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Understanding the Effect of Kindness on Adolescent Givers' Well-being

Jessica Louise Cotney

PhD in Psychology

University of Sussex

Thesis submitted for the qualification of Doctor of Philosophy in Psychology

February 2019

Statement

I hereby declare that this thesis has not been, and will not be, submitted in whole or in part to another university for the award of any other degree.

Jessica Louise Cotney

February 2019

Declaration

This thesis is presented in a ‘papers style’ format. The empirical work is therefore reported across three papers each written in a format that is suitable for publication in peer-reviewed journals. The first chapter is an introduction that reviews current literature in the field and provides a brief summary of the current programme of work. The final chapter provides a synthesis of the work from all three papers, presenting overall conclusions and implications, identifying limitations of the studies performed, and suggesting directions for future research.

Paper 1 has already been published open access in the Journal of Social and Personal Relationships and the version presented here is the accepted manuscript:

Cotney, J. L., & Banerjee, R. (2017). Adolescents’ conceptualizations of kindness and its links with well-being: A focus group study. *Journal of Social and Personal Relationships*, 36(2), 599 – 617. Doi: 10.1177/026540751773858

Paper 2 has already been submitted to the Journal of Happiness Studies. It has been returned from peer review with an invitation to revise and resubmit. It was submitted as:

Cotney, J. L., & Banerjee, R. (2018). The impact of a kindness-based reflective writing task on adolescent well-being.

Paper 3 will be submitted to a journal following submission of the thesis and will also be co-authored with my supervisor, Robin Banerjee.

The author contributions for all three papers are as follows:

Jess Cotney was responsible for all aspects of the research design, application for ethical approval, participant recruitment, data collection, data analyses, and writing the manuscripts. Robin Banerjee provided advice, guidance, and feedback for all of these

research processes, including the study design, materials development, ethical review application, model development, statistical analyses, and providing comments on the drafts of each paper.

UNIVERSITY OF SUSSEX

JESSICA LOUISE COTNEY

PhD IN PSYCHOLOGY

UNDERSTANDING THE EFFECT OF KINDNESS ON

ADOLESCENT GIVERS' WELL-BEING

SUMMARY

There is growing evidence, mainly from research with adult populations, that being kind predicts increased well-being for the giver. Adolescence is a sensitive period for the development of relevant systems such as moral reasoning and perspective-taking skills. Furthermore, adolescents are at high risk for the onset of mental health problems as well as declining well-being. Thus, kindness-based interventions may be a useful method to promote well-being in this age group. However, there is little understanding of kindness among adolescent populations, and very few experimental investigations have tested the impact of kindness on adolescent well-being. This thesis includes three papers designed to identify adolescents' conceptualisations of kindness, the impact of kindness on adolescent well-being, and the mechanisms that may explain how, why, and when kindness is most effective. Participants were aged 11 to 15 years in all papers.

The first paper reports on a qualitative study designed to document and understand adolescents' conceptualisations of kindness. The paper identified a range of behavioural and psychological manifestations of kindness. Papers 2 and 3 used randomised, experimental methods to test the impact of kindness on well-being. For Paper 2, this consisted of a single kindness-based reflective writing task, whereas Paper 3 reports the findings from a four-week kindness-based intervention. Analyses for both studies revealed no significant overall effects of the kindness tasks on well-being.

However, in each case, a positive indirect effect of kindness on subjective well-being via eudaimonia was observed. Paper 3 also identified a positive indirect effect of the intervention on general levels of kindness and flourishing.

Together, the findings demonstrate that kindness is a multidimensional construct, consisting of both behavioural manifestations and specific other-focussed motivations. Furthermore, the findings highlight the challenges of designing kindness-based interventions to raise well-being in adolescents and suggest the importance of eudaimonic experience in fostering a positive impact of kindness on adolescent givers. This has important theoretical implications for future research and practical implications for the way in which kindness-based initiatives are designed and implemented.

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Introduction

Psychological research has shown an increasing interest in kindness across the last few decades. For example, when entering ‘kindness’ as an abstract search term into the PsycInfo and PsycArticles databases, only 35 academic papers (out of 454,303) were published in the 1980s. In the 1990s, this increased to 89 (out of 635,069) but since 2010 alone, there have been 946 (out of 1,745,248) publications on kindness. There have been 27 times more kindness publications since 2010 than in the 1980s, yet the total number of publication has only increased by 4 times. This demonstrates a huge increase in kindness-based research, relative to the total number of published papers. This rise in kindness-based research has grown from an increasing interest in identifying factors that contribute to human flourishing and well-being. The initial section of this review will outline definitions of kindness as a psychological construct. It will then go on to summarise empirical evidence linking kindness with well-being. This section will begin with a conceptualisation of well-being and then review the adult literature linking kindness and well-being in order to set the context. The core aim, however, will be to understand what is known about these links within adolescent samples. The literature review will end with a summary of the mechanisms that are thought to explain the effect of kindness on well-being outcomes. It will explore the current evidence base for intervening variables, as well as moderator variables such as individual differences and activity-level features. Finally, the overarching research aims and rationale for this thesis will be presented, followed by a review of the current methodology and a summary of the current studies.

Conceptualising Kindness

Kindness may be considered as one aspect of the larger over-arching construct of prosociality. Prosocial behaviour is defined as any voluntary act that protects or benefits another person (Dovidio, Piliavin, Schroeder, & Penner, 2006; Eisenberg,

Fabes, & Spinrad, 2006; Weinstein & Ryan, 2010). There are various types of prosocial behaviour, such as helping, sharing, cooperating, comforting and volunteerism (Schroeder & Graziano, 2015). Prosociality is the enduring tendency to engage with these acts (Zuffianò et al. 2014a; Eisenberg et al. 2006). Given the behavioural nature of prosociality, definitions do not specify the type of motivation, such that prosocial acts can be performed for a wide range of reasons including self-oriented, other-oriented, or practical concerns (Eisenberg et al. 2006). Kindness, however, differs from the broad definition of ‘prosociality’ in that kind behaviours hinge upon an other-focussed motivational stance. Peterson and Seligman (2004) refer to kindness as a behaviour that is driven by compassion or concern and expressed by doing favours or good deeds. Relatedly, Eisenberg and colleagues describe kindness as voluntary prosocial acts that are *not* motivated by avoidance of punishment or rewards. Although a single operational definition of kindness is missing, all conceptualisations share the commonality that kindness involves a prosocial act on the one hand, and an other-focussed motivation on the other (Knafo & Israel, 2012).

Although kindness is gaining increasing academic interest, particularly within positive psychology (a recent theoretical approach that seeks to understand the underpinnings of human flourishing; Carr, 2013; Seligman, 2011), it is more common for psychologists to refer to specific behaviours that reflect kindness, such as giving, helping, or comforting. Furthermore, other umbrella terms – such as prosociality, altruism or compassion – are often used to describe a range of kind actions, with prosociality being the most commonly used of these terms within developmental science. Given the theoretical overlap between kindness and these related concepts, amid the variation in terms used across the literature, this chapter will review research on any construct that describes behaviours intended to benefit another (working

definitions are provided in Table I.1). This will provide a thorough review of the evidence, particularly given that kindness is a rarely used term in developmental literature. For the purposes of this chapter, we will use the term ‘kindness’ as an umbrella term to describe any or all of these constructs.

Table I.1

Kindness Terms and Definitions

Term	Definition
Instrumental Helping	An action that aids a recipient with an instrumental goal. At a basic level, this could include picking up a dropped object, or opening a door for someone (Dunfield, 2014).
Cooperating	An act of working together to achieve a mutual goal. This differs from the other constructs listed here as it usually requires all individuals to bear personal costs to create benefits, rather than having one actor and recipient (Rand, Kraft-Todd, & Gruber, 2015).
Volunteering	Volunteerism involves a person committing their own time and resources to provide a service to the wider community. This is usually conducted in the form of pre-planned, formally organised charity work or community service that spans across a sustained period of time, although it can also occur as a one-off (Choi & Kim, 2011; Thoits & Hewitt, 2001).
Sharing	Sharing requires the actor to provide a resource that the recipient desires, often in the context of distributing resources or time in a fair manner (Dunfield, 2014).
Giving/ Generosity	The act of giving something away. This is usually an item that belongs to the giver and is not expected to be given back by the recipient. As the value or extent of giving increases, so does the level of generosity (Aknin, Hamlin, & Dunn, 2012).
Prosocial Spending	An act of spending money on someone else, or giving money away, sometimes also termed ‘financial generosity’ (Dunn, Aknin, & Norton, 2014).

*Table I.2 cont.**Kindness Terms and Definitions*

Term	Definition
Comforting/ Caring	An act of caring for someone in need, or offering support to someone in emotional distress (Dunfield, 2014).
Compassion	A prosocial act that is motivated by the desire and intention to alleviate another's suffering (Roeser & Eccles, 2015). Compassion can also occur as a psychological state (awareness, concern, and intention to alleviate suffering) but we use the behavioural definition here.
Prosocial Behaviour	Any act done voluntarily to benefit another person (Eisenberg et al. 2006).
Pro-environmental behaviour	Positive behaviour that is directed towards nature and the environment, sometimes measured via 'sustainable consumption:' spending money on environmentally friendly, or green, products (Xiao & Li, 2011).
Altruism/ altruistic behaviour	Any prosocial behaviour that is primarily motivated by concern for others or internalized values, rather than by the desire for rewards or the avoidance of punishment (Eisenberg et al. 2006).

Kindness and Well-being

A growing body of research has now begun to ask whether living a kind, generous and caring life is associated with being happy and well. Positive psychology is a relatively recent theoretical approach that seeks to understand the underpinnings of human flourishing and to identify factors that contribute to well-being (Carr, 2013; Seligman, 2011). The increasing interest in kindness has grown from this approach, such that there is growing evidence that engaging in prosocial behaviours can predict well-being outcomes for the *giver* (Curry et al. 2018). Therefore, this section will begin with a brief theoretical review of well-being, before summarising the empirical evidence

that links kindness (and its related concepts) with a broad array of positive outcomes that are indicative of well-being.

Conceptualising Well-being

Well-being is a multidimensional construct, made up of both hedonia and eudaimonia; that is, the combination of feeling good and functioning well (Delle Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2011; Donaldson, Dollwet, & Rao, 2015). Combined, the overarching construct is often referred to as flourishing (Huppert & So, 2013). Flourishing is thought to be synonymous with a high level of mental well-being and good mental health (Huppert, 2009; Huppert & So, 2013; Keyes, 2002; Ryff & Singer, 1998). Importantly, positive functioning does not necessarily sit on the same continuum as negative functioning, such that well-being is not simply the absence of mental disorder but the presence of positive psychological resources (Sin & Lyubomirsky, 2009). It is positive psychological well-being that will be the focus of this review.

Hedonia is made up of pleasure attainment and pain avoidance (Ryan & Deci, 2001; Steger, Kashdan, & Oishi, 2008). It is primarily indexed via measures of subjective well-being (SWB) and, as such, we will use the term SWB from this point on. High levels of SWB are thought to include frequent positive (or pleasant) affect, infrequent negative (or unpleasant affect) and the judgement that life is satisfying (Diener, 1984; Tov & Lee, 2015). Eudaimonia, on the other hand, refers to an enduring state of well-being that is characterised by positive human functioning and fulfilment (Steger et al. 2008; Waterman, 1993). Eudaimonia is thought to be achieved through engaging with value-driven behaviours that subsequently nurture personal growth and positive functioning (Hallam et al. 2014; Huta & Ryan, 2010; Steger et al. 2008).

Importantly, SWB refers to the subjective evaluation of one's life alongside one's affective states, whereas eudaimonia consists of a range of indicators that reflect a life well-lived. Thus, these eudaimonic indicators are distinct from the evaluation of one's life, but the presence of these indicators may predict one's subjective evaluation and emotional experience of it (Diener, Lucas, & Oishi, 2018; Joshanloo, Sirgy, & Park, 2018).

There are many influential theories that take a eudaimonic approach to well-being. For instance, Ryff's (1989) six dimensions of psychological well-being include autonomy, environmental mastery, personal growth, positive relationships, purpose in life, and self-acceptance. Similarly, Diener includes purpose in life, positive relationships, engagement, competence, self-esteem, optimism, and contribution to others as components of eudaimonia (Diener et al. 2010). Ryan and Deci's (2000) approach, based on self-determination theory (SDT), states that well-being will arise from the satisfaction of three basic psychological needs: autonomy, competence, and relatedness. For Maslow (1971), belonging, self-esteem, self-actualization, and self-transcendence are considered the highest levels of psychological health. Similarly, Huta (2016) ascertains that self-transcendent motivations are an essential component of eudaimonia. Although there are overlaps and differences across these theories, each of the listed components reflects positive human functioning and can therefore be considered an indicator of EWB (Maslow, 1971; Ryan & Deci, 2001; Ryff & Keyes, 1995).

Other theories combine subjective and eudaimonic well-being in their conceptualisation, including Seligman (2011) who lists positive emotion, engagement, relationships, meaning and accomplishment (PERMA) as essential components of flourishing; Keyes (2002) who added subjective aspects to Ryff's (1989) theory of

psychological well-being; as well as Huppert and So (2013) who list emotional stability, positive emotion and vitality, alongside competence, engagement, meaning, resilience, and self-esteem. Despite the differences in the theoretical approaches illustrated here, there is a growing consensus that well-being is a multidimensional construct consisting of both subjective and eudaimonic aspects (Ryan, Huta, & Deci, 2008). Therefore, we will consider a range of positive indicators in the review that follows.

Theoretical Reasons for the Link between Kindness and Well-being

Why might kindness increase well-being for the giver? Humans are fundamentally social creatures. Indeed, evolutionary scientists argue that we have evolved from primates that have lived in social groups for millions of years (Schultz, Opie, & Atkinson, 2011) yet also that human altruism may be a defining feature that distinguishes us from other animals (Fehr & Fischbacher, 2003). Many theories of kindness predict a positive link between being kind and being well. This section will briefly summarise some of the theoretical explanations regarding the link between kindness and well-being.

Living in groups is thought to have numerous benefits for reproduction and survival (Curry et al. 2018). Theories of natural selection state that psychological mechanisms such as altruism and kindness have evolved in order to take advantage of these benefits. For instance, kin altruism (being kind to family members) increases the welfare of kin and thus promotes reproduction even in future generations (Hamilton, 1964). Mutualism, on the other hand (kindness towards those who share a common group) promotes survival by encouraging cooperation between group members (e.g., sharing of skills and resources) and providing a competitive advantage against other groups (Alvard & Nolin, 2002; Balliet, Wu, & De Dreu, 2014). Reciprocal altruism

describes kindnesses that are, in essence, ‘returning the favour’. This may include returning a kindness to someone who has helped one before, or it may involve offering kindness to those that one may need help from in the future (Alexrod, 1984; Trivers, 1971). Here, the kindness ensures that one will receive help when one needs it most, another adaptation that promotes survival. Another theory concerns ‘competitive altruism’. Here, the kindness is thought to enhance one’s social status and is initiated in order to impress one’s peers and potential mates (Fehr & Flschbacher, 2003).

Within psychology, evolutionary theories of kindness consider human altruism to be ultimately genetically self-serving, often termed egotistical (Feigin et al., 2014). Other theories, such as stage theory approaches, consider kindness to be a developmental process, moving through self-interest and then onwards towards social norms, moral norms and then truly other-focussed acts (Krebs & Hesteren, 1994). This idea of true altruism is thought to be a final developmental stage of maturity. Other theories consider kindness to be a mechanism of arousal-reduction or negative state relief (Feigin et al., 2014). Here, theorists propose that negative empathic arousal can be relieved by kindness, motivating the desire to relieve the negative state of the recipient (Schaller & Cialdini, 1988) or, alternatively, that positive emotional states can be achieved via vicarious joy or positive empathy (Telle & Pfister, 2015). Mood maintenance theories suggest that motivation to maintain a positive state may therefore trigger prosociality (Feigin et al., 2014).

A commonality across all of these theories is that kindness has benefits, not just for the recipient but also for the giver. These theories therefore claim that we have adapted to be motivated to be kind to others and that these systems motivate kindness not just towards family and friends but also towards strangers. Importantly, in order for these motivational systems to be effective, there must be a reward process that allows

humans to recognise these benefits of cooperation and continue to act kindly in the future. Happiness is thought to be one potential reward-system, often termed the ‘warm glow of giving’ (Andreoni, 1990; Andreoni & Miller, 2002; Harbaugh, Mayr, & Burghart, 2007) and evolutionary theorists consider this as a reward system for acting in ways that specifically promote survival and reproduction (Buss, 2000; Grinde, 2002). It is therefore reasoned, given the adaptive motivations for prosociality, that being kind will result in greater levels of psychological well-being (Fredrickson, 2003; Post, 2005). The next section will review empirical evidence of this theoretical prediction.

The Link Between Kindness and Well-being in Adult Populations

The majority of research in this area has been conducted with adult populations and so we begin by giving a brief overview of the evidence thus far linking kindness with positive well-being in this age group. The relationship between kindness and well-being has been documented across a wide range of studies, including both correlational and experimental designs.

Correlational evidence. A large number of studies have identified a positive relationship between kindness and well-being in adult populations. For instance, research has shown that adults who engage with volunteering tend to have higher levels of overall life satisfaction when compared with adults who do not (Haski-Leventhal, 2009). Similarly, the more time spent volunteering, the higher their reported levels of happiness (Borgonovi, 2008). These findings have been evidenced in both Europe and America across large samples of cross-sectional data. Furthermore, positive correlations have remained even after controlling for both demographic and economic factors (Borgonovi, 2008; Ugur, 2017). Other researchers have focussed on ‘everyday’ prosocial behaviours, such as helping, giving or prosocial spending. Schwartz,

Meisenhelder, Ma, and Reed (2003) found that informal helping, such as comforting, was a better predictor of mental health in a sample of American adults, than was receiving help from others. This suggests that the positive associations with helping may be inherent within the act of ‘doing’ kindness oneself, rather than just the presence of positive social contact. Generosity has also been shown to have positive links for the giver, such as in a survey study conducted by Brooks (2007) where, in an American sample, people who gave charitable donations were 43% more likely to say they were ‘very happy’ than non-givers were, even after accounting for a wide range of demographics, including income. Even at the geographical level, differences in state-wide SWB predict the prevalence of extraordinary altruism such as kidney donation in America (Brethel-Haurwitz & Marsh, 2014). Kindness towards other entities has also been linked with well-being. For instance, generativity, the concept of having concern for the welfare of future generations, has been linked with greater self- and life-satisfaction (Rittenour & Colaner, 2012) and pro-environmental behaviours have been linked with SWB in American and Chinese cultures (e.g., Xiao & Li, 2011; also see Brown & Kasser, 2005). The correlational evidence is large and convincing, with many other studies also reporting a positive link between prosocial action and well-being (see Post, 2005 for a review).

The convincing supply of correlational research is strengthened by longitudinal findings that have linked prosocial orientations, such as volunteering, altruism and informal helping with many positive well-being outcomes three years later, including happiness, life satisfaction, positive affect, self-esteem, and sense of control over life (Kahana, Bhatta, Lovegreen, Kahana, & Midlarsky, 2013; Thoits & Hewitt, 2001). Other research shows that high levels of SWB are retained one year after voluntary activity (Magnani & Zhu, 2018). Although limited in their number, longitudinal studies

such as these provide initial suggestive support for the notion that ‘being kind’ may not only be positively associated with well-being but may actually increase well-being over time.

Experimental and intervention-based research. Although the correlational evidence is useful in identifying a positive association between kindness and well-being, experimental evidence is required in order to make any conclusions regarding the direction of causality. In fact, early psychological research suggested that positive mood encourages prosocial behaviour, rather than the converse (e.g., Isen, 1970; Isen & Levin, 1972). More recently, experimental research has tested whether the promotion of kindness can subsequently increase well-being outcomes to try and confirm a causal relationship. Experimental paradigms tend to take the form of either prosocial spending (where participants are required to spend money on someone else; Dunn, Aknin, & Norton, 2008), acts of kindness (where participants are instructed to engage with acts of kindness towards others; e.g. Alden & Trew, 2013; O’Connell, O’Shea, & Gallagher, 2015; Rowland & Curry, 2018), or reflecting on acts of kindness (where participants are instructed to remember or record acts of kindness that already occur in daily life; e.g., Wiwad & Aknin, 2017).

Typically, the evidence shows that prosocial paradigms have a greater effect on well-being than the control tasks, which range from neutral tasks (e.g., tracking daily activities, Otake et al. 2006) to self-focussed tasks (such as doing acts of kindness for oneself; Nelson, Layous, Cole, & Lyubomirsky, 2016). For example, prosocial spending has been repeatedly shown to increase individual reports of SWB, when compared with self-focussed spending (Dunn et al. 2014; Hill & Howell, 2014), and kind acts have been shown to increase a range of well-being outcomes, including positive affect, vitality, self-esteem, and relatedness (Weinstein & Ryan, 2010), as well as

improvements in mood and self-evaluations (Harris, 1977; Williamson & Clark, 1989; Nelson et al. 2016). Likewise, reflecting on past instances of kindness (Aknin, Dunn, & Norton, 2012; Wiwad & Aknin, 2017), and tracking acts of kindness (Otake et al. 2006) have both been shown to improve positive affect. Recent studies have begun to replicate these results in specific, theoretically-relevant samples, including ex-offenders (Hannibal, Aknin, Douglas, & Viljoen, 2018) and those experiencing mental health problems such as social anxiety (Alden & Trew, 2013). Together, these results imply that engaging with, or recalling, a kind behaviour can have an immediate effect on a range of well-being outcomes.

Some experimental research has identified the reverse direction of causality in the relationship between kindness and well-being. For example, in a study conducted by Rand and colleagues, positive emotion predicted increased levels of cooperation during a resource-allocation game (Rand et al. 2015). Theorists have posited that kindness results in a positive sensation named the ‘warm glow of giving’ (Andreoni, 1990; Andreoni & Miller, 2002; Harbaugh, Mayr, & Burghart, 2007) and that this feeling subsequently drives future helping behaviour (Crumpler & Grossman, 2008). This suggests that kindness and well-being have a bidirectional relationship. One experimental study provides evidence for this, showing that prosocial spending increased subsequent levels of happiness and happiness then increased subsequent levels of prosocial spending (Aknin et al. 2012). These findings have been further supported by Zuffianò and colleagues (2014a) who found a longitudinal relationship from prosociality to self-esteem, and then from self-esteem to prosociality. It is thought that this emotionally rewarding loop of kindness allows people to maintain prosociality over time, thus providing a potential method for sustainable changes in well-being via

interventions (Aknin, Dunn, & Norton, 2012; Aknin, Van de Vondervoort, & Hamlin, 2018; Snippe et al. 2017).

Intervention-based research has shown that kindness can have a positive effect on well-being across an extended period of time. Interventions tend to encourage participants to engage with numerous acts of kindness over a period of weeks (e.g., perform three kind acts per week for four weeks; Alden & Trew, 2013). For instance, researchers have asked participants to: count their kindnesses every day for one week (Otake et al. 2006); practice being compassionate towards others for one week (Mongrain, Chin, & Shapira, 2011); or engage with five random acts of kindness on one day each week, for six weeks (Lyubomirsky, Sheldon, & Schkade, 2005). Despite the subtle differences between the intervention tasks, all saw significant improvements in well-being outcomes for the intervention group, but not for controls. Indeed, a recent meta-analysis of 27 randomised, controlled studies has shown that, on average, kindness-based interventions have a small to medium positive effect ($d = 0.28$) on SWB outcomes compared with control groups (Curry et al. 2018). Thus, this growing collection of intervention-based research suggests that kindness may be effective at increasing levels of well-being for adult populations.

Despite the promising evidence across this expanding body of work, there are a plethora of inconsistent results. For instance, some interventions have found a positive effect on life satisfaction (Buchanan & Bardi, 2010) whereas others have not (Layous et al. 2012). This implies that kindness may be more effective at boosting the emotional aspects of well-being. Also, interventions consistently impact positive, but not negative, affect (e.g., Alden & Trew, 2013; Ouwenel, Le Blanc, & Schaufeli, 2014), and they do not reduce depressive symptoms (Mongrain et al. 2011), suggesting that kindness is more clearly beneficial for promoting positive indicators of well-being than for reducing

mental health problems. Furthermore, some interventions have found that positive affect also improves for the control group (e.g., Buchanan & Bardi, 2010; O’Connell et al. 2016; Wang, Tran, Nyutu, & Flemming, 2014) and eudaimonic indicators of well-being are often not included as outcome measures. This paints a confusing picture and leaves many unanswered questions regarding the conditions under which kindness interventions are most likely to be beneficial and which outcomes they are most likely to affect.

Overall, the evidence suggests that kindness and well-being are positively associated, and that kindness interventions may be a useful method for promoting well-being in adulthood. However, research is still in its infancy, dominated by studies conducted in America, and sometimes producing inconclusive results. Many questions therefore remain, and inconsistent findings indicate the need to extend and develop this area of research, with added attention to the nature of the control task, as well as the mechanisms that may explain how, why and when kindness is most effective. Research needs to be extended across a wider range of countries, and via an increase of longitudinal and controlled experimental methodologies in order to substantiate its strength. Nonetheless, this initial stream of evidence gives rise to the question of whether such practices could have a positive impact if incorporated into settings such as schools.

Kindness and Well-being in Children and Adolescents

There is a dearth of research that explores the specific relationship between kindness and well-being in children and adolescents, when compared to the adult literature that has focussed heavily on everyday kindnesses as a route towards outcomes such as positive affect and life satisfaction. Although the developmental literature has

rarely studied this directly, there is a large body of research on the development of prosociality across age. Additionally, researchers have examined the associations that individual differences in prosociality have with other outcomes that fit under the broad heading of well-being, such as self-esteem and peer relationships. Therefore, these studies give us some indication of the relations that kindness could potentially have with the well-being of children and adolescents. This section will therefore focus on what is currently known about the development of prosociality before summarising the empirical literature that links prosocial behaviour with a broad array of beneficial outcomes that reflect well-being. It will then explore work that has used kindness-related intervention methodologies to promote these outcomes in schools.

Developmental changes in prosociality. The development of prosocial tendencies has been researched extensively by developmental psychologists. These behaviours emerge in early life and continue to develop and increase in complexity across the lifespan, moving from simple helping or sharing in toddlerhood, through prosocial lying in middle childhood, to long-term commitment in adolescence and adulthood (Hammond & Brownell, 2015). Furthermore, the overall level of prosociality increases linearly throughout childhood, but we see this linear trend dissipate in adolescence as prosocial behaviour becomes increasingly selective (Eisenberg & Fabes, 1998). Evidence shows that prosociality is heritable, such that a child's overall level of prosociality is somewhat predicted by their genes (Knafo & Plomin, 2006; Knafo-Noam, Uzefovsky, Israel, Davidov, & Zahn-Waxler, 2015). There is substantial evidence of individual differences in prosociality across all ages (Davis, Martin-Cuella, & Luce, 2019; Eisenberg, Morris, McDaniell, & Spinrad, 2009) and evidence that prosociality is influenced by the behaviour of role models, such as parents (Brownell et al., 2013), peers (Eisenberg, Cameron, Tryon, & Dodez, 1981), and teachers (Ornaghi,

Grazzani, Cherubin, Cont, & Piralli, 2015; Banerjee McLaughlin, Cotney, Roberts, & Peereboom, 2015). This section will briefly summarise the evidence of when and in what way changes occur throughout childhood, and more specifically, in the transition from childhood to adolescence.

Prosocial behaviour becomes particularly apparent in early childhood. A detailed body of evidence shows that very young children are able, and choose, to help others with both pragmatic and emotional needs and are able to decipher when help is actually required of them (see Martin & Olson, 2015; Warneken, 2015 for a review). Numerous observational studies have demonstrated that the types of prosocial behaviour enacted become more varied and advanced across the early years. To summarise, from around 12 to 18 months, children will help adults with simple tasks, such as picking up an object for someone that has accidentally dropped it (e.g., Warneken & Tomasello, 2006). By 18 to 24 months, children begin to comfort others when they are distressed (e.g., Pettygrove, Hammond, Karahuta, Waugh, & Brownell, 2013) and purposefully share objects with parents, other adults, and siblings (e.g., Brownell, Iesue, Nichols, & Svetlova, 2013; Paulus, Kuhn-Popp, Licata, Sodian, & Meinhardt, 2013; Sommerville, Schmidt, Yun, & Burns, 2013). From two years of age, children become more advanced by helping, comforting and sharing in the *absence* of verbal or behavioural cues. For instance, children have been observed returning an object to someone who does not realise they have dropped it (e.g., Warneken, 2013). By this age, kindness is commonly occurring not only towards adults but amongst peers too (Hamann, Warneken, Greenberg, & Tomasello, 2011). For school-aged children, prosocial behaviour continues to develop by becoming more selective and differentiated. For example, four- to six-, but not three-year-olds, are more likely to share with friends than with disliked peers (Moore, 2009; Paulus & Moore, 2014) and seven- to eight-year-old children share

more with peers from their own school than with peers from another (Fehr, Bernhard, & Rockenbach, 2008). These findings suggest that children not only become more advanced and more autonomous helpers but that they also begin to make choices about when to engage with kindness and whom to direct it towards.

Research is more limited for the adolescent age group (see Eisenberg et al., 2009 for a review). Nonetheless, the evidence suggests that kindness continues to develop in complexity across the teenage years. In general, research indicates that prosocial behaviour becomes more and more frequent from early to middle childhood but in adolescence the increases in kindness do not show the same linear trend. Indeed, some studies even show an overall decline in prosociality across adolescence (Su, Yao, Pei, & Su, 2019). However, other research shows that the changes tend to depend on the type of behaviour enacted, such that sharing or donating become more frequent, but instrumental helping or comforting do not (Eisenberg & Fabes, 1998). Similarly, there is longitudinal evidence that kindnesses towards friends and strangers, but not towards family, increase throughout adolescence (Padilla-Walker, Carlo, Memmott-Elison, 2018). These non-linear changes are despite evidence that the cognitive and affective competencies that are needed to engage with kindness, as well as the neurological systems that regulate them, continue to develop (Eisenberg et al. 2009; Nelson, Leibenluft, McClure, & Pine, 2005; Tashjian, Weissman, Guyer, & Galvan, 2018; see Keating, 2004). Thus, it seems likely that their skills are deployed in an increasingly selective way, no longer following a linear trend but becoming more complex and selective. The changes that occur across the lifespan suggest that although some infant behaviours reflect a very similar form to that of adolescents, the motives and functions that drive the acts may become more advanced over time (Crone & Fuligni, 2019; Hammond & Brownell, 2015).

It is thought that the reasoning involved in prosocial action also becomes more mature with age. Cross-sectional and longitudinal findings have evidenced that children's prosocial reasoning becomes increasingly more altruistic and less self-focussed (e.g., Eisenberg, Carlo, Murphy, & Van Court, 1995). In Eisenberg and colleagues' (2006) review of prosocial development, three stages of prosocial reasoning are outlined. During the preschool years, prosocial behaviour is most commonly motivated by hedonistic or needs-oriented reasoning, such as that which anticipates reward, or avoids punishment. Once a child is of primary school age, they become more concerned with seeking approval from others and enhancing their social relationships. In middle childhood, reasoning becomes more abstract, such that children will base their behaviours on emotions such as guilt, the positive affect they will experience, or internalised principles and values. By adolescence, there is an increasing concern for other people's thoughts and feelings (Svetlova, Nichols, & Brownell, 2010; Tashjian et al. 2018). These qualitative changes in prosocial reasoning continue to mature throughout adolescence and may explain why kindness becomes more differentiated with age as well as why the quantitative changes are not simply linear. Given that the changes in moral reasoning become more and more in line with definitions of kindness as a behaviour that is driven by an other-focussed motivation, adolescents may be much more able than younger children to engage with acts of kindness that match this definition.

Beyond adolescence, moral motivations for prosocial behaviour continue to develop. Research has shown, for instance, that during young adulthood individuals may begin to converge their own goals with the goals of others, showing that concern for self becomes integrated with a concern for others whereas in adolescence these are largely separate motives (Dunlop, Walker, & Matsuba, 2012). Thus, it remains unclear

whether adolescents will get the same self-benefit from kindness, when compared with young adults. Given what is known about the development of kindness across the lifespan, adolescence is a sensitive period for the development of prosociality and a potentially useful time to intervene.

The link between kindness and well-being in children and adolescents. As with adults, individual differences in childhood levels of kindness have been detected by researchers. Although the developmental capacity to engage with prosocial behaviour changes across the years, the relative differences that are present across individuals remain relatively stable through to adolescence (Eisenberg et al. 1999; Flynn, Ehrenreich, Beron, & Underwood, 2015), and across contexts (Bandura, Caprara, Barbaranellie, Gerbino, & Pastorelli, 2003). These individual differences in prosocial responding have been examined by developmental researchers in relation to a range of positive outcomes that are indicative of well-being. As with adult research, the child literature has also exhibited a theoretical shift over the last fifteen years towards understanding well-being in terms of positive indicators or strengths, a complementary paradigm to the more traditional approaches that are focussed on negative indicators or child survival (Larson, 2000; Scales & Benson, 2005; Lippman, Moore, & McIntosh, 2011; Seligman, 2011). Alongside this, there has also been a growing interest in promoting well-being in schools. The presence of this agenda is evidenced in recently published reports (Banerjee et al., 2015; McLaughlin, 2015) that discuss the importance of emphasising well-being within the schooling framework, as well as attempts to measure and track well-being in the children and young people of today (e.g., McFall, 2012; UNICEF, 2007; 2013; 2014). As part of this well-being agenda, interventions that are designed to boost the social and emotional well-being of children and young people are becoming increasingly commonplace within schools and as a target for

developmental research. Some of these programs are focussed, at least in part, on kindness. This section therefore provides a brief overview of the correlational evidence linking kindness with well-being, and then summarising the experimental and intervention-based research.

