completing the survey a second time.	☐
5. I understand that participation in this study is entirely voluntary, and I am free to withdraw participation at any time without giving a reason.	☐

6. I know that if I have concerns about the study, I can email the researcher or supervisor any time during or after the study.	O
7. I understand that my information will be confidential, with a unique number code assigned in place of my name. The Data Protection Act and the UWTSD research data management protocol will store the data.	O
8. I also understand that at the end of the study, I will be provided with a debrief and the opportunity to email the researcher or supervisor if I have any questions.	O
9. I consent to take part in this study.	O

Appendix 4: The Oxford Happiness Scale – Hills and Argyle (2002)

Psychologists Michael Argyle and Peter Hills at Oxford University developed the Oxford Happiness Questionnaire.

Instructions

Below are several statements about happiness. Please indicate how much you agree or disagree

with each by entering a number in the blank after each statement, according to the following scale:

1 = strongly disagree

2 = moderately disagree

3 = slightly disagree

4 = slightly agree

5 = moderately agree

6 = strongly agree

The Questionnaire

1. I have very warm feelings towards almost everyone.

2. I rarely wake up feeling rested. (R)

3. I am always committed and involved.

4. Life is good.

5. I do not think that the world is a good place. (R) _

6.. I laugh a lot.

7. I am satisfied with everything in my life.
8. There is a gap between what I want to do and what I have done. (R)
9. I am thrilled.
10. I find beauty in some things.
11. I always have a cheerful effect on others.
12. I can fit in (find time for) everything I want to.
13. I feel I am not in control of my life. (R)
14. I feel able to take anything on.
15. I often experience joy and elation.
16. I do not find it easy to make decisions. (R)
17. I feel I have a great deal of energy.
18. I usually have a good influence on events.
19. I do not feel particularly healthy. (R)

Appendix 5: The Warwick–Edinburgh Mental Well-being Scale (WEMWBS)

Below are some statements about feelings and thoughts.

Please tick the box that best describes your experience of each over the last week.

STATEMENTS	None of the time	Rarely	Some of the time	Often	All of the time
I have been feeling optimistic about the future	1	2	3	4	5
I have been feeling useful	1	2	3	4	5
I have been feeling relaxed	1	2	3	4	5
I have been feeling interested in other people	1	2	3	4	5
I have had the energy to spare	1	2	3	4	5
I have been dealing with problems well	1	2	3	4	5
I have been thinking clearly	1	2	3	4	5
I have been feeling good about myself	1	2	3	4	5
I have been feeling close to other people	1	2	3	4	5
I have been feeling confident	1	2	3	4	5
I have been able to make up my mind about things	1	2	3	4	5
I have been feeling loved	1	2	3	4	5
I have been interested in new things	1	2	3	4	5

I have been feeling cheerful	1	2	3	4	5
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Appendix 6: Social Connectedness Scale – Lee and Robbins (1995).

Following are several statements that reflect various ways in which we view ourselves.

Rate the degree to which you agree or disagree with each statement using the following scale

(1 = Strongly Disagree and 6 = Strongly Agree).

Statements	Strongly disagree	Disagree	Mildly disagree	Mildly agree	Agree	Strongly agree
1. I feel comfortable in the presence of strangers	1	2	3	4	5	6
2. I am in tune with the world	1	2	3	4	5	6
3. I fit in well in new situations	1	2	3	4	5	6
4. I feel close to people	1	2	3	4	5	6
5. I see people as friendly and approachable	1	2	3	4	5	6
6. I feel understood by the people I know	1	2	3	4	5	6
7. I can relate to my peers	1	2	3	4	5	6

8. I find myself actively involved in people's lives	1	2	3	4	5	6
9. I can connect with other people	1	2	3	4	5	6
10. My friends feel like family	1	2	3	4	5	6

Appendix 7: Study Debrief

An exploration of kindness and prosocial behaviour among university students

Thank you for taking part in the study. This study aimed to explore the factors that shape and influence kindness and prosocial behaviour among university students, mainly to see if engaging in simple acts of kindness over one week can influence an individual's well-being, happiness, and sense of social connectedness.

To learn more about this study's background, you can access these YouTube videos, using the following links, explaining the idea behind simple acts of kindness by Psychologist Dr Marilee Ludvik and APRESO resources.

<https://www.youtube.com/watch?v=ow4o-3ifwEs>

<https://www.youtube.com/watch?v=l38rpflRc4Q>

Your data will be held in confidence and stored securely and anonymously in accordance with the Data Protection Act and the UWTSD research data management protocol until the degree is completed, after which it will be destroyed.

If you wish to withdraw your data from the study, you should do so now. Once you submit your data, it will become anonymous, and it will not be possible to trace it back to you.

If you are happy to submit your data, please click the SUBMIT button now.

If taking part in this study has raised any questions, please speak to the researcher Katherine Monk at 2220232@student.uwtsd.ac.uk or contact the dissertation supervisor, Karen Eaton-Thomas at k.eatonthomas@uwtsd.ac.uk

Thank you once again for taking the time to participate in this study.

BSc Honours Applied Psychology

University of Wales Trinity Saint David, Carmarthen

Appendix 8: Ethics Form

APPLICATION FOR ETHICAL APPROVAL

RESEARCH STUDENTS

This form is to be completed by the student within SIX months for full-time students and TWELVE months for part time students, after the commencement of the research degree or following progression to Part Two of your course.

Once complete, submit this form via the MyTSD Doctoral College Portal at (<https://mytsd.uwtsd.ac.uk>).

This document is also available in Welsh.

RESEARCH STAFF ONLY

All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk , with the title 'Ethical Approval' followed by your name.

STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.

In order for research to result in benefit and minimise risk of harm, it must be conducted ethically. A researcher may not be covered by the University's insurance if ethical approval has not been obtained prior to commencement.

The University follows the OECD Frascati manual definition of **research activity**: “creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications”. As such this covers activities undertaken by members of staff, postgraduate research students, and both taught postgraduate and undergraduate students working on dissertations/projects.

The individual undertaking the research activity is known as the “principal researcher”.

Ethical approval is not required for routine audits, performance reviews, quality assurance studies, testing within normal educational requirements, and literary or artistic criticism.

Please read the notes for guidance before completing ALL sections of the form.

This form must be completed and approved prior to undertaking any research activity.

Please see Checklist for details of process for different categories of application.