Correlational evidence. Within developmental science, self-esteem (the extent that an individual judges themselves as worthy of value; Zuffianò et al. 2014a) has been widely recognized as an important indicator of positive functioning (Erol & Orth, 2011; Orth & Robins, 2014). There is a large body of evidence, therefore, linking prosocial behaviours with this specific outcome. Findings have shown that prosocial children, measured via self-reported helpfulness, sharing, consoling, kindness and cooperativeness, are high in self-efficacy (Bandura, Caprara, Barbaranelli, Pastorelli, & Regalia, 2001). Likewise, self-esteem is positively related to prosocial behaviour in early, mid and late adolescence (Kasser, 2005; Laible, Carlo, & Roesch, 2004; Sahdra, Ciarrochi, Parker, Marshall, & Heaven, 2015; Zuffianò et al. 2014a; Zuffianò et al. 2014b) and youths who have a high self-esteem tend to also have prosocial attitudes towards achieving their goals in life (Smith, Walker, Fields, Brookins, & Seay, 1999). Many studies have investigated the impact of volunteerism in adolescence and have revealed that young volunteers report high levels of self-esteem, self-image and self-confidence (see Eisenberg et al. 2009; Moore & Allen, 1996 for a review).

Peer relationships, a core aspect of EWB, are also considered one of the most important features for child and adolescent functioning, particularly during the adolescent years (Brown & Larson, 2009). There is extensive evidence from sociometric research, that popular students tend to be more prosocial than their average-popularity-status peers (see Newcomb, Bukowski, & Pattee, 1993) and prosocial teens also tend to be more generally accepted or liked (Eisenberg et al. 1999; Padilla-Walker

& Carlo, 2014). Similarly, liking is associated with prosocial behaviour during middle childhood (Zimmer-Gembeck, Geiger, & Crick, 2005) and survey results have shown that 14- and 18-year-olds are more likely to be accepted amongst peers if they are prosocial (Pakaslahti, Karjalainen, & Keltikangas-Jarvinen, 2002). Furthermore, those who have reciprocal friendships, such that the partner agrees they are friends, tend to be more altruistic, prosocial, emotionally supportive, and less aggressive (e.g., Wentzel, McNamara-Barry, & Caldwell, 2004). Altruism is also related to positive relationships in teens (Markiewicz, Doyle, & Brendgen, 2001; Schwartz, Keyl, Marcum, & Bode, 2009; Wentzel, 2003; Wentzel, 2014).

Correlational research has also linked a range of other positive outcomes with prosociality in adolescents. In a large-scale survey study conducted with 10- to 18-year-olds, generosity was positively related to happiness and self-esteem (Kasser, 2005). Similarly, Schwartz and colleagues (2009) surveyed helping behaviour and altruism in over 400 teenage participants and found that these kinds of behaviours were positively related to self-acceptance and having a sense of purpose in life. Encouragingly, Mariano and Savage (2009) found similar results in their mixed methods study. Over 170 adolescents were interviewed about their purpose in life and they frequently talked about generosity. Furthermore, statistical analyses revealed that references to generosity were positively related to the teens' sense of purpose, as well as relationship and happiness goals. In essence, these findings signify a conscious awareness and belief among youths that behaving in a kind way is beneficial for their personal pursuits. Froh and colleagues (2010) also conducted survey research with adolescents and found that those who were high in levels of 'engaged living' – a term used to describe lifestyles that involved social integration and absorption – were also more grateful, happy, hopeful, and prosocial, and had higher levels of positive affect, life satisfaction, self-

esteem and positive school experience. Although Froh and colleagues did not test the direct relationships between prosociality and well-being outcomes, these findings do imply that kindness occurs alongside these positive aspects of psychological functioning.

Longitudinal research is limited but does provide some support for the cross-sectional findings by identifying positive sequelae of kindness across time. For example, Firestone, Firestone, and Catlett (2003) found that children who learnt about generosity were more likely to be satisfied with life later on. Furthermore, Wink and Dillon (2007) conducted a striking birth cohort analysis whereby adolescents born in the 1920s and who expressed generative concern had better life satisfaction, felt more peaceful, calm and happy, and were less depressed many decades later than those who did not. These findings suggest that kindness during childhood is associated with well-being outcomes in adulthood. Furthermore, Zuffianò and colleagues (2014a) investigated the links between self-reported prosociality and self-esteem in a large group of participants from age 15 through to 25 years. They found that early prosocial behaviour, such as helping and taking care of others, positively predicted later self-esteem but early self-esteem did not predict later prosociality. This finding was also supported by Chen, Li, Li, Li, and Liu (2000). Prosocial behaviour also seems to have a positive effect on subsequent relations. For instance, Caputi, Lecce, Pagnin, and Banerjee (2012) found that prosocial behaviour at age five positively predicted popularity at age seven. Relatedly, Ostrov and Guzzov (2015) found that early prosocial behaviour positively predicted an increase in social dominance. This suggests that prosocial children are more readily followed and accepted by their peers. The effect was not present in reverse, suggesting that kindness may temporally precede this kind of

social status. Collectively, these findings provide initial evidence that prosocial behaviour may temporally precede well-being.

Experimental and intervention-based research.

Social and emotional learning approaches. There is a large and growing pool of research around social and emotional learning (SEL) approaches that are designed to promote social and emotional development in schools (e.g., Banerjee, Weare, & Farr, 2014). SEL involves the acquisition of core competencies in self-awareness, self-management, social awareness, relationships skills and decision making (Collaborative for Academic, Social and Emotional Learning, 2013) and so methods used to teach these competencies often involve the promotion of kindness or prosocial behaviour. Interventions of this kind are repeatedly shown to have a positive impact on aspects of psychosocial functioning for children and adolescents. A meta-analysis of 213 universal whole-school programs has shown that they tend to improve social and emotional skills, attitudes and behaviours, whilst also bolstering academic achievement and reducing conduct problems and emotional distress (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Solomon, Watson, Delucchi, Schaps, and Battistich (1989) evaluated a program that was designed specifically to bolster prosocial development in elementary schools. The program consisted of five key areas: cooperation, developmental discipline, social understanding, prosocial values and helping. Findings indicated that children in the intervention schools scored significantly higher on supportive and friendly behaviour, as well as spontaneous prosocial behaviour, providing persuasive evidence that kindness can be *promoted*. Even so, SEL programs mostly *do not* focus specifically and primarily on being kind in terms of the activities used with the children and young people, and are often focused on preventing negative outcomes, rather than increasing positive ones.

Positive psychology interventions. In contrast to SEL approaches that focus on a broad range of social and emotional skill acquisition, as well as both positive and negative outcomes, positive psychology has a very specific goal of understanding what it is that allows people to flourish, and how positive well-being can be promoted via simple-to-administer intervention activities. As demonstrated thus far, positive psychology has limited foundations within developmental and educational psychology, but some attention has focused on what makes a school a happy place (e.g., Layard, 2005; Noddings, 2003). From this, related branches of work have begun to emerge, namely Positive Youth Development (PYD) and Positive Education (Seligman, Ernst, Gillham, Reivich, & Linkins, 2009), both of which are a reaction to the over-emphasis on problem management, treatment and prevention in this age group, particularly adolescents (Tolan, 2014). Ferrer-Wreder (2014) argues that psychology should move away from the narrow focus of deficit approaches because it creates a misleading perception of youth behaviour as well as an incomplete understanding of development. These approaches have led to interventions with children and adolescents in an attempt to cultivate positive well-being in schools.

The majority of positive psychology studies that focus specifically on kindness have worked with adult populations (as previously reviewed), despite claims that interpersonal and relational strengths, such as kindness, are important topics of investigation for positive development (Eisenberg & Ota Wang, 2003). However, general positive psychology interventions, which incorporate some kindness-related tasks, have been conducted with children in recent years. For instance, Suldo, Savage and Mercer (2014) boosted life satisfaction via a 10-week intervention for pupils in middle childhood, and ‘Strengths Gym’, a program for UK adolescents, increased life satisfaction and positive affect across a 6-month period (Proctor et al. 2011).

Despite the encouraging findings within adults, to our knowledge only three lab-based experimental studies have investigated the impact of kindness on well-being for children and/or adolescents. Akinin and colleagues asked children, aged 18 months to five years, to give edible treats to a puppet under experimental conditions. They measured the toddlers' happiness levels via observation of facial expressions, finding that those who gave their treats away expressed greater levels of positive emotion than those who did not. Furthermore, this emotion improved even further if the treat they gave was their own, rather than one which belonged to the researcher (Akinin et al. 2012; Akinin et al. 2015; Wu, Zhang, Guo, & Gros-Louis, 2017). To our knowledge, no experimental studies of this nature have been conducted with older children or adolescents. Much more experimental work is required in order to determine whether or not kindness impacts well-being in these age groups.

Some researchers have begun testing whether kindness-specific interventions impact well-being in the same way for children as for adults. To our knowledge, there is only one positive psychology intervention study of kindness in school-aged participants. Nine- to 11-year-olds were prompted across a four-week period to carry out three prosocial acts a week (Layous, Nelson, Oberle, Schonert-Reichl, & Lyubomirsky, 2012) with significant increases in happiness and peer acceptance. In support, some charitable organisations have conducted kindness interventions. For example, the Random Acts of Kindness Foundation conducted a school-based programme, finding that kindness boosted academic attainment, positive affect, and social-emotional learning (Lawson, Moore, Portman-Marsh, & Lynn, 2013; Schonert-Reichl & Whitehead, 2016). Similarly, Devine-Barribeau and Huff (2013) tested kindness as a community service option for juvenile offenders, with qualitative improvements in positive emotion. This approach, like SEL, has provided some promising results for promoting positive aspects

of development in children and young people, rather than preventing – or curing – negative ones. Nonetheless, this is still a relatively new area of research and there is not yet a large body of work on kindness as the core approach. Even so, those programmes that have assessed the impact of kindness on well-being show that prosocial learning may be beneficial for positive outcomes, yielding an early foundation for further investigation of these techniques.

Overall, the findings that link prosociality with well-being in youth are promising, delivering consistent results across large samples and a range of methodologies. They suggest that prosociality may be important for adolescents' psychological functioning and well-being development. Even so, the area is vastly understudied, particularly with respect to experimental research, and much like the adult literature is also largely restricted to studies conducted in America. There is still a distinct lack of longitudinal work in relation to well-being outcomes, such as happiness, life satisfaction, and sense of meaning. Moreover, developmental literature predominantly talks about kindness in the context of prosociality which tends to be operationalized as sharing, helping, and comforting. This has limitations in that it does not necessarily encompass the broader conception of kindness that is referred to within the adult literature, such as that which includes random acts of kindness in the absence of distress, altruism, prosocial spending or generativity. Studies that specifically test kindness as a contributor to well-being outcomes are limited in number, producing only a few studies with adolescents and none with children. Even so, those that have tested these relations have provided encouraging results and inspire further investigation in this area.

Mechanisms and Moderators

The mechanisms that underpin the links between kindness and SWB currently remain unclear. Uncovering the mechanisms of kindness is an important consideration for the success of kindness interventions as this will help to inform the design of kindness activities, as well as to help identify potential facilitators and barriers of successful kindness-promotion. Some studies have begun to identify the mechanisms through which kindness has an effect on well-being, as well as the conditions under which kindness is most effective. This section, therefore, will review a range of factors that have been previously identified in experimental work.

Eudaimonia as a Potential Mechanism in the Effect of Kindness on Well-being

Some authors argue that acts of kindness have an emotionally rewarding mechanism, known as the “warm glow”. This is characterised simply by feeling good (Andreoni, 1990) and this theory therefore implies that being kind has inherent, direct effects on affective aspects of SWB (Martela & Ryan, 2015). We propose, however, that kindness may have eudaimonic functions that, at least in part, explain *how* it leads to SWB outcomes. As described above, eudaimonia is a state of well-being that consists of positive human functioning and can be achieved, in part, via contributions to the greater good and other value-driven behaviours. Given this, kindness is theoretically linked with definitions of eudaimonia. Indeed, kind acts are often used as illustrative examples of the type of behaviours that are likely to trigger eudaimonic experiences (Hallam et al. 2014; Huta & Ryan, 2010; Steger et al. 2008). Furthermore, there is correlational evidence of a positive association between kindness and a range of eudaimonic indicators (Hill, Burrow, O’Dell, & Thornton, 2010; Klein, 2016; Schwartz et al. 2009; Yang, Li, Fu, & Kou, 2017) and theorists claim that eudaimonic activities promote a more enduring sense of SWB (Ryan et al. 2008). It is possible, then, that acts of kindness may have eudaimonic functions that, in turn, lead to higher levels of SWB.

Although experimental and intervention studies more commonly focus on SWB outcomes, some studies have begun to identify indirect effects via variables that reflect eudaimonia – albeit in adult populations – such as positive self-evaluations, autonomy, meaning in life, positive relationships, and self-transcendence (Diener et al. 2010; Maslow, 1971; Ryan & Deci, 2001; Ryff & Keyes, 1995). This section will briefly review this evidence, addressing each of these indicators.

Many theories claim that positive self-evaluation is a core aspect of eudaimonia (Diener et al. 2010; Huppert & So, 2013; Ryff, 1989). Indicators of positive self-evaluation include self-esteem, self-efficacy, and competence, all of which have been shown to mediate the effect of kindness on SWB in adult populations (Brown, Hoyer, & Nicholson, 2012; Hui & Kogan, 2017; Martela & Ryan, 2016). Kindness and benevolence are considered to be universally valued (Schwartz, 1994) and theorists claim that behaving in a way that is concordant with one's values may be what drives these positive appraisals of oneself and one's life (Schwartz & Sortheix, 2018). Relatedly, autonomous kindnesses (i.e., voluntary and intrinsically-motivated), rather than pressure-based acts (i.e., acts that are instructed, expected, or dutiful), are also thought to have a greater impact on well-being outcomes in adults (Gebauer, Riketta, Broemer, & Maio, 2008; Weinstein & Ryan, 2010) and toddlers (Wu et al. 2017). Autonomy is another key component of eudaimonia (Ryan & Deci, 2001; Ryff, 1989) and these acts are thought to be more likely to result in positive self-evaluation, which, in turn, has positive effects on SWB (Feng & Guo, 2017; Nelson et al. 2015). As mentioned above, prosocial behaviour has also been linked with self-esteem in adolescent populations (e.g., Fu, Padilla-Walker, & Brown, 2017). It is possible then, that positive self-evaluation may also be an explanatory mechanism of the links between kindness and well-being in adolescent populations. However, adolescents are

still developing the skills required to enact autonomous kindnesses (Eisenberg et al. 2009), thus the effects may be differential across this age range. Experimental investigations have, thus far, only been conducted with adults.

Although kindness is thought to promote positive self-regard on the one hand, it is also likely to promote self-transcendence (the tendency to care for, or focus on, entities outside of oneself; Schwartz, 1994) on the other. Self-transcendence is thought to be essential for higher states of well-being (Coward, 1996; Keyes & Annas, 2009; Maslow, 1971) whereas self-focussed attention is associated with negative affect and mental health problems (Mor & Winquist, 2002). Self-transcendent attention and values have been repeatedly shown to promote prosociality (Caprara, Alessandri, & Eisenberg, 2012; Dambrun & Ricard, 2011; Piff, Dietze, Feinberg, Stancato, & Keltner, 2015; Sanderson & McQuilkin, 2017) and have also been shown to moderate the effect of kindness on SWB, such that those with greater self-transcendent values are more likely to benefit from a kindness task (Hill & Howell, 2014). Indeed, the emotional benefits of prosociality are thought to hinge upon an other-focussed motivation and this effect is mediated by feelings of morality (Wiwad & Aknin, 2017). Relatedly, other-focussed cognitions, such as beneficence – the sense of being able to give – have been shown to mediate the effect of kindness on SWB outcomes, even after controlling for other aspects of eudaimonia, such as competence and autonomy (Martela & Ryan, 2015). Self-transcendence may, therefore, play an important role in *why* kindness has an effect on SWB. Although yet to be studied in either adults or children, it is possible that kindness may increase self-transcendence, which may, in turn, promote well-being. Indeed, other-focussed strengths have been shown to predict well-being in adolescents longitudinally (Gillham et al. 2011). Given that adolescents are still developing self-transcendent moral reasoning skills perspective-taking abilities (Eisenberg et al. 2009),

this may be a particularly important time to test whether self-transcendence is a function of kindness.

Unsurprisingly then, giving to others is also associated with feeling socially connected (Aknin, Dunn, Sandstrom, & Norton, 2013; Inagaki & Orehek, 2017). Relatedness, another aspect of eudaimonia (Ryan & Deci, 2001), is thought to have positive implications for well-being across the life course (Brown & Larson, 2009; Olsson, McGee, Dada-Raja, & Williams, 2013) and a large number of studies have demonstrated that relationship variables, such as relatedness and social connection, mediate the effect of kindness tasks on SWB outcomes (Aknin, Sandstrom, Dunn, & Norton, 2011; Brown et al. 2012; Jiang, Zeng, Zhang, & Wang, 2016; Martela & Ryan, 2015; Yamaguchi et al. 2016). Peer relationships become increasingly important throughout adolescence (Brown & Larson, 2009) and, as outlined above, prosociality is associated with having positive relationships in this age group (Holder & Coleman, 2008, 2009; Lindberg & Swanberg, 2006; Ramsey & Gentzler, 2015). A school-based kindness intervention has also been shown to have a positive effect on peer relationships in nine- to 11-year-olds (Layous et al. 2012). Thus, kindness may promote SWB in adolescents due to its association with positive relationships, yet experimental studies have not tested this indirect pathway in youth.

Another variable that is key to theories of eudaimonia is meaning in life. Given that kindness includes other-focussed psychological states, is value-driven, and can involve positive social interaction, it is likely that it also provides a good source of meaning and purpose in life. Indeed, research has shown that kindness is associated with meaning and purpose in both adults (Klein, 2016) and adolescents (Hill et al. 2010; Schwartz et al. 2009; Yang et al. 2017), and also that meaning in life predicts higher levels of SWB (Lin & Shek, 2018). Furthermore, experimental evidence has shown that

kind acts increase the sense of meaningfulness in adults (Martela & Ryan, 2016).

However, conflicting results were found for a clinical sample (Kerr, O'Donovan, & Pepping, 2015), leaving it unclear whether meaning or purpose would be a potential mechanism through which kindness has a positive effect on well-being.

Given the evidence thus far, an act of kindness may entail, psychologically, a range of significant eudaimonic experiences and these may subsequently increase positive emotions and overall life satisfaction. This initial body of evidence implies that eudaimonic functions of kindness may explain, at least in part, how kindness promotes subjective well-being. Thus, research should continue to explore these mechanistic pathways in order to better understand how kindness can be used as a method for well-being promotion. This seems particularly important for adolescent populations, where relevant social and cognitive processes are still developing, yet previous research is very limited.

Individual- and Activity-level Moderators

Alongside research that addresses the mechanisms that underlie the positive effect of kindness, other research has begun to identify the conditions under which kindness is most effective (Curry et al. 2018; Lyubomirsky & Layous, 2013; Rowland & Curry, 2018). This body of research seeks to identify a wide range of moderating factors that may influence the effectiveness of kindness, including activity-level features, such as the type of kindness, or individual-level features such as age, gender or initial well-being. Studies that address these moderators have important implications for the design and success of kindness-based interventions. This section will therefore review existing evidence on the features that moderate the effect of kindness interventions on well-being outcomes.

Activity-level features. Features of the kind activity may influence its effectiveness for promoting well-being. This may include the frequency or variety of kind acts, or the social context in which they are enacted. For instance, previous research has shown that kindness interventions are more effective if five acts are conducted on one day each week, rather than five acts spread out across the week (Lyubomirsky et al. 2005) suggesting that the dosage and intensity may be quite important. Relatedly, another study found that kind acts were more likely to be effective if they were varied, offering novel opportunities to experience being kind compared with enacting the same kind acts repeatedly (Sheldon, Boehm, & Lyubomirsky, 2012). This may suggest that novelty is important, or that different types of acts have differential effects on well-being, therefore providing greater benefits if a range of acts are conducted.

Research has also shown that the social context can moderate the effect of kindness. Research has shown, for instance, that kind acts are more effective if they provide opportunity for social connection (Aknin et al. 2013) or when the act is directed towards a close relation rather than a stranger (Aknin et al. 2011). This evidence is somewhat mixed, however, as kindness has also been shown to have positive effects when social interaction is completely absent, such as when there is no face-to-face contact (Martela & Ryan, 2016) and another study found no difference between close and distant social ties (Rowland & Curry, 2018). Furthermore, longitudinal research has shown that prosocial behaviour predicts self-esteem in adolescents if directed towards unfamiliar (but not familiar) recipients (Fu et al. 2017). Relatedly, there is evidence that kindness can occur across a variety of social situations, such that it can occur as a reaction to the needs of others (e.g., picking up a dropped item; comforting someone in distress), but it can also occur when no obvious need is present for the recipient (e.g.,

smiling; forgiving others; recycling), or even without the recipient's awareness of the act (e.g., leaving money in a vending machine). These acts may be more likely to consist of autonomous, internal motivation and may require more advanced social and emotional skills (Binfet & Enns, 2018). It is possible then that social contexts such as the recipient's level of need may also influence the effect of kindness on the giver's well-being, particularly in youth samples, although specific evidence of this does not yet exist. These mixed results, alongside gaps in knowledge, signify a need for further investigation into the social context of kindness and how this may differ across age.

Lastly, the particular motivation for kindness may also have a role to play. Related to the eudaimonic mechanisms mentioned above, certain motivations appear to be more effective than others, suggesting that the psychological state that the giver finds themselves in whilst performing the act has an important role in determining how effective it is. As discussed above, autonomous acts are more likely to boost well-being than pressure-based acts (e.g., Gebauer et al. 2008; Weinstein & Ryan, 2010; Wu et al. 2017) and the positive effects of kindness have been shown to have greater impacts on affect if the kindness has other-focussed, rather than self-focussed, motives (Wiwad & Aknin, 2017). Furthermore, research has argued that reinforcement and the use of rewards, in shaping children's prosocial behaviour, can reduce the intrinsic motivation to do good (Dahl, 2015; Warneken & Tomasello, 2008).

Individual-level features. Importantly, kindness may be more effective for some individuals than for others. Related to the motivational factors already discussed, an individual's dispositional level of self-transcendence has been shown to increase the effectiveness of a kindness intervention (Hill & Howell, 2014), such that those who value prosocial activities are more likely to reap the rewards. Furthermore, evidence has shown that general levels of motivation and effort moderate the effectiveness of

happiness-increasing tasks (Deci & Ryan, 2000; Layous, Lee, Choi, & Lyubomirsky, 2013). Relevant prosocial skills may also be fundamental to a kindness intervention's effectiveness, particularly within developmental samples. For instance, self-transcendent moral reasoning, empathy, and perspective-taking abilities are thought to be fundamental prerequisites in enactments of kindness (Eisenberg et al. 2009). There is evidence that empathy (e.g., Sahdra et al. 2015) and perspective-taking (e.g., Wu & Su, 2014) are important developmental antecedents of enacting kindnesses that are still developing during adolescence (Bosco, Gabbatore & Tirassa, 2014). Theorists have suggested that the impact of a kind act cannot be fully realised without the socio-cognitive skills that are required to enact it (Eisenberg et al. 2006). Indeed, research has shown that a kindness task is more beneficial for the giver if they understand the impact that it had on the recipient (Aknin, Dunn, Whillans, Grant, & Norton, 2013). Without the capacity to truly understand this impact, kindness may have less beneficial effects, exacerbating the need to study this topic in developmental samples.

Baseline levels of well-being have also been shown to moderate the impact of being kind. For instance, studies have shown that individuals experiencing depression are more likely to benefit from a kindness intervention (Schacter & Margolin, 2018) and volunteering is shown to have a larger impact on those who have lower levels of SWB at the outset (Magnani & Zhu, 2018). Given the links between depression and self-focussed attention (Mor & Winquist, 2002), the other-focussed nature of kindness may provide an important opportunity for these individuals to minimise self-focussed rumination. Furthermore, these individuals may have more room for improvement if their baseline well-being is particularly low. There are mixed results here though, as other studies have demonstrated that positive affect predicts increased levels of kindness

(Aknin et al. 2012; Aknin et al. 2018; Snippe et al. 2017) and that happy people are more likely to benefit from a kindness intervention (Otake et al. 2006).

Lastly, demographic variables may influence the effectiveness of kindness for an individual's well-being. As mentioned above, many of the skills and values that allow for a successful enactment of kindness are still developing during childhood and adolescence. Furthermore, the link between prosociality and well-being has been shown to strengthen from young to late adulthood (Lansford, 2018; Morrison, Jebb, Tay, & Dierne, 2017). Thus, the impact of kindness may be tied to temporally and developmentally sensitive experiences. It is possible, then, that age may influence the extent to which kindness has an effect on well-being. Other demographic variables, such as gender, may also have an important influence. Gender differences have been evidenced in both prosociality and well-being. For instance, females are more likely to enact comforting behaviours whereas males are more commonly observed providing practical help (Eagly, 2009; Eisenberg et al. 2009). Evidence has also shown that males are more likely to report higher levels of well-being (Lansford, 2018). However, there is little evidence of age or gender differences in the effectiveness of kindness tasks.

The evidence thus far suggests that the effect of kindness on well-being outcomes is a complex picture, impacted by a range of activity-level and individual-level moderators. Furthermore, the mechanisms of kindness are not clearly understood, but there are a range of potential mediators that explain *how* kindness impacts well-being. Importantly, certain mechanisms of kindness may interact with individual-level factors. For example, mechanisms of kindness that are sensitive to particular developmental periods (e.g., self-transcendence) may have differential indirect effects across age. Although promising, the previous evidence has substantial gaps and mixed

results, which justify the need for further research into the mechanisms and moderators of kindness on well-being.

Aims and Research Questions

This thesis includes a programme of work designed to explore the impact of kindness on adolescent givers' well-being. The current literature has provided some promising evidence that being kind not only is associated with an individual's well-being but also may be a possible method to promote both hedonic (e.g., positive emotion, life satisfaction) and eudaimonic (e.g., sense of meaning, positive relationships) aspects of flourishing. Although still in its infancy, the evidence base within the adult literature is compelling but little research has been conducted with adolescents, despite this being a sensitive developmental period for both prosociality and well-being. Therefore, the over-arching research aims are:

1. To advance understanding of adolescents' conceptualisations of kindness, by listening to adolescents' own perspectives on kindness, including its behavioural form, as well as its social and psychological antecedents and outcomes. It is expected that adolescents will be able to describe a wide range of kind behaviours and that they will be able to identify psychological benefits for both the giver and the recipient.
2. To examine the impact of kindness on adolescent well-being for the giver, by testing the effects of controlled, randomised experimental tasks. It is expected that a kindness task will have greater effects on well-being than a matched control task.
3. To explore the mechanisms that may explain how, why, and when kindness has a positive effect on well-being in adolescents. We aim to identify mediating

pathways from kindness to SWB, with a particular focus on aspects of eudaimonia. It is expected that those who performed and/or recalled a kindness task will be more likely to have had a eudaimonic experience which, in turn, will predict increases in SWB outcomes. We also aimed to explore moderating factors that may influence these pathways, including activity-level features and individual-level features.

Methodological Approach

In order to address the research questions, the empirical research adopted a mixed-methods approach. Employing both qualitative and quantitative approaches was highly appropriate given the lack of prior research within this population. Therefore, it was considered important to incorporate the views and voices of adolescents as part of the research programme. This mixed-methods approach allowed us to test hypotheses regarding the effects of kindness on well-being, whilst also ensuring that the research questions and task designs were appropriate and relevant to youth populations.

In the first paper, I conducted in-depth qualitative focus groups with a sample of adolescent participants. The focus group methodology provided a safe space for adolescents to discuss and assess kindness amongst their peers. This allowed me to gather the adolescent perspective and situate our knowledge of kindness (as well as our future research designs) within the context of adolescents' own conceptualisations, making the experimental work of this thesis developmentally appropriate. The focus groups allowed me to gather a definition of kindness that is relevant to youth, as well as to identify mechanisms and impacts of kindness that are prominent to adolescents. Given the lack of prior evidence within this age group, this filled an important gap and an essential first step to inform future studies. Although a larger-scale study could have been conducted, such as a longitudinal survey study that may have provided a more

exhaustive list of kindnesses as well as a larger observable sample, this would not have allowed me to represent the voices, individual views and experiences of adolescents, which was a key aim.

A potential next step could have been to continue with a qualitative approach, assessing the adolescents' changing perceptions and experiences of kindness over time, a method that has been used by John-Tyler Binfet and colleagues to provide an in-depth collection of evidence across the younger childhood years (Binfet, 2015; Binfet & Enns, 2018; Binfet & Gaertner, 2015; Binfet & Passmore, 2017). If I had taken a similar approach, this could have identified developmentally relevant shifts in enactments of kindness, as well as the perceived effects of kindness on well-being. However, I chose to apply the findings of Paper 1 to the design of randomised, controlled experiments, in order to provide preliminary causal evidence of the effect of kindness on well-being outcomes. Therefore, in Papers 2 and 3, we compared the effects of a kindness task with an active control group. The control groups were instructed to spend time with others whereas the experimental groups were instructed to be kind. The control tasks were selected in order to compare the effect of kindness with the generic effect of interacting socially. This was carefully designed such that the effects of kindness were isolated from the effects of general socialising, an aim that would have been very difficult to achieve via correlational or qualitative methods. The empirical work in these papers focussed on the use of a wide range of self-report questionnaires, completed both before and after the experimental tasks in order to test effects over time. In Paper 2, the task was reflective in nature, asking the participants to remember an act of kindness and write about it in detail. This allowed me to test whether just a single memory of kindness can have a positive effect on well-being, over and above being social. However, this methodology did not allow me to test whether these changes were

sustainable over time. Therefore, for Paper 3, we tested the effect of a four-week kindness intervention on a range of well-being measures, including both subjective and eudaimonic outcomes measured several weeks after the baseline. Here, the intervention included actual acts of kindness, rather than memories. This allowed me to overcome, to some extent, the limitations of Paper 2's use of an experimental task that involved reflecting on just one experience.

Using quantitative methods to carry out statistical testing allowed me to extend existing knowledge of both direct and indirect pathways from kindness to well-being outcomes. Therefore, Papers 2 and 3 also assessed whether the kindness tasks were more likely to be rated as fulfilling eudaimonic experiences than the social control tasks. I then tested whether, in turn, this experience of eudaimonia predicted changes in well-being compared to the baseline. In order to achieve this, a questionnaire measure was designed specifically for this thesis, asking the participants to rate their kindness (or social) activity against six items. Each item asked the participants to rate the extent to which their activity satisfied feelings of eudaimonia, such as social relationships, self-transcendence, and positive self-evaluations. This measure was broadly based on theories of EWB, as well as the qualitative findings from Paper 1. This allowed me to test whether eudaimonic functions of kindness serve as an explanatory mechanism of the effect of kindness on well-being. Although I could have measured dispositional levels of EWB as a mediating mechanism, I chose to explore whether and to what extent the kindness activity itself was rated as a eudaimonic experience, allowing me to test whether, and how, the act of kindness is qualitatively different to the more generic act of interacting socially.

Lastly, I was able to test for moderating factors in Papers 2 and 3. Here, I explored a range of activity-level and person-level factors that could influence the effect

of kindness on well-being outcomes. In Paper 2, I used the task instructions to manipulate the type of kindness that was remembered, including a) the type of kindness enacted: unprompted vs. prompted by recipient need or distress, and b) the type of recipient: familiar vs. unfamiliar. In both studies, I tested for moderation effects of both age and gender. All of the moderators were selected based primarily on findings from Paper 1, as well as evidence from the previous literature. Although these factors were identified by participants in the qualitative study, the quantitative techniques allowed me to statistically test whether these moderators influenced the extent to which kindness has an effect on well-being outcomes.

Overview of Empirical Research

This thesis includes three papers that address the overarching aims outlined above. The first paper is a qualitative study designed to document and understand adolescents' perceptions of kindness. The paper aimed to identify the types, antecedents, and outcomes of kindness that are prominent for adolescent populations, as well as the social and psychological factors that may influence these processes. For the second paper, I tested the impact of a single kindness-based reflective writing task on adolescents' SWB. Guided by the findings of Paper 1, the second study tested for mediating pathways via eudaimonia whilst also examining the moderating role of several contextual and dispositional factors. The final paper extended Paper 2 by aiming to examine the effect of a four-week school-based kindness intervention on adolescent well-being, and to identify whether these effects were mediated by eudaimonia. I also tested whether the intervention had effects on a range of other positive outcomes, including kindness, purpose in life, self-esteem and peer relationships. Participants were aged 11 to 15 years in all three studies. The specific aims, rationale, methodology and hypotheses for each paper are described below.

Paper 1: Adolescents' Conceptualisations of Kindness and its Link with Well-being: A Focus Group Study

This study used a qualitative approach to explore conceptualisations of kindness within adolescents. The primary goal was to understand how adolescents define kindness. A secondary aim was to understand adolescents' experiences of kindness across four core categories: the behavioural forms that kindness takes, the antecedents of kindness, the outcomes of kindness, and the social and psychological factors that may influence any of these processes. Given the distinct lack of research on adolescent perspectives on kindness, the paper fills an important gap in conceptual understanding. The study was designed to help ensure that subsequent research and interventions were appropriate and relevant to youth populations, as well as to identify the mechanisms of kindness that may be worthy of investigation during this developmental period. Data was sought via six semi-structured focus groups, including 32 pupils from UK secondary schools in different parts of the country. The questions were focussed on definitions and examples of kindness, reasons for kindness, variations in kindness, and emotions associated with kindness. A qualitative, thematic analysis was employed. Given the scarcity of prior research and the nature of the research design, specific hypotheses were not provided. However, I expected that adolescents would be able to describe a wide range of prosocial behaviours, and that they would be able to identify social and psychological benefits of kindness. Also, in view of the research described above that shows sophistication of moral reasoning during adolescence, it was also expected that participants would be aware of at least some contextual and dispositional factors that influence kindness.

Paper 2: The Impact of a Kindness-based Reflective Writing Task on Adolescent Well-being

The next paper tested experimentally the effects of kindness on well-being outcomes in adolescents. My main aim was to examine whether a single kindness-based reflective writing task would have a positive effect on SWB from before to after the activity, and to test mediated pathways via eudaimonia. Eudaimonia was measured as a function of the kind act (state level), rather than as a dispositional, trait-level outcome, such that participants rated the extent to which the action satisfied a range of eudaimonic indicators. A secondary aim was to test whether these effects were moderated by a range of contextual and dispositional factors, including the type of kindness enacted, as well as the age and gender of the participants. The study included 350 students from UK secondary schools. Students were randomized, within classrooms, into two main conditions. The experimental group were asked to remember and write about a single act of kindness, and the control group were asked to write about a recent experience of spending time with others. The control group was designed to differentiate the effects of kindness from the effects of more general socialising. Within each condition, participants were further divided into groups reflecting the contextual moderators, with respect to a) whether the kindness was prompted by the need (e.g., distress) of the recipient (needs-prompted vs. unprompted) and b) the familiarity of the recipient (familiar vs. unfamiliar). Participants completed well-being measures before and after the activity. It was hypothesised that the kindness group would experience greater increases in SWB than the control group. Further, it was expected that the kindness group would rate their recalled experiences as higher on aspects of eudaimonia and that this eudaimonia would explain any differential effects of kindness versus control conditions on changes in SWB.

**Paper 3: The Impact of a Kindness-based Intervention on Adolescent Well-being:
The Role of Eudaimonia**

The final paper evaluated the impact of a four-week, school-based kindness intervention on adolescents. The primary aim was to test whether the kindness intervention, compared with a matched control task, had a positive impact on the students' SWB and overall flourishing. We also tested whether these effects were mediated by experiences of eudaimonia, as in Paper 2. Participants included 601 students attending UK secondary school. The study included two experimental groups: 1) kindness and 2) self-focussed conversation. Participants in the kindness group were encouraged to do three kind acts to others each week, whereas the self-focussed control group were encouraged to tell others three facts about themselves each week. The control group was designed to differentiate the effects of kindness towards others from more general socialising that was focused on self-enhancement. Participants completed a questionnaire before and after the intervention. As well as SWB and overall flourishing, the questionnaire included a diverse range of measures including kindness, prosocial behaviour, gratitude, self-esteem, purpose in life, and peer relationships. As in Paper 2, each week, participants rated the extent to which their respective tasks satisfied aspects of eudaimonia. The aim was to test whether the groups exhibited differential effects on these diverse hedonic and dispositional eudaimonic positive outcomes and whether any of the effects were mediated by the extent to which carrying out the tasks themselves involved experiences of eudaimonia. The study also tested for moderation effects of age and gender. It was hypothesised that the kindness group would experience larger increases in SWB and flourishing from before to after the intervention and that these effects would be mediated by eudaimonia. The inclusion of the remaining dispositional eudaimonic outcome measures was exploratory and specific hypotheses were therefore not formulated.

Paper 1

Adolescents' Conceptualisations of Kindness and its Links with Well-being: A Focus Group Study

Abstract

There has been a recent surge of interest from researchers, policymakers, and the general public in how kindness can promote well-being. Even though adolescence is a key period for the development of relevant value systems and mental health, little is known about adolescents' understanding of kindness. Six focus groups were conducted with 11- to 15-year-olds, exploring their conceptualisations of kindness. Thematic analysis revealed a multifaceted understanding, identifying ten different categories of kind behaviour that are influenced by situational antecedents as well as specific self- and other-focused goals. Crucially, participants also identified a number of moderators, including contextual and dispositional factors (e.g., features of social relationships, levels of empathy) that support and extend current theoretical frameworks. Responses from participants reinforced the idea that kindness contributes to well-being for the recipient *and* the giver. These findings have implications for the future design and efficacy of kindness-based well-being interventions for adolescents.

Key words: Adolescence, Kindness, Prosocial behaviour, Qualitative, Well-being

Adolescents' Conceptualisations of Kindness and its Links with Well-being: A Focus Group Study

Kindness as a psychological construct has recently attracted great interest from researchers, particularly as a pathway to positive well-being outcomes (Dunn, Aknin, & Norton, 2014; Lyubomirsky & Layous, 2013). This complements growing interest from policymakers and the general public (Action for Happiness, n.d.; Aked, Marks, Cordon, & Thompson, 2008). However, little work in this area has been conducted with adolescents, despite research indicating that relevant value systems (e.g., moral reasoning, and self-transcendence) develop (Eisenberg, Morris, McDaniel, & Spinrad, 2009) and mental health and well-being decline during this period (McFall, 2012; Taggart, Lee, & McDonald, 2014). Thus, although kindness is recognised as a potentially important focus for school-based programmes that foster social and emotional development (Binfet, 2015; Helliwell, Layard, & Sachs, 2015), we know little about how adolescents conceptualise kindness and the relevant social and psychological processes. The present investigation offers new data on these conceptualisations and can therefore help to guide future research and applications.

Conceptualisations of Kindness

Kindness can be viewed as one aspect of the larger overarching construct of prosociality. However, kindness definitions differ from broader definitions of 'prosocial behaviour' (any action done voluntarily that protects or benefits another person; Eisenberg, Fabes, & Spinrad, 2006) because they hinge on an other-focused motivational stance. For instance, Peterson and Seligman (2004) state that kindness is driven by compassion or concern and is expressed by doing favours, good deeds, or care-giving. Eisenberg and colleagues describe kindness as any voluntary act that

benefits others and is not motivated by external rewards or punishments. Although a single operational definition is lacking, all descriptions carry a common theme:

Behaviour that involves both the prosocial acts and the underlying, other-focused motivations (Knafo & Israel, 2012).

We can expect that this idea will be at the foundation of adolescents' conceptions, but very few studies on this topic have been documented with youth samples. One study investigated conceptualisations of kindness in children aged five to six years (Binfet & Gaertner, 2015). The child conceptions shared the common theme of positive behaviour directed towards others and they picked up on some motivational components, such as friendship-building. Other studies have also shown that children can identify other-focused motivations of kindness (Recchia, Wainryb, Bourne, & Pasupathi, 2015; Sengsavang, Willemsen, & Krettenauer, 2015). Even so, kindness is thought to be developmental in nature, with knowledge of the underlying motivations becoming more mature as age increases (Lamborn, Fischer & Pipp, 1994). We may, therefore, see more mature conceptions of other-focused drivers in an older sample. Binfet and Gaertner also noted that small gestures considered as kindness by young children, such as 'following directions' and 'wearing a smile', may be given less emphasis (and therefore go un-noticed) by adults that are attempting to promote kindness in the school context. Not only this, but small gestures may not be considered significant enough to be classified as 'kindness' by adults. It is possible that child-adult disparities such as these may continue into adolescence, an important consideration for the development of kindness-based interventions in schools. This highlights a need for illuminating adolescent conceptions such that kindness research with youth populations is appropriate and relevant to the specific age group.

Mechanisms of Kindness

There is little understanding of adolescents' knowledge regarding the social and psychological mechanisms that drive kindness, a seemingly important aspect given the academic emphasis on other-oriented motivation. Within the adult literature, social mechanisms such as levels of relatedness (Pavey, Greitmeyer & Sparks, 2011) and psychological mechanisms such as empathy (Ali & Bozorgi, 2015), self-transcendence (e.g., Caprara, Alessandri, & Eisenberg, 2012) and emotionality (Barasch, Levine, Berman & Small, 2014) are examples of principal topics of interest in kindness research. Indeed, the requirement for an other-oriented motivation implies that attention to others' mental states is integral to an act of kindness. There is evidence that empathy (e.g., Sahdra, Ciarrochi, Parker, Marshall, & Heaven, 2015) and perspective-taking (e.g., Wu & Su, 2014) are important developmental antecedents of enacting kindnesses. Young children can recognise the stability of kindness within individuals (Lockhart, Chang, & Story, 2002) but there is no direct evidence as to whether children or teens understand the socio-cognitive factors that may be driving these individual differences. We therefore seek to discover whether adolescents are able to make connections between mentalizing skills and kind actions.

Social-contextual factors are also known to influence kind behaviour in youth. Research has shown that adolescents express a felt obligation to help those in need and are sensitive to different levels of need in others (Smetana et al. 2009). Even young children are able to make complex decisions about whether to provide help to friends in need (Sierksma, Thijs, Verkuyten, & Komter, 2014) and can also be very selective with their prosocial behaviours based on relational contexts. For example, children are more likely to share with 'liked' rather than 'disliked' peers (Moore, 2009). Given this evidence, adolescents are likely to be able to reflect on how particular social contexts, such as the level of need or features of relationships, may influence kindness.

Kindness and Well-being

As discussed above, the idea that kindness will benefit the recipient is integral to definitions provided by adults and children alike. However, researchers have begun to ask whether kindness can also be beneficial for the *giver*. Research with adult populations has shown that positive aspects of well-being correlate with kind behaviours (e.g., Brethel-Haurwitz & Marsh, 2014) and numerous intervention studies have shown that engaging with acts of kindness can lead to improvements in well-being outcomes (Alden & Trew, 2013; O’Connell, O’Shea, & Gallagher, 2016). We know much less about these effects in adolescents, but a pilot study with children aged nine to 11 years demonstrated improved life satisfaction and peer relationships following a four-week kindness intervention in school (Layous, Nelson, Oberle, Schonert-Reichl, & Lyubomirsky, 2012). Adolescent understanding of this link has barely been investigated, but teens have been found to identify generosity and prosocial behaviours as examples of achieving a fulfilling sense of purpose in life (Hill, Burrow, O’Dell, & Thornton, 2010), with an accompanying appreciation that helping others is satisfying (Killen & Turiel, 1998). These findings show not only an awareness that kind behaviour is beneficial for the giver’s life, but also an ability to reflect on social and psychological functioning. We anticipate that adolescents will therefore identify giver-focused benefits of kindness.

Researchers have begun to investigate the mechanisms that link kind behaviour with well-being outcomes, identifying the conditions under which kindness is most likely to be beneficial for a giver (Lyubomirsky & Layous, 2013). For instance, kind acts tend to have greater effects on well-being when they are driven by pleasure-based (or autonomous) motivation (Gebauer, Riketta, Broemer, & Maio, 2008; Weinstein & Ryan, 2010) or when they provide opportunity for social connection (Aknin, Dunn,

Sandstrom, & Norton, 2013). These factors are shown to mediate the link between being kind and feeling good (Martela & Ryan, 2015). We therefore also consider adolescents' awareness of social and psychological factors that may affect kindness outcomes.

Kindness is also thought to have broader societal effects, such as social contagion (Tsvetkova & Macy, 2014). Cooperative behaviour spreads through social networks (Jordan, Rand, Arbesman, Fowler, & Christakis, 2013) and those who receive help from strangers are more likely to help others in the future (Fowler & Christakis, 2010). These effects may be driven by feelings of gratitude (Bartlett & De Steno, 2006) and elevation, an emotion triggered by witnessing another perform acts of moral beauty (Algoe & Haidt, 2009). Research has shown that gratitude and elevation both lead to increased altruistic behaviour in adults (Schnall, Roper, & Fessler, 2010). Little is known about elevation in adolescence, but gratitude does predict prosocial behaviour in children aged 11 years (e.g., Tian, Chu, & Huebner, 2015). Also, young children are able to reason about reciprocity when making prosocial decisions (Martin & Olson, 2015). We therefore expect that adolescents may be conscious of the contagion effects of kindness and other influential mechanisms, such as gratitude and reciprocity.

The Current Study

The preliminary aim of this study is to document adolescents' perceptions of kindness, a gap in the current literature. We know from other research that relevant value systems (e.g., moral reasoning and self-transcendence) emerge and become established during adolescence (Eisenberg et al. 2009). Moreover, this is a developmental period where the prevalence of mental health problems increases considerably (Murphy & Fonagy, 2012; Taggart et al. 2014; Thapar, Collishaw, Pine, &

Thapar, 2012) and substantial individual differences can be found in positive aspects of well-being (e.g., happiness; McFall, 2012). Furthermore, higher levels of positive well-being in adolescence predict a wide range of health and social outcomes in adulthood (Hoyt, Chase-Lansdale, McDave, & Adam, 2012). Not surprisingly, then, policymakers and charitable organisations have begun to turn their attention to the potential value of strategies to promote kindness and prosocial skills in school settings (Bywater & Sharples, 2012; Helliwell et al. 2015). Given the relative scarcity of research on adolescent conceptions of kindness, this study will help to ensure that future research and interventions in this area are relevant to youth populations. A secondary aim is to explore adolescents' perceptions of kindness-related well-being outcomes, as well as the social (e.g., features of social relationships) and psychological (e.g., empathy) factors that influence the development and enactment of kindness and its links with well-being. To this end, we conducted six focus groups with 11- to 12- and 14-to-15-year-olds. Given the significance of this developmental period for kindness and well-being, we selected these age groups to adequately represent views across the age range. The relationship between kindness and well-being has previously been investigated via experimental methods. Research that explores these relationships from a qualitative and experiential perspective is currently absent from the literature and this study, therefore, provides a novel approach to researching this topic.

In sum, we were interested in exploring adolescents' representations of kindness across four main categories: the behavioural forms that kindness takes; the antecedents of kindness; the outcomes of kindness; and the social and psychological factors that influence any of these processes. The discussion guide was designed to address these four aspects. Given the lack of prior research with this age group, we did not have any specific hypotheses regarding these. However, it is expected that adolescents will

describe a wide range of prosocial behaviours when defining kindness, in line with recent qualitative research with younger children (Binfet & Gaertner, 2015), and that they will be able to identify both social and psychological benefits of kindness. We also expect participants will be aware of at least some contextual and dispositional factors that influence these processes.

Method

Participants

Participants were 32 pupils from UK secondary schools in year 7 (11-12 years; 8 male, 10 female) and year 10 (14-15 years; 4 male, 10 female). Pupils were drawn from three mixed-gender, comprehensive secondary schools in England. All schools were large compared to the national average. The majority of pupils were White British but two schools had a higher than average intake for speakers of English as a second language. The percentages of pupils with special educational needs or entitlement to free school meals were average or lower than average in all schools (Ofsted Dashboard, 2014).

In one school, all eligible pupils were invited to take part during an assembly. In another, eligible pupils from the school council were invited, and in the remaining school, the invited pupils were selected by teachers in eligible year groups, based on their current school workload and resulting availability. A three-stage consent procedure was employed. Head teachers first approved the study in each school and parental consent was then sought for invited participants. Participants provided their own written consent on the date of the focus group. Schools and participants were not compensated for their time.

Focus Group Semi-Structured Discussion Guide

Questions were focused on definitions and examples of kindness; reasons for kindness; variations in kindness; and emotions associated with kindness. The groups were semi-structured, such that participants were encouraged to lead the discussion, but the facilitator helped them to stay on topic by asking core questions and adding prompts where necessary (see Table 1.1). Broad questions were asked to allow the conversation to remain pupil-led as much as possible, and prompts re-phrased the questions to foster a more detailed response. The discussion guide included detailed instructions that informed the facilitator on how and when to use the questions. The first and last question were mandatory – the facilitator was instructed to only ask the remaining core questions if the participants did not cover them in the spontaneous discussions. Pupils were encouraged to give specific, clear and concrete examples to ensure data integrity. Towards the end of the discussion, pupils were encouraged to say anything else that they felt was relevant.

Procedure

Participants were divided into six mixed-gender focus groups, each lasting 45 to 60 minutes. Each group consisted of three to eight pupils and met once during school hours. Discussions were audio-recorded and transcribed verbatim. Focus groups offer a valuable opportunity to gain in-depth knowledge from several individuals. Interaction between participants is thought to be particularly likely to produce depth of understanding, when compared with one-to-one interviews for example (Daley, 2013). This method can be useful with young participants as it can reduce unease that may occur from a one-to-one interview and instead creates a safe and familiar environment with peers (Punch, 2002). After gaining consent, the group facilitator led an icebreaker activity involving a name-learning game and a warm-up task. Pupils were split into two groups and asked to write down as many words as they could that they would use to

describe kindness. This activity is recommended with young samples as it helps to a) foster open group discussion between pupils, and b) give pupils the space to explore the concept of kindness amongst peers before being asked direct questions by the facilitator (Gibson, 2007). The facilitator then guided the focus group through the interview schedule described above.

Table 1.1

Examples of Questions and Prompts from the Semi-Structured Discussion Guide

Core Questions	Prompts
What does the word kindness mean to you?	How would you describe kindness to someone that didn't know what it was?
Try to remember times when someone was kind. What are you thinking of? Can you give some examples?	It could be when someone else was kind, or when you were kind. Are there any types of kindness you haven't described? Can you explain every detail of what you're thinking of?
Why are people kind?	When people are kind, what are their intentions? What impact does kindness have?
Is kindness the same in every place or situation?	Are some people more kind than others? Can you give me some examples? Do certain experiences encourage kindness?
What emotions or feelings do you associate with kindness?	How do people feel when there is kindness? How does it feel when someone is kind?

Analysis

An inductive thematic analysis was used to identify commonly occurring themes within the dataset. Given the dearth of prior empirical research on adolescent's conceptualisations of kindness, the analysis was based entirely on the semantic content of the dataset, rather than latent meanings, such that the coding process was inductive

and data-driven, rather than theory-driven (Braun & Clarke, 2006). Familiarity with the data was achieved through transcription and repeated reading. During this stage, like responses that represented common topics were grouped as initial codes. These codes were attached to broad over-arching themes in order to form a general conceptual description of the participants' experiences. Transcript extracts were read by both authors, who discussed similarities and differences between their initial impressions. Once the coding framework was agreed upon between the two researchers, the first author coded all transcripts using NVivo software. The data was extracted and read individually for each theme. At this stage, themes were merged or sub-divided as necessary (e.g., in cases of substantial overlap across themes) to ensure the framework's integrity to the dataset as a whole. Themes were then clearly defined, including a written description, criteria, examples and counter-examples for each. The coded dataset was examined to uncover meaningful links within and across themes. The data for each theme was read thoroughly and a detailed summary was written. This process informed the identification of patterns within the group responses, and the way in which themes were interconnected. Throughout the analysis, checks for researcher bias were made between the two researchers, who met frequently to discuss the integrity of the framework to the raw dataset.

Results

In total, analysis of the data resulted in the identification of 27 themes. These themes were grouped conceptually into five overarching categories (see Figure 1.1). The Kind Acts category includes themes representing the various types of kind behaviour described by the adolescents. Two categories of antecedents for these behaviours were also identified: Situational Triggers and Psychological Goals. One further category was identified for the different types of Impacts that kindnesses were

thought to have. Finally, participants identified a range of Moderating Factors, representing the factors that could influence any or all of the previous categories. Participants discussed themes in distinct but related ways, such that the categories were interconnected and any instance of kindness could incorporate a different combination of the themes shown within the diagram. The key findings from each of the overarching categories are explained below. Illustrative quotes or examples are reported where needed.

Conceptualisations of Kind Behaviour

Kindness was consistently defined as prosocial acts that are driven by placing other people's needs and emotions before one's own, even if there is no benefit to oneself, *"like not just thinking about yourself all the time,"* [Female, Year 7] *"to go out of their way to do, not what they want, but to help you succeed"* [Male, Year 7]. In line with our expectations, when discussing specific examples of kindness, participants described a broad range of behaviours. The types of behaviour are divided into 10 distinct themes, each containing a diverse range of specific examples (shown in Table 1.2). These findings show that adolescents perceive kindness to be a concept that has both behavioural and motivational components. The behaviours tended to be inseparable from the underlying motivation; if an act occurs in the absence of other-focused intentions, it would not be considered as a kind act by the participants of this study (discussed in more detail below).

Situational and Psychological Antecedents

The participants identified various antecedents of kindness. Firstly, kindness is always preceded by an underlying motivation, or psychological goal. As shown in

Table 1.3

10 themes for kind acts, with examples

Kind Act Theme	Description
Emotional Support	Being thoughtful, trustworthy, and understanding when another person is upset or going through a difficult life event (e.g., listening, comforting, cheering someone up).
Proactive Support	Providing support for others when they are not experiencing emotional upset (e.g., showing an interest in positive life events, or congratulating others for their success).
Social Inclusion	Letting or inviting people to join in with games or activities.
Positive Sociality	Behaving positively towards others in everyday situations (e.g., saying good morning, smiling, being friendly, being polite, expressing gratitude, and letting others go first on the bus).
Complimenting	Using kind phrases or words to describe others and expressing it to them.
Helping	Instrumental helping, (e.g., picking up a dropped item); helping with basic needs, (e.g., providing accommodation or food); and helping with achievement needs (e.g., helping someone to complete a task or learn a new skill).
Expressing Forgiveness	Explicitly forgiving other's transgressions and/or mistakes. This refers to the specific act of expressing forgiveness to the transgressor (e.g., to alleviate negative feelings following a transgression).
Honesty	Telling the truth whenever it is appropriate to do so, or withholding an honest opinion to prevent upsetting others.
Generosity	Sharing, monetary giving, material giving, loans, and making things for others.
Formal Kindness	A premeditated act of kindness, (often collective, involving more than one individual), such as fundraising for charity or volunteering.

Figure 1.1, these psychological processes formed four distinct themes (other-focused, self-focused, relationship-focused, and non-autonomous).

Other-focused goals are those that are driven by a desire to improve another person's physical or emotional state and were, by far, most frequently spoken about by all the participants. They were often, but not always, linked with the situational trigger (where one exists). For example, emotional distress may trigger a goal to relieve that distress which, in turn, may stimulate emotional support (the kind act). This is a relatively simplistic example though; other-focused reasoning can also occur in the absence of need, and can drive any one of the kindness types shown in Table 1.2. For instance, a compliment (the kind act) may be given to make someone feel good (the goal) but it is not a prerequisite that the recipient feels bad, or is in need, before the kind act occurs.

Self-focused goals include examples such as hoping to improve one's social standing, feeling good about oneself, or relieving feelings of guilt. Here, a participant describes how these goals often occur alongside other-focused goals, rather than in isolation: "...*thinking about like how you can make somebody else happy as well as making yourself happy*," [Female, Year 10].

In the case of relationship-focused goals, it is not the individuals that benefit per se, but the quality of the interactions between them. Here, the goal may be to initiate, maintain, or repair a friendship, for example. One participant compared relationship-focused kindness with an egg timer that is "*draining away and you keep topping it up, making sure that it doesn't run out [...] so you're keeping your friendship or whatever type of relationship going*" [Female, Year 7]. Any act could be driven by this goal but

behaviours that are triggered by a relationship issue (e.g., forgiveness) may be particularly likely to have this kind of goal.

The fourth theme relates to acts of kindness that are non-autonomous. This reflects acts that are not intrinsically driven, such as when adhering to school rules. There was a consensus that this is a “*slightly different*” [Male, Year 10] construct to kindness because “*you might feel obliged to do things for others [...] it’s more like a chore.*” The participants noted that this type of act is less likely to feel good. Similarly, participants felt that kindnesses entirely driven by self-interest (in the absence of other-focused goals) are not ‘real’ kindness: “*sometimes people are doing it in a fake way*” [Female, Year 10]. This further demonstrates participants’ understanding of kindness as a multifaceted concept; the behaviour cannot be truly kind, nor is it likely to benefit one’s well-being, without the prosocial psychological processes that drive it.

Situational triggers of kindness included five distinct themes (see Figure 1.1), three of which are focused on the needs of other people, specifically emotional, instrumental, and health-related needs. Examples of an act triggered by a health-related need may include raising money for someone with cancer, or helping someone to stop smoking: “*I helped my dad, because my dad used to smoke [...] I guided him to do the right thing and he actually did stop which is really good*” [Male, Year 7]. The notion that kindness occurs in the presence of need is a commonly occurring discourse within the existing literature (Smetana et al. 2009). However, the remaining three themes refer to situations where a recipient’s need is *not* a prominent factor. Participants described situations in which a recipient’s positive (or neutral) life events may trigger kind acts. For example, a recent engagement or news of an achievement can stimulate the act of proactive support in others: “*I won an award and one of my friend text me the night that I won saying, ‘Well done’ [...] even though he won a prize, he was putting me before*

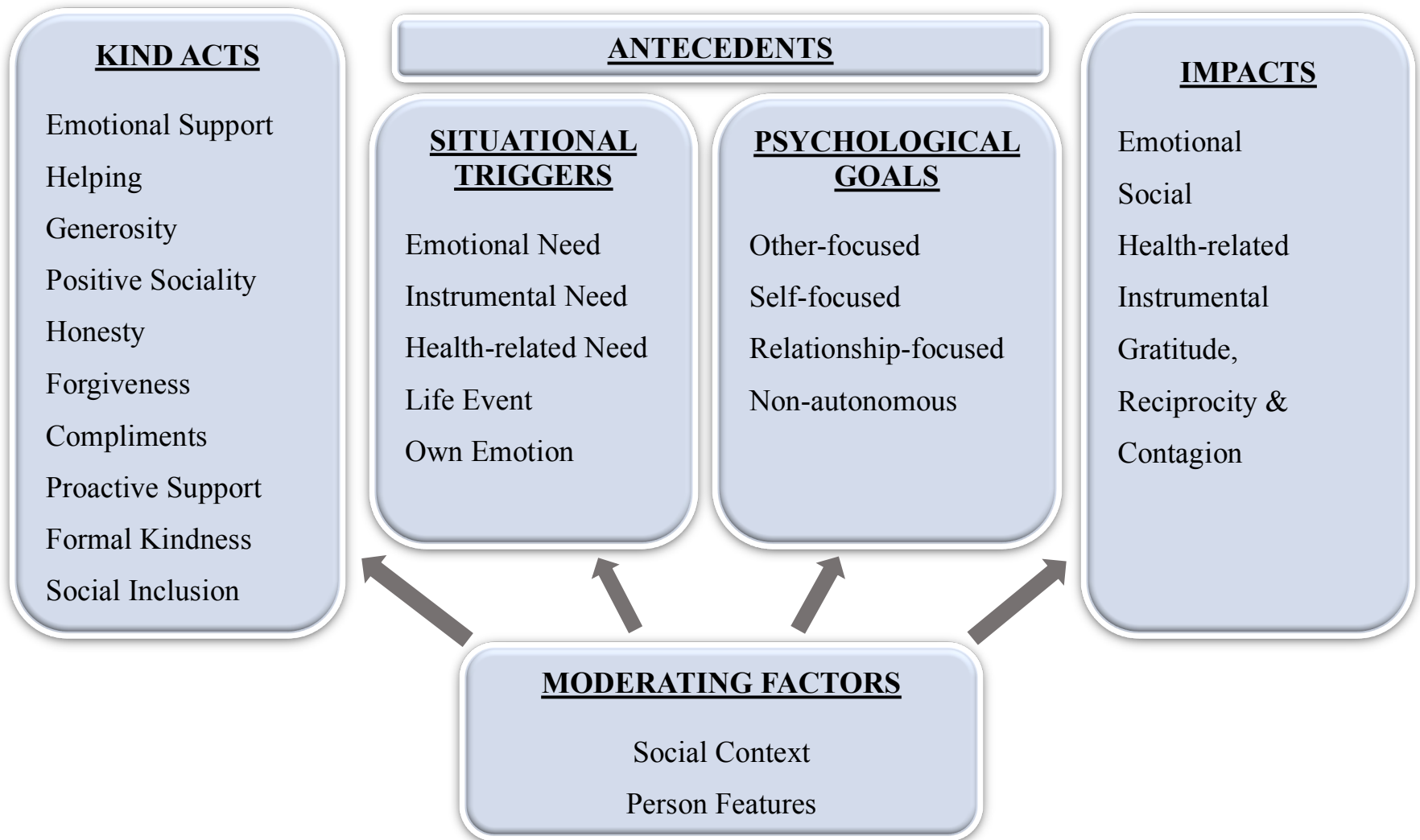


Figure 1.1: Conceptual grouping of 27 themes into five over-arching categories

him” [Male, Year 7]. The young people also described instances when one’s own emotion can spark kindness. For example, feeling in a positive mood can promote any of the kindness types listed in Table 1.2, although it may be more influential in the context of everyday behaviours such as positive sociality, and complimenting. Other emotional triggers can include guilt or gratitude. Note that situational triggers do not always occur in isolation. Here, a participant describes needs-based and emotional triggers occurring simultaneously:

I feel a bit like guilty in myself as well if I see other people like not as like happy as me [...] Like when you see homeless people [...] the other day I was gonna go and buy a snack after school [...] you see the people outside and you feel really guilty about just going and wasting money. So you sort of want to help them. [Female, Year 10]

Notably, the participants stressed that kindness can sometimes happen without a specific situational trigger, labelled as ‘No Trigger’ in Figure 1.1, *“like smiling at people, they don’t necessarily need to be crying,”* [Male, Year 10]. Actions that apply here may include, but not be exclusive to, positive sociality or generosity.

Impacts of Kind Behaviour

The participants identified five distinct outcomes of kindness (see Figure 1.1) and, as predicted, there was a consensus that some of these impacts can affect not only the recipient, but also the giver, and those in the surrounding social context.

The types of outcomes reported by participants differed according to whether the benefit was specific to the recipient, the giver, or shared between giver, receiver and others. Often, participants spoke about short- and long-term instrumental and physical health-related benefits, and these outcomes were deemed specific to the recipient of

kindness. Typically, they were concretely tied to the recipient's needs (e.g., offering a seat to someone less physically able). Participants felt that as a general rule, the recipient of kindness is always a beneficiary.

In the context of emotional outcomes, however, there was a consensus that the giver can *also* experience positive effects, such as increased levels of confidence, joy, or pride. *"Sometimes without realising it, you only realise afterwards, that that's probably made you more happy than them, even though you're being kind ... it's just made you really happy. It's made you feel good"* [Male, Year 7]. *"...they're feeling positive views about themselves and it just makes you feel more confident and that people do appreciate it"* [Female, Year 10]. Relatedly, an awareness of having made a positive impact can lead to feelings of fulfilment and feeling like a good person: *"If you help someone it makes you feel good coz it makes you feel like you're a good person"* [Female, Year 7]; *"it makes you feel better as a person, it makes you feel kinder, and more complete"* [Male, Year 7]. The impact that kindness has on relationships was also spoken about as a shared benefit between giver and receiver: *"...we became really good friends ... kindness like pulls people together"* [Female, Year 7]; *"you feel a bond if you're kind to them"* [Female, Year 7].

Finally, the adolescents spoke about the wider impacts of kindness (beyond the dyadic interaction). Feelings of gratitude were discussed as both an impact and a trigger of kind actions, closely related to and often influencing, instances of reciprocity and behavioural contagion. *"If you do something then they're like, 'Oh, that's nice, they didn't need to do that, I should do that.' And they pass it on. It's like, I dunno, contagious isn't it? It's like a cycle"* [Male, Year 10]. Expressions of gratitude were also spoken of as acts of kindness if they had a kind motivation. Participants stressed the importance of gratitude for well-being effects; where the recipient does not show

gratitude, being kind is less likely to feel good: *“it could make you quite sad if you’re being kind and [they’re] not giving the kindness back”* [Female, Year 10]. In contrast, when gratitude is expressed to the giver, it can promote positive emotional outcomes for them: *“...They actually show a lot of appreciation [...] you feel a bit better about it”* [Female, Yr10].

Moderating Factors

In line with our aims, the participants identified a range of social and psychological factors that can influence the way in which kindness is enacted, intended, or received, in addition to those referred to in the categories described above. These fell into two inter-related themes, concerning the social situation on the one hand (social context), and the giver’s individual competencies, states, or traits on the other (person features).

Beginning with the social context, aspects of the dyadic relationship (between the giver and receiver of kindness), particularly the level of relatedness, and the relationship history, were considered highly influential. For example, a negative history, such as bullying, could make kindness feel *“kind of strange, so you don’t necessarily give the kindness back,”* [Female, Year 10] and being kind to strangers may feel more extraordinary than to close relatives because *“no one’s expecting you to do it”* [Female, Year 10], sometimes leading to an increased emotional impact for the giver: *“I think you feel better about it [...] because when you’re kind to strangers you don’t have to do it”* [Female, Year 10]. However, some participants did point out the age-related difficulties in being kind to unknown others, as it is often inappropriate to approach strangers.

Participants also identified challenges in evaluating kindness, such that the giver may think they're being kind but the recipient might not. The adolescents linked this with a giver's ability to assess a person's need and anticipate their reaction, and is therefore associated with their knowledge of (or relatedness to) the particular recipient (social context). However, they also felt that individual differences in person features – such as the ability to use mentalizing skills or empathy – are relevant:

[...] see what it would be like to be them and see the pain and the anger they're going through, so then you could really understand what they need and what they like and how to help them properly. Because sometimes when you're helping somebody [...] you sort of miss the objective of what they really need [...] So maybe if you just stop and see what they really need, like their priority, that can be quite helpful. [Male, Year 7]

Participants noted that these difficulties in evaluating kindness can sometimes lead to negative emotional consequences for the recipient, or a reluctance to engage with kindness from the giver.