SECTION A: About You (Principal Researcher)

1	Full Name:	Katherine Monk			
2	Tick all boxes that apply:	Member of staff:	☐	Honorary research fellow:	☐
	Undergraduate Student	☒	Taught Postgraduate Student	☐	Postgraduate Research Student

3	Institute/Academic Discipline/Centre:	Psychology and Counselling
4	Campus:	Carmarthen
5	E-mail address:	2220232@student.uwtsd.ac.uk
6	Contact Telephone Number:	
<i>For students:</i>		
7	Student Number:	2220232
8	Programme of Study:	BSc Applied Psychology
9	Director of Studies/Supervisor:	Karen Eaton-Thomas

SECTION B: Approval for Research Activity

1	Has the research activity received approval in principle? (please check the Guidance Notes as to the appropriate approval process for different levels of research by different categories of individual)	YES	☒	NO	☐
				<i>Date</i>	
2	If Yes, please indicate source of approval (and date where known): <i>Approval in principle must be</i>	Research Degrees Committee	☐		
		Institute Research Committee	☐		
		Other (write in)	☒	July 2024	

	<i>obtained from the relevant source prior to seeking ethical approval</i>	Supervisor – Karen Eaton-Thomas		
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SECTION C: Internal and External Ethical Guidance Materials

	Please list the core ethical guidance documents that have been referred to during the completion of this form (including any discipline-specific codes of research ethics, location-specific codes of research ethics, and also any specific ethical guidance relating to the proposed methodology). Please tick to confirm that your research proposal adheres to these codes and guidelines. You may add rows to this table if needed.		
1	<u>UWTSD Research Ethics & Integrity Code of Practice</u>	☒	
2	UWTSD Research Data Management Policy	☒	
3	UWTSD Student Code of Conduct	☐	
4	UWTSD Data Protection and Storage Protocol		
5	BPS Code of Human Research Ethics (April 2021)		
6	BPS Code of Ethics and Conduct (July 2018)		
7	BPS Data Protection Regulation – Guidance for Researchers (2018)		

SECTION D: External Collaborative Research Activity

If there are external collaborators then you should gain consent from the contact persons to share their personal data with the university. If there are no external collaborators then leave this section blank and continue to section E.

1	Institution	
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2	Contact person name					
3	Contact person e-mail address					
4	Is your research externally funded?	YES	☐	NO	☐	
5	Are you in receipt of a KESS scholarship?	YES	☐	NO	☐	
6	Are you specifically employed to	Voluntary	YES	☐	NO	☐
7	undertake this research in either a paid or voluntary capacity?	Employed	YES	☐	NO	☐
8	Is the research being undertaken within an existing UWTSD Athrofa Professional Learning Partnership (APLP)?	If YES then the permission question below does not need to be answered.	YES	☐	NO	☐
9	Has permission to undertake the research has been provided by the partner organisation?	(If YES attach copy) If NO the application cannot continue	YES	☐	NO	☐

Where research activity is carried out in collaboration with an external organisation

10	Does this organisation have its own ethics approval system?	YES	☐	NO	☐
	If Yes, please attach a copy of any final approval (or interim approval) from the organisation (this may be a copy of an email if appropriate).				

SECTION E: Details of Research Activity

1	Indicative title:	An exploration of kindness and prosocial behaviour among university students in the UK		
2	Proposed start date:	November 2024	Proposed end date:	May 2025
	Introduction to the Research (maximum 300 words per section) Ensure that you write for a <u>Non-Specialist Audience</u> when outlining your response to the points below: <i>Purpose of Research Activity</i> <i>Proposed Research Question</i> <i>Aims of Research Activity</i> <i>Objectives of Research Activity</i> Demonstrate, briefly, how <u>Existing Research</u> has informed the proposed activity and explain <i>What the research activity will add to the body of knowledge</i> <i>How it addresses an area of importance.</i>			
3	Purpose of Research Activity Kindness has been described as both a known and a subconscious cognitive process that “entails enacting kind behaviour toward other people” (Otake et al., 2006). Prosocial behaviour has been described as “any action that, as it happens, benefits others, or promotes harmonious relations with others, even if there is no sacrifice on the actor’s part and even if there is some benefit to the actor” (Hay, 1994). Extensive research regarding the underlying mechanisms that drive acts of kindness and prosocial behaviour among university students has been previously investigated			

(e.g., Rosli & Perveen, 2021; Lee et al., 2024; Munawar et al., 2023; Jiang et al., 2021)

However, there are three areas of limitations on the overall research on kindness and prosocial behaviour, firstly, research focuses on one single act of kindness (e.g. complimenting a stranger) to distinguish between various groups or individuals. Secondly, kindness is only seen from a unidimensional perspective when it has the capacity to be seen from a multidimensional perspective. Thirdly and finally, this research area lacks a strong psychometric instrument.

As a result, the purpose of the proposed study is to explore the impact of carrying out a variety of kindness acts over a period of one week on an experimental group of participants compared to a control group of participants who are not required to conduct acts of kindness. Additionally, prosocial kindness will be explored as a multidimensional concept, being measured on social connection, happiness and well-being.

Reference List:

Bar-Tal, D., Raviv, A., & Goldberg, M. (1982). Helping Behavior among Preschool Children: An Observational Study. *Child Development*, 53(2), 396.

<https://doi.org/10.2307/1128982>

Caprara, G. V., Barbaranelli, C., Incatasciato, M., Pastorelli, C., & Rabasca, A. (1997). Emotional instability, physical and verbal aggression, and prosocial behavior as precursors of scholastic achievement and social adjustment. In *The Plenum*

series in social/clinical psychology (pp. 111–120). https://doi.org/10.1007/978-1-4615-5883-5_7

Denham, S. A. (1986). Social Cognition, Prosocial Behavior, and Emotion in Preschoolers: Contextual Validation. *Child Development*, 57(1), 194. <https://doi.org/10.2307/1130651>

Guttman, R., & Greenbaum, C. W. (1998). Facet theory. *European Psychologist*, 3(1), 13–36. <https://doi.org/10.1027/1016-9040.3.1.13> Hay, D. F. (1994). Prosocial development. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 35(1), 29–71. <https://doi.org/10.1111/j.1469-7610.1994.tb01132.x>

Jiang, Y., Yao, Y., Zhu, X., & Wang, S. (2021). The influence of college students' empathy on prosocial behavior in the COVID-19 pandemic: The mediating role of social responsibility. *Frontiers in Psychiatry*, 12. <https://doi.org/10.3389/fpsy.2021.782246>

Lauri, M. A., & Calleja, S. S. (2019). Prosocial behaviour and psychological wellbeing. In BRILL eBooks (pp. 46–62). https://doi.org/10.1163/9789004394179_005

Lee, Y. A., Guo, Y., Li, G., & Chen, F. S. (2024). Prosocial behavior as an antidote to social disconnection: The effects of an Acts of Kindness intervention on daily social contact and loneliness. *Journal of Happiness Studies*, 25(4). <https://doi.org/10.1007/s10902-024-00742-x>

- Lennon, R., & Eisenberg, N. (1987). Emotional Displays Associated with Preschoolers' Prosocial Behavior. *Child Development*, 58(4), 992.
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- Munawar, S., Farid, T., Iqbal, S., & Gul, A. (2023). Exploring the Relationship between Self-Compassion and Prosocial Behavior among University Students; Mediating Role of Empathy. *Social Science Research Network*.
<https://doi.org/10.2139/ssrn.4320296>
- Otake, K., Shimai, S., Tanaka-Matsumi, J., Otsui, K., & Fredrickson, B. L. (2006). Happy People Become Happier through Kindness: A Counting Kindnesses Intervention. *Journal of Happiness Studies*, 7(3), 361–375.
<https://doi.org/10.1007/s10902-005-3650-z>
- Rosli, S. N., & Perveen, A. (2021). The Relationship between Prosocial Behavior and Psychological Well-Being among Undergraduate Students. *International Journal of Academic Research in Business & Social Sciences*, 11(6).
<https://doi.org/10.6007/ijarbss/v11-i6/10119>
- Son, D., & Padilla-Walker, L. M. (2019). Happy Helpers: a multidimensional and Mixed-Method approach to prosocial behavior and its effects on friendship Quality, Mental Health, and Well-Being during Adolescence. *Journal of Happiness Studies*, 21(5), 1705–1723. <https://doi.org/10.1007/s10902-019-00154-2>