A giver's life experiences were also considered an important person feature, particularly in needs-based situations where the giver is better able to empathise, or be more motivated to help, because they have experienced similar needs to those of the recipient. Likewise, positive life experiences can motivate one to pay-it-forward, passing the kindness onto others. This is linked with the impact of reciprocity and contagion: *"it can make them be kinder to other people as well because they'll be like, 'I need to do something else,'"* [Female, Year 10]. Other experience-specific knowledge

can also facilitate kindness in particular circumstances, such as knowing the way around school when someone is lost.

Some of the discussions implied that certain aspects of emotional well-being may be required in order for one to fully engage with kindness. A few participants mentioned that confidence is sometimes needed in order to go through with a kind act, *“coz you’re brave to go up to someone and actually be kind to them,”* [Female, Year 10]. Other participants stated that it can be quite difficult to be kind if a giver is feeling in a low mood, because *“if you’re like feeling sorry for yourself then you’re not looking out towards other people, you’re just staying in your shell and stuff,”* [Male, Year 10] or is struggling with social anxiety, making them *“not want to necessarily talk to a new person,”* [Female, Year 10].

Discussion

Participants identified ten distinct types of kind behaviour and provided a multifaceted definition of the construct, including both behavioural and motivational components. Participants made detailed assessments, illuminating situational triggers and psychological goals that contribute to enactments of kindness. The adolescents were also able to make direct links between kindness and numerous social and psychological outcomes, for both the giver and the recipient, as well as the wider community. Furthermore, they initiated insightful discussions about the complexities of kindness in everyday life, recognising that social and psychological aspects of life can influence whether kindness occurs, but also the extent to which it has a positive effect.

Motivational and Behavioural Dimensions of Kindness

Participants provided substantial depth about the motivational component of kindness. Consistent with other qualitative research (Bergin, Tally, & Hamer, 2003;

Binfet & Gaertner, 2015), they identified a wide range of behavioural examples, such as social inclusion, complimenting, forgiveness, honesty, proactive support, and positive sociality, that went beyond those primarily referred to in prosocial research with youth. In contrast, developmental research is still predominantly focused on a smaller range of prosocial behaviours, typically sharing, helping, and comforting (Dunfield, 2014). Unsurprisingly, some of these behaviours (e.g., forgiveness) had not been previously reported by younger children (Binfet & Gaertner, 2015), suggesting that adolescents have a more sophisticated understanding of kindness. Further qualitative research would clarify whether the types of behaviour identified here are meaningful across different age groups. There were also subtle differences between the behaviours reported here, and those described as ‘prosocial behaviour’ by adolescents of another study (Bergin et al. 2003). This positions kindness as distinct from positive social behaviour more generally and reiterates the importance of studying kindness as a distinct construct with a particular motivational stance. Typically, developmental research is focused more broadly on prosocial behaviour. If researchers intend to assess and promote kindness in young people, then research must direct its focus to include the range of behaviours that are salient to the specific age group.

Importantly, participant utterances suggest that the link between behaviour and motivation cannot be severed; kindness is kindness because of the interplay between the act and the goal that drives it. In other words, it is possible to *act* kindly but not *be* kind, emphasised by participants’ rejection of prosocial acts that are driven by self-interest or are not autonomous. Participants’ repeated reference to other’s emotional states suggests that other-oriented reasoning is a prominent aspect of kindness. This went beyond merely comforting others, a behaviour that is commonly researched in developmental science (Dunfield, 2014), because the promotion of positive emotion in

others is not limited to needs-based situations. Participants also emphasised the initiation and maintenance of social relationships in line with younger children who considered social goals as a key part of kindness (Binfet & Gaertner, 2015). Researchers must therefore consider the importance of an autonomous orientation, interpersonal relationships, and other-focused goals in kindness research and interventions with adolescents.

Facilitators and Barriers of Kindness

The adolescents also demonstrated an awareness of factors that can be barriers and facilitators of kindness. This data provides evidence that adolescents recognise mentalizing skills as important prerequisites for successful enactments of kindness and that a person's need can influence kindness, often as a result of triggering an empathic response. Although participants recognised empathy as a facilitator of kindness, they stressed that unfamiliar social contexts, such as when specific personal experience or social knowledge is lacking, can make empathising very challenging. This complex interplay between mentalizing skills and social experience warrants further systematic investigation as it seems that mentalizing skills must be paired with specific social knowledge in order to facilitate confident enactments of kindness in youth. This study therefore provides novel, qualitative evidence of adolescents' awareness of the complex interactions between mentalizing skills, kindness, and social contexts and is in line with experimental research that empathy and perspective-taking are important developmental antecedents of prosociality (Sahdra et al. 2015). The quality of relationship between giver and recipient was also identified as influential. Participants noted that it is more difficult to be kind towards those who have been unkind in the past, or with whom they do not get on well, supporting evidence that prosociality becomes more selective in adolescence (e.g., Moore, 2009). In relationships with a negative history, feelings of

gratitude and reciprocity are therefore likely to be in short supply, creating a potential barrier to future kindnesses. However, where gratitude is present, it was viewed to promote positive outcomes of kindness. Gratitude should therefore be an important consideration within kindness research.

Participants also identified state emotions that can influence kind behaviour. Broadly, positive mood states were thought to facilitate kind acts, whereas negative mood states were thought to hinder them. Participants felt that attending to other people's emotions is challenging when one is experiencing negative affect because self-focus tends to be exaggerated. Indeed, research has identified that self-transcendent values (caring for people and entities outside of oneself) are associated with kind behaviours (Dambrun & Ricard, 2011) and positively correlated with numerous aspects of well-being, including hope, purpose in life, and affect balance (Coward, 1996). A degree of emotion regulation or baseline well-being may therefore be required for a young person to successfully engage with kindness. These are important considerations for researchers investigating kindness-based well-being interventions.

Kindness as a Pathway to Well-being

On the other hand, participants identified numerous well-being benefits of being kind, in line with adult evidence that being kind has a positive effect on a giver's well-being (e.g., O'Connell et al. 2016). Much like the existing literature, the participants reported numerous positive outcomes of kindness, including happiness (Kasser, 2005); improved self-confidence or a sense of competence (Martela & Ryan, 2015); and better social relationships (Layous et al. 2012). Participant utterances also support the theory of a positive feedback loop between feeling happy and being kind (Aknin et al. 2012) and provide novel evidence that adolescents have an understanding of contagion effects, gratitude and reciprocity (Jordan et al. 2013; Tsvetkova & Macy, 2014). Together, these

findings warrant a much closer examination of kindness-based well-being interventions for younger populations, particularly in school settings where opportunities for contagion and reciprocity may be in abundance.

Current research has yet to investigate the factors that moderate the effectiveness of kindness interventions for adolescents. Prior research with adults has found that kindness to close social ties has stronger effects than to weak social ties (Aknin et al. 2011) but the participants of this study note that kindness to strangers can have a bigger impact on happiness than being kind to family members. Autonomy is also shown to enhance the beneficial impact of kindness in adults (Weinstein & Ryan, 2010), a finding that is consistent with participant responses in this study. Other influential factors, such as baseline well-being and self-transcendent values also warrant investigation, as discussed above. Systematic research investigating the moderators of intervention success would be a valuable addition to current literature with this age group.

Limitations and future directions

Despite the unique understanding this study has provided, it is important to recognise that these findings cannot be generalised to all people of this age. A larger study, involving a range of different youth groups would allow us to see whether conceptions of kindness differ across this age group (for example, by gender, ethnicity, or economic status; see Eisenberg et al. 2006; Trommsdorff, Friedlmeier, & Mayer, 2007). Moreover, the discussion questions asked participants to discuss kindness but did not specify that the kindnesses should be those that are enacted by people of their own age. Therefore, their descriptions represent their knowledge and understanding of kindness, but not necessarily their own proclivity to behave in this way. Future research would benefit from further qualitative investigation into specific kindnesses that young people actually engage with as understanding does not necessarily reflect capacity to

act. Some examples may be particularly more common in older adolescents (or indeed adults) than younger teens, such as formal kindness, or kindness directed towards strangers (Eisenberg et al. 2006). Furthermore, the qualitative nature of this research meant that it was vulnerable to researcher bias in the data analysis and interpretation. Steps were taken to minimise this risk, including frequent checks across both authors to ensure the coding framework reflected the raw data. Even so, researcher bias in the design and analysis of the research could mean that some conceptions of kindness may not have been identified in this study and the findings should not be considered exhaustive.

Although this research provides unique evidence that young people are aware of and have experienced the well-being benefits of kindness, these results do not in themselves show that fostering kindness will improve well-being for adolescents. One study has tested this relationship in youth (Layous et al. 2012). School students, aged nine to 11 years, were prompted to engage with three kind acts per week for four weeks. Promising results showed that participants significantly improved in positive affect and peer acceptance (Layous et al. 2012) but research is still in its infancy. Future research should test systematically the effects of kindness on well-being outcomes, incorporating the findings from the current study in order to design interventions that include age-appropriate activities and to test relevant mechanisms. Adolescents may benefit from interventions that include guidance on how to employ empathy skills, for example. Similarly, interventions would likely be strengthened by including examples of kind behaviour that are specifically relevant to the age of the youths concerned. Kindness-based interventions that incorporate gratitude practice may also provide positive results. Indeed, prior research has shown that interventions are more successful if participants practice gratitude before kindness (Layous, Lee, Choi, & Lyubomirsky, 2013). Future

studies may also consider the effects of kindness within different social contexts, such as with close or distant recipients, a factor that moderates well-being in adults (e.g., Aknin, Sandstrom, Dunn, & Norton, 2011). In sum, the present work extends our understanding of kindness in adolescents and shows that they make direct links between kindness and well-being. The findings have important implications for the design of future research in this area such that the research, and its applications, are relevant and meaningful to youth populations.

Paper 2

The Impact of a Kindness-based Reflective Writing Task on Adolescent Well-being

Abstract

There is growing evidence, mainly from research with adult populations, that being kind predicts increased well-being, including greater positive affect and life satisfaction.

Little is known about the nature and extent of such impacts of kindness in adolescence, an important period for the development of relevant value systems and moral reasoning, as well as mental health problems and positive well-being. The current study tested experimentally the impact of a kindness-based reflective writing task on aspects of well-being in 350 students aged 11-12 and 14-15 years. Participants in the experimental group were asked to remember and write about a recent experience of being kind and were asked to either write about a needs-prompted kindness (i.e. when someone was upset or in need of help) or an unprompted kindness. They were also asked to either think of a familiar or an unfamiliar recipient. The control group were asked to write about a recent experience of spending time with others. When compared with the control group, there were no main effects of the kindness task on subjective well-being. However, participants in the kindness group were more likely to give higher ratings for aspects of eudaimonia when recalling their experiences. Moreover, the kindness task was found to have a significant indirect effect on increased positive affect via the greater feelings of self-transcendent attention and pride associated with their recalled experiences. Results varied according to the age of the students and whether or not the kindness was needs-prompted. Implications for school-based interventions and characterizations of kindness are discussed.

Key words: Kindness, Prosocial behaviour, Well-being, Adolescence, Interventions

The Impact of a Kindness-based Reflective Writing Task on Adolescent Well-being

Accumulating evidence suggests that kindness may promote well-being for the giver, particularly subjective well-being (SWB) indicators (i.e., positive affect and life satisfaction; Dunn, Aknin, & Norton, 2014). Given concerns about declining levels of well-being during adolescence (McFall, 2012; Taggart, Lee, & McDonald, 2014), kindness could be a potentially important focus for school-based programmes designed to foster social and emotional development (Binfet, 2015; Helliwell, Layard, & Sachs, 2015). Adolescence is thought to be a period of heightened plasticity with respect to developing healthy psychosocial functioning and is therefore an opportune time to intervene (Roeser & Pinela, 2014). However, very little is known about the effects of kindness on well-being outcomes in this age group. The current study was conducted in secondary schools to determine whether a kindness-based reflective writing task would predict higher rates of SWB in adolescents and whether eudaimonic functions of kindness would mediate these changes.

The Impact of Kindness on Subjective Well-being

There is a growing body of evidence that suggests kindness (prosocial acts that are driven by other-focussed motivation; Cotney & Banerjee, 2017) may promote positive aspects of SWB in adult populations (e.g., Chancellor, Margolis, Bao, & Lyubomirsky, 2017; Dunn, Aknin, & Norton, 2008). High levels of SWB are thought to include frequent positive (or pleasant) affect, infrequent negative (or unpleasant) affect and the judgment that life is satisfying (Diener, 1984; Tov & Lee, 2015). Many studies have identified a correlational link between being kind and reporting higher levels of positive affect and life satisfaction (Brethel-Haurwitz & Marsh, 2014; Dunn et al. 2014; Ugur, 2017). Interventions tend to encourage participants to engage with numerous acts

of kindness over a period of weeks (e.g., perform three kind acts per week for four weeks; Alden & Trew, 2013). A recent meta-analysis of 21 such studies revealed that, on average, kindness interventions have a small to moderate positive effect on SWB outcomes, compared with control groups (Curry et al. 2018). It is thought that this emotionally rewarding mechanism of kindness allows people to maintain prosociality over time, thus providing a potential method for sustainable changes in well-being (Aknin, Dunn, & Norton, 2012; Aknin, Van de Vondervoort, & Hamlin, 2018; Snippe et al. 2017).

However, very few studies have investigated the well-being benefits of kindness during childhood and adolescence although early research does provide some promising results. For example, toddlers have exhibited greater happiness when giving their own treats away than when receiving treats for themselves (Aknin, Hamlin, & Dunn, 2012; Wu, Zhang, Guo, & Gros-Louis, 2017) and nine- to 11-year-old students who were randomly assigned to do three kind acts per week over four weeks, showed greater increases in life satisfaction than those who were instructed to visit three places (Layous, Nelson, Oberle, Schonert-Reichl, & Lyubomirsky, 2012). To our knowledge, this is the only experimental study to have been conducted with school-aged participants but there is other evidence that supports an association. A large-scale survey study conducted with 10- to 18-year-olds revealed a positive correlation between generosity and happiness (Kasser, 2005) and teens have expressed that helping others is satisfying (Killen & Turiel, 1998). Moreover, a recent focus group study conducted with 11- to 15-year-olds showed that adolescents have experienced happiness as a direct result of being kind (Cotney & Banerjee, 2017). Given this evidence, we expect that adolescents are likely to experience positive emotions after writing about an act of kindness. Even so, randomised experimental studies are needed to properly unravel the

effects of kindness on well-being outcomes and no such studies exist with adolescent populations. The current study is, therefore, a necessary step towards understanding the potential value of kindness as a method for fostering well-being in this age group.

Eudaimonia as a Mediator of Kindness Effects

The mechanisms that underpin the links between kindness and SWB are currently unclear. Some authors argue that enactments of kindness are followed by an immediate “warm glow,” (characterised by feeling good; Andreoni, 1990) and that being kind therefore has inherent, direct effects on SWB (Martela & Ryan, 2015). We propose that kindness may have eudaimonic functions that, at least in part, explain *why* it increases SWB outcomes. Well-being is a multidimensional construct made up of both hedonia and eudaimonia (Delle Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2011; Donaldson, Dollwet, & Rao, 2015). SWB is the primary index of hedonia: pleasure attainment and pain avoidance (Ryan & Deci, 2001; Steger, Kashdan, & Oishi, 2008). Eudaimonic well-being, on the other hand, is an enduring state that is characterised by personal growth, fulfilment and contribution to the greater good (Steger et al. 2008; Waterman, 1993). Indicators include meaning or purpose in life, positive relationships, autonomy, competence, positive self-evaluation, and self-transcendence (Maslow, 1971; Ryan & Deci, 2001; Ryff & Keyes, 1995). To understand the impacts of kindness more clearly, research needs to include both subjective well-being outcomes and experiences of eudaimonia to unpick the complex mechanistic pathways. Uncovering the mechanisms of kindness is an important consideration for the success of kindness interventions as it will help to inform the design of kindness activities, as well as to help identify potential facilitators and barriers of successful kindness promotion.

Kindness is intimately related to eudaimonia, given that eudaimonia is thought to be achieved through engaging with value-driven behaviours that subsequently nurture personal growth and contribution to the greater good (Hallam et al. 2014; Huta & Ryan, 2010; Steger et al. 2008). Given this theoretical association between prosocial behaviours and eudaimonia, it is likely that acts of kindness will be rated as high on aspects of eudaimonia. Indeed, there is evidence that kindness is associated with a greater sense of meaning in life (a core indicator of eudaimonia) in adults (Klein, 2016), and adolescents have been shown to associate kindness with having a sense of purpose (Hill, Burrow, O'Dell, & Thornton, 2010; Schwartz, Keyl, Marcum, & Bode, 2009; Yang, Li, Fu, & Kou, 2017). Yet much of the literature in this area does not include eudaimonic indicators in its assessment of kindness interventions. Furthermore, if acts of kindness are likely to be characterised by eudaimonic experiences, then perhaps the links between being kind and feeling happy can be explained by aspects of eudaimonia associated with the kindness, such as positive self-evaluations, meaning in life, positive relationships, or self-transcendence.

The eudaimonic functions of kindness have not been identified, but some studies do provide support for our hypothesis. Research in this area is still in its infancy and is predominantly focussed on adult populations but it has begun to identify mechanisms that map onto conceptions of eudaimonia. For instance, positive self-evaluations are, by their very nature, eudaimonic experiences and are shown to mediate the link between being kind and feeling good in adults (Brown, Hoyer, & Nicholson, 2012; Martela & Ryan, 2016). Studies have also shown that autonomous kindnesses (i.e., voluntary and intrinsically motivated), compared with pressure-based acts (i.e., acts that are instructed, expected or dutiful), have a greater impact on SWB outcomes in adults (e.g., Gebauer, Riketta, Broemer, & Maio, 2008; Weinstein & Ryan, 2010) and toddlers (Wu et al.

2017). In a recent study, a sample of adolescents agree that autonomy is essential for successful acts of kindness (Cotney & Banerjee, 2017). Given that autonomous acts are intrinsically motivated, it is thought that they consequently result in more positive evaluations of oneself (e.g., self-efficacy, feelings of competence, self-esteem; Feng & Guo, 2017; Nelson et al. 2015). Relatedly, prosocial behaviour is positively associated with self-esteem in adolescence (e.g., Fu, Padilla-Walker, & Brown, 2017). It is possible then, that positive self-evaluation may be an explanatory mechanism of the links between kindness and well-being in adolescent populations, although specific investigations have not been conducted with this age group.

On the other hand, successful enactments of kindness may encourage self-transcendence (the tendency to care for, or focus on, entities outside of oneself; Schwartz, 1994). Self-transcendence is thought to be essential for higher states of well-being (Coward, 1996; Keyes & Annas, 2009; Maslow, 1971) whereas self-focussed attention is associated with negative affect and mental health problems (Mor & Winquist, 2002). Self-transcendent values are thought to promote prosociality (Caprara, Alessandri, & Eisenberg, 2012; Dambrun & Ricard, 2011; Piff, Dietze, Feinberg, Stancato, & Keltner, 2015; Sanderson & McQuilkin, 2017) and are also shown to moderate the effect of kindness on SWB, such that those with self-transcendent values are more likely to benefit (Hill & Howell, 2014). Likewise, the benefits of prosocial spending are shown to depend upon an other-focussed motivation and are mediated by feelings of morality (Wiwad & Akin, 2017). This has not been studied experimentally in adolescents, but in a recent qualitative study, 11- to 15-year-olds recognised the importance of other-focussed attention for acts of kindness (Cotney & Banerjee, 2017) and other-focussed strengths predict well-being over time (Gillham et al. 2011). Self-

transcendence may, therefore, play an important role in how kindness may increase mood and life satisfaction in this age group.

Methodological Considerations

Many experimental studies involve prolonged kindness practice over a period of weeks (e.g., Layous et al. 2012). In these studies, the tasks engineer new acts of kindness where the effects of *being* kind and *reflecting* on kindness are conflated. However, there is evidence that counting kindnesses over a period of weeks, rather than engaging in new acts, also has positive effects on well-being (Otake et al. 2006). Furthermore, loving-kindness meditation (where participants are encouraged simply to contemplate feelings of love and kindness towards others) results in increased self-transcendent attention and well-being (Roeser & Pinela, 2014). It is possible then, that recalling pre-existing acts of kindness may also increase well-being outcomes. Given this, there is a need to study the effects of a single memory of kindness in order to isolate the effect of *recalling* a previous act from doing a new act, as well as to identify whether a single kind occurrence, rather than prolonged practice, can have immediate effects on well-being in this age group. Furthermore, given that kindness interventions for adolescents are likely to be situated in the school context, it is important that kindness tasks are designed such that they can be delivered in a classroom to large numbers of students simultaneously. Indeed, some existing experimental paradigms, such as those conducted in a lab (e.g., Aknin, Hamlin, & Dunn, 2012) are limited in that they cannot be easily re-created in the classroom and are unlikely to provide a large sample size. Reflective tasks, where large numbers of students can engage with kind memories during class time may, therefore, be a practical method for promoting well-being in youth, if effective. This provides further rationale for employing classroom-based activities in order to situate the findings within a naturalistic setting.

In addition, a major obstacle to drawing conclusions about the effects of kindness in existing experimental work is that most intervention studies compare kindness with a neutral control condition that is not expected to promote well-being and is not inherently social (e.g., keeping track of daily activities; Alden & Trew, 2012). It is widely accepted that relatedness has positive implications for well-being across the life course (Brown & Larson, 2009; Olsson, McGee, Nada-Raja, & Williams, 2013) and giving to others is associated with feeling socially connected (Aknin, Dunn, Sandstrom, & Norton, 2013; Inagaki & Orehek, 2017). It is possible, then, that the effects of kindness are due to being social rather than the act of kindness itself. Indeed, many studies have shown that relatedness mediates the link between being kind and having better well-being (Aknin, Sandstrom, Dunn, & Norton, 2011; Brown et al. 2012; Jiang, Zeng, Zhang, & Wang, 2016; Yamaguchi et al. 2016). An experimental study conducted with adults has shown that kindness has positive effects on well-being, even when there is no face-to-face contact with the beneficiary (Martela & Ryan, 2016). These results are promising and suggest that well-being impacts are not merely the result of spending time with others. Indeed, a very recent study showed that a reflective kindness task (helping a stranger) was more effective than a reflective *social* task (going out with friends) at increasing positive affect (Midlarsky, Pirutinsky, Chakrabarti & Cohen, 2018). However, studies that test this differentiation are very rare and have not been conducted with youth samples. Given this, there is a need for research to explicitly include a *social* control task to test whether kindness has effects on well-being over and above simply being with other people. Therefore, participants could be asked to either reflect on a recent act of kindness or a recent social interaction to isolate the effects of kindness above and beyond general socialising.

The Present Study

Our main aim was to test the effect of a kindness-based reflective writing task on SWB (measured via self-reported affect and life satisfaction; Diener, 1984) in adolescents aged 11-12 and 14-15 years. This is the first study, to our knowledge, that has tested experimentally the effects of recalling kindness in these age groups. As noted above, there is a need to compare the effect of being kind with general socialising, so the current study included a social control task where participants were asked to reflect on spending time with others, whereas the experimental group recalled an act of kindness. Furthermore, the task involved reflecting on one single act, to isolate the effects of recalling a single kindness, as opposed to doing prolonged kindness practice. It was hypothesised that positive affect would increase significantly more in the kindness condition than in the control condition. No specific hypotheses were made with respect to life satisfaction as it is a more stable aspect of SWB that is more likely to be influenced by major or prolonged events than fleeting experiences (Pavot & Diener, 2008). Thus, it is unclear whether one very short positive activity would have any notable effects on this SWB outcome. The goal of promoting well-being has important implications for secondary schools: higher well-being in school students is associated with numerous desirable outcomes in the school setting, such as positive school climate and academic achievement (Dato & King, 2018; Suldo, Huebner, Savage, & Thalji, 2011). Furthermore, prosocial behaviour predicts higher academic achievement in adolescents across time (Gerbino et al. 2017). Yet given the sensitive period of development, it cannot be presumed that kindness interventions will have the same effects on well-being across the adolescent age range. We know from other research that the transition from late childhood through to adulthood contains significant shifts in self-transcendent moral reasoning and perspective-taking skills, and that these developments are associated with changing patterns of prosocial behaviour as well as

mental health and well-being (Eisenberg, Morris, McDaniel, & Spinrad, 2009). The age groups were therefore selected in order to test for age-related differences across the secondary school period.

A further aim was to test whether eudaimonic functions of the recalled acts of kindness mediate any changes in SWB from before to after the writing task, a novel investigation with this age group. Advancing this knowledge will help to guide the design of interventions intended to foster prosociality in adolescents, a period when the development of prosociality is highly sensitive. Students rated the eudaimonic functions of their memories according to six items: self-transcendent attention, meaning in life, social acceptance, social connection, feeling like a good person, and feeling proud. These aspects were selected based on theories of eudaimonia (Ryan & Deci, 2001; Ryff & Keyes, 1995; Maslow, 1971) in combination with adolescents' conceptions of kindness and its impacts (Cotney & Banerjee, 2017). It was hypothesised that the experiences reported in the kindness condition would receive higher eudaimonic ratings with respect to self-transcendent attention, meaning in life, and positive self-evaluations such as feeling like a good person or feeling proud of oneself. It was hypothesised, however, that social acceptance and social connection would not differ between the kindness condition and the control group given that the control task involved a social experience. It was expected that at least some of the eudaimonic ratings would mediate changes in SWB, given that all of these concepts have been previously considered in kindness research with adults (Hill & Howell, 2014; Klein, 2016; Martela & Ryan, 2015), but a lack of research with this age group meant that specific *a priori* predictions were not made here.

Authors have called for more research exploring the moderators of kindness effects (Curry et al. 2018; Lyubomirsky & Layous, 2013; Rowland & Curry, 2018), to

expand knowledge of what conditions are most effective for kindness-based well-being interventions. So, as a secondary aim, the current study tested whether the impact on well-being was moderated by the type of kindness enacted, with respect to a) whether the kindness was prompted by the need (e.g., distress) of the recipient (needs-prompted vs. unprompted) and b) the familiarity of the recipient (familiar vs. unfamiliar).

Kindness-based tasks have shown to be more effective for adults when the recipient is a close social connection (Aknin et al. 2011) but other studies have provided conflicting results (Rowland & Curry, 2018). Such research is still in its infancy and moderators have not been explored experimentally in adolescent samples. However, longitudinal research has shown that prosocial behaviour predicts self-esteem in adolescents if directed towards unfamiliar (but not familiar) recipients (Fu et al. 2017). Qualitative evidence shows that 11- to 15-year-olds are conscious that the needs and familiarity of the recipient can influence the enactments and effects of kindness (Cotney & Banerjee, 2017). Hence, these two activity-level moderators were selected for the current study. Given that there are gender differences in prosocial development during adolescence (Eisenberg et al. 2009), we also tested for moderation by gender. Moderation analyses were exploratory, so hypotheses were not formulated.

Method

Participants

Participants were 350 pupils attending UK secondary schools in year 7 (11-12 years; $n = 169$), and year 10 (14-15 years; $n = 181$). Participants were 52% male ($n = 180$) and 43% female ($n = 149$). 5% of participants did not disclose their gender ($n = 21$). Most participants reported their ethnicity as White British ($n = 261$; 74%). A further 53 participants reported other ethnic backgrounds (15%) and the remainder were

unsure or did not disclose ($n = 36$; 11%). Pupils were drawn from two mixed-gender, comprehensive secondary schools in England, situated in West Sussex. Compared with the national averages, both schools were larger than average in size. In both schools, most pupils were White British, and the percentage of pupils that speak English as a second language was below average. The intake for pupils entitled to free school meals was lower than average in both schools and the percentage of pupils with special educational needs was in line with the national average. Classes were selected to participate based on timetable availability. In total, 14 classes participated across the two schools and all pupils within these classes were invited.

Design

Participants were randomly assigned, within each classroom, to one of three kindness conditions in which they were instructed to vividly recall a time, over the previous few weeks, when they: ‘were kind to someone who was upset or in need of help’ (needs-prompted kindness), ‘were kind to someone who wasn’t upset or in need of help’ (unprompted kindness), or ‘spent their free time with another person/people’ (control). In each condition, half of the participants were instructed to think about someone they knew very well (familiar) and half were instructed to think about someone they had never met before (unfamiliar). In total, this resulted in six experimental groups: 3 (kindness condition: needs-prompted, unprompted, control) x 2 (recipient-familiarity condition: familiar, unfamiliar). All participants were asked to write down the memory in as much detail as possible. Sample sizes for each experimental condition are shown in Table 2.1. Participants completed measures of SWB before and after the experimental exercise and rated their specific recalled experiences on six aspects of eudaimonia at the end of the session. The eudaimonic ratings were completed at the end of the session in order to ensure that any changes in

the primary outcome of interest (subjective well-being) could not appear as an artefact of completing the eudaimonic ratings.

Measures

Subjective well-being. To measure affect, we employed the Positive and Negative Affect Schedule for Children, the shortened version (Ebesutani et al. 2012). This scale consisted of 10 items (joyful, miserable, cheerful, angry, happy, afraid, lively, scared, proud, and sad). Participants were asked to rate how much they were feeling each of these emotions ‘at this moment in time.’ All items were scored on a Likert scale of 1 to 5, from ‘very slightly or not at all,’ to ‘a little,’ ‘moderately,’ ‘quite a bit,’ or ‘extremely.’ Mean responses were used to calculate an overall score for both positive and negative affect. Internal consistency was $\alpha = .84$ for positive affect and $.75$ for negative affect.

Life satisfaction. To measure life satisfaction, we employed the Life Satisfaction Scale for Children (Gadermann, Schonert-Reichl, & Zumbo, 2010). This scale consisted of five statements about life satisfaction, such as ‘I am happy with my life,’ and ‘In most ways my life is close to the way I would want it to be.’ Participants were asked to rate how much they agreed with each statement based on how they were feeling ‘right now in this moment.’ Each item was scored on a Likert scale of 1 to 5, from ‘disagree a lot,’ through ‘disagree a little,’ ‘don’t agree or disagree,’ ‘agree a little,’ or ‘agree a lot.’ Mean responses were used to calculate an overall life satisfaction score. Internal consistency was $\alpha = .86$.

Eudaimonic experience. Pupils were asked to reflect on the memory they recalled by rating the experience according to how much it satisfied aspects of eudaimonia. The scale asked students to rate the extent to which the experience: “made

me pay attention to the other person's feelings" (self-transcendent attention)¹; "made me feel like a good person" (good person); "made me feel accepted by the other person" (social acceptance); "made me feel like my life has meaning" (meaning in life); "made me feel connected to the other person" (social connection); and "made me feel proud of myself" (proud of self). These items were constructed for the current study to measure eudaimonic functions of the kind act. They were selected based on prior evidence (as discussed above) that these eudaimonic aspects (meaning; positive self-evaluations; social relationships; self-transcendent attention) may be associated with kindness.

The pupils also rated how kind their behaviour in the memory they recalled was, in order to test whether the participants differentiated levels of kindness across the conditions. All seven items were scored on a Likert scale from 1 to 5, from 'very slightly or not at all,' through 'a little,' 'moderately,' 'quite a bit,' or 'extremely.'

Procedure

An information sheet was provided for all eligible students and their parents or guardians, two weeks before the experiment. During this time, parents were given an opportunity to 'opt out' if they did not want their child to participate. All students who provided written consent themselves took part in the study. No opt-out forms were returned by parents.

The sessions were led by the experimenter and were conducted with whole classes during lesson time. The experimenter introduced the study, read through the

¹ Note that participants were not instructed to pay attention to other people's feelings in any of the tasks. Thus, the self-transcendence measure cannot be considered circular. Given that individuals are likely to be paying attention to others during an act of kindness but may also do so during a social interaction, it is a reasonable hypothesis to test whether participants are more likely to rate themselves as having self-transcendent attention during a kind act than a social act. Adolescents are still developing self-transcendent moral reasoning, thus there is likely to be variability in the extent to which they pay attention to others when instructed to think about kindness.

information sheet and issued written consent forms to all students before beginning the experiment. Participants then reported their baseline SWB by completing the PANAS (Ebesutani et al. 2012) and the Life Satisfaction Scale (Gadermann et al. 2010). They were encouraged to think about how they ‘feel right now, in this very moment.’ A filler task, including visual puzzles such as ‘spot the difference’, was then completed for five minutes. This was designed to distract participants from the topic of SWB so that the kindness activity was not artificially linked to the well-being measures.

Following the filler task, each participant received one of the six experimental tasks, at random. All students were encouraged to read their instructions very carefully and to work independently; both a teacher and researcher were present at all times to ensure this. Students worked in silence throughout the session but could raise their hand to ask questions if they wished. These questions commonly reflected difficulties in remembering an experience that exactly matched the instructions. For instance, some students could not recall an example that was directed towards an unfamiliar recipient. If they struggled to think of an experience that exactly matched the instructions, they were encouraged to think of a memory that was ‘as close to the instructions as possible.’ Students were asked to re-live the memory in as much detail as they could before writing about it. The worksheets were provided by the experimenter and completed with a pen or pencil. All students, irrespective of condition, were instructed to write about the experience in as much detail as possible. They were prompted to think about where they were, why they were there, who was there, what they did, and what happened next. The task was designed to bring back naturalistic kind acts that the young people already perform in their day-to-day life.

Students were given as long as they needed to complete the writing task and then repeated the SWB measures immediately. They then reflected on the memory

again by completing the eudaimonic ratings. These were completed after the SWB measures to ensure that changes in SWB were not directly brought about by the mere act of completing the eudaimonia ratings. The final question asked them to rate how kind their behaviour in the memory was, and they answered demographic questions on gender and ethnicity. Students were debriefed and thanked for their time at the end of the session.

Analysis Plan

Before addressing the main research questions, preliminary analyses were conducted to check for gender differences on all scores using a mixed 3 (kindness condition: needs-prompted vs. unprompted vs. control) x 2 (recipient-familiarity condition: familiar vs. unfamiliar) x 2 (gender: male vs. female) x 2 (time: pre vs. post) ANOVA with time as the repeated measures. We also tested for differences in kindness ratings of the recollected acts across conditions using a 3 (kindness condition: needs-prompted vs. unprompted vs. control) x 2 (recipient-familiarity condition: familiar vs. unfamiliar) x 2 (age: 11-12 years vs. 14-15 years) between-groups ANOVA.

For our main analysis, we tested effects of experimental condition on each of the SWB outcomes² using a mixed-design ANOVA: 3 (kindness condition: needs-prompted vs. unprompted vs. control) x 2 (recipient-familiarity condition: familiar vs. unfamiliar) x 2 (age: 11-12 years vs. 14-15 years) x 2 (time: pre vs. post), with repeated measures on the final factor. This analysis also tested for interactions of kindness condition with age group and recipient-familiarity. The key focus was on interactions between time and condition, given the hypothesis that changes in SWB would be more pronounced for

² These analyses included multiple-hypothesis testing. Thus, any significant effects of the ANOVA analyses should be taken with caution due to an increased likelihood of family-wise error rate. Note that the final model includes all dependent variables in a single analysis, overcoming this limitation.

those recalling acts of kindness than for those recalling more generic experiences of socialising with others.

We also sought to test whether the experiences recalled in the kindness conditions (compared to the control condition) were more likely to receive higher eudaimonic ratings, and in turn whether kindness condition had indirect effects on changes in SWB *via* the eudaimonic ratings provided for the specific recalled experience. The kindness condition was dummy coded with control as the reference group and the two dummy variables were entered as predictors in a multi-group SEM using Mplus 6. It should be noted that although the eudaimonic ratings were completed at the end of the session (to ensure the mere fact of completing these ratings could not influence the SWB ratings), they were viewed in our analysis as potential mediators. Specifically, we anticipated that the experiences recalled in the kindness conditions, compared to the control condition, would have been rated more highly on eudaimonic functions, and that these eudaimonic functions of the recalled experiences would in turn predict changes in SWB. Finally, moderation by age group was tested by constraining paths to be equal for the younger and older students and then evaluating deterioration of fit.³

Participants were considered eligible for each analysis if they had followed the task instructions correctly. Two researchers checked the written responses to ensure that all participants had completed the correct writing task for their experimental condition. The ANOVA analyses required participants to have written about a situation matching the assigned kindness condition (needs-prompted, unprompted, or control) and the assigned recipient-familiarity condition (familiar or unfamiliar). Table 2.2 shows that

³ Multilevel modelling was not appropriate for this study due to an insufficient high-level sample size (7 classrooms per experimental group); small sample sizes at the higher-level lead to biased estimates and any conclusions would therefore have to be considered with caution, particularly where multiple measures are included in the design (McNeish & Stapleton, 2016).

270 (77%) participants had verified responses, meaning that a total of 80 participants were excluded from these analyses. The most common difficulty for participants was recalling events that specifically involved unfamiliar recipients (68% of excluded participants). For the multigroup mediation analysis, we included those who had written about a situation matching the assigned kindness condition, regardless of recipient-familiarity given that the familiarity variable was excluded from this analysis (Table 2.3)⁴. Approximately 86-88% of participants in each condition recalled an event matching the instructions. A total of 46 participants were therefore excluded from this analysis.

Results

Preliminary Analyses

Preliminary analysis showed significant main effects of gender on life satisfaction (LS), $F(1, 241) = 3.71, p = .055$; positive affect (PA), $F(1, 243) = 13.83, p < .001$; and negative affect (NA), $F(1, 243) = 5.53, p = .019$. Compared with females, male participants reported higher scores for both LS and PA, and lower scores for NA. However, in a mixed ANOVA, gender did not interact with time or condition (all p 's $> .05$) and was therefore excluded from subsequent analyses.

We predicted that kindness ratings would differ across the three kindness conditions, such that participants assigned to either of the kindness conditions would report higher levels of kindness than those in the control condition. We tested this using a 3 (kindness condition: needs-prompted vs. unprompted vs. control) x 2 (recipient-familiarity condition: familiar vs. unfamiliar) x 2 (age: 11-12 years vs. 14-15 years)

⁴ Analyses were also conducted using the total sample, including participants who were judged to have followed the instructions incorrectly. Results for the ANOVA analyses and the overall mediation model were very similar.

between-groups ANOVA. The main effect of kindness condition was non-significant $F(2,227) = 1.43, p = .243$. However, there was a significant interaction between age and kindness condition, $F(2,227) = 3.07, p = .048$. Older pupils gave higher kindness ratings if they belonged to a kindness condition rather than a control condition, but younger pupils did not. The hypothesis was therefore supported for older pupils, $F(2,227) =$

Table 2.4

Total sample size across age and condition

	Year 7			Year 10			Total
	Familiar	Unfamiliar	Total	Familiar	Unfamiliar	Total	
Needs-	35	25	60	30	34	64	124
prompted	26	31	57	30	28	58	115
Unprompted	30	22	52	27	32	59	111
Control							
Total	91	78	169	87	94	181	350

Table 5.2

Number and percentage of eligible participants for ANOVA analyses (verified in both kindness and recipient familiarity conditions) by age group

	Year 7		Year 10		Total
	N (%)		N (%)		N (%)
	Familiar	Unfamiliar	Familiar	Unfamiliar	
Needs-	30	14	26	18	88
prompted	(86%)	(56%)	(87%)	(53%)	(71%)
	22	20	25	23	90
Unprompted	(85%)	(65%)	(83%)	(82%)	(78%)
	26	20	23	23	92
Control	(87%)	(91%)	(85%)	(72%)	(83%)
Total	78	54	74	64	270
	(86%)	(69%)	(85%)	(68%)	(77%)

Table 2.6

Number and percentage of eligible participants for multi-group mediation modelling (verified in kindness condition) by age group

	Year 7	Year 10	Total
	N (%)	N (%)	N (%)
Needs-prompted	52 (87%)	57 (89%)	109 (88%)
Unprompted	48 (84%)	51 (88%)	99 (88%)
Control	47 (90%)	49 (83%)	96 (86%)
Total	147 (87%)	157 (87%)	304 (87%)

4.38, $p = .014$, but not for younger pupils, $F(2,227) = .507$, $p = .603$. There was also a significant main effect of age on kindness ratings, $F(1,227) = 21.70$, $p < .001$, with 11- to 12-year-olds reporting higher kindness ratings overall. Means and standard deviations are shown in Table 2.4. Given this age-related difference in kindness ratings, all subsequent analyses included age as a moderator. Recipient-familiarity did not have any main or interaction effects on kindness ratings (all p 's $> .05$).

Table 2.7

Mean kindness rating across age and experimental condition

	Kindness Rating		
	M (SD)		
	Year 7	Year 10	Total
Needs-prompted	4.30 (.66)	3.90 (.85)	4.12 (.79)
Unprompted	4.14 (.68)	3.93 (.68)	4.02 (.69)
Control	4.30 (.71)	3.49 (.90)	3.86 (.91)
Total	4.25 (.68)	3.77 (.83)	4.00 (.80)

Table 2.8: *Pre and post mean and standard deviation for SWB measures across conditions and age group*

	Year 7 M (SD)						Year 10 M (SD)						Total M (SD)		
	Familiar		Unfamiliar		Total		Familiar		Unfamiliar		Total		Pre	Post	N
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post			
LS:															
Needs-prompted	3.72 (.90)	3.62 (.97)	3.68 (.74)	3.63 (.92)	3.71 (.84)	3.62 (.95)	3.56 (.95)	3.56 (.96)	3.59 (.93)	3.68 (.95)	3.57 (.93)	3.61 (.94)	3.64 (.89)	3.62 (.94)	86
Unprompted	3.65 (1.09)	3.66 (1.19)	3.67 (1.04)	3.72 (1.07)	3.66 (1.05)	3.69 (1.12)	3.39 (.77)	3.18 (.79)	3.44 (.90)	3.44 (.96)	3.42 (.83)	3.31 (.88)	3.53 (.94)	3.49 (1.01)	89
Control	3.84 (.78)	3.93 (.84)	4.08 (.77)	4.15 (.78)	3.93 (.78)	3.30 (.99)	3.26 (1.07)	3.08 (1.17)	3.43 (.75)	3.51 (.74)	3.34 (.92)	3.51 (.74)	3.62 (.89)	3.64 (.98)	88
Total	3.74 (.91)	3.74 (.10)	3.80 (.89)	3.84 (.95)	3.76 (.90)	3.77 (.98)	3.41 (.93)	3.28 (.99)	3.48 (.85)	3.53 (.88)	3.44 (.89)	3.40 (.94)	3.60 (.91)	3.58 (.98)	263
PA:															
Needs-prompted	3.04 (.90)	3.02 (1.01)	3.37 (.07)	3.23 (.81)	3.14 (.85)	3.08 (.95)	2.58 (.87)	2.61 (1.16)	2.98 (.89)	2.91 (1.07)	2.74 (.89)	2.73 (1.12)	2.94 (.89)	2.91 (1.05)	87
Unprompted	2.95 (.74)	2.91 (.92)	3.10 (.77)	3.00 (.86)	3.02 (.75)	2.95 (.88)	2.84 (.82)	2.68 (.85)	2.70 (.82)	2.66 (.93)	2.77 (.82)	2.67 (.88)	2.98 (.79)	2.80 (.88)	89
Control	3.15 (.84)	3.12 (1.08)	3.35 (.86)	3.32 (.89)	3.23 (.84)	3.20 (1.00)	2.82 (.90)	2.66 (.93)	2.80 (.72)	2.80 (.79)	2.81 (.81)	2.73 (.86)	3.01 (.84)	2.96 (.95)	89
Total	3.05 (.83)	3.02 (1.00)	3.26 (.78)	3.17 (.85)	3.13 (.81)	3.08 (.94)	2.74 (.86)	2.65 (.98)	2.82 (.80)	2.78 (.98)	2.77 (.83)	2.71 (.95)	2.94 (.84)	2.88 (.96)	265
NA:															
Needs-prompted	1.52 (.56)	1.52 (.66)	1.43 (.42)	1.29 (.27)	1.49 (.52)	1.45 (.57)	1.45 (.48)	1.42 (.58)	1.23 (.32)	1.20 (.28)	1.36 (.43)	1.33 (.49)	1.43 (.48)	1.39 (.53)	87
Unprompted	1.26 (.41)	1.31 (.48)	1.52 (.83)	1.57 (1.03)	1.39 (.65)	1.43 (.79)	1.53 (.70)	1.51 (.74)	1.47 (.60)	1.37 (.53)	1.50 (.65)	1.44 (.64)	1.45 (.64)	1.44 (.71)	89
Control	1.38 (.42)	1.31 (.46)	1.15 (.21)	1.18 (.22)	1.29 (.37)	1.26 (.39)	1.71 (.71)	1.63 (.74)	1.55 (.58)	1.27 (.36)	1.63 (.65)	1.45 (.61)	1.46 (.55)	1.36 (.52)	89
Total	1.40 (.48)	1.39 (.55)	1.37 (.59)	1.37 (.69)	1.38 (.53)	1.38 (.61)	1.56 (.63)	1.52 (.68)	1.43 (.54)	1.29 (.41)	1.50 (.59)	1.41 (.58)	1.45 (.56)	1.40 (.59)	265

Overall Effect of Writing Task on Subjective Well-being

We expected that PA, but not NA or LS would improve from before to after the writing task and that belonging to a kindness condition would lead to larger improvements in PA than belonging to the control condition. We tested this hypothesis using a mixed 3 (kindness condition: needs-prompted vs. unprompted vs. control) x 2 (recipient-familiarity condition: familiar vs. unfamiliar) x 2 (age: 11-12 years vs. 14-15 years) x 2 (time: pre vs. post) ANOVA, with repeated measures on the final factor. This analysis also allowed us to explore interaction effects of kindness with age and recipient-familiarity. Means and standard deviations for pre and post scores across condition and age can be viewed in Table 2.5.

Contrary to our hypotheses, there were no main effects of kindness condition on SWB outcomes. There was a significant main effect of time on PA, $F(1, 253) = 3.93, p = .049$, showing a small decrease in PA scores from pre to post test. However, neither the main effect of kindness, $F(2, 253) = .689, p = .503$, nor the interaction between time and kindness, $F(2, 253) = .126, p = .882$, approached significance. There was also a significant main effect of time on NA, $F(1, 253) = 5.70, p = .018$ showing that NA reduced from pre to post test. Again, neither the main effect of kindness, $F(2, 253) = .290, p = .749$, nor the interaction between time and kindness, $F(2, 253) = 1.61, p = .202$, approached significance. Thus, the participants reported less negative and less positive emotion from before to after the writing task but this did not differ significantly by kindness condition.

The main effect of time on LS scores was non-significant, $F(1, 251) = .145, p = .703$, as was the main effect of kindness, $F(2, 251) = .584, p = .558$, and the interaction

between time and kindness, $F(2, 251) = .302, p = .739$. Thus, LS did not change from before to after the writing task, irrespective of kindness condition.

There was a significant main effect of age on PA, $F(1, 253) = 12.21, p = .001$ and LS, $F(1, 251) = 9.53, p = .002$. On average, younger pupils reported higher scores than older pupils for these SWB measures. However, these effects did not interact with time or condition (all p 's $> .05$). The main effect of age on NA was not significant: $F(1, 253) = 1.22, p = .270$. All of the main and interaction effects for recipient-familiarity were non-significant (all p 's $> .05$). Overall, neither the age of participants nor the familiarity of their recipient had any impact on whether or not the writing task affected SWB.

Indirect Effects via Eudaimonic Experiences

Next, we turned to our hypothesis concerning indirect effects of kindness via higher ratings of aspects of eudaimonia for the recalled experiences. To test whether the eudaimonic ratings for the recalled experiences were associated with changes in SWB, a difference score was computed for each of the SWB outcomes, by subtracting the pre-writing task score from the corresponding post-writing task score. A positive difference score therefore represented an increase in reported well-being from before to after the writing task. Bivariate correlations, means, and standard deviations for the eudaimonic ratings and the SWB difference scores are reported in Table 2.6. The correlations indicated that all of the eudaimonic ratings were significantly positively correlated with increased PA, and three of the ratings (social acceptance, meaning in life, and feeling proud) were also significantly positively correlated with increased LS. Changes in NA, however, were not associated with any ratings of eudaimonia. In essence, pupils who recalled experiences with higher ratings for aspects of eudaimonia were more likely to

Table 2.9

Bivariate correlations, means, and standard deviations for change scores in SWB and ratings of eudaimonia for the recalled experiences

	1	2	3	4	5	6	7	8	9
1. PA increase									
2. NA increase	-.18**								
3. LS increase	.31***	-.17**							
4. Self-transcendence	.27***	-.03	.06						
5. Good person	.22***	.06	.05	.56***					
6. Social acceptance	.27***	-.03	.15*	.46***	.52***				
7. Meaning	.20***	-.02	.15*	.40***	.51***	.50***			
8. Social connection	.16**	-.02	.08	.44***	.39***	.58***	.58***		
9. Pride in self	.30***	.00	.15*	.44***	.71***	.48***	.55***	.44***	
M	-.08	-.03	-.03	3.43	3.61	3.56	3.04	3.42	3.33
SD	.59	.44	.35	1.16	1.19	1.19	1.31	1.29	1.28

* $p < .05$; ** $p < .01$; *** $p < .001$

show increases in reported levels of LS and positive (but not negative) affect after the writing task.

A mediation model was evaluated to determine whether those in the kindness conditions gave higher ratings of eudaimonia for their recalled experiences, compared with the control condition, and in turn whether condition membership had any indirect effects on changes in SWB via these eudaimonic ratings. The kindness condition was dummy coded with control as the reference group and the two dummy variables were entered as predictors. The PA difference score, and LS difference score were entered as dependent variables. NA was not included given that it was not correlated with any of the eudaimonic ratings. The eudaimonic ratings were all entered as mediator variables and allowed to covary with one another to control for correlations between these items.

A multigroup approach was used to evaluate potential moderating effects of age. We first created a saturated multi-group model and then applied equality constraints on all paths between variables, such that the estimated coefficients were constrained to be equal for younger and older age groups (Figure 2.1). The chi-square difference test revealed a significant deterioration of fit following the inclusion of these equality constraints, $\chi^2(36) = 60.22, p = .007$, suggesting that some of the pathways were significantly different for older than for younger students. In subsequent iterations, equality constraints were applied one pathway at a time to establish whether there was significant deterioration in model fit. On the basis of this analysis, we created a multi-group model in which all pathways with significant group differences were allowed to vary by age, constraining all other paths to be equal. Pathways that were non-significant in both groups were removed from the model, with the exception of the direct paths from kindness condition to the SWB difference scores which were retained to control for the direct effects of condition membership on the outcomes.

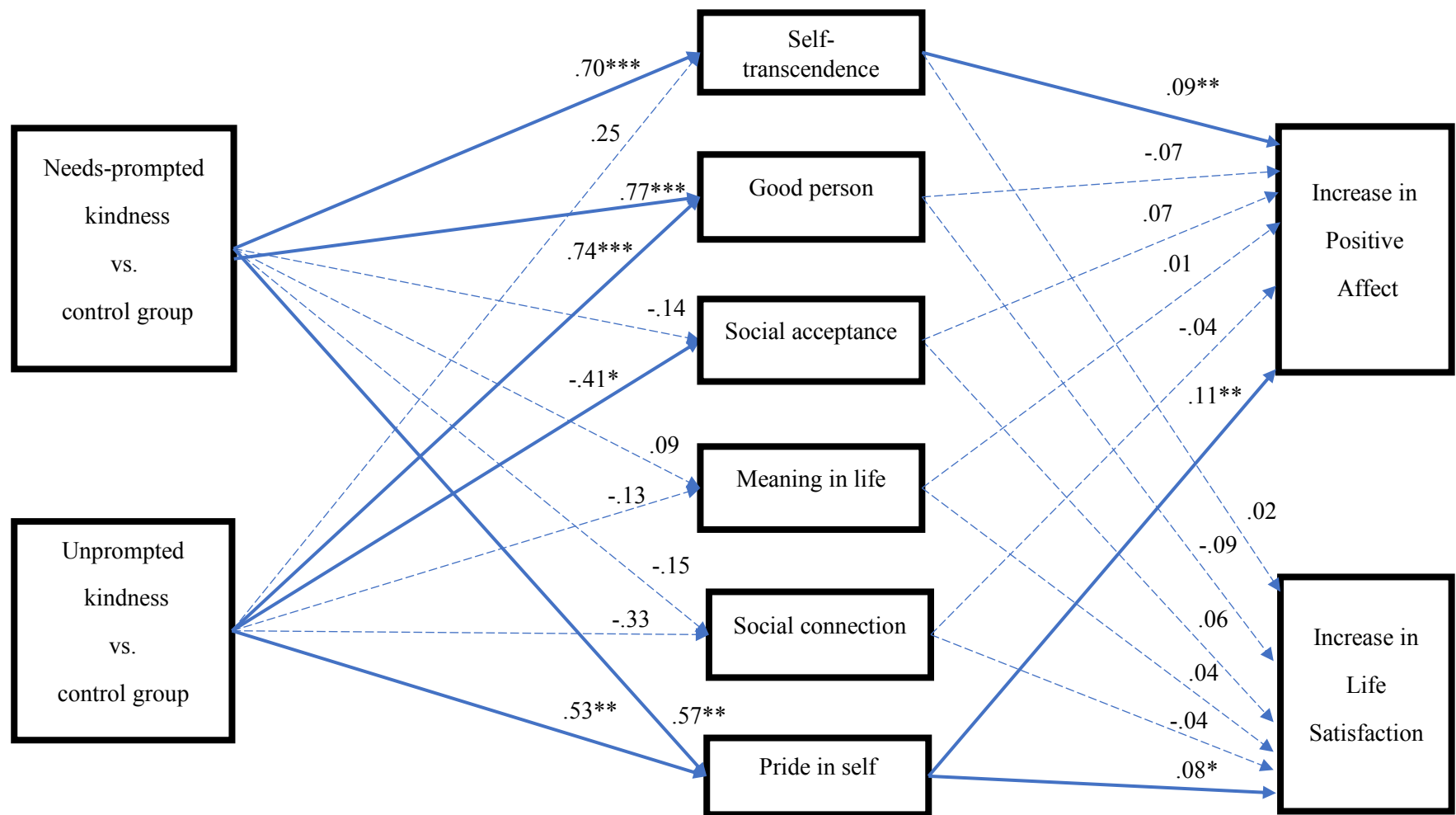


Figure 2.2: Single-group saturated model testing pathways from kindness condition to changes in PA and LS via eudaimonic ratings

* $p < .05$; ** $p < .01$; *** $p < .001$. Non-significant direct paths from condition to SWB are not shown in this diagram.

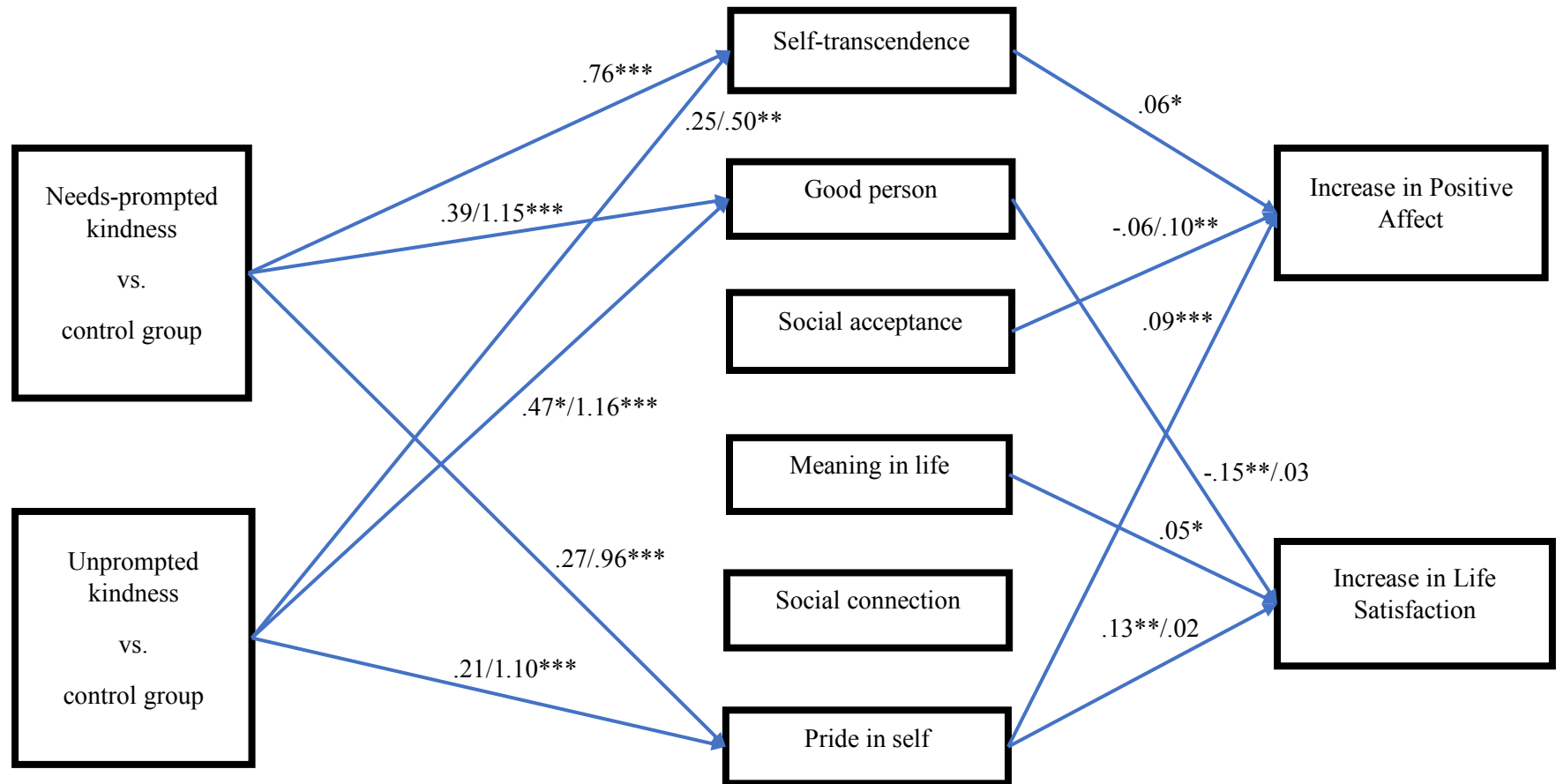


Figure 2.3: Multi-group model showing effects of kindness condition on PA and LS via eudaimonic ratings for younger (11-12 years) and older (14-15 years) pupils.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Note. Where significant age group differences were identified, two coefficients are provided (younger/older). All coefficients are unstandardized. Model fit: $\chi^2(24) = 26.52$, $p = .327$; CFI = .997; TLI = .99; RMSEA = .026; SRMR = .036

Non-significant direct paths from condition to SWB are not shown in this diagram.

The final model is shown in Figure 2.2 with unstandardized path coefficients for both age groups. The analysis indicated a good fit of the model to the data, $\chi^2(24) = 26.52$, $p = .327$, with a comparative fit index (CFI) of .997, root mean square error of approximation (RMSEA) of .03, and standardized root mean square residual (SRMR) of .04. Significant paths were found from the needs-prompted kindness condition to self-transcendent attention in both 11- to 12- and 14- to 15-year-olds ($p < .001$), indicating that students who wrote about a needs-prompted kindness rated the experience as higher with regard to self-transcendent attention than students who wrote about spending time with others. For the older pupils, the needs-prompted condition also significantly predicted higher ratings for: feeling like a good person ($p < .001$), and feeling proud ($p < .001$), but these effects were not present for younger pupils (all p 's $> .05$). The unprompted kindness condition also significantly predicted higher ratings for self-transcendent attention ($p = .009$), feeling like a good person ($p < .001$), and feeling proud ($p < .001$) in the 14- to 15-year-olds, indicating that 14- to 15-year-olds who wrote about an unprompted kindness also rated it more highly on these three aspects of eudaimonia compared with students in the control group. The effect on feeling like a good person was significantly smaller in the younger pupils though ($p = .028$), and effects on self-transcendent attention and pride were non-significant in this age group (p 's $> .05$). Overall, these results show that older pupils gave higher ratings of self-transcendent attention, feeling like a good person, and feeling proud of themselves when they were reflecting on experiences in either of the kindness conditions, compared to experiences in the control condition. Condition membership had fewer effects on eudaimonic ratings for the younger students, particularly if they belonged to the unprompted kindness condition. However, younger pupils did give higher ratings for self-transcendent attention if they were recalling needs-prompted acts of kindness.

Importantly, several of the eudaimonic ratings significantly predicted changes in PA and LS for both age groups (see Figure 2.2). We therefore estimated indirect effects from kindness condition to SWB difference scores. Support was found for mediated links between kindness condition and increases in PA via eudaimonic aspects of well-being, particularly for 14- to 15-year-olds. Compared with the control condition, there was a significant indirect effect of belonging to the needs-prompted condition on increases in PA, via greater self-transcendent attention ($\beta = .05, p = .034$) and pride ($\beta = .07, p = .008$). For the unprompted kindness condition, there was also a significant indirect effect on increases in PA, via greater feelings of pride ($\beta = .09, p = .006$). For 11- to 12-year-olds, the needs-prompted condition had a significant indirect effect on increases in PA via greater feelings of self-transcendent attention ($\beta = .05, p = .034$) but none of the other effects were significant. Overall, findings suggest that self-transcendent attention and pride may be important mechanisms in differentiating the effects of being kind from spending time with others, but that these effects vary across the age groups. None of the indirect effects for LS reached significance for either age groups. R^2 values revealed that the model accounted for 20% of the variance in PA difference scores and 6% of the variance in LS difference scores for 14- to 15-year olds. In contrast, the model only accounted for 7% of PA difference scores and 8% of LS difference scores for the younger sample.

To test the robustness of effects, the analysis was bootstrapped with 10,000 resamples checking at 95% bias-corrected adjusted confidence intervals (BCa CIs; MacKinnon, Lockwood, & Williams, 2004). Bootstrapping is especially important for indirect effects, which are not assumed to be normally distributed. If confidence intervals do not cross zero, this provides stronger evidence that the effects are robust. Accordingly, confidence intervals did not cross zero for the significant indirect effects

of condition on positive affect via self-transcendence (age group collapsed: BCa CIs = 0.01 to 0.12), or pride (older group only: BCa CIs = .026 to .145).

Discussion

There were no overall changes in SWB from before to after the kindness task. Thus, the intervention, overall, had no effect on improving well-being when compared to the control condition. However, the results show that memories of being kind were more likely to be characterised by some aspects of eudaimonia than spending time with others. This included self-transcendent attention, feeling like a good person, and feeling proud of oneself (older group only), but did not include feelings of social acceptance, social connection, or meaning in life. The findings also show that, irrespective of condition, memories that were characterised by higher levels of eudaimonia were positively associated with an increase in SWB. All six eudaimonic ratings were highly correlated with an increase in positive (but not negative) affect and three of the ratings (social acceptance, meaning and pride) were also highly correlated with an increase in life satisfaction. Crucially, although the kindness conditions had no overall effects on any of the SWB outcomes, improvements in positive affect were indirectly predicted by kindness condition *via* an increased likelihood to think of a memory that triggered self-transcendent attention (for both younger and older groups) and pride (for the older group only).

If we consider the overall effects in isolation, the findings suggest that recall-based kindness interventions may not be effective at boosting well-being in adolescents when compared with general social activities. However, given the evidence of positive indirect effects, an alternative explanation is that unmeasured suppressor variables (or competing indirect effects) were having a negative impact on SWB, cancelling out the

positive influence of the kindness task. This suggests the potential positive effects of reflecting on a single act of kindness, but that the effects may be suppressed by other intervening variables.

Overall Effects of Kindness on Subjective Well-being

Importantly, there were no overall changes in positive affect, negative affect or life satisfaction from before to after the kindness task. This was contrary to expectations given that adolescents have spoken about the positive effects that kindness has on their mood (Cotney & Banerjee, 2017) and the increasing experimental evidence that kindness practice leads to improvements in positive affect (Alden & Trew, 2013; Curry et al. 2018; Layous et al. 2012; Rowland & Curry, 2018). Furthermore, previous research has shown that memories of kindness (Aknin et al., 2011) and counting kindnesses (Otake et al., 2006) promote well-being in adult samples, and that single acts of kindness promote well-being in children (Aknin et al., 2012). Given that adolescents have been shown to understand, theoretically, the positive impact of being kind on well-being (Cotney & Banerjee, 2017), it is surprising that a reflective task did not improve the mood of current participants. This has important implications for kindness-based well-being promotion strategies in youth, as the results imply that a reflective kindness task may not be enough to trigger significant improvements in subjective well-being.

Life satisfaction has previously been shown to improve during kindness-based interventions (Layous et al. 2012) but it is considered a relatively stable aspect of SWB that responds to prolonged events rather than momentary experiences (Pavot & Diener, 2008). Therefore, it is not that surprising that life satisfaction was unaffected by the short kindness task used in this study. Future research should therefore consider how life satisfaction may respond to longer, prolonged kindness practice in this age group.

Positive affect, on the other hand, has been shown to improve even after a single act of kindness in young children (Aknin et al., 2012). However, this study asked the children to engage in *new* acts of kindness, whereas the current study relied on memories of kindness. It may be that actual acts of kindness are more effective at promoting positive affect, particularly given that some of the participants were unable to easily recall a kind act. Future research should therefore re-test this hypothesis using a prolonged acts-of-kindness paradigm with adolescents.

Eudaimonic Functions of Kindness

Although there were no overall effects of kindness on well-being, the study did find that memories of kindness were more likely to trigger particular aspects of eudamonia. One of the primary hypotheses was that kindness would be associated with higher feelings of eudaimonia when compared with spending time with others. This provides preliminary experimental evidence of the eudaimonic functions of kindness. One such function is self-transcendent attention, and another is positive self-evaluation, such as feeling like a good person or feeling proud of oneself. This is the first randomised experimental study to demonstrate how acts of kindness are recalled as eudaimonic experiences (over and above general socialising), in adolescent populations.

The notion that kindness is associated with positive self-evaluations is consistent with prior research. Studies have shown that prosociality (Zuffianò et al. 2014a) and volunteering (Brown et al. 2012) predict self-esteem and self-efficacy. In the current study, adolescents were more likely to report feeling proud of themselves, or as though they are a good person when they were recalling an act of kindness rather than a more general social experience. This provides preliminary evidence that kind acts are more

likely than general socialising to be seen by adolescents as experiences where they feel good about themselves.

Consistent with prior evidence that kindness is associated with self-transcendent values (Caprara et al. 2012; Dambrun & Ricard, 2011; Piff et al. 2015), participants were also more likely to report experiences of self-transcendent attention if they belonged to a kindness condition. Importantly, participants in the kindness condition were instructed to remember an ‘act of kindness’ but were *not* specifically instructed to pay attention to other people’s emotions. Although kindness is defined, in the academic literature, as an act that has an other-focussed motivational stance, this does not necessarily mean that adolescents will have other-focussed attention when asked to reflect on, or engage with an act of kindness. In addition, it is possible that participants in the comparison group may have also had other-focussed attention given that the task required them to remember a social interaction. Therefore, this finding provides evidence that adolescents may be more likely to have a self-transcendent experience during an act of kindness than during more general social interactions. This supports developmental theories that consider self-transcendent moral reasoning to be an important antecedent of advanced prosocial behaviour (see Eisenberg, Fabes, & Spinrad, 2006). However, theories tend to focus on self-transcendence as a value or moral reasoning structure that *promotes* kindness, rather than a potential function or outcome *of* kindness. Moreover, the few studies that have investigated self-transcendence in relation to kindness interventions consider this construct as a trait-level moderator of the effects on well-being. Thus, pre-existing levels of self-transcendence have been shown to enhance the beneficial effects of kindness interventions (e.g., Hill & Howell, 2014). In contrast, the current study provides preliminary evidence that kind acts may provide opportunities to enhance self-transcendent attention. This corroborates

theories of loving-kindness meditation that consider self-transcendent attention to be a key outcome of focussing on kindness during contemplative practice (Roeser & Pinela, 2014).