	Wentzel, K. R. (1996). Social goals and social relationships as motivators of school adjustment. Cambridge University Press eBooks, 226–247. https://doi.org/10.1017/cbo9780511571190.012 (this box should expand as you type)
4	Research Question 1. What impact does performing simple acts of kindness have on an individual? Hypotheses – H1 – Participants in the experimental (kindness) group will demonstrate an improvement in their well-being scores following one week of performing simple acts of kindness compared to their well-being scores before performing the acts of kindness. H2 – Participants in the experimental (kindness) group will demonstrate an improvement in their Happiness scores following one week of performing simple acts of kindness compared to their Happiness scores before performing the acts of kindness. H3 – Participants in the experimental (kindness) group will demonstrate an improvement in their social connectedness scores following one week of performing

	simple acts of kindness compared to their social connectedness scores before performing the acts of kindness. H4 – Participants in the experimental group will demonstrate higher well-being, happiness and social connectedness scores than the participants in the control group. H5 – There will be an interaction between participants well-being, happiness and social connectedness scores in the experimental group. H6 – There will be an interaction between participants well-being, happiness and social connectedness scores in the control group. (this box should expand as you type)
5	Aims of Research Activity To explore the impact of simple acts of kindness on participants well-being, happiness and social connectedness. (this box should expand as you type)
6	Objectives of Research Activity 1. To utilise an online survey to explore the impact of simple acts of kindness on an individuals well-being, happiness and social connectedness in an experimental group

	over a period of one week compared to a control group of participants not required to perform simple acts of kindness. (this box should expand as you type)
	Proposed methods (maximum 600 words) Provide a brief summary of all the methods that may be used in the research activity, making it clear what specific techniques may be used. If methods other than those listed in this section are deemed appropriate later, additional ethical approval for those methods will be needed. You do not need to justify the methods here, but should instead describe how you intend to collect the data necessary for you to complete your project.
7	1. Participants include undergraduate students from UWTSD on any Psychology related course. Each participant will be over 18 years of age and will voluntarily participate via an online registration programme called the Experimental Management System (EMS) in which participants will receive credits toward course completion. The study will include a minimum of 60 participants. 2. Participants will be invited to take part in the study by selecting the study on the university EMS platform. They will be presented with brief details of what the study entails before deciding to proceed to the information page of the online survey (appendix 1). The information page will provide details of the study and what it will entail, including examples of the type of questions they will be asked. They will also

	be provided with email details of the researcher and supervisor, in case they have any questions about the study itself. 3. If participants decide to continue, they will next be taken to an online consent form (appendix 2), which includes a number of statements to confirm that they understand what will be expected of them. The final statement asks for them to click on a circle which is confirmation of their consent to take part. At this point, if they decline to take part they will be advised to close their browser. 4. If they provide their consent, they will enter the survey questions, for the first time. Please refer to appendix 3 to see the full list of questions and their sources. They will then be randomly allocated to either the experimental group or the control group via the randomiser function in Qualtrics. Participants will be informed that they do not have to answer any questions that they do not want to and that they can skip questions or withdraw from the study at any time by closing their browser. They will also be told that all responses will be anonymous, and they will not be asked to provide any personal details. They will be assured of data confidentiality and adherence to the guidelines of GDPR. 5. They will then be provided with a list of various acts of kindness, from which they are asked to perform at least three of these each day for a period of one week (Appendix 5). They are also asked to provide a unique password to include on the survey, to be used to identify them one week later when they complete the survey for a second time (both experimental group and control group).
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	6. On completion of the questions, they will be taken to a debrief page, where an explanation of the study will be provided, (appendix 4) along with a reminder of their final chance to withdraw their data before the final submission of their responses. Once submitted, their responses will be anonymised and will no longer be able to be traced back to them, so it is important that they are made aware of this before submitting their answers. The email details of the researcher and supervisor will be provided again and participants will be reminded to make a note of these for future reference. 7. One week later, participants will be required to visit the second link to the survey on EMS to complete the survey for a second time. The procedure will follow the same format as the initial survey, with participants being reminded to enter their unique identification password that they used on the first survey, in order for their data to be linked together. 8. The data will be stored in Qualtrics before being exported into SPSS for data analysis. A mixed ANOVA will be used to analyse the data, with the within factors being time (pre and post kindness acts) and between factors being the experimental group compared to the control group. The DV's are the well-being, happiness and social connectedness scores. (this box should expand as you type)
	Location of research activity Identify all locations where research activity will take place.
8	

	Online (this box should expand as you type)
	Research activity outside of the UK If research activity will take place overseas, you are responsible for ensuring that local ethical considerations are complied with and that the relevant permissions are sought. Specify any local guidelines (e.g. from local professional associations/learned societies/universities) that exist and whether these involve any ethical stipulations beyond those usual in the UK (provide details of any licenses or permissions required). Also specify whether there are any specific ethical issues raised by the local context in which the research activity is taking place, for example, particular cultural and/or legal sensitivities or vulnerabilities of participants. If you live in the country where you will do the research then please state this.
9	(this box should expand as you type)

10	Use of documentation not in the public domain: Are any documents <u>NOT</u> publicly available?	NO	☐
		YES	☐
11	If Yes, please provide details here of how you will gain access to specific documentation that is not in the public domain and that this is in accordance with the current data protection law of the country in question and that of England and Wales.		

	<i>(this box should expand as you type)</i>
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	Does your research relate to one or more of the seven aims of the Well-being of Future Generations (Wales) Act 2015?	YES	NO
12	A prosperous Wales	☐	☐
13	A resilient Wales	☐	☐
14	A healthier Wales	☐	☐
15	A more equal Wales	☐	☐
16	A Wales of cohesive communities	☒	☐
17	A Wales of vibrant culture and thriving Welsh language	☐	☐
18	A globally responsible Wales	☐	☐
19	If YES to any of the above, please give details:		
	Research (Mental Health Foundation, Wales) suggests that simple acts of kindness can improve mental health and well-being, therefore if the results of this study support this idea, then encouraging people to perform these simple acts may contribute to a more cohesive community. <i>(this box should expand as you type)</i>		

SECTION F: Scope of Research Activity

	Will the research activity include:	YES	NO
1	Use of a questionnaire or similar research instrument?	☒	☐
2	Use of interviews?	☐	☒
3	Use of focus groups?	☐	☒
4	Use of participant diaries?	☐	☒
5	Use of video or audio recording?	☐	☒
6	Use of computer-generated log files?	☐	☒
7	Participant observation with their knowledge?	☐	☒
8	Participant observation without their knowledge?	☐	☒
9	Access to personal or confidential information without the participants' specific consent?	☐	☒
10	Administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive?	☐	☒
11	Performance of any acts which may cause embarrassment or affect self-esteem?	☐	☒
12	Investigation of participants involved in illegal activities?	☐	☒
13	Use of procedures that involve deception?	☐	☒
14	Administration of any substance, agent or placebo?	☐	☒
15	Working with live vertebrate animals?	☐	☒
16	Procedures that may have a negative impact on the environment?	☐	☒
17	Other primary data collection methods. Please indicate the type of data collection method(s) below.	☐	☒
	Details of any other primary data collection method:		

	(this box should expand as you type)		
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If NO to every question, then the research activity is (ethically) low risk and **may** be exempt from **some** of the following sections (please refer to Guidance Notes).

If YES to any question, then no research activity should be undertaken until full ethical approval has been obtained.

SECTION G: Intended Participants

If there are no participants then do not complete this section, but go directly to section H.

	Who are the intended participants:	YES	NO
1	Students or staff at the University?	☒	☐
2	Adults (over the age of 18 and competent to give consent)?	☒	☐
3	Vulnerable adults?	☐	☒
4	Children and Young People under the age of 18? (Consent from Parent, Carer or Guardian will be required)	☐	☒
5	Prisoners?	☐	☒
6	Young offenders?	☐	☒
7	Those who could be considered to have a particularly dependent relationship with the investigator or a gatekeeper?	☐	☒

8	People engaged in illegal activities?	☐	☒
9	Others. Please indicate the participants below, and specifically any group who may be unable to give consent.	☐	☒
	Details of any other participant groups: (this box should expand as you type)		

	Participant numbers and source Provide an estimate of the expected number of participants. How will you identify participants and how will they be recruited?	
10	How many participants are expected?	60 participants will be recruited on a volunteer basis. <i>(this box should expand as you type)</i>
11	Who will the participants be?	The participants will be students from within the Discipline of Psychology and Counselling. <i>(this box should expand as you type)</i>
12	How will you identify the participants?	

		Participants will voluntarily sign up to take part in the study through the discipline's Experiment Management System (EMS). Participants will be offered credits in exchange for their participation. These credits will benefit the participants, contributing to their total needed credits to enable them to use the EMS for their own research for their final year of study. Participants will then be identified by their personal unique ID number. <i>(this box should expand as you type)</i>
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	Information for participants:	YES	NO	N/A
13	Will you describe the main research procedures to participants in advance, so that they are informed about what to expect?	☒	☐	☐
14	Will you tell participants that their participation is voluntary?	☒	☐	☐
15	Will you obtain written consent for participation?	☐	☒	☐
16	Will you explain to participants that refusal to participate in the research will not affect their treatment or education (if relevant)?	☒	☐	☐
17	If the research is observational, will you ask participants for their consent to being observed?	☒	☐	☐
18	Will you tell participants that they may withdraw from the research at any time and for any reason?	☒	☐	☐

19	With questionnaires, will you give participants the option of omitting questions they do not want to answer?	☒	☐	☐
20	Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	☒	☐	☐
21	Will you debrief participants at the end of their participation, in a way appropriate to the type of research undertaken?	☒	☐	☐
22	If NO to any of above questions, please give an explanation			
	As the study is online, participants are not able to provide written consent. However they will indicate their consent by clicking on a statement online which states “I give my consent to take part in this study”. If they do not click this statement, they will not be able to continue into the main part of the initial questionnaire. <i>(this box should expand as you type)</i>			

	Information for participants:	YES	NO	N/A
24	Will participants be paid?	☐	☒	☐
25	Is specialist electrical or other equipment to be used with participants?	☐	☒	☐
26	Are there any financial or other interests to the investigator or University arising from this study?	☐	☒	☐

27	Will the research activity involve deliberately misleading participants in any way, or the partial or full concealment of the specific study aims?	☐	☒	☐
28	If YES to any question, please provide full details			
	(this box should expand as you type)			

SECTION H: Anticipated Risks

	Outline any anticipated risks that may adversely affect any of the participants, the researchers and/or the University, and the steps that will be taken to address them.		
	If you have completed a full risk assessment (for example as required by a laboratory, or external research collaborator) you may append that to this form.		
1	Full risk assessment completed and appended?	Yes	☐
		No	☒
2	Risks to participants For example: sector-specific health & safety, emotional distress, financial disclosure, physical harm, transfer of personal data, sensitive organisational information		
	Risk to participants:	How you will mitigate the risk to participants:	

	1. Participants may feel uncomfortable or become distressed when being asked about their well-being, happiness and social connectedness.	1. Participants will be provided with detailed information about the study and relevant procedures, including whom to contact (myself or the dissertation supervisor) should any issues arise, both prior to entering the study and on the debrief page following completing week 1 and week 2 of the survey. This will enable participants to raise any concerns regarding the content of the questions being asked. In addition, examples of the types of questions included in the survey will be provided on the information page of the study. Participants will be reminded that they have the right to withdraw at any point in the study, with their contribution not being included in data analysis. They will be reminded that doing this will not negatively impact them in any way, with no penalty for their withdrawal. If the participant becomes uncomfortable with the research, they will have been made aware that they can withdraw at any point, with a reminder of this being provided on each page of the survey and on the debrief page at the end of week 1 and week 2.
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	2. Risk of transfer of personal data. As participants are required to provide a unique password of their own in order to link together their responses from week 1 and week 2, they might be worried that their anonymity or confidentiality might be compromised. <i>(this box should expand as you type)</i>	2. Participants will be told not to disclose their password to anyone else and not use the same one that they have on any personal or electronic devices. They will be informed that only the supervisor and researcher will have access to the data, which will be anonymised once week 2 data has been collected. The identifying passwords will be removed and replaced with a unique number to avoid the risk of accidental identification. All data collected from the surveys will remain confidential and in line with UWTSD Data Protection and Storage Protocol and the guidelines of GDPR. <i>(this box should expand as you type)</i>
3	If research activity may include sensitive, embarrassing or upsetting topics (e.g. sexual activity, drug use) or issues likely to disclose information requiring further action (e.g. criminal activity), give details of the procedures to deal with these issues, including any support/advice (e.g. helpline numbers) to be offered to participants. Note that where applicable, consent procedures should make it clear that if something potentially or actually illegal is discovered in the course of a project, it may need to be disclosed to the proper authorities	

	N/A <i>(this box should expand as you type)</i>	
4	Risks to the investigator For example: personal health & safety, physical harm, emotional distress, risk of accusation of harm/impropriety, conflict of interest	
	Risk to the investigator: 1. Participants may find the task tedious or boring and not wish to continue, or be disappointed that they are not in the experimental group and withdraw, meaning that the researcher may not gather enough data to run the planned analysis. 2. The student researcher may be asked for information outside the scope of knowledge as an undergraduate student.	<i>How you will mitigate the risk to the investigator:</i> 1. Participants will be fully informed that their participation in the study will take place over a one week period and that they are signing up to answer two online surveys one week apart plus commit to engaging in 3 simple acts of kindness each day for the one week period (randomly assigned experimental group). The list of acts of kindness is provided on the information page to enable participants to decide if they want to take part. 2. Any queries sent to the researchers that they cannot deal with will be passed on to the research supervisor