Overall, the findings of this study imply that being kind (compared with general socialising) may be more likely to consist of some, but not all, aspects of eudaimonia. However, contrary to expectations and prior research (e.g., Klein, 2016), this study revealed that meaning in life was rated just as highly by the participants in the social condition as those in the kindness conditions. Given that peer relationships become increasingly important during the adolescent years (Brown & Larson, 2009), it may be that youth are equally as likely to source meaning from socialising as from being kind. In light of emerging evidence that adolescents associate kindness with having a sense of purpose (Hill et al. 2010; Schwartz et al. 2009) it is possible that purpose, rather than meaning, may be more specifically associated with kindness for this age group. Similarly, social connection and acceptance did not differ between the experimental groups. This finding was in line with our hypotheses. It is likely that social experiences and kindness provide equal opportunities for social connection and acceptance, particularly in youth populations who are most likely to direct kindnesses towards people they are already close with (Sierksma, Thijs, & Verkuyten, 2015).

Indirect Effects of Kindness on Subjective Well-being

In line with our hypotheses, indirect effects on positive affect were identified, suggesting that writing about kindness had a positive influence on the affective aspect of SWB over and above writing about spending time with others. Specifically, the kindness condition had indirect effects on positive affect via the greater ratings of self-transcendent attention and pride given to the recalled experiences, in comparison with

the control condition. It is important to note that negative affect was not affected by eudaimonic functions of kindness. This is in line with notions that negative and positive affect are not on a single continuum but instead represent independent aspects of SWB: prior research shows that positive and negative affect have different correlates (Watson & Pennebaker, 1989) and kindness-based research shows that prosociality is not consistently associated with, nor does it reduce, negative affect (Alden & Trew, 2013; Dulin & Hill, 2003). This is the first experimental study, to our knowledge, that has identified mechanisms that may underpin the links between kindness and SWB in this age group. This is an important first step towards understanding the beneficial effects of kindness for youth. It has implications for the way in which kindness-based interventions are designed, helps to identify facilitators and barriers to enacting kindnesses, and reiterates the need to include both eudaimonic and subjective indicators of well-being in kindness research.

Developmental psychologists consider self-transcendence to be a particularly important process during the adolescent years (Roeser & Pinela, 2014) and multiple studies have found associations between self-transcendence and SWB outcomes (Compton, 2018; Coward, 1996; Gillham et al. 2011). The results of this study suggest that kindness-based interventions may be a useful tool to help foster self-transcendence in school students, and in turn, promote positive affective outcomes. Such interventions, therefore, should seek to foster kind acts that hinge upon self-transcendent motivation.

Importantly though, self-transcendent attention was *not* a mechanism of kindness for 11 to 12-year-olds in the unprompted kindness condition; when younger students were asked to write about an act of kindness that was *not* triggered by distress, they were just as likely to recall the experience as involving self-transcendent attention as when writing about a social experience. This finding is in line with developmental

theories that relevant socio-cognitive skills are still developing during this period. For example, it is argued that children in late childhood struggle to use perspective-taking skills or sympathy if the recipient is not physically present, such as instances that occurred in the past or occurred across a physical boundary (see Eisenberg et al. 2006; Eisenberg et al. 2009 for a review). Given this, the retrospective nature of the kindness task may have reduced the likelihood that the students would still retain experiences of self-transcendent attention, particularly for unprompted acts where obvious distress was not a primary factor. The self-transcendent mechanism identified in the current study implies that perspective-taking skills may be required in order to reap the benefits of kindness; a skill that may be much more challenging for younger students when kindness is unprompted and alleviating distress is less obvious. Moreover, approval-oriented moral reasoning begins to decline in mid-adolescence, suggesting that the younger group may have been more likely to recall acts that were driven by the need for approval (e.g., from peers or teachers) rather than purely other-focussed motivations that require self-transcendent attention (Eisenberg, Cumberland, Guthrie, Murphy, & Shepard, 2005). It is possible then, that younger students may require additional support to recall acts of kindness that are characterised by self-transcendent attention, particularly when obvious distress is not the primary trigger (Cotney & Banerjee, 2017, for a discussion of kindness triggers in adolescents).

Positive self-evaluation was also identified as an explanatory mechanism in the current study. Self-efficacy beliefs and self-esteem are important well-being predictors in adolescence (Caprara & Steca, 2005; Karatzias, Chouliara, Power, & Swanson, 2006; Paradise & Kernis, 2002). It is unsurprising then, that if kindness is associated with positive self-evaluations this may, in turn, increase positive emotions. This study identified feeling proud of oneself as an important factor, but other positive self-

evaluations, such as competence and efficacy may also be instrumental in the link between being kind and feeling good; both of which have been identified as mediators in the adult literature (Brown et al. 2012; Martela & Ryan, 2015). These preliminary results warrant more detailed investigation of a broader range of self-evaluations that may result from fostering kindness in this age group.

Crucially, the effects on pride were not present for 11- to 12-year-olds; younger students were just as proud of themselves in the kindness conditions as in the social condition, irrespective of whether the kindness was needs-prompted or unprompted. Developmental differences in prosocial reasoning may also be reflected here. It is plausible that approval-oriented reasoning is less likely to trigger pride than other-oriented reasoning, for instance. Indeed, autonomous, intrinsically-driven acts are thought to be more conducive of positive self-evaluations (Nelson et al. 2015). Given that approval-oriented reasoning begins to decline in mid-adolescence (Eisenberg et al. 2005), the younger students may have been less likely to recall an autonomous, other-focussed act. That said, in a recent qualitative study, children aged 11 to 12 years flagged the importance of autonomous, other-oriented reasoning in their discussions of kindness suggesting that younger adolescents are familiar with other-focussed acts (Cotney & Banerjee, 2017). Furthermore, pride is accepted by children and adolescents as a motivation for helping that does not diminish the act of kindness itself (Shorr, 1993). In the current study, however, the task was designed to reawaken naturalistic acts that the young people already perform in their day-to-day life, so although adolescents are aware of other-focussed motivations and pride, this may not reflect their proclivity to act in this way. Younger students may therefore require more specific guidance around other-oriented, intrinsically-driven reasoning in order for kindness tasks to boost positive self-evaluations.

Potential Suppressor Effects of Kindness

In the past decade, advances in statistical methods for mediation analysis have criticised prior methods for placing the significance of overall effects between the independent and dependent variables at the forefront of the analysis (Rucker et al., 2011). Previously, the significance of associations between independent and dependent variables was used to determine whether or not to proceed with mediation testing. Thus, where the total effect was non-significant, it was assumed there is no effect and it was therefore unusual to proceed with mediation analysis. The purpose of the mediation testing was therefore to determine whether an intervening variable fully or partially accounts for a significant effect on the outcome variable (Baron & Kenny, 1986). However, advances in the last decade recommend that the attention should be focussed on the significance of the indirect effects, irrespective of whether there is a significant overall effect (Rucker et al., 2011; Zhao, Lynch, & Chen, 2010).

Suppressor effects contribute to the reasoning behind this change. Suppression tends to refer to unmeasured intervening variables that reduce (or suppress) the magnitude of the relationship between an independent and dependent variable (MacKinnon, Krull, & Lockwood, 2000; Rucker et al., 2011). Suppressors may exist alongside a positive indirect effect of another intervening variable thus resulting in a non-significant total effect. In the case of the current study, there may be unmeasured variables, unique to the kindness condition, that intervene to *reduce* its impact on the well-being outcomes. Thus, although there is no overall significant effect of kindness on the well-being outcomes, this may be due to *competing* indirect effects that cancel out (or suppress) the positive indirect effects of the eudaimonia ratings. For example, the kindness task may have positive indirect effects via these aspects of eudaimonia, but the kindness task may be less effective (compared with the social task) at promoting other

aspects of eudaimonia, or other relevant variables, creating a suppressor effect of condition membership (i.e., mediated via eudaimonia, suppressed via the less positive impact of socialising). This is a very important point given that the kindness task may be having some distinct positive effects, but so too may the comparison task, resulting in a null effect overall.

It is possible, for example, that the context of this task was not conducive to improving well-being in youth. Writing about a kind act involves memory and cognitive exertion, and expending energy. The task may therefore not induce emotions such as joy, happiness, excitement or contentment in the specific moment. Indeed, the task may even result in a feeling of drudgery, given that it was performed in the context of a class lesson and required students to complete a worksheet. As noted in the methods section, more students found it difficult to recall an act of kindness that exactly matched the instructions whereas remembering a social experience was relatively easier; this may have added to the cognitive demands of the kindness task and increased the relative benefits of the control task, suppressing the positive effects of the kindness task compared with the social task.

It is also possible that the control task increased some unmeasured outcomes, such as autonomy, competence or gratitude, therefore suppressing the comparative effects of kindness via eudaimonia. For instance, the control task specifically asked participants to think of an experience that occurred during their *free* time. It is feasible then, that the control task was more conducive at promoting autonomy and intrinsically-driven activities, particularly in light of the evidence, discussed above, that adolescents are still developing the socio-cognitive skills required to engage with autonomous and intrinsic prosocial behaviour (Eisenberg et al. 2006; Eisenberg et al. 2009). It is also worth noting that although the social task did not explicitly refer to kindness,

participants may still have thought of an experience where kindness was occurring within the social interaction, conflating the effects of the control task. Furthermore, given that the participants were instructed to think of an isolated kindness, this may have reduced their awareness of gratitude. For instance, they may have thought of a time when they were giving and therefore not on times when they have received. Indeed, there is evidence to show that kindness tasks are more effective if they are preceded by gratitude tasks (Layous, Lee, Choi, & Lyubomirsky, 2013) and positive social experiences are thought to be intimately related to gratitude (McCullough, Kimeldorf, & Cohen, 2008). It is possible then, that unmeasured variables such as those discussed here may have cancelled out or suppressed the positive effects of self-transcendent attention and pride on SWB. This calls for further experimental work investigating the mechanisms that differentiate the effects of kindness from general socialising.

Limitations and Future Directions

It should be recognised that the results of this experiment were based on a single memory of kindness. This provides evidence that kind acts may be a valuable consideration for adolescent well-being. However, it is also possible that writing about one act may not be sensitive enough to trigger subtle shifts in mood. Prior research has focussed on prolonged kindness practice, over a period of weeks, rather than single occurrences (e.g., Layous et al. 2012). It is possible, based on the current findings, that kindness has incremental effects on affect due to accumulating eudaimonic experiences, such as self-transcendent attention and pride. If this is true, the current study may have underestimated the effects of kindness on SWB. Furthermore, the effects may be stronger for actual acts of kindness rather than memories alone. It is possible that retrospective tasks may be too difficult for younger students who are less accustomed to

autonomous, other-oriented prosociality (Eisenberg et al. 2005). Indeed, younger participants were more likely to think of a memory that did not match the specific task instructions, suggesting it was difficult for them to recall a specific example retrospectively. It is also important to note that the younger students did not differentiate their kindness ratings in accordance with condition membership. Older pupils gave higher kindness ratings if they belonged to a kindness condition rather than the control condition, but younger pupils did not. This may suggest that the manipulation was less effective for the younger students or that younger students interpret socialising as a kindness in itself and therefore require more detailed definitions of what constitutes kindness above and beyond spending time with others. However, inspection of the written responses and the presence of some significant differences on ratings of eudaimonia suggested that the content of the memories did differ across the conditions even if the younger students did not necessarily rate them as more kind. Even so, providing younger students with more developmentally attainable tasks may be more likely to have beneficial effects. Future research would also benefit from a design that encourages adolescents to engage with and reflect upon kindness over a more prolonged period of time.

Although this research provides unique, preliminary evidence of the eudaimonic functions of kindness, the eudaimonic ratings were not exhaustive and relied on single, retrospective ratings. It is possible that kindness may be characterised by other eudaimonic experiences such as purpose, autonomy or competence (Ryan & Deci, 2001). Research that explores a broader range of eudaimonic functions would help to further enhance our understanding of how the psychological experience of engaging with kindness can be differentiated from more general socialising. Detailed investigations into the functions of kindness will also help to identify interactions

between them. It was beyond the scope of the current study, for instance, to test whether self-transcendent attention is the factor that evokes feelings of pride during a kind act, or whether another factor is responsible, such as beneficence (the sense of having positively impacted others; (Martela & Ryan, 2015) or competence (Martela & Ryan, 2016). Knowledge of these intricate details may guide the design of interventions such that they foster the kind behaviours that are most likely to promote well-being. It would also provide a more nuanced understanding of what it means to be kind, providing opportunities for more detailed operational definitions of kindness as a unique, psychological construct.

Conclusion

In sum, the present study did not find that a single, retrospective memory of kindness was more effective at boosting well-being than a memory of spending time with others, given that there was no significant overall effect of condition on the outcome variables. However, the results do show that a recalled kind act is more likely to be rated as high on some, but not all, aspects of eudaimonia, and that these eudaimonic functions mediate the effects of a kindness-based reflective writing task on SWB. Together, these findings suggest that self-transcendent attention and positive self-evaluations may be particularly important mechanisms in differentiating the benefits of kindness from the benefits of general socialising. Indeed, the fact that these effects were present in the context of just one kind memory is promising for the emerging development of kindness-based well-being interventions for adolescents, particularly those in the latter stages of secondary school.

Paper 3

The Impact of a School-Based Kindness Intervention on Adolescent Well-being: The Role of Eudaimonia

Abstract

An increasing number of experimental studies have shown that kindness may promote well-being, including outcomes such as positive affect and life satisfaction. At the same time, little is known about the effects of kindness during adolescence, despite increasing concerns about declining well-being and the rise of mental health problems. The current study tested the effect of a four-week kindness-based intervention on diverse aspects of well-being in 601 secondary school students aged 11-12 and 14-15 years. Results showed that those who were randomly assigned to the kindness intervention, in comparison to a control condition (involving more self-focused socialising), reported higher levels of eudaimonic experience – such as self-transcendence and social connection – during the intervention. These experiences, in turn, predicted increased subjective well-being, flourishing, and general levels of kindness at the end of the intervention. Interestingly, after controlling for this mediating effect of eudaimonia, we found that kindness did not have positive overall effects on the well-being outcomes. The results suggest that kindness may have positive effects on well-being, but only to the extent that it elicits experiences of eudaimonia. Implications for school-based interventions and the underlying mechanisms of kindness are discussed.

Key words: Kindness, Prosocial behaviour, Well-being, Adolescence, Interventions

The Impact of a School-based Kindness Intervention on Adolescent Well-being: The Role of Eudaimonia

An increasing number of experimental studies have shown that kindness may promote well-being, particularly subjective well-being (SWB) outcomes, such as positive affect and life satisfaction (Dunn, Aknin, & Norton, 2014). There are increasing concerns about declining levels of well-being (McFall, 2012) and the rise of mental health problems (Taggart, Lee, & McDonald, 2014; World Health Organization, 2014) during adolescence. Kindness, therefore, is currently being considered as a potential focus for school-based programmes that are designed to foster social and emotional outcomes in youth (Binfet, 2015; Helliwell, Layard, & Sachs, 2015). The transition through adolescence is thought to be a particularly important period for the development of moral reasoning and prosociality (Eisenberg, Morris, McDaniel, & Spinrad, 2009). Furthermore, adolescence is a period of heightened plasticity (Roeser & Pinela, 2014) and positive well-being during adolescence has been shown to predict positive well-being during adulthood (Richards & Huppert, 2011). It may therefore be an ideal time to intervene. Despite this, there is very little evidence regarding the effects of kindness in adolescent populations and there is a particular dearth of investigations on the specific mechanisms that might explain *why* or *how* it has positive effects on well-being. The current study, therefore, tested the effect of a school-based kindness intervention on adolescent well-being, and whether these effects were mediated by eudaimonic experiences.

Kindness and Subjective Well-being

An act of kindness can take the form of any prosocial behaviour but in order to be considered ‘kindness’ it must be paired with an other-focussed motivational stance

(as opposed to a prosocial act that is driven by the desire for praise or personal rewards; Cotney & Banerjee, 2017; Knafo & Israel, 2012). There is an increasing volume of experimental research showing that kindness promotes SWB for the giver. SWB is conceptualised as frequent positive affect, infrequent negative affect, and the judgement that life is satisfying (Diener, 1984; Tov & Lee, 2015). This body of evidence is particularly strong for adult populations (Chancellor, Margolis, Bao & Lyubomirsky, 2017; Dunn, Aknin & Norton, 2008), with a recent meta-analysis showing that, on average, kindness-based interventions have a small to medium effect ($d = 0.28$) on subjective well-being outcomes (Curry et al. 2018). This self-rewarding mechanism of kindness is thought to, in turn, promote future acts of kindness. It may therefore provide a sustainable method for promoting well-being over time (Aknin, Dunn & Norton, 2012; Aknin, Van de Vondervoort & Hamlin, 2018; Snippe et al. 2017).

Although the majority of studies have been conducted with adult populations, early experimental research has demonstrated similar findings in children and youth. For instance, toddlers have been shown to express greater levels of happiness when giving to others than when giving to themselves (Aknin, Hamlin & Dunn, 2012; Wu, Zhang, Guo & Gros-Louis, 2017). Similarly, a four-week kindness intervention resulted in increased life satisfaction for nine to 11-year olds, when compared with a control group who were asked to visit three places (Layous, Nelson, Oberle, Schonert-Reichl & Lyubomirsky, 2012). To our knowledge, this is the only school-based kindness intervention study to have been conducted over a number of weeks. Experimental findings correspond with qualitative and survey research, showing that adolescents experience happiness as a direct result of being kind to others (Cotney & Banerjee, 2017; Kasser, 2000), that helping others is satisfying to them (Killen & Turiel, 1998), and that other-focussed strengths predict their subsequent levels of well-being (Gillham

et al. 2011). Overall, these results provide promising evidence regarding the potential for kindness-based interventions in schools, yet the number of studies remains very small. There is a particular need for randomised controlled studies within adolescent samples. The current study is, therefore, a vital addition to research that aims to evaluate kindness as a method for promoting well-being in schools.

Eudaimonia as a Mediator of the Effects of Kindness on Well-being

Well-being is considered a multidimensional construct, made up of both hedonia and eudaimonia (Delle Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2011; Donaldson, Dollwet, & Rao, 2015). The term hedonia refers to pleasure attainment and pain avoidance (i.e., feeling good) and is commonly indexed via SWB (Ryan & Deci, 2001; Steger, Kashdan, & Oishi, 2008). In contrast, eudaimonia is an enduring state of well-being and is characterised by positive human functioning (Huppert & So, 2013). Aspects of eudaimonia may include personal growth, fulfilment, and contribution to the greater good (Steger et al. 2008; Waterman, 1993). Given this, kindness is thought to be intimately related to eudaimonia and the theoretical discourse on eudaimonia commonly refers to kind acts as an example of the types of behaviour that will result in eudaimonic experiences (Hallam et al. 2014; Huta & Ryan, 2010; Steger et al. 2008). Indeed, correlational research has identified a link between kindness and eudaimonic experiences, such as meaning (Klein, 2016) and purpose in life (Hill, Burrow, O'Dell, & Thornton, 2010; Schwartz, Keyl, Marcum, & Bode, 2009; Yang, Li, Fu, & Kou, 2017). Given this link between eudaimonia and kindness, we propose that being kind may have eudaimonic functions that might explain, at least in part, *why* kindness has positive effects on SWB.

A growing body of research has begun to address this issue, with many studies identifying eudaimonic indicators as explanatory mechanisms in the effects of kindness on SWB. Common indicators of eudaimonia include meaning or purpose in life, positive relationships, autonomy, competence, positive self-evaluations, and self-transcendence (Diener et al. 2010; Maslow, 1971; Ryan & Deci, 2001; Ryff & Keyes, 1995). Relatedness (Aknin, Sandstrom, Dunn, & Norton, 2011; Brown, Hoyer, & Nicholson, 2012; Jiang, Zeng, Zhang, & Wang, 2016; Martela & Ryan, 2015; Yamaguchi et al. 2016) and autonomy (Martela & Ryan, 2016; Hui & Kogan, 2018) have been shown to mediate the effect of kind activities on SWB outcomes. Similarly, kind acts that are autonomous (i.e., voluntary and intrinsically motivated), rather than pressure-based (i.e., acts that are instructed, expected or dutiful), have a larger effect on SWB in adults (e.g., Gebauer, Riketta, Broemer, & Maio, 2008; Weinstein & Ryan, 2010) and children (Sabato & Kogut, 2018; Wu et al. 2017). Autonomous acts result in more positive self-evaluations (e.g., self-efficacy, self-esteem, competence; Feng & Guo, 2017; Nelson et al. 2015) which have also been shown to mediate the effect of kindness on SWB outcomes (Brown et al. 2012; Hui & Kogan, 2017; Martela & Ryan, 2016). In addition, self-transcendence (the tendency to care for, or focus on, entities outside of oneself; Schwartz, 1994) has been shown to influence the effectiveness of kindness tasks. Self-transcendent values moderate the effect of kindness on well-being (Hill & Howell, 2014) and there is evidence that the benefits of prosocial action are dependent upon an other-focussed motivation (Wiwad & Aknin, 2017). This initial body of evidence highlights the need to continue to include both eudaimonic and subjective well-being outcomes in kindness-based research, and to test whether eudaimonic functions of kindness can explain any increase in subjective well-being.

Experimental studies on the mechanisms of kindness have been predominantly focussed on adult populations, but a recent study conducted with adolescents showed that a reflective kindness task (compared with a control task) was more likely to increase SWB via the higher ratings of eudaimonia given for the recalled acts of kindness. In particular, the acts of kindness recalled by participants were more likely to be rated by participants as high on self-transcendence and positive self-evaluation which, in turn, predicted an increase in positive affect (Cotney & Banerjee, under review). This is in line with cross-sectional research with adolescents where kindness has been shown to correlate with positive self-evaluative outcomes, such as self-esteem (Fu, Padilla-Walker & Brown, 2017; Kasser, 2005), and self-acceptance (Schwartz et al. 2009). Qualitative research also corroborates these results, as adolescents state that an other-focussed motivation, and self-transcendent skills such as empathy, are required for well-being effects to occur and that being kind makes you feel good about yourself (Cotney & Banerjee, 2017). Given these findings, it is reasonable to expect that a kindness-based intervention in school would be associated with greater experiences of eudaimonia, which in turn may lead to increases in SWB.

Methodological Considerations and Other Variables

Existing experimental paradigms regarding kindness-based well-being research tend to take one of three forms: prosocial spending, where participants are asked to spend a monetary sum on someone else; acts-of-kindness, where participants are asked to engage with kind actions directed towards others; or recalling kindness, where participants are asked to recall a previous act of kindness towards others. Previous research with adolescents is very limited across all three paradigms, but a recent study that used a ‘recalling kindness’ methodology (Cotney & Banerjee, under review), found that although the kindness task had positive effects on affect via indirect pathways, the

task did not have overall positive effects on well-being from before to after the task.

This study did not ask students to carry out any *new* acts of kindness. Thus, it is important to test, using randomised controlled methods, whether an acts-of-kindness approach *is* effective at causing overall improvements in well-being. Indeed, a previous study with younger students (Layous et al., 2012) found that life satisfaction improved for their participants using a four week acts-of-kindness approach in school. The acts-of-kindness paradigm also provides a useful opportunity to promote kindness practice across a prolonged period and, therefore, to test whether changes occur over time. In contrast, lab-based or recall tasks tend to test immediate effects on well-being.

Previous research has theorised that prolonged practice is likely to be more impactful than a single event, particularly for aspects of well-being that are thought to be relatively stable, rather than fleeting, in nature (life satisfaction; Cotney & Banerjee, under review; Pavot & Deiner, 2008). It is therefore important to test whether prolonged practice works for adolescent samples. Furthermore, the acts-of-kindness paradigm can be adapted to make it suitable for delivery within a classroom, and simple for a teacher to deliver. These aspects have added benefits in that the intervention study can test the effects within a naturalistic environment that maps on to how the intervention is likely to be delivered if rolled out in schools. To our knowledge, this is the first study to test the effects of a kindness-based classroom intervention with this age group or in the UK. A lack of research in this area leaves it unclear as to whether kindness has positive effects for adolescents.

Within existing experimental research, many intervention studies compare kindness with a neutral control condition that is fundamentally unsocial (e.g., keeping track of daily activities; e.g., Alden & Trew, 2013). This poses a major challenge in drawing conclusions about the effects of kindness as it is difficult to isolate the impact

of kindness from that of spending time or interacting with others. There is a substantial body of evidence showing that kindness and prosociality are closely linked with social connectedness (Aknin, Dunn, Sandstrom, & Norton, 2013; Inagaki & Orehek, 2017) and that social outcomes have positive implications for well-being across the life course (Brown & Larson, 2009; Olsson, McGee, Nada-Raja, & Williams, 2013). It is reasonable then, to question whether kindness has positive effects on well-being purely because it is characterised by social interaction. In fact, there is a growing number of experimental studies that identify social outcomes as mediators in the link between kindness and well-being (Aknin et al. 2011; Brown et al. 2012; Jiang, Zeng, Zhang, & Wang, 2016; Yamaguchi et al. 2016). Recent research has begun to address this challenge and provides preliminary evidence that kindness has the potential to have larger effects on well-being than general socialising, via an increased likelihood to trigger eudaimonia (Cotney & Banerjee, under review). Relatedly, an experimental study conducted with adults has shown that kindness has positive effects on well-being, even when there is no face-to-face contact with the beneficiary (Martela & Ryan, 2016) and another has shown that a reflective kindness task (helping a stranger) is more effective at boosting positive affect than a reflective social task (going out with friends; Midlarsky, Pirutinsky, Chakrabarti, & Cohen, 2018). These results are promising and suggest that well-being impacts are not merely the result of spending time with others. Even so, attempts to differentiate the effects of kindness from the effects of socialising are very rare. Furthermore, these studies were all based on imagined kindnesses, either via remembering a recent act (Cotney & Banerjee, under review; Midlarsky et al. 2018) or playing a kind video game (Martela & Ryan, 2016). This highlights the need for additional studies that include social control tasks in experimental research on kindness.

The inclusion of a social control task creates a further challenge within experimental work given that social activities may incidentally involve kindness. Recent research that has addressed this challenge (Cotney & Banerjee, under review; Midlarsky et al. 2018) asked the control group to think of *any* social event, which may have inadvertently included other-focussed, or even kind, activities. Thus, the effects of kindness may have been underestimated. In contrast, prosocial spending paradigms ensure that the control group are not engaged in kindness given that the control condition typically requires participants to spend money on themselves. Studies consistently find that prosocial spending improves well-being when compared with self-focused spending. This is a useful comparison, as it controls for the risk of kindness occurring for the control group. However, prosocial spending paradigms still conflate the effects of being kind and spending time with others, given that prosocial spending is likely to involve spending time with others but self-focused spending is likely to be done alone. It would be useful then to combine these two approaches, such that the comparison group is engaging in a social task but also encouraged to be self-focused to reduce the risk of any incidental kindnesses. This will help to establish whether there are specific qualities of kindness that differentiate it from socialising more generally or whether social interactions can be just as effective, even if they are predominantly self-focused.

In order to improve the rigour of this work, studies in this area should also consider other variables that could relate both to kindness and to the indicators of well-being. Notably, previous research has suggested that kindness may also be closely related to gratitude. For instance, the socio-cognitive skills that are required to enact kindnesses (e.g., empathy, perspective-taking; Eisenberg et al. 2002) are also thought to be necessary in the development of gratitude (Layous & Lyubomirsky, 2014) and both

gratitude and kindness are considered self-transcendent emotions (Stellar et al. 2017). Gratitude is considered a positive emotional response and can include fleeting feelings, such as being grateful for a personal kindness (Emmons & Crumpler, 2000; Emmons & McCullough, 2003; Peterson & Seligman, 2004; Tsang, 2006) or trait levels of gratitude, described as an overall appreciation for the positive in life (Kerr, O'Donovan & Pepping, 2015). There is evidence that gratitude can promote further instances of kindness (Bartlett & DeSteno, 2006; Schnall, Roper, & Fessler, 2010; Tian, Chu, & Huebner, 2015), but research has yet to test whether kindness practice may induce feelings of gratitude in the *giver*. Given that kindness has been shown to promote well-being (Curry et al. 2018) it is possible that it may highlight the positives in life, and thus promote feelings of gratitude. Also, kindness and gratitude may have similar socio-cognitive antecedents (Layous & Lyubomirsky, 2014), and therefore may share developmental pathways. It is thought, then, that one must understand kindness in order to be grateful for it (McCullough et al. 2001). Given this, it is interesting to consider whether practicing kindness may have subsequent effects on levels of gratitude. This will help to clarify whether there is a bidirectional relationship between these concepts and improve knowledge of the mechanisms that distinguish kindness from more general social interactions.

The Current Study

The primary aim of the current study was to test the effect of a four-week kindness-based intervention on subjective well-being (measured via self-reported affect and life satisfaction; Diener, 1984) and flourishing (measured via self-reported mental well-being, Haver, Akerjordet, Caputi, Furunes & Magee, 2015; Huppert & So, 2013) in adolescents. Flourishing is defined as both feeling good (SWB) and functioning well (EWB) and thus provides an overall measure of well-being that captures both hedonic

and eudaimonic aspects (Huppert & So, 2013; Tennant et al. 2007). Participants aged 11-12 and 14-15 years were selected in order to test these effects across both lower and upper secondary school.

As highlighted above, there is a need to compare the effects of kindness with more general socialising. To this end, the current study included two experimental groups: 1) kindness and 2) self-focused conversation. Participants in the self-focused conversation group were asked to tell others three facts about themselves as a weekly homework task. The task was therefore inherently self-focused (i.e., facts about me) and social (i.e., conversation). The kindness group were encouraged to do three kind acts to others.

We hypothesised that the kindness group would experience larger increases than the self-focused group in positive affect, life satisfaction, and flourishing from before to after the intervention⁵. Given the evidence from our previous research (Cotney & Banerjee, under review), we predicted that this would occur *via* the eudaimonic functions of the performed acts of kindness. Students rated the eudaimonic functions of their activities every week during a school lesson according to six items, each reflecting an aspect of EWB: self-transcendent attention, meaning in life, social acceptance, social connection, feeling like a good person, and feeling proud. These aspects were formulated for a previous study (Cotney & Banerjee, under review) and were selected based on theories of eudaimonia (Ryan & Deci, 2001; Ryff & Keyes, 1995; Maslow, 1971) and adolescents' conceptions of kindness and its outcomes (Cotney & Banerjee, 2017). This is the first study to test the mechanistic role of eudaimonia in a school-

⁵ Initially, the study also included data collection four weeks after the intervention had ended (follow-up). However, due to school-based difficulties, there was substantial attrition. Thus, the results of this analysis are not included in this article.

based kindness intervention and will help to inform the design of interventions, clarifying the specific qualities of kindness that should be promoted in order to increase well-being. It was hypothesised that the kindness group would give higher eudaimonic ratings for the acts performed during the intervention which, in turn, would predict larger increases in SWB and flourishing.

A secondary aim was to test whether the experimental condition had differential effects on a range of other positive outcomes, including purpose in life, self-esteem and peer relationships. Given that these eudaimonic indicators are shown to be associated with kindness (Hill et al. 2010; Schwartz et al. 2009; Yang et al. 2017), it is important to consider them as outcome variables in kindness-based research, rather than focussing only on SWB. Indeed, if flourishing is thought to be composed of both subjective and eudaimonic dimensions (Huppert & So, 2013), then we should be considering the effects of kindness on trait-level measures of both components. Including these measures may also help to identify whether there are specific aspects of eudaimonia that are promoted by kindness, when compared with more general socialising. Given that gratitude has been linked with kindness (Layous & Lyubomirsky, 2014; Stellar et al. 2017), but the direction of the relationship remains unclear, we also included a trait gratitude measure to test whether kindness may have an effect on this outcome. Lastly, we included prosocial and overall kindness measures to test whether the students' self-reported levels of prosociality and kindness were differentially influenced by the experimental conditions. The inclusion of these other measures was exploratory and, as such, specific directional hypotheses were not formulated, with the exception that those who had performed acts of kindness were expected to increase in their self-reported kindness over the course of the intervention. As a final, exploratory aim, we also tested for moderation by age and gender given the relevant developmental changes at this time

(Eisenberg et al. 2009; Lansford, 2018; Morrison, Jebb, Tay, & Dierne, 2017) and evidence of gender differences in different types of prosociality (see Balliet, Li, Macfarlan, & Vugt, 2011 for a review; Eagly, 2009) and well-being (Lansford, 2018).

Method

Participants

Participants were 601 students attending a UK secondary school in year 7 (11-12 years; $n = 313$) and year 10 (14-15 years; $n = 288$). All classes in year 7 and year 10 participated as part of their regular timetabled activities. In total, 24 classes participated (12 from each year group) and all students within these classes took part on an opt-out basis. Participants were 43% male ($n = 260$) and 51% female ($n = 308$). A further 6% of participants did not disclose their gender ($n = 33$). With respect to ethnicity, 57% of participants identified as White British ($n = 343$). A further 32% of participants reported other ethnic backgrounds, including Other White Background ($n = 68$), Asian or Asian British ($n = 38$), Black or Black British ($n = 14$), Mixed Heritage ($n = 55$), and Other ($n = 17$). The remainder were unsure or did not disclose ($n = 66$; 11%). Students were drawn from a mixed-gender, comprehensive secondary school in England, situated in Brighton and Hove. Compared with the national averages, the school was larger than average in size, most students were White British, and the percentage of students with English as a second language was below average. The intake for students entitled to free school meals was lower than average and the percentage of students with special educational needs was in line with the national average.