	3. There is also a risk that the student researcher may be accused of harm/impropriety if the participant feels they are not happy about something that has occurred during the research. 4. There may be a conflict of interest as the participants will be from the school of psychology and may be known to the researcher. <i>(this box should expand as you type)</i>	3. The researcher will follow all UWTSD and BPS researcher codes of conduct and research guidelines, behaving professionally and respectfully at all times. The study will not take place until all elements have been approved by the supervisor and ethical approval has been granted. 4. The researcher will act with professionalism and integrity at all times, following the BPS research ethics code of conduct and will ensure that the participants know that they can withdraw at any point without consequence. Participants will be assured that the data will be stored anonymously and confidentially and that no personal information will be sought. <i>(this box should expand as you type)</i>
5	University/institutional risks For example: adverse publicity, financial loss, data protection	
	Risk to the University:	<i>How you will mitigate the risk to the University:</i>

	1. Should the researcher's or participants' behaviour be contrary to the Student Code of Conduct, there is a danger that the reputation of the university will be jeopardised. 2. Data could be exposed, leaked, or used for other purposes. <i>(this box should expand as you type)</i>	1. All Psychology students are required to abide by the UWTSD Student Code of Conduct, and participants are given the supervisor's contact information if they have any questions. In addition, the researcher will act with professionalism and respect at all times and abide by the BPS research ethics code of conduct. 2. In accordance with the BPS code of research ethics and UWTSD's Research data management policy, the data will be stored following GDPR regulations and only utilised for the intended purpose. All acquired data will be securely stored on the researchers university password protected OneDrive account. On completion of the degree any stored data relating to the study will be destroyed. <i>(this box should expand as you type)</i>
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6	Environmental risks For example: accidental spillage of pollutants, damage to local ecosystems	
	Risk to the environment: N/A <i>(this box should expand as you type)</i>	<i>How you will mitigate the risk to environment:</i> <i>(this box should expand as you type)</i>

	Disclosure and Barring Service			
	If the research activity involves children or vulnerable adults, a Disclosure and Barring Service (DBS) certificate must be obtained before any contact with such participants.	YES	NO	N/A
7	Does your research require you to hold a current DBS Certificate?	☐	☒	☐
8	If YES, please give the certificate number. If the certificate number is not available please write “Pending”; in this case any ethical approval will be subject to providing the appropriate certificate number.			

SECTION I: Feedback, Consent and Confidentiality

1	Feedback What de-briefing and feedback will be provided to participants, how will this be done and when?
	 At the end of the survey on week 1 and week 2, participants will be directed to an online debrief. The debrief from week 1 will outline the purpose of the study with further instructions to follow

	during the next week (depending on which group participants are allocated to). They will be asked to create their own unique password before submitting their responses. At this point, they will also be reminded that they can still withdraw from the study if they wish. If participants complete the week and continue onto the survey for week 2, the debrief at the end of this study will offer them the final chance to withdraw, before submitting their responses for the final time. After this, they will no longer be able to withdraw from the study, due to the anonymisation of their answers. The debrief page will also contain the contact details for the researcher and supervisor should they wish to ask any questions following completion of the study, and participants will be reminded to make a note of these. <i>(this box should expand as you type)</i>
2	Informed consent Describe the arrangements to inform potential participants, before providing consent, of what is involved in participating. Describe the arrangements for participants to provide full consent before data collection begins. If gaining consent in this way is inappropriate, explain how consent will be obtained and recorded in accordance with prevailing data protection legislation.
	Upon clicking the link on EMS, participants will be taken to an information page, outlining what is expected of them if they agree to participate in this study. They will be informed that the study involves three parts, an online survey at the start, one week of either engaging in simple acts of kindness (experimental group), or doing nothing (control group), followed by the completion of the survey again one week later. Examples of the survey questions are provided in order for participants to see the type of questions they will be asked. The information page will ensure to highlight that the participants may withdraw at any point within the study, with no ramifications coming from doing

	so. Finally, the participants will be told that all responses will remain confidential and will be stored in an anonymous format in accordance with the UWTSD research data management protocol. <i>(this box should expand as you type)</i>
3	Confidentiality / Anonymity Set out how anonymity of participants and confidentiality will be ensured in any outputs. If anonymity is not being offered, explain why this is the case.
	All data collected within this study will be anonymised, with each participant being assigned a random number to replace the participants unique password used for the purpose of linking the week 1 and week 2 surveys together. Participants will not be required to provide any personally identifiable information such as name, student number or address, therefore data collected will be completely anonymous. <i>(this box should expand as you type)</i>

SECTION J: Data Protection and Storage

	Does the research activity involve personal data (as defined by the General Data Protection Regulation 2016 “GDPR” and the Data Protection Act 2018 “DPA”)?	YES	NO
1	“Personal data” means any information relating to an identified or identifiable natural person (‘data subject’). An identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier	☒	☐

	<i>such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person. Any video or audio recordings of participants is considered to be personal data.</i>		
	If YES, provide a description of the data and explain why this data needs to be collected:		
2	Participants will be required to provide their age and gender identity as part of descriptive data required in quantitative data analysis. <i>(this box should expand as you type)</i>		
	Does it involve special category data (as defined by the GDPR)?	YES	NO
3	“Special category data” means sensitive personal data consisting of information as to the data subjects’ – <i>(a) racial or ethnic origin,</i> <i>(b) political opinions,</i> <i>(c) religious beliefs or other beliefs of a similar nature,</i> <i>(d) membership of a trade union (within the meaning of the Trade Union and Labour Relations (Consolidation) Act 1992),</i> <i>(e) physical or mental health or condition,</i> <i>(f) sexual life,</i> <i>(g) genetics,</i> <i>(h) biometric data (as used for ID purposes),</i>	☐	☒
	If YES, provide a description of the special category data and explain why this data needs to be collected:		
4			

	<i>(this box should expand as you type)</i>
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	Will data from the research activity (collected data, drafts of the thesis, or materials for publication) be stored in any of the following ways?	YES	NO
5	Manual files (i.e. in paper form)?	☐	☒
6	University computers?	☐	☒
7	Private company computers?	☐	☒
8	Home or other personal computers?	☒	☐
9	Laptop computers/ CDs/ Portable disk-drives/ memory sticks?	☒	☐
10	“Cloud” storage or websites?	☒	☐
11	Other – specify:	☐	☒
12	For all stored data, explain the measures in place to ensure the security of the data collected, data confidentiality, including details of backup procedures, password protection, encryption, anonymisation and pseudonymisation:		
	All data obtained regarding this study will be stored on the investigators personal laptop within the university office 365 software, on OneDrive, which is password protected. The data will firstly be collected in the survey software Qualtrics, saved on the researchers password protected university account before being exported into SPSS, which will also be stored on the researchers university password protected OneDrive account. The researcher being the sole individual to have access to the file.		

	<i>(this box should expand as you type)</i>
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	Data Protection		
	Will the research activity involve any of the following activities:	YES	NO
13	Electronic transfer of data in any form?	☒	☐
14	Sharing of data with others at the University outside of the immediate research team?	☐	☒
15	Sharing of data with other organisations?	☐	☒
16	Export of data outside the UK or importing of data from outside the UK?	☐	☒
17	Use of personal addresses, postcodes, faxes, emails or telephone numbers?	☐	☒
18	Publication of data that might allow identification of individuals?	☐	☒
19	Use of data management system?	☒	☐
20	Data archiving?	☐	☒
21	If YES to any question, please provide full details, explaining how this will be conducted in accordance with the GDPR and Data Protection Act (2018) (and any international equivalents, where appropriate):		
	The data will firstly be collected in the survey software Qualtrics, saved on the researchers password protected university account before being exported into SPSS, which will also be stored on the researchers university password protected OneDrive account. The UWTSD Data Protection and Storage Protocol shall be followed for the confidentiality of any information gathered during the period of the study.		

	Final dissertation material will be shared with UWTSD academic staff in the form of a written thesis and oral presentation of work. <i>(this box should expand as you type)</i>
22	List all who will have access to the data generated by the research activity:
	Katherine Monk Karen Eaton-Thomas <i>(this box should expand as you type)</i>
23	List who will have control of, and act as custodian(s) for, data generated by the research activity:
	Katherine Monk <i>(this box should expand as you type)</i>
24	Give details of data storage arrangements, including security measures in place to protect the data, where data will be stored, how long for, and in what form. Will data be archived – if so how and if not why not.
	All data will be stored electronically. During data collection, the data will be stored in the researcher`s university password protected Qualtrics account. Data that has been analysed will be stored digitally in a password-protected file in the researchers university OneDrive account. Upon completion of the degree, all data collected will be destroyed. The university's research data management policy will be followed in all data storage arrangements.

	<i>(this box should expand as you type)</i>		
25	Please indicate if your data will be stored in the UWTSD Research Data Repository (see https://researchdata.uwtsd.ac.uk/). If so please explain. <i>(Most relevant to academic staff)</i>		
	Data will not be stored in the UWTSD Research Data Repository. <i>(this box should expand as you type)</i>		
26	Confirm that you have read the UWTSD guidance on data management (see https://www.uwtsd.ac.uk/library/research-data-management/)	YES	☒
27	Confirm that you are aware that you need to keep all data until after your research has completed or the end of your funding	YES	☒

SECTION K: Declaration

	The information which I have provided is correct and complete to the best of my knowledge. I have attempted to identify any risks and issues related to the research activity and acknowledge my obligations and the rights of the participants. In submitting this application I hereby confirm that I undertake to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice which is published on the website: https://www.uwtsd.ac.uk/research/research-ethics/		
1	Signature of applicant:	Katherine Monk	Date: 01.11.2024

For STUDENT Submissions:

2	Director of Studies/Supervisor:	Karen Eaton-Thomas	Date: 01.11.2024
3	Signature:	K. M. Eaton-Thomas	

For STAFF Submissions:

4	Academic Director/ Assistant Dean:		Date:
5	Signature:		

Checklist: Please complete the checklist below to ensure that you have completed the form according to the guidelines and attached any required documentation:

☒	I have read the guidance notes supplied before completing the form.
☒	I have completed ALL RELEVANT sections of the form in full.
☒	I confirm that the research activity has received approval in principle
☐	I have attached a copy of final/interim approval from external organisation (where appropriate)
☐	I have attached a full risk assessment (where appropriate) <i>ONLY TICK IF YOU HAVE ATTACHED A FULL RISK ASSESSMENT</i>
☒	I understand that it is my responsibility to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice.
☒	I understand that before commencing data collection all documents aimed at respondents (including information sheets, consent forms, questionnaires, interview schedules etc.) must be confirmed by the DoS/Supervisor, module tutor or Academic Director.

RESEARCH STUDENTS ONLY

Once complete, submit this form via the **MyTSD Doctoral College Portal** at (<https://mytsd.uwtsd.ac.uk>).

RESEARCH STAFF ONLY

All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk , with the title 'Ethical Approval' followed by your name.

STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.

Appendix 9: SPSS Output Data

General Linear Model

Within-Subjects Factors

Measure: MEASURE_1

Dependent

factor1 Variable

1	total_happy_1
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2	Totalhappy_2
---	--------------

Between-Subjects Factors

		Value Label	N
Please confirm to which	1	1. Control Group	26
group you were allocated:	2	2. Experimental Group	38

Descriptive Statistics

	Please confirm to which group you were allocated:	Mean	Std. Deviation	N
total happy time one	1. Control Group	76.65	11.335	26
	2. Experimental Group	63.26	16.984	38
	Total	68.70	16.259	64
total happiness time 2	1. Control Group	76.04	17.388	26
	2. Experimental Group	79.11	18.744	38
	Total	77.86	18.128	64

Box's Test of Equality

of Covariance

Matrices^a

Box's M	6.116
F	1.964
df1	3
df2	172790.019
Sig.	.117

Tests the null hypothesis

that the observed

covariance matrices of

the dependent variables

are equal across groups.

a. Design: Intercept +

Q65

Within Subjects Design:

factor1

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	
factor1	Pillai's Trace	.112	7.804 ^b	1.000	62.000	.007	.112	
	Wilks' Lambda	.888	7.804 ^b	1.000	62.000	.007	.112	
	Hotelling's Trace	.126	7.804 ^b	1.000	62.000	.007	.112	
	Roy's Largest Root	.126	7.804 ^b	1.000	62.000	.007	.112	
factor1 * Q65		Pillai's Trace	.128	9.117 ^b	1.000	62.000	.004	.128

Wilks' Lambda	.872	9.117 ^b	1.000	62.000	.004	.128
Hotelling's Trace	.147	9.117 ^b	1.000	62.000	.004	.128
Roy's Largest Root	.147	9.117 ^b	1.000	62.000	.004	.128

a. Design: Intercept + Q65

Within Subjects Design: factor1

b. Exact statistic

Mauchly's Test of Sphericity^a

Measure: MEASURE_1

					Epsilon ^b		
Within Subjects		Approx. Chi-			Greenhouse-		
Effect	Mauchly's W	Square	df	Sig.	Geisser	Huynh-Feldt	Lower-bound
factor1	1.000	.000	0	.	1.000	1.000	1.000

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept + Q65

Within Subjects Design: factor1

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: MEASURE_1

		Type III Sum of					Partial Eta
Source		Squares	df	Mean Square	F	Sig.	Squared
factor1	Sphericity Assumed	1789.616	1	1789.616	7.804	.007	.112
	Greenhouse-Geisser	1789.616	1.000	1789.616	7.804	.007	.112
	Huynh-Feldt	1789.616	1.000	1789.616	7.804	.007	.112
	Lower-bound	1789.616	1.000	1789.616	7.804	.007	.112
factor1 * Q65	Sphericity Assumed	2090.616	1	2090.616	9.117	.004	.128
	Greenhouse-Geisser	2090.616	1.000	2090.616	9.117	.004	.128
	Huynh-Feldt	2090.616	1.000	2090.616	9.117	.004	.128
	Lower-bound	2090.616	1.000	2090.616	9.117	.004	.128
Error(factor1)	Sphericity Assumed	14217.603	62	229.316			
	Greenhouse-Geisser	14217.603	62.000	229.316			
	Huynh-Feldt	14217.603	62.000	229.316			
	Lower-bound	14217.603	62.000	229.316			