Design

Twenty-four classrooms were randomly assigned within each year group to one of two conditions (experimental vs. control). Each class participated in a four-week

intervention during their existing 30-minute Personal, Social and Health Education (PSHE) lessons. The content of the intervention was either focussed on ‘acts of kindness’ (experimental group) or ‘self-focused conversations’ (control group). All students completed a self-report survey at two time points: pre-intervention and post-intervention⁶. Throughout the four-week intervention, students reported what they did each week on an in-class survey and rated their activities with respect to six aspects of eudaimonia. The key measures from the current study are described below⁷.

Measures

Subjective well-being.

Positive and negative affect. The shortened version of the Positive and Negative Affect Schedule for Children (Ebesutani et al. 2012) consisted of 10 items (joyful, miserable, cheerful, angry, happy, afraid, lively, scared, proud, and sad). Participants were asked to rate how much they were feeling each of these emotions ‘over the last two weeks.’ All items were scored on a Likert scale of 1 to 5, from ‘very slightly or not at all,’ to ‘a little,’ ‘moderately,’ ‘quite a bit,’ or ‘extremely.’ Mean responses were used to calculate an overall score for both positive and negative affect. Internal consistency was $\alpha = .82$ for positive affect and .80 for negative affect.

Life satisfaction. The Life Satisfaction Scale for Children (Gadermann, Schonert-Reichl, & Zumbo, 2010) consisted of five statements about life satisfaction,

⁶ Our study design also included a follow-up time point to assess durability of any overall improvements in well-being, and this took place four weeks after the completion of the intervention. However, due to unforeseen logistical difficulties experienced by the school, there was substantial attrition in terms of completion of measures at follow-up data collection: 35% of the original sample were lost at this time point. In view of this, and the fact that overall improvements in well-being were not observed from the pre- to post-intervention time points, the results of this analysis are not reported here. A summary of the findings can be found in the online supplementary materials.

⁷ This formed part of a larger battery of measures; additional items measuring values orientation, school climate and school belonging were included but are not reported here.

such as ‘I am happy with my life,’ and ‘In most ways my life is close to the way I would want it to be.’ Participants were asked to rate how much they agreed with each statement on a Likert scale of 1 to 5, from ‘disagree a lot,’ through ‘disagree a little,’ don’t agree or disagree,’ ‘agree a little,’ or ‘agree a lot.’ Mean responses were used to calculate an overall life satisfaction score. Internal consistency was $\alpha = .85$.

Flourishing. The Short Warwick Edinburgh Mental Well-being Scale (SWEMWBS; Haver et al. 2015) consisted of seven items about mental well-being, such as ‘I’ve been feeling optimistic about the future’, ‘I’ve been dealing with problems well,’ and ‘I’ve been feeling close to other people’. Participants were asked to rate each item on a Likert scale of 1 to 5, from ‘none of the time,’ through ‘rarely,’ ‘some of the time,’ ‘often,’ or ‘all of the time.’ Mean responses were used to calculate an overall flourishing score. Internal consistency was $\alpha = .78$.

Additional variables.

Purpose. A single item, taken from the Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi & Kaler, 2006) was used to measure purpose in life: ‘My life has a clear sense of purpose.’ Participants were asked to rate each item on a Likert scale of 1 to 7, from ‘absolutely untrue,’ through ‘mostly untrue,’ ‘somewhat untrue,’ ‘can’t say,’ ‘somewhat true,’ ‘mostly true,’ or ‘absolutely true.’

Self-esteem. The Self-esteem subscale from the Middle Years Development Instrument (Schonert-Reichl et al. 2013). consisted of three items about self-esteem, such as ‘A lot of things about me are good’ and ‘In general, I like being the way I am’. Participants were asked to rate how much they agreed with each statement on a Likert scale of 1 to 5, from ‘disagree a lot,’ through ‘disagree a little,’ don’t agree or disagree,’

‘agree a little,’ or ‘agree a lot.’ Mean responses were used to calculate an overall self-esteem score. Internal consistency was $\alpha = .84$.

Peer relationships. The Peer-belonging subscale from the Middle Years Development Instrument (Schonert-Reichl et al. 2013) consisted of three items about peer-belonging, such as ‘when I am with other kids me age, I feel I belong’ and ‘I feel part of a group of friends that do things together.’ The Friendship Intimacy subscale from the Middle Years Development Instrument (Schonert-Reichl et al. 2013) consisted of three items about friendship-quality, such as ‘I have a friend I can tell everything to’ and ‘There is somebody my age who really understands me.’ Participants were asked to rate how much they agreed with each statement on a Likert scale of 1 to 5, from ‘disagree a lot,’ through ‘disagree a little,’ ‘don’t agree or disagree,’ ‘agree a little,’ or ‘agree a lot.’ Mean responses were used to calculate an overall score for peer belonging and friendship quality. Internal consistency was $\alpha = .82$ for peer belonging and $\alpha = .88$ for friendship quality.

Gratitude. The first four items from the Gratitude Questionnaire-6 (GQ6; McCullough, Emmons & Tsang, 2002) were used to measure gratitude. The remaining two questions were removed due to recommendations from psychometric research in this age group (see Froh et al. 2011) and consultation with the teachers working in the school. Items included questions such as ‘I have so much in life to be grateful for’ and ‘When I look at the world, I don’t see much to be grateful for’. Participants were asked to rate each statement on a Likert scale of 1 to 6, from ‘strongly disagree,’ through ‘disagree,’ ‘slightly disagree,’ ‘neither agree or disagree,’ ‘slightly agree,’ or ‘agree,’ and ‘strongly agree.’ Mean responses were used to calculate an overall gratitude score. Internal consistency was $\alpha = .73$.

Prosocial behaviour. The Prosocial subscale from the Strengths and Difficulties Questionnaire (SDQ; Goodman, Lamping & Ploubidis, 2010) consisted of five items, such as ‘I try to be nice to other people. I care about their feelings,’ and ‘I often volunteer to help others (parents, teachers, children).’ Participants were asked to rate each statement as either ‘true,’ ‘somewhat true,’ or ‘not true.’ Mean responses were used to calculate an overall prosocial behaviour score. Internal consistency was $\alpha = .66$.

Overall kindness. A single item was included to measure self-perceived ratings of overall kindness: ‘In general, how kind are you?’ Participants were asked to draw an arrow on a sliding scale from ‘not kind at all’ to ‘the kindest possible.’ Scores ranged from one to five.

In-class Ratings of Eudaimonia for Performed Acts. Each week, students were asked to rate one of their activities (act of kindness or fact-telling) according to how much it satisfied six aspects of eudaimonia. The scale asked students to rate the extent to which the experience: “made me pay attention to the other person’s feelings” (self-transcendent attention)⁸; “made me feel like a good person” (good person); “made me feel accepted by the other person” (social acceptance); “made me feel like my life has meaning” (meaning in life); “made me feel connected to the other person” (social connection); and “made me feel proud of myself” (proud of self). These items were constructed for a previous study (Cotney & Banerjee, 2017) to measure eudaimonic functions of the kind act or fact-telling. They were selected based on prior evidence (as discussed above) that these eudaimonic aspects (meaning; positive self-evaluations;

⁸ Note that participants were not instructed to pay attention to other people’s feelings in any of the tasks. Thus, the self-transcendence measure cannot be considered circular. Given that individuals are likely to be paying attention to others during an act of kindness but may also do so during a social interaction, it is a reasonable hypothesis to test whether participants are more likely to rate themselves as having self-transcendent attention during a kind act than a social act. Adolescents are still developing self-transcendent moral reasoning, thus there is likely to be variability in the extent to which they pay attention to others when instructed to do kind acts.

social relationships; self-transcendence) may be associated with kindness. The students also rated how kindly they behaved during the act to test whether the participants differentiated levels of kindness across conditions. All seven items were scored on a Likert scale from 1 to 5, from ‘very slightly or not at all,’ through ‘a little,’ ‘moderately,’ ‘quite a bit,’ or ‘extremely.’ Each participant received a mean score for each individual rating across the four weeks⁹. The mean scores for the six eudaimonic ratings were loaded onto a latent variable of eudaimonia in the structural equation model.

Procedure

An information sheet was provided for all eligible students, and their parents or guardians, two weeks before the intervention began. During this time, parents and students were given opportunity to ‘opt out’ if they did not want to participate in the research project. No opt out forms were returned, so all students participated as part of their existing 30-minute Personal, Social and Health Education (PSHE) lessons. All students signed a written consent form during the first session. The head teacher reviewed all study documents and provided written consent to conduct the study using parental and student opt-out procedures. Class teachers were responsible for delivering all of the lessons and collecting survey data. All teachers attended a training session with the lead researcher and were provided with lesson plans and a detailed instruction guide. Classrooms were randomly assigned, within each year group, to the experimental or control condition¹⁰.

⁹ All students received a mean score for each rating as long as they completed at least one of the weekly worksheets. The statistical analysis was also conducted using a sample that consisted only of those participants who completed the worksheets for at least 50% of the sessions (two out of four weeks); this sample produced comparable results so the larger sample was retained.

¹⁰ Multilevel modelling was not appropriate for this study due to an insufficient high-level sample size (12 classrooms per experimental group); small sample sizes at the higher level lead to biased estimates

All participants completed the survey (consisting of all measures listed above) and a demographics questionnaire one week before the intervention began (pre). This survey was complete again on the last day of the intervention (post), and four weeks after the intervention had ended (follow-up). Every week, over the course of four weeks, students took part in either a ‘kindness’ or a ‘conversations’ curriculum. The control curriculum was designed to test whether the effects of kindness differ to the effects of spending time with others. It was therefore designed to foster positive social activity, but the tasks encouraged self-focused attention (i.e., talking about oneself) rather than other-focussed attention (i.e., being kind). The structure of the curriculum (e.g., number of sessions; length of sessions; session format; reflection sheets) matched that of the experimental group. All students were told that the study was about students’ social experiences and emotions and were not given any further details regarding the research hypothesis; thus they were blind to the research hypothesis.

Kindness. Participants in the kindness condition received an introductory lesson on kindness followed by four weeks of kindness practice. The introductory lesson included a video about kindness (Random Acts of Kindness Foundation, 2015a) and some group activities exploring the meaning of kindness, whether kindness is important, and ideas for acts of kindness. The video titled ‘What is kindness?’ showed a group of teenagers describing their own definitions of kindness. The video did not mention any links between kindness and happiness. The kindness practice required participants to do ‘three kind things’ each week in their own time. During class, students shared one of their kind acts with a partner and then reported their kind acts on a reflection sheet. They then rated one of their acts on the six aspects of eudaimonia described above.

and any conclusions would therefore have to be considered with caution, particularly where multiple measures are included in the design (McNeish & Stapleton, 2016).

Every week, the lesson ended with a ‘Kindness Minute.’ Kindness Minute activities were short, immediate kindnesses done in class, such as: smile at your neighbour; give someone a compliment; write a thank you note; tell someone a joke. Teachers were provided with an ‘acts of kindness ideas’ sheet and a ‘kindness minute ideas’ sheet to support the activities. The introductory lesson and kindness minute were adapted from the Random Acts of Kindness Foundation’s Kindness Curriculum (Random Acts of Kindness Foundation, 2015b).

Self-focused Conversations. Participants in the self-focused conversations condition received an introductory lesson on conversations followed by four weeks of conversation practice. The introductory lesson included a video that featured a teenager telling facts about themselves (Deyes, 2011) and some group activities exploring whether it is important to have conversations with others and identifying facts about themselves. The conversation practice required participants to ‘tell three facts about themselves to someone else’ each week in their own time. During class, students shared one of their facts with a partner and then reported their facts on a reflection sheet. They then rated one of their fact-telling conversations on the six aspects of eudaimonia described above. Every week, the lesson ended with a ‘Social Minute.’ Social Minute activities were short, immediate social activities done in class, such as: switch places with someone else and share a funny fact; chat with a partner about anything; shake hands and say hi to as many students as possible in one minute; share one thing you like and one thing you dislike. Teachers were provided with a ‘facts about me ideas’ sheet and a ‘social minute ideas’ sheet to support the activities.

Analysis Plan

Preliminary analyses were conducted to check for age and gender differences on all scores using a series of mixed 2 (condition: kindness vs. control) x 2 (gender: male vs. female) x 2 (age: 11-12 years vs. 14-15 years) x 2 (time: pre vs. post) four-way ANOVAs with time as the repeated measures variable. This ANOVA was conducted for all outcome variables, including: positive and negative affect, life satisfaction, flourishing, prosocial behaviour, kindness, gratitude, purpose, self-esteem, peer belonging and friendship quality. We also tested for differences across condition in mean eudaimonia ratings and mean kindness ratings for the acts performed during the intervention using a series of 2 (condition: kindness vs. control) x 2 (age: 11-12 years vs. 14-15 years) between groups ANOVAs to check for age differences and 2 (condition: kindness vs. control) x 2 (gender: male vs. female) between-groups ANOVAs to check for gender differences.

The main analysis then tested for overall effects of condition on each of the outcomes¹¹, using a two-way mixed design ANOVA: 2 (condition: kindness vs. control) x 2 (time: pre vs. post), with time as the repeated measures factor. We expected time by condition interaction effects on the key outcome variables of positive affect, life satisfaction, and flourishing, in that these variables were expected to increase over time for the kindness condition but not the control condition¹². For these ANOVA analyses, the sample size consisted of those students who received a mean score for the outcome measures at both pre- and post-test. Thus, the sample size ranged from 418 to 456 depending on the specific outcome measure (see Table 3.1). Therefore, these analyses

¹¹ These analyses tested multiple-hypotheses. Thus, any significant effects of the ANOVA analyses should be taken with caution due to an increased likelihood of family-wise error rate. Note that the final model includes all dependent variables in a single analysis, overcoming this limitation.

¹² A summary version of the ANOVA analyses is reported below, highlighting the key findings. Given that our hypotheses were primarily focussed on the change in outcome variables from pre- to post-test, this report will primarily focus on the interaction effects between time and condition. A full statistical report of all ANOVA statistics can be found in the online supplementary materials.

included 70 - 76% of the original sample, respectively. The rate of attrition varied by classroom. Of the 24 classrooms that participated, 10 classrooms retained 90 - 100% of their original sample, seven classrooms retained 80 - 89% of their original sample, four classrooms retained 75 - 79% of its original sample. Due to unforeseen logistical difficulties experienced by the school, one classroom only retained 71% of its original sample, one classroom retained only 52% of its original sample, and one classroom did not participate at post-test.

Finally, we used a structural equation model (SEM) to identify indirect effects of the condition on all outcome variables, via mean eudaimonia ratings of the performed acts. Specifically, we modelled pathways from the dichotomous variable representing the contrast between the kindness and control condition on the one hand, and change scores representing increases from pre-intervention to post-intervention on the other. After checking for significant correlations among all the ratings of aspects of eudaimonia for the acts performed during the intervention, we included a latent variable for eudaimonia as an intervening variable between the condition variable and the outcome change scores. Direct paths between condition and all change scores in outcome variables were also included, and all change scores for outcome variables were allowed to covary. For this SEM analysis, we used full information maximum likelihood such that students were only excluded from the analysis if they had missing data on all of the dependent variables, including the change scores and the latent eudaimonia variable ($n = 574$).

Results

Preliminary Analyses

Preliminary ANOVA analyses (as outlined in the analysis plan) revealed significant main effects of age and gender on almost all the outcome variables. However, for the majority of variables, age and gender did not interact with time (all $ps > .05$). Gratitude was the only exception, showing a significant three-way interaction between time, condition and age, $F(1, 447) = 5.29, p = .022$; gratitude scores reduced over time, but this was significantly greater for 14- to 15-year-olds in the kindness condition. Furthermore, for all six of the eudaimonia ratings for the performed acts, neither age or gender had any significant main effects or interaction effects with condition (all $ps > .05$). Age and gender were therefore excluded from all subsequent analyses given that they did not significantly interact with time or condition on the outcome variables or on the mean ratings for eudaimonia.

We expected that mean ratings of kindness for the performed acts would differ across the conditions, such that participants assigned to the kindness condition would rate their activities as more kind than those in the control condition. Unexpectedly, the main effect of condition was non-significant, $F(1, 493) = .02, p = .882$ and there were no significant interaction effects with age or gender (all $ps > .05$). Therefore, kindness ratings did not differ significantly according to condition membership.

Overall Effect of Condition

We analysed the effect of condition membership on all outcome variables using a mixed 2 (condition: kindness vs. control) x 2 (time: pre vs. post) two-way ANOVA, with time as the repeated measures factor. Means and standard deviations for pre and post scores, subdivided by condition, can be viewed in Table 3.1.

Well-being. There was a significant main effect of time on positive affect, $F(1, 454) = 12.07, p = .001$ and negative affect, $F(1, 454) = 15.51, p < .001$.

Table 3.1

Means and standard deviations for all outcome variables across time and condition

		M (SD)		N
		Pre	Post	
Positive affect	Kindness	3.52 (.81)	3.63 (.83)	236
	Control	3.58 (.82)	3.71 (.83)	220
	Total	3.55 (.81)	3.67 (.83)	456
Negative affect	Kindness	1.99 (.80)	2.17 (.94)	236
	Control	1.84 (.78)	1.95 (.85)	220
	Total	1.92 (.79)	2.06 (.91)	456
Life satisfaction	Kindness	3.64 (.90)	3.61 (.85)	233
	Control	3.68 (.93)	3.79 (.95)	222
	Total	3.66 (.91)	3.70 (.90)	455
Flourishing	Kindness	3.50 (.62)	3.50 (.72)	235
	Control	3.50 (.63)	3.60 (.76)	221
	Total	3.50 (.63)	3.55 (.74)	456
Kindness	Kindness	3.99 (.72)	4.08 (.77)	214
	Control	3.98 (.68)	4.09 (.76)	204
	Total	3.99 (.70)	4.08 (.76)	418
Prosocial Behaviour	Kindness	1.60 (.35)	1.55 (.40)	220
	Control	1.56 (.34)	1.54 (.39)	213
	Total	1.58 (.34)	1.54 (.39)	433
Gratitude	Kindness	5.83 (.85)	5.54 (1.06)	234
	Control	5.83 (.92)	5.76 (1.03)	222
	Total	5.83 (.89)	5.65 (1.05)	456
Purpose	Kindness	4.93 (1.39)	4.84 (1.53)	231
	Control	4.92 (1.51)	4.86 (1.76)	213
	Total	4.92 (1.45)	4.85 (1.64)	444
Self-esteem	Kindness	3.92 (.86)	3.88 (.87)	222
	Control	3.98 (.86)	3.96 (.90)	214
	Total	3.95 (.86)	3.92 (.89)	436
Peer belonging	Kindness	3.92 (.96)	3.80 (.98)	222
	Control	4.03 (.86)	4.05 (.81)	214
	Total	3.97 (.92)	3.92 (.91)	436
Friendship quality	Kindness	4.18 (1.03)	4.07 (.99)	223
	Control	4.22 (.93)	4.18 (.91)	213
	Total	4.20 (.98)	4.12 (.96)	436

However, the main effect of condition and the interaction between time and condition were non-significant for both variables (all $ps > .05$). Thus, the participants reported both more positive and more negative emotion from before to after the intervention but this did not differ significantly by condition. There was a significant interaction between time and condition on life satisfaction, $F(1, 453) = 4.35, p = .038$; life satisfaction increased for the control group but not for the kindness group. The main effects of time and condition were non-significant (both $ps > .05$). There were no significant effects of time, or significant interactions between time and condition on flourishing (all $ps > .05$). Thus, flourishing did not change from before to after the intervention, irrespective of condition.

Kindness and prosocial behaviour. There were significant main effects of time on prosocial behaviour, $F(1, 431) = 5.32, p = .022$ and on overall kindness, $F(1, 416) = 7.36, p = .007$, showing that prosocial behaviour decreased and kindness increased from before to after the intervention. However, the main effect of condition and the interaction between time and condition were non-significant for both variables (all $ps > .05$). Thus, changes in prosociality and kindness did not differ according to condition.

Gratitude. There was a significant main effect of time on gratitude, $F(1, 454) = 18.63, p < .001$. The main effect of condition was non-significant, $F(1, 454) = 2.17, p = .142$. However, there was a significant interaction between time and condition, $F(1, 454) = 6.30, p = .012$. Gratitude decreased in both conditions, but the reduction was significantly greater for the kindness group.

Purpose, self-esteem and peer relationships. There were no significant effects of time, or significant interactions between time and condition on the following variables: purpose, self-esteem, friendship quality, and peer belonging (all $ps > .05$).

Thus, these variables did not change from before to after the intervention, irrespective of condition.

Indirect Effects via Ratings of Eudaimonia for the Performed Acts

Next, we tested whether there were indirect effects of condition via the ratings of eudaimonia provided for the performed acts. To test whether the eudaimonic ratings were associated with changes in the outcome variables, a difference score was computed for each of the SWB outcomes, flourishing, kindness, prosocial behaviour, purpose, self-esteem, gratitude, peer belonging and friendship quality. The pre-intervention score was subtracted from the corresponding post-intervention score to look at the difference from before to immediately after the intervention. A positive difference score therefore represented an increase in the reported variable from pre-intervention to post-intervention. Bivariate correlations, means, and standard deviations for the eudaimonia ratings and the difference scores that were retained in the final model below¹³ are reported in Table 3.2. Numerous modest but significant associations can be seen between increases in positive affect, life satisfaction, flourishing, overall kindness, and gratitude on the one hand, and ratings of eudaimonia for acts performed during the intervention on the other. It was also clear that all six of the eudaimonic ratings were very highly correlated with each other.

A structural mediation model was evaluated to determine whether acts performed by the kindness group attracted generally higher eudaimonic ratings (compared to acts performed by the control group) and, in turn, whether condition membership had any indirect effects on changes in the outcome variables via the

¹³ A full correlation matrix that includes the excluded variables can be found in the supplementary materials (Table S3.2).

Table 3.2.

Bivariate correlations, means, and standard deviations for mean eudaimonic ratings and difference scores for SWB, flourishing, overall kindness and gratitude (n = 456)

	1	2	3	4	5	6	7	8	9	10	11
1. Increase in PA											
2. Increase in LS	.31***										
3. Increase in Flourishing	.38***	.40***									
4. Increase in Overall Kindness	.16**	.12*	.14*								
5. Increase in Gratitude	.23***	.31***	.34***	.04							
6. Social connect	.09	.08	.08	.14**	.02						
7. Good person	.11*	.10*	.10*	.09	-.02	.73***					
8. Social accept	.14**	.12*	.12*	.15**	.04	.78***	.71***				
9. Meaning	.11*	.11*	.11*	.13*	-.02	.64***	.66***	.70***			
10. Self-transcendence	.06	.10*	.10*	.11*	-.03	.72***	.71***	.72***	.66***		
11. Pride	.12*	.13*	.13**	.17***	.03	.65***	.79***	.64***	.68***	.65***	
M	.12	.04	.04	.10	-.18	2.97	3.20	3.11	2.84	3.16	3.17
SD	.76	.71	.66	.76	.90	1.11	1.16	1.11	1.20	1.15	1.23

$p < .05$; ** $p < .01$; *** $p < .001$

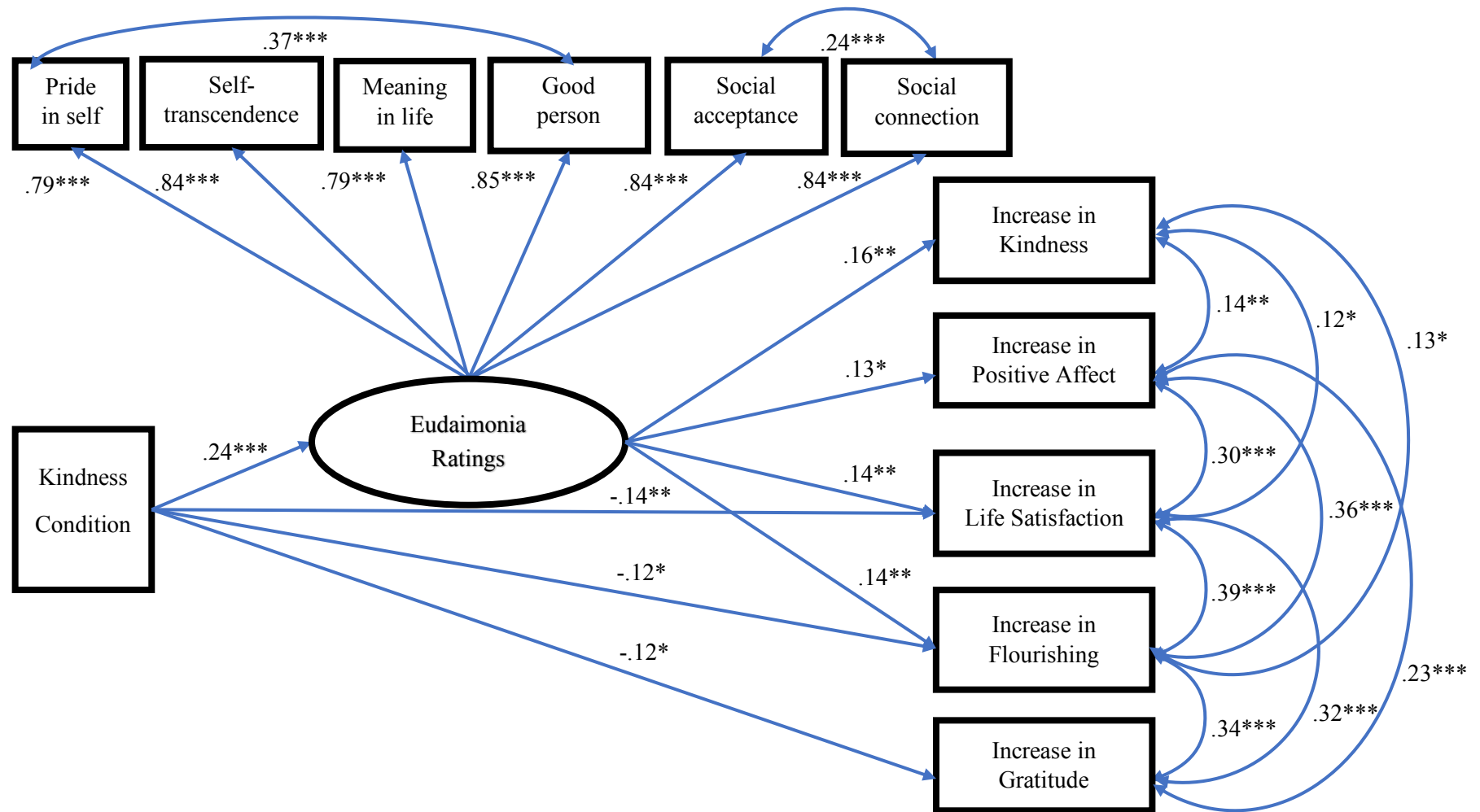


Figure 3.1: Final structural mediation model testing pathways from kindness condition to increases in outcome variables via ratings of eudaimonia

* $p < .05$; ** $p < .01$; *** $p < .001$. All coefficients are standardized. Non-significant direct paths from condition to outcomes are not shown in this diagram. Condition: 1=Social; 2=Kindness. Model fit: $\chi^2 (38) = 199.98$, $p < .001$; CFI = .946; RMSEA = .086; SRMR = .034.

eudaimonia ratings. Condition was entered as the predictor variable. In view of the pattern of correlations noted above, eudaimonia was entered as a single latent mediator variable, with each eudaimonic rating loading significantly onto it. Covariation pathways were entered from social acceptance to social connection, and from good person to proud of self. All of the difference scores were entered as outcome variables. Initial inspection of the model revealed that there were no significant pathways predicting negative affect, prosocial behaviour, self-esteem, peer belonging or friendship quality so they were removed from all analyses. All other non-significant pathways were then removed from the model, except for direct paths from condition to the difference scores. These were retained to control for the direct effects of condition membership on the outcomes when estimating indirect effects.

The final model for all increases in outcome variables from pre- to post-intervention is shown in Figure 3.1 with standardized path coefficients. The analysis indicated a good fit of the model to the data, $\chi^2(38) = 199.98, p < .001$, with a comparative fit index (CFI) of .946, root mean square error of approximation (RMSEA) of .086, and standardized root mean square residual (SRMR) of .034. Significant positive pathways were found from kindness condition to eudaimonia ratings ($p < .001$) and from eudaimonia ratings to positive affect ($p = .010$); life satisfaction ($p = .004$); flourishing ($p = .003$), and kindness ($p = .003$). This indicates that students who were assigned to the kindness condition gave higher eudaimonic ratings to their performed acts than students who were assigned to the control condition. In turn, higher eudaimonic ratings predicted a larger increase in kindness, life satisfaction, flourishing, and positive affect at the end of the intervention. We therefore estimated indirect effects from condition to the difference scores. Support was found for mediated links between condition and increases in life satisfaction ($\beta = .03, p = .014$), positive affect ($\beta = .03, p$

= .022), flourishing ($\beta = .03, p = .011$), and kindness ($\beta = .04, p = .009$) via higher ratings of eudaimonia for the acts performed during the intervention period. In contrast, the eudaimonia ratings did not predict changes in gratitude scores.

With respect to direct effects, after controlling for the positive indirect pathways via higher eudaimonia ratings reported above, we found negative direct paths from condition to life satisfaction ($p = .004$), flourishing ($p = .015$) and gratitude ($p = .012$). This indicates that, after taking into account the positive indirect effects via eudaimonic ratings, the kindness group were less likely to report increased levels of life satisfaction, flourishing, and gratitude at the end of the intervention.

To test the robustness of effects, the analysis was bootstrapped with 10,000 resamples checking at 95% bias-corrected adjusted confidence intervals (BCa CIs; MacKinnon, Lockwood, & Williams, 2004). Bootstrapping is especially important for indirect effects, which are not assumed to be normally distributed. If confidence intervals do not cross zero, this provides stronger evidence that the effects are robust. Accordingly, confidence intervals did not cross zero for the significant indirect effects of condition on positive affect (BCa CIs = .01 to .10), life satisfaction (BCa CIs = .01 to .09), flourishing (BCa CIs = .01 to .09), and kindness (BCa CIs = .02 to .11), via eudaimonia.

Discussion

The findings show that those in the kindness condition, when compared with those in the self-focused conversation condition, did not experience overall increases in well-being outcomes from before to after the intervention. In fact, the self-focussed conversation group were more likely to experience increases in life satisfaction and flourishing, showing that, overall, the kindness intervention was not effective at causing

mean increases. Furthermore, findings show that gratitude reduced significantly more in the kindness group than in the social group (although the direction was negative for both conditions). However, the kindness group did experience higher levels of eudaimonia *during* the intervention. In turn, students who had higher eudaimonic experiences were more likely to report increased SWB, flourishing and overall kindness at the end of the four-week period. Indeed, there was an indirect effect of kindness condition on positive affect, life satisfaction, and flourishing outcomes (as well as overall self-reported kindness) via an increased likelihood to experience eudaimonia. The positive indirect effects of kindness condition via eudaimonic ratings did not compensate for the reduction in gratitude, given that the eudaimonia ratings did not give rise to an increase in gratitude. Overall, these results demonstrate that kindness practice may have positive predictive value for well-being in adolescents, but only to the extent that it is effective at triggering eudaimonic experiences. Without this eudaimonic aspect, social experiences involving self-focused conversations may be more effective at boosting well-being. One possible explanation is that suppressor variables, or competing indirect effects unique to kindness, were having a negative impact on well-being, subsequently cancelling out the positive effects of the kindness task. This finding emphasises the complexity of kindness-based research and poses some interesting questions for future studies.

Overall Effects of Kindness on Well-being

Importantly, the kindness intervention did not have significant positive overall effects on well-being outcomes, compared with the social conversation group. In fact, the social condition resulted in greater increases in life satisfaction and flourishing, even though the task was designed to be predominantly self-focussed. There were no significant differences in overall effects on positive affect or general levels of kindness.

These findings were contrary to our hypotheses, given the increasing experimental research that has identified a direct, positive effect of kindness on well-being in adults (Curry et al. 2018) and children (Layous et al. 2012). This has been shown in adults even when kindness is compared with a social task (Midlarsky et al. 2018). This lack of overall effects may be due to variation in the extent to which participants were able to engage with true kindnesses. Indeed, one surprising finding was that those in the kindness condition did not, overall, rate the acts they performed during the intervention as significantly kinder than those in the self-focused conversation condition. This may reflect the fact that many of the acts performed in the kindness condition may simply not have been aligned with the intervention instructions, or alternatively that the acts of those in the self-focused conversation condition were felt to be equally kind albeit in a different way (e.g., taking time to talk to someone else). Furthermore, the social acts in the comparison group may have been more developmentally attainable for participants of this age. Lastly, the lack of positive effects may be due to the tightly controlled comparison group; for adolescents, kindness may not have benefits that go beyond positive social interaction.