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

		Type III Sum					Partial Eta
Source	factor1	of Squares	df	Mean Square	F	Sig.	Squared
factor1	Linear	1789.616	1	1789.616	7.804	.007	.112
factor1 * Q65	Linear	2090.616	1	2090.616	9.117	.004	.128

Error(factor1 Linear)	14217.603	62	229.316			
------------------------	-----------	----	---------	--	--	--

Levene's Test of Equality of Error Variances^a

		Levene			
		Statistic	df1	df2	Sig.
total happy time one	Based on Mean	4.021	1	62	.049
	Based on Median	4.102	1	62	.047
	Based on Median and with adjusted df	4.102	1	58.471	.047
	Based on trimmed mean	4.028	1	62	.049
total happiness time 2	Based on Mean	.632	1	62	.430
	Based on Median	.703	1	62	.405
	Based on Median and with adjusted df	.703	1	61.121	.405
	Based on trimmed mean	.740	1	62	.393

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Q65

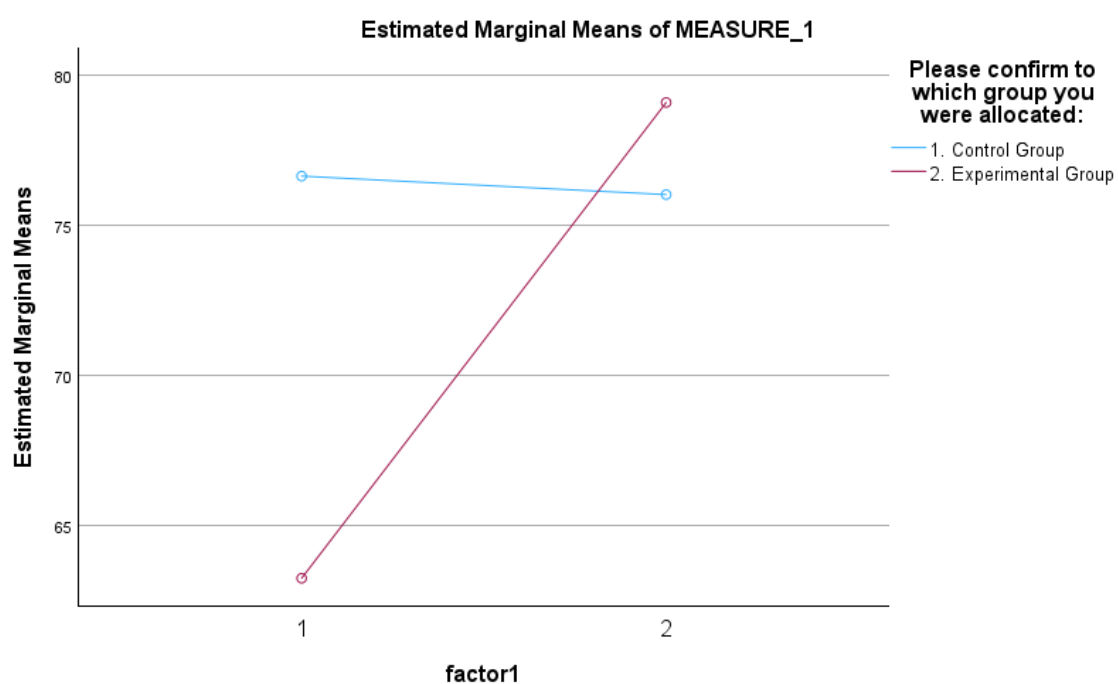
Within Subjects Design: factor1

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	672000.810	1	672000.810	2059.906	<.001	.971
Q65	822.685	1	822.685	2.522	.117	.039
Error	20226.190	62	326.229			



General Linear Model

Within-Subjects Factors

Measure: MEASURE_1

Dependent

factor1 Variable

1	total_well_1
---	--------------

2	total_well_2
---	--------------

Between-Subjects Factors

		Value Label	N
Please confirm to which group you were allocated:	1	1. Control Group	26
	2	2. Experimental Group	38

Descriptive Statistics

	Please confirm to which group you were allocated:	Mean	Std. Deviation	N
total well-being time one	1. Control Group	46.81	8.722	26
	2. Experimental Group	41.50	8.934	38
	Total	43.66	9.164	64
total well-being time two	1. Control Group	48.81	9.948	26
	2. Experimental Group	47.74	10.412	38
	Total	48.17	10.160	64

Box's Test of Equality of

Covariance Matrices^a

Box's M	5.164
F	1.658

df1	3
df2	172790.019
Sig.	.174

Tests the null hypothesis

that the observed covariance

matrices of the dependent

variables are equal across

groups.

a. Design: Intercept + Q65

Within Subjects Design:

factor1

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df	Sig.
factor1	Pillai's Trace	.117	8.219 ^b	1.000	62.000	.006
	Wilks' Lambda	.883	8.219 ^b	1.000	62.000	.006
	Hotelling's Trace	.133	8.219 ^b	1.000	62.000	.006
	Roy's Largest Root	.133	8.219 ^b	1.000	62.000	.006
factor1 * Q65	Pillai's Trace	.034	2.175 ^b	1.000	62.000	.145
	Wilks' Lambda	.966	2.175 ^b	1.000	62.000	.145
	Hotelling's Trace	.035	2.175 ^b	1.000	62.000	.145
	Roy's Largest Root	.035	2.175 ^b	1.000	62.000	.145

a. Design: Intercept + Q65

Within Subjects Design: factor1

b. Exact statistic

Mauchly's Test of Sphericity^a

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^b
					Greenhouse-Geisser
factor1	1.000	.000	0	.	1.000

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables equals the identity matrix.

a. Design: Intercept + Q65

Within Subjects Design: factor1

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Effects table.

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F
factor1	Sphericity Assumed	523.683	1	523.683	8.219
	Greenhouse-Geisser	523.683	1.000	523.683	8.219

factor1 * Q65	Huynh-Feldt	523.683	1.000	523.683	8.219
	Lower-bound	523.683	1.000	523.683	8.219
	Sphericity Assumed	138.558	1	138.558	2.175
	Greenhouse-Geisser	138.558	1.000	138.558	2.175
	Huynh-Feldt	138.558	1.000	138.558	2.175
	Lower-bound	138.558	1.000	138.558	2.175
	Sphericity Assumed	3950.434	62	63.717	
	Greenhouse-Geisser	3950.434	62.000	63.717	
Error(factor1)	Huynh-Feldt	3950.434	62.000	63.717	
	Lower-bound	3950.434	62.000	63.717	

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

		Type III Sum of				
Source	factor1	Squares	df	Mean Square	F	Sig.
factor1	Linear	523.683	1	523.683	8.219	.006
factor1 * Q65	Linear	138.558	1	138.558	2.175	.145
Error(factor1)	Linear	3950.434	62	63.717		

Levene's Test of Equality of Error Variances^a

		Levene Statistic	df1	df2
total well-being time one	Based on Mean	.016	1	62

	Based on Median	.031	1	62
	Based on Median and with adjusted df	.031	1	61.847
	Based on trimmed mean	.006	1	62
total well-being time two	Based on Mean	.001	1	62
	Based on Median	.051	1	62
	Based on Median and with adjusted df	.051	1	61.988
	Based on trimmed mean	.005	1	62

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Q65

Within Subjects Design: factor1

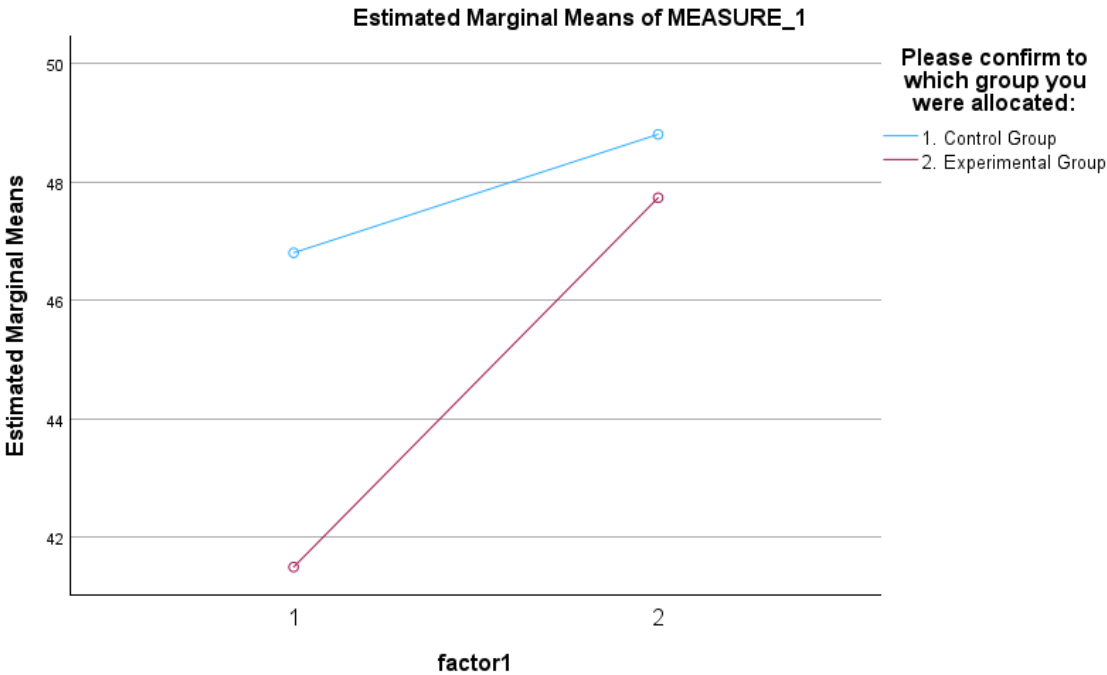
Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squa
Intercept	263752.356	1	263752.356	2212.654	<.001	.973
Q65	314.044	1	314.044	2.635	.110	.041
Error	7390.511	62	119.202			

Profile Plots



General Linear Model

Within-Subjects Factors

Measure: MEASURE_1

factor1 Dependent Variable

1	Totalsocial_1
2	total_social_2

Between-Subjects Factors

		Value Label	N
Please confirm to which group you were allocated:	1	1. Control Group	26
	2	2. Experimental Group	38

Descriptive Statistics

	Please confirm to which group you were allocated:	Mean	Std. Deviation	N
total social time 1	1. Control Group	41.50	7.078	26
	2. Experimental Group	35.74	11.444	38
	Total	38.08	10.244	64
total social time two	1. Control Group	40.12	12.456	26
	2. Experimental Group	44.21	11.085	38
	Total	42.55	11.740	64

Box's Test of Equality of**Covariance Matrices^a**

Box's M	8.922
F	2.865
df1	3

df2	172790.019
Sig.	.035

Tests the null hypothesis

that the observed covariance

matrices of the dependent

variables are equal across

groups.

a. Design: Intercept + Q65

Within Subjects Design:

factor1

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df	Sig.
factor1	Pillai's Trace	.067	4.478 ^b	1.000	62.000	.038
	Wilks' Lambda	.933	4.478 ^b	1.000	62.000	.038
	Hotelling's Trace	.072	4.478 ^b	1.000	62.000	.038
	Roy's Largest Root	.072	4.478 ^b	1.000	62.000	.038
factor1 * Q65	Pillai's Trace	.123	8.660 ^b	1.000	62.000	.005
	Wilks' Lambda	.877	8.660 ^b	1.000	62.000	.005
	Hotelling's Trace	.140	8.660 ^b	1.000	62.000	.005
	Roy's Largest Root	.140	8.660 ^b	1.000	62.000	.005

a. Design: Intercept + Q65

Within Subjects Design: factor1

b. Exact statistic

Mauchly's Test of Sphericity^a

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^b
					Greenhouse-Geisser
factor1	1.000	.000	0	.	1.000

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables equals the identity matrix.

a. Design: Intercept + Q65

Within Subjects Design: factor1

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Effects table.

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F
factor1	Sphericity Assumed	387.905	1	387.905	4.478
	Greenhouse-Geisser	387.905	1.000	387.905	4.478
	Huynh-Feldt	387.905	1.000	387.905	4.478
	Lower-bound	387.905	1.000	387.905	4.478

factor1 * Q65	Sphericity Assumed	750.155	1	750.155	8.660
	Greenhouse-Geisser	750.155	1.000	750.155	8.660
	Huynh-Feldt	750.155	1.000	750.155	8.660
	Lower-bound	750.155	1.000	750.155	8.660
Error(factor1)	Sphericity Assumed	5370.814	62	86.626	
	Greenhouse-Geisser	5370.814	62.000	86.626	
	Huynh-Feldt	5370.814	62.000	86.626	
	Lower-bound	5370.814	62.000	86.626	

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

		Type III Sum of				
Source	factor1	Squares	df	Mean Square	F	Sig.
factor1	Linear	387.905	1	387.905	4.478	.038
factor1 * Q65	Linear	750.155	1	750.155	8.660	.005
Error(factor1)	Linear	5370.814	62	86.626		

Levene's Test of Equality of Error Variances^a

		Levene Statistic	df1	df2	Sig.
total social time 1	Based on Mean	5.086	1	62	.038
	Based on Median	3.024	1	62	.086

total social time two	Based on Median and with adjusted df	3.024	1	51.941	.0
	Based on trimmed mean	4.779	1	62	.0
	Based on Mean	.569	1	62	.4
	Based on Median	.102	1	62	.7
	Based on Median and with adjusted df	.102	1	55.042	.7
	Based on trimmed mean	.527	1	62	.4

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Q65

Within Subjects Design: factor1

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	201478.851	1	201478.851	1364.910	<.001	.957
Q65	21.476	1	21.476	.145	.704	.002
Error	9152.024	62	147.613			

Profile Plots