One possible explanation for this finding, is that the kindness task was not adequately triggering other-focussed acts of kindness. Previous research has identified kindness not as a single act but as a complex, multidimensional construct that can take many behavioural forms and can be influenced by a range of situational antecedents and personal motivations, as well as dispositional and contextual factors (Cotney & Banerjee, 2017). Given this, there may be a range of different factors that could influence the extent to which a kind act triggers an eudaimonic experience. In the current study, students may have varied in their approach to the kindness task, such that some may have engaged with an other-focussed motivation, whereas others may have

been driven by approval or achievement particularly given the school-based context of the intervention. Research has shown that an other-focussed motivational stance is essential for successful acts of kindness (Cotney & Banerjee, 2017; Knafo & Israel, 2012). Other aspects of kindness that may influence its effect could include the specific type of behaviour (e.g., instrumental giving vs. emotional support), or the type of recipient (e.g., liked vs. disliked). Furthermore, dispositional factors may also influence the effectiveness of the kindness, such as varying levels of relevant socio-cognitive skills (e.g., empathy; Sahdra, Ciarrochi, Parker, Marshall, & Heaven, 2015). Research that seeks to uncover the conditions under which kindness is most likely to trigger eudaimonia in youth populations would be a useful addition to the literature, providing a more nuanced understanding of the way in which an intervention should be designed and delivered.

It is also possible that the comparison group concealed the potentially positive effects of kindness on well-being. A previous study that found positive effects of a kindness intervention in nine to 11-year-olds (Layous et al., 2012) used a non-social task as a comparison (visit three places). Thus, it is possible that the highly social nature of our comparison group reduced the capacity for positive effects of kindness. Indeed, a recent study conducted with adolescents of the same age (Cotney & Banerjee, under review) found that a reflective kindness task had no significant benefits for well-being compared with a reflective social task. Given this, it may be that kindness tasks provide similar benefits to other social activities for this age group. Indeed, previous research has linked social relationships with well-being outcomes in adolescence (Brown & Larson, 2009) and social impacts of kindness have been shown to mediate its effects on well-being in adults (Brown et al., 2012). Thus, the benefits of kindness found in previous studies may be driven by the benefits of positive social interaction. However,

this does not explain why the social group may have experienced *greater* increases than the kindness group.

Given that adolescents are already well-practised at spending time with their peers (Brown & Larson, 2009), but still developing the skills required to engage with kindness (Crone & Fuligni, 2019; Eisenberg et al. 2009), it is possible that the social task was easier and subsequently more pleasant to engage with, providing more overall feelings of life satisfaction and flourishing. Furthermore, given that adolescents tend to choose to spend their free time with peers (Brown & Larson, 2009), the social intervention may have provided more autonomy, a construct that is thought to be very important for well-being (Ryan & Deci, 2000). Furthermore, the self-focussed nature of the comparison tasks may have provided the students with additional benefits regarding self-enhancement that may have further increased the impact on well-being outcomes. Research shows that self-enhancement can inflate self-reports of subjective well-being (Wojcik & Ditto, 2014). Given this, it remains unclear whether an acts-of-kindness task would be beneficial when compared with a more neutral comparison group.

There is evidence that adolescents are still developing the skills required to engage with truly other-focussed kindness. Thus, it is possible that simply replicating the acts-of-kindness paradigms that are delivered with adults may not be enough. Adolescents may require more detailed guidance on the types of acts and motivations to engage with kindness. This notion is supported by a previous study that found self-transcendence to be an important mediator in the effect of kindness on well-being in youth (Cotney & Banerjee, under review). Furthermore, the same study found that kindness tasks were more effective at promoting well-being for 14- to 15-year-olds than 11- to 12-year-olds, suggesting that these paradigms may be easier to engage with as adolescents move closer to young adulthood. Future research should look to adapt the

acts-of-kindness paradigms such that they contain more developmentally appropriate instruction and support rather than simply replicating the comparable adult interventions.

The Effects of Kindness on Well-being: The Role of Eudaimonia

In line with our primary hypothesis, the kindness intervention had indirect effects on positive affect, life satisfaction, and flourishing (as well as overall self-reported kindness), suggesting there is potential for a kindness-based intervention to positively influence adolescent well-being over and above the effects of spending time conversing about oneself with others, but only to the extent that it is more likely at triggering eudaimonic experiences. These effects were explained by an increased likelihood to experience feelings of eudaimonia over the course of the intervention. This provides early experimental evidence that kindness has eudaimonic functions, in adolescent populations, that differentiate it from general socialising. To our knowledge, this is the first study to identify mechanisms that may underpin the effects of kindness on well-being in the context of a randomised, school-based intervention study. These findings provide a more nuanced understanding of the beneficial effects of kindness in youth. This can inform the way in which interventions are designed and reiterates the need for further investigations that explore the role of eudaimonia in kindness-based research.

The indirect effects demonstrate that kindness does have the potential to provide greater well-being benefits over and above the mere experience of socialising with others, to the extent that it is characterised by eudaimonic experiences. This maps onto theories stating that eudaimonia can be achieved via value-driven behaviours such as contributions to the greater good (Steger et al. 2008). Furthermore, it supports an emerging body of evidence that has identified eudaimonic indicators as explanatory

mechanisms in the link between kindness and well-being (Aknin et al. 2011; Brown et al. 2012; Hill & Howell, 2014; Martela & Ryan, 2016; Wiwad & Aknin, 2017).

Importantly, the current findings replicate those of a recent study that tested the effect of a reflective kindness task on adolescent well-being (Cotney & Banerjee, under review). Just as in the current study, it was found that the kindness group (compared with a social control group) reported higher levels of eudaimonia, which in turn predicted an increase in positive affect. Crucially, the current study shows that this effect can be observed not just within a single session but over an extended period of time. Together, these findings suggest that the way in which kindness is enacted is crucial for its beneficial effects on the adolescent giver. Interventions should therefore seek to foster kind acts that are most likely to trigger feelings of eudaimonia, such as acts that are hinged on a self-transcendent motivation or that encourage social interaction or a sense of pride, for instance. This notion is supported by a recent study that identified self-transcendence and pride as core mechanisms (Cotney & Banerjee, under review).

Although the acts performed by those in the kindness group were systematically rated as higher on aspects of eudaimonia, we did not find that the kindness group showed any tendency to improve over time on *dispositional* aspects of eudaimonic well-being (EWB), including purpose in life, self-esteem, and peer relationships. It is possible that being kind may be characterised by key aspects of eudaimonia *in the moment*, such as self-transcendence and other aspects measured here, but that these ‘state’ experiences of eudaimonia do not necessarily translate into significant changes over four weeks in ‘trait’ levels of EWB. Indeed, EWB is thought to be reflected by the sustained presence of specific indicators that reflect positive functioning (Steger et al. 2008; Waterman, 1993). Thus, perhaps more sustained or more varied practice of eudaimonic activities is needed in order to trigger meaningful and enduring changes in

these dispositional outcomes (Steger et al. 2008). In addition, consistent with the findings of Cotney and Banerjee (under review), there were no effects of kindness – either overall, directly, or indirectly via eudaimonia – on changes in negative affect. This confirms suggestions that experiences of kindness and accompanying eudaimonia are likely to have a distinctive effect on positive rather than negative indicators of well-being (Alden & Trew, 2013; Cotney & Banerjee, under review; Mongrain et al. 2011; Ouweneel, Le Blanc, & Schaufeli, 2014; Watson & Pennebaker, 1989).

Potential Suppressor Effects of Kindness

It is also possible that negative suppressor effects may have cancelled out the positive effect of kindness. Suppressor variables are thought to exist when a mediation model identifies the presence of a significant indirect effect where there is no significant main effect of the independent variable on the dependent variable (Rucker et al., 2011). Historically, a condition of mediation analysis was for a significant overall effect to be identified first, its main purpose being to identify an intervening variable that either partially or totally mediates the existing overall effect (i.e., there must be an overall effect to mediate; Baron & Kenny, 1986). However, advances in mediation analysis now encourage researchers to focus on the significance of the indirect effects even when there is no significant overall effect (see Rucker et al., 2011 and Zhao et al., 2010 for a detailed discussion). This focus on the indirect effects has come about, in part, because competing indirect effects can sometimes cause apparent null findings on the total overall effects (MacKinnon et al., 2000; Rucker et al., 2011); a combination of multiple intervening variables may explain a particular relationship. Thus, a combination of positive and negative effects may cancel each other out, concealing the total effect. Given that there were no overall effects of kindness on well-being, but positive indirect

effects via eudaimonia, it is possible that other suppressor variables may have cancelled out the positive impact of kindness.

Intriguingly, after controlling for the effects of eudaimonia during the intervention, the kindness group remained significantly more likely to experience a reduction in gratitude from before to after the intervention. It is possible then, that this reduction in gratitude could have suppressed the positive effects of eudaimonia, particularly given that gratitude has been consistently positively associated with well-being outcomes in previous research (see Wood, Froh, & Geraghty, 2010 for a review). For example, it may be that kindness promotes well-being via eudaimonia, but that reductions in gratitude may suppress these improvements in well-being because having less gratitude is harmful to well-being (i.e., a mediating effect of eudaimonia and a suppressing effect of gratitude). It is possible that the self-focused conversations provided more opportunities for noticing the good things in life and therefore were less likely to see a reduction in gratitude. Indeed, there is evidence to show that positive social experiences are thought to be intimately related to gratitude (McCullough, Kimeldorf, & Cohen, 2008). An alternative explanation is that among those in the kindness condition, a heavy focus on being the *giver* of kindness may have reduced the likelihood to notice times when they have *received* kindness. Thus, in focusing purely on performing acts of kindness, the design of our intervention may have had the unintended consequence of diminishing gratitude, which may have suppressed its potential to increase the well-being outcomes. Importantly, there may also be other *unmeasured* suppressor variables responsible for the null total effect and researchers may therefore need to consider the inclusion of other variables in their analyses.

Given these considerations, it may be important to consider potential suppressor variables when delivering a kindness-based intervention. For instance, gratitude tasks

could be incorporated within kindness-based interventions to buffer against any negative effects. Previous research has suggested, for example, that kindness tasks may be more effective if they are preceded by gratitude practice (Layous, Lee, Choi, & Lyubomirsky, 2013). Furthermore, gratitude ratings could be incorporated into future research as an intervening variable to test whether its inclusion changes the total effects. Even so, it remains unclear whether the intervention drove the negative change in gratitude or whether external variables, such as school pressure, were at least partly responsible for this reduction; the latter seems plausible in that the descriptive statistics showed an overall decline in gratitude in both conditions. This calls for further research investigating the intricate relationship between kindness and gratitude in the context of positive interventions and for the inclusion of other variables that may be negatively affected by kindness.

Methodological Limitations

Although this study has identified differential effects of kindness vs. social tasks on a range of positive outcomes, it is important to note that the study did not include a neutral control group. Both activities were positive tasks given that sociality is associated with a range of well-being indicators (Brown & Larson, 2009; Olsson et al. 2013). Thus, the fact that significant differences were identified is a real strength of this research and we would expect much larger effects if the kindness task was compared with a neutral control activity rather than the positive activity of sharing self-focussed facts with others. Indeed, where a neutral or inactive control task has been used with adults, kindness is shown to have significant positive effects on well-being outcomes (e.g., Alden & Trew, 2013). This may also be true for adolescents. However, the lack of a neutral control task makes it difficult to interpret whether either of the current conditions had a positive effect on the participants compared with the trajectory of

change in outcome variables for those engaged in regular school activities. Future studies should seek to include an inactive control group such that the effects of each condition can be compared with ‘business as usual’. This will provide a more nuanced interpretation of both the positive and negative effects, such that the changes for each group can be compared with the general, temporal patterns within the school.

One of the most prominent findings from this research is that acts performed by those in the kindness group were significantly more likely to trigger feelings of eudaimonia than the acts performed in the self-focused conversation group. Moreover, although the acts performed by those in the kindness group were not necessarily labelled by the pupils as significantly more kind than acts performed by those in the self-focused conversation group, the kindness intervention indirectly predicted an increase in self-reported overall kindness via the ratings of eudaimonia during the intervention, providing further support for the notion that kindness has eudaimonic qualities. Indeed, the fact that the kindness groups did not rate themselves significantly higher on levels of kindness during the intervention task, suggests that it is not perceiving oneself as a ‘kind’ person that drives the change in well-being, but the experience of eudaimonia that occurs during the act. This has important implications for the design of interventions, but it was beyond the scope of this study to assess the factors that may explain the variation in eudaimonia. We therefore cannot ascertain *how* to design a kindness task such that it is most effective, or *who* it may be most effective for. Given that the effects on well-being appeared to be dependent on a more highly eudaimonic experience, it is essential to understand the within-group features that may explain variation in this mediator. Factors that may influence the effectiveness of the intervention could include activity-level moderators, such as the type of kindness, or person-level moderators such as their motivation. This could be achieved by adding

further instructions regarding the experimental task, or, for example, by tracking and analysing the specific behaviours that participants engage with throughout the intervention.

Individual differences may also influence the eudaimonic capacity of the kindness (see Layous & Lyubomirsky, 2013 for a discussion of person-activity fit). In the current study, neither age nor gender moderated the effects, but other relevant variables may be influential, and should be explored in future research. Examples may include self-transcendent values or baseline mental health. Indeed, self-transcendent values have previously been shown to moderate the effect of relatedness on well-being outcomes (Hill & Howell, 2012) and some mental health problems have been associated with a decreased likelihood to engage in prosocial behaviour (Choi, Johnson, & Johnson, 2011; Flynn, Ehrenreich, Beron, & Underwood, 2015). As such, individual differences may be an important focus for future investigations.

Another important consideration for school-based interventions is the contextual support for students. In this study, the teachers were primarily responsible for delivering the intervention. All teachers were provided with training and guidance materials to control for variations in implementation between classes, but we did not measure the level of contextual support provided by the teachers, nor did we assess other teacher-level factors such as level of engagement, method of implementation, or motivation for the task. Social support has been shown to moderate the effectiveness of positive activities (Nelson et al. 2015). Furthermore, evidence shows that school staff can effectively deliver social and emotional learning programs in schools, but that effectiveness is moderated by implementation problems (Durlak, Weissberg, Dymnicki, Taylor & Schellinger, 2011). Thus, in the context of a school-based intervention, the teacher-level factors are likely to be highly influential in determining the success of the

activities, particularly with respect to pupils' fidelity to, and motivation to engage with, the intervention instructions. Given this, future research should incorporate measures of implementation and teacher engagement to assess whether these factors may have influenced the results.

Conclusion

In sum, the current study did not provide evidence that a kindness intervention is more effective at boosting overall well-being than a comparable social intervention. However, the findings do suggest that an intervention that promotes acts of kindness may be more effective than self-focused social activities at triggering eudaimonic experiences. These experiences may, in turn, have positive effects on a range of well-being outcomes in adolescents, but the positive effects of kindness on those outcomes appear only to the extent that the kindness acts satisfy feelings of eudaimonia. Therefore, eudaimonia is an important mechanism of kindness and, in its absence, kindness may be less effective in increasing well-being than a self-focused conversational activity. These findings have important implications for the way in which kindness-based interventions are designed, whilst highlighting a number of questions regarding the conditions under which kindness is most likely to be effective.

Supplementary Materials

Complete List of Effects from Preliminary Analyses

Before conducting the main analysis, preliminary analyses were conducted to check for age and gender differences using a mixed 2 (condition: kindness vs. control) x 2 (gender: male vs. female) x 2 (age: 11-12 years vs. 14-15 years) x 2 (time: pre vs. post) four-way ANOVA with time as the repeated measures. This showed significant main effects of gender on life satisfaction, $F(1, 446) = 8.68, p = .003$; negative affect, $F(1, 447) = 20.99, p < .001$; the Warwick Edinburgh Mental Well-being Scale (flourishing), $F(1, 447) = 26.40, p < .001$; prosocial behaviour, $F(1, 424) = 13.11, p < .001$; purpose, $F(1, 435) = 4.58, p = .033$; self-esteem, $F(1, 427) = 18.50, p < .001$; peer belonging, $F(1, 427) = 8.97, p = .003$; and friendship quality, $F(1, 427) = 6.75, p = .010$. Compared with females, male participants reported higher scores for life satisfaction, flourishing, purpose, self-esteem, and peer belonging. Females reported higher scores for negative affect, prosocial behaviour, and friendship quality. There were also significant main effects of age on life satisfaction, $F(1, 446) = 16.67, p < .001$; positive affect, $F(1, 447) = 13.49, p < .001$; negative affect, $F(1, 447) = 15.42, p < .001$; flourishing, $F(1, 447) = 8.16, p = .004$; prosocial behaviour, $F(1, 424) = 31.31, p < .001$; purpose, $F(1, 435) = 19.81, p < .001$; gratitude, $F(1, 447) = 30.55, p < .001$; self-esteem, $F(1, 427) = 26.12, p < .001$; peer belonging, $F(1, 427) = 12.81, p < .001$; and friendship quality, $F(1, 427) = 9.86, p = .002$. Younger students reported higher scores for life satisfaction, positive affect, flourishing, purpose, gratitude, self-esteem, peer belonging, and friendship quality. Younger students reported lower scores for negative affect. However, for the majority of variables, there were no significant interactions with time or condition (all $ps > .05$). Gratitude was the only exception, showing a significant three-way interaction between time, condition and age, $F(1, 447) = 5.29, p$

=.022; gratitude scores reduced over time, but only for 14- to 15-year-olds who belonged to the kindness condition.

We also tested for age and gender differences across condition for the mean eudaimonia ratings for the acts performed during the intervention using a series of 2 (condition: kindness vs. control) x 2 (age: 11-12 years vs. 14-15 years) between-groups two-way ANOVAs and 2 (condition: kindness vs. control) x 2 (gender: male vs. female) between-groups two-way ANOVAs. This showed significant main effects of condition on social connection, $F(1, 547) = 22.90, p < .001$; feeling like a good person, $F(1, 547) = 95.91, p < .001$; social acceptance, $F(1, 547) = 5.13, p = .024$; self-transcendence, $F(1, 546) = 22.83, p < .001$; and feeling proud of self, $F(1, 545) = 31.14, p < .001$. The main effect of condition on meaning in life was non-significant, $F(1, 546) = 1.61, p = .205$. Those in the kindness group rated their performed acts as significantly higher on social connection, feeling like a good person, social acceptance, self-transcendence and feeling proud of self, compared with the social group. However, the ratings did not differ for meaning in life. For all six ratings, there were no significant interactions with age or gender (all $ps > .05$). Age and gender were excluded from all subsequent analyses given that they did not have any significant interaction effects with time or condition on the outcome variables or the mean eudaimonia ratings.

We also tested whether the mean kindness ratings differed across the conditions, such that participants assigned to the kindness condition would rate their activities as more kind than the control condition. We tested this using a 2 (condition: kindness vs. control) x 2 (age: 11-12 years vs. 14-15 years) x 2 (gender: male vs. female) between-groups three-way ANOVA. The main effect of condition was non-significant $F(1, 493) = .02, p = .882$. There was a significant main effect of gender, $F(1, 493) = 10.90, p = .001$,

such that females reported higher kindness ratings overall, but it did not interact with condition ($p > .05$). All other effects were non-significant (all $ps > .05$).

Complete List of Effects from ANOVAs on All Outcome Variables

For each outcome variable, we conducted a mixed 2 (condition: kindness vs. control) x 2 (time: pre vs. post) two-way ANOVA, with time as the repeated measures factor.

Well-being. There was a significant main effect of time on positive affect, $F(1, 454) = 12.07, p = .001$ showing that positive affect increased from pre to post test. However, neither the main effect of condition, $F(1, 454) = 1.04, p = .307$, nor the interaction between time and condition, $F(1, 454) = .07, p = .786$, approached significance. There was also a significant main effect of time on NA, $F(1, 454) = 15.51, p < .001$, showing an increase in negative affect scores from pre to post test. Again, neither the main effect of condition, $F(1, 454) = 2.08, p = .150$, nor the interaction between time and condition, $F(1, 454) = .87, p = .352$, approached significance. Thus, the participants reported more positive and negative emotion from before to after the intervention but this did not differ significantly by condition.

The main effect of time on life satisfaction scores was non-significant, $F(1, 453) = 1.34, p = .249$, as was the main effect of condition, $F(1, 453) = 1.85, p = .175$. However, there was a significant interaction between time and condition on life satisfaction, $F(1, 453) = 4.35, p = .038$; life satisfaction increased for the control group but not for the kindness group.

The main effect of time on flourishing was also non-significant, $F(1, 454) = 2.33, p = .127$, as was the main effect of condition, $F(1, 454) = .67, p = .413$, and the

interaction between time and condition, $F(1, 454) = 2.92, p = .088$. Thus, flourishing did not change from before to after the intervention, irrespective of condition.

Purpose. The main effect of time on purpose was also non-significant, $F(1, 442) = 1.54, p = .283$, as was the main effect of condition, $F(1, 442) = .00, p = .987$, and the interaction between time and condition, $F(1, 442) = 2.92, p = .801$. Thus, purpose did not change from before to after the intervention, irrespective of condition.

Self-esteem. The main effect of time on self-esteem was also non-significant, $F(1, 434) = 1.00, p = .317$, as was the main effect of condition, $F(1, 434) = .79, p = .374$, and the interaction between time and condition, $F(1, 434) = .09, p = .770$. Thus, self-esteem did not change from before to after the intervention, irrespective of condition.

Gratitude. There was a significant main effect of time on gratitude, $F(1, 454) = 18.63, p < .001$ showing that gratitude decreased from pre to post test. The main effect of condition was non-significant, $F(1, 454) = 2.17, p = .142$. However, there was a significant interaction between time and condition, $F(1, 454) = 6.30, p = .012$, with students in the kindness group showing larger reductions in gratitude than the control group, from before to after the intervention.

Peer relationships. The main effect of time on peer belonging was also non-significant, $F(1, 434) = 2.12, p = .146$. There was a significant main effect of condition, $F(1, 434) = 5.12, p = .024$, with the control group having higher scores than the kindness group. However, the interaction between time and condition was non-significant, $F(1, 434) = 3.63, p = .058$. The main effect of time on friendship quality was also non-significant, $F(1, 434) = .562, p = .454$, as was the main effect of condition, $F(1, 434) = .80, p = .372$, and the interaction between time and condition, $F(1, 434) =$

.56, $p = .454$. Thus, friendship quality and peer belonging did not change from before to after the intervention, irrespective of condition.

Kindness and prosocial behaviour. The main effect of time on prosocial behaviour was significant, $F(1, 431) = 5.32, p = .022$, showing that prosocial behaviour reduced from before to after the intervention. However, the main effect of condition was non-significant, $F(1, 431) = .74, p = .391$, as was the interaction between time and condition, $F(1, 431) = .63, p = .427$. Thus, participants reported less prosocial behaviour after the intervention, but this did not differ significantly according to condition. Similarly, the main effect of time on kindness was significant, $F(1, 416) = 7.36, p = .007$, showing that kindness ratings increased from before to after the intervention. However, the main effect of condition was non-significant, $F(1, 416) = .00, p = .992$, as was the interaction between time and condition, $F(1, 416) = .04, p = .846$. Thus, participants rated themselves as more kind after the intervention, but this did not differ significantly according to condition.

Changes in All Outcome Variables from Post-intervention to Follow-up

We analysed this hypothesis using a mixed 2 (condition: kindness vs. control) x 2 (time: post vs. follow-up) two-way ANOVA, with time as the repeated measures factor. Means and standard deviations for post and follow-up scores across condition can be viewed in Table S3.1.

Well-being. There were no significant main effects of time, or interactions between time and condition, on positive affect, life satisfaction, or flourishing (all $ps > .05$). Thus, these variables did not change from post-intervention to follow-up, irrespective of condition. However, there was a significant main effect of condition on life satisfaction, showing that the control group continued to have higher scores overall

Table S3.1

*Means and standard deviations for all outcome variables across time and condition
(Post to Follow-up)*

		M (SD)		N
		Post	Follow-up	
Positive affect	Kindness	3.63 (.83)	3.62 (.88)	202
	Control	3.71 (.83)	3.74 (.77)	185
	Total	3.67 (.83)	3.68 (.82)	387
Negative affect	Kindness	2.17 (.94)	2.14 (.90)	202
	Control	1.95 (.85)	2.06 (.89)	185
	Total	2.06 (.91)	2.11 (.89)	387
Life satisfaction	Kindness	3.61 (.85)	3.67 (.94)	201
	Control	3.79 (.95)	3.89 (.89)	186
	Total	3.70 (.90)	3.78 (.92)	387
Flourishing	Kindness	3.50 (.72)	3.50 (.83)	202
	Control	3.60 (.76)	3.65 (.69)	187
	Total	3.55 (.74)	3.58 (.77)	389
Kindness	Kindness	4.08 (.77)	4.16 (.68)	190
	Control	4.09 (.76)	4.13 (.72)	175
	Total	4.08 (.76)	4.15 (.70)	365
Prosocial Behaviour	Kindness	1.55 (.40)	1.50 (.42)	193
	Control	1.54 (.39)	1.59 (.36)	179
	Total	1.54 (.39)	1.54 (.39)	372
Gratitude	Kindness	5.54 (1.06)	5.52 (1.08)	202
	Control	5.76 (1.03)	5.65 (1.05)	187
	Total	5.65 (1.05)	5.58 (1.06)	389
Purpose	Kindness	4.84 (1.53)	4.89 (1.52)	194
	Control	4.86 (1.76)	5.22 (1.52)	177
	Total	4.85 (1.64)	5.05 (1.52)	371
Self-esteem	Kindness	3.88 (.87)	3.82 (.95)	193
	Control	3.96 (.90)	4.07 (.83)	182
	Total	3.92 (.89)	3.94 (.90)	375
Peer belonging	Kindness	3.80 (.98)	3.88 (.89)	193
	Control	4.05 (.81)	4.01 (.83)	181
	Total	3.92 (.91)	3.94 (.87)	374
Friendship quality	Kindness	4.07 (.99)	4.09 (.98)	193
	Control	4.18 (.91)	4.07 (.95)	181
	Total	4.12 (.96)	4.08 (.98)	374

for this outcome, $F(1, 385) = 6.46, p = .011$. For negative affect, there was a significant main effect of time $F(1, 385) = 6.37, p = .012$, showing that negative affect increased from post-intervention to follow-up. However, neither the main effect of condition, nor the interaction between time and condition, approached significance (both $ps > .05$).

Purpose. The main effect of time on purpose was also significant, $F(1, 369) = 3.90, p = .049$, but the main effect of condition, and the interaction between time and condition, were both non-significant (both $ps > .05$). Thus, purpose did increase from post-intervention to follow-up, but this did not differ according to condition.

Self-esteem. There were no significant main effects of time, or interaction effects between time and condition on self-esteem (all $ps > .05$), but there was a significant main effect of condition, $F(1, 373) = 5.85, p = .016$, showing that the control group had higher scores overall.

Gratitude. There was a significant main effect of time on gratitude, $F(1, 387) = 11.96, p = .001$, showing that gratitude decreased from post-intervention to follow-up. The main effect of condition was also significant, $F(1, 387) = 4.36, p = .037$, showing that the control group continued to have higher gratitude scores overall. However, the interaction between time and condition was non-significant, $F(1, 387) = 1.22, p = .270$, showing that although gratitude decreased overall, this did not differ according to condition.

Peer relationships. There were no significant main effects of time, or interaction effects between time and condition on peer belonging or friendship quality (all $ps > .05$), but there was a significant main effect of condition on peer belonging, $F(1, 372) = 5.37, p = .021$, showing that the control group had higher scores overall.

Kindness and prosocial behaviour. There were no significant main effects of time, or interaction effects between time and condition on kindness (all $ps > .05$). However, there was a significant interaction between time and condition on prosocial behaviour, $F(1, 370) = 5.68, p = .018$; prosocial scores decreased from post-intervention to follow-up for the kindness group only. The main effects for time and condition were non-significant (both $ps > .05$).

Table S3.2.

Bivariate correlations, means, and standard deviations for mean eudaimonic ratings and change scores from pre- to post-intervention for all outcome variables, including those excluded from the final model (n = 456)

	1	2	3	4	5	6	7	8	9	10	11
1. Increase in PA											
2. Increase in NA	-.16**										
3. Increase in LS	.31***	-.20***									
4. Increase in Flourishing	.38***	-.24***	.40***								
5. Increase in Kindness	.16**	.01	.12*	.14*							
6. Increase in Prosocial behaviour	.06	-.09	.13**	.25***	.10*						
7. Increase in Gratitude	.23***	-.19***	.31***	.34***	.04	.09					
8. Increase in Purpose	.20***	-.13**	.32***	.21***	-.04	.18***	.22***				
9. Increase in Self-esteem	.33***	-.14**	.35***	.38***	.08	.16***	.32***	.23***			
10. Increase in Peer belonging	.21***	-.24***	.22***	.33***	.04	.07	.28***	.10*	.31***		
11. Increase in Friendship quality	.15***	-.13**	.18***	.26***	.09	.17***	.22***	.06	.29***	.43***	
12. Social connect	.09	.04	.08	.08	.14**	-.00	.02	.09	.07	.00	.01
13. Good person	.11*	.03	.10*	.10*	.09	.01	-.02	.06	.07	-.01	-.05
14. Social accept	.14**	.04	.12*	.12*	.15**	.01	.04	.08	.07	-.00	-.01
15. Meaning	.11*	.11*	.11*	.11*	.13*	.01	-.02	.14**	.06	-.02	-.03
16. Self-transcendence	.06	.09	.10*	.10*	.11*	.04	-.03	.06	.05	-.01	.03
17. Pride	.12*	.05	.13*	.13**	.17***	-.01	.03	.07	.07	-.00	-.04
M	.12	.15	.04	.04	.10	-.04	-.18	-.07	-.03	-.06	-.08
SD	.76	.78	.71	.66	.76	.35	.90	1.44	.67	.80	.90

* $p < .05$; ** $p < .01$; *** $p < .001$

Table S3.2.

Continued

	12	13	14	15	16	17
12. Social connect						
13. Good person	.73***					
14. Social accept	.78***	.71***				
15. Meaning	.64***	.66***	.70***			
16. Self-transcendence	.72***	.71***	.72***	.66***		
17. Pride	.65***	.79***	.64***	.68***	.65***	
M	2.97	3.20	3.11	2.84	3.16	3.17
SD	1.11	1.16	.111	1.20	1.15	1.23

* $p < .05$; ** $p < .01$; *** $p < .001$

General Discussion

The three papers within this thesis were designed to illuminate the impact that kindness has on an adolescent giver's well-being, as well as to identify the mechanisms through which kindness has such effects, and the conditions under which it is most effective. All papers focus on positive aspects of well-being, including both hedonic and eudaimonic dimensions of flourishing, and consider the impact of kindness within the developmental context. This discussion will provide a collated summary of the findings in relation to the overall aims outlined in the introduction. It will then consider the theoretical and practical implications of the research. A final section will consider the limitations of this research and identify future directions.

Summary of Research Findings

Adolescents' Conceptualizations of Kindness

The first aim was to document adolescents' own understanding of kindness, including its behavioural forms, as well as its social and psychological antecedents. This was explored in Paper 1 by conducting six focus groups for qualitative analysis. The thematic analysis showed that adolescents understand kindness to be a multifaceted construct, consisting of both behavioural and motivational dimensions. As expected, the participants identified many distinct types of kind behaviour that clearly fit under the umbrella term of prosociality. These behavioural manifestations included emotional support, proactive support, social inclusion, positive sociality, complimenting, helping, expressing forgiveness, honesty, generosity, and formal acts of kindness. Crucially, these behaviours were only considered to be an act of kindness when paired with an underlying other-focused motivation. This motivational component was fundamental to the definition of kindness; thus, kindness can be differentiated from the broader construct of prosocial behaviour. The participants also identified a range of other social

and psychological factors that may precede an act of kindness. These included situational triggers, including the needs (emotional, instrumental, or health-related) and life events that are occurring for the recipient, as well as personal triggers, including the giver's own emotion. Importantly, these were not considered fundamental to the definition of kindness, such that kindness can occur in the absence of an immediate trigger. Other psychological motives were also identified, including self-focused, relationship-focused, and non-autonomous goals. Although important for identifying the range of factors that influence kind behaviour in adolescents, these motives were also not considered fundamental to the definition of kindness as a construct. Indeed, other-focused goals, such as the desire to improve another person's physical, social, or psychological state, were considered the only essential motivational component of kindness. This other-focused motivational stance was therefore at the heart of all examples of kindness, thus providing a useful theoretical framework for understanding its specific nature.

The Impact of Kindness on Well-being

A second aim was to identify whether kindness has positive effects on well-being outcomes, and whether eudaimonic functions of kindness were able to explain this effect. Paper 1 provided initial, qualitative support for a positive perceived impact of kindness on the giver's well-being from the perspective of young people themselves. Indeed, the focus group participants identified a range of positive impacts that reflected both subjective (e.g., positive emotion) and eudaimonic (e.g., positive self-evaluation and positive relationships) aspects of well-being. Papers 2 and 3 extended these findings via the use of randomized, controlled experimental methods.

First, Paper 2 showed that those assigned to recall and reflect on an act of kindness, when compared with those assigned to the social control condition, did not experience any overall changes in SWB from before to after the writing task. However, they were more likely to rate their memory as high on various aspects of eudaimonia. This included self-transcendence and positive self-evaluation but did not include positive relationships or meaning in life. These eudaimonic qualities, in turn, predicted increased levels of life satisfaction and positive, but not negative, affect from before to after the writing task. In line with our hypotheses, mediation analysis revealed that belonging to the kindness condition had a significant indirect effect on increased positive affect via an increased likelihood to experience self-transcendence and pride during the act. However, these effects were moderated by the age of the participants and whether or not the kindness was prompted by an obvious need on the part of the recipient.

Paper 3 consisted of a four-week kindness-based intervention that involved performing (and then recalling on a weekly basis) acts of kindness, rather than simply a single retrospective memory of kindness. The study replicated the findings of Paper 2, such that those in the kindness condition, in comparison to those in the control condition (involving more self-focused socialising), did not have larger overall increases in well-being from before to after the intervention. However, they did experience higher overall levels of eudaimonia during the intervention (including self-transcendence, positive self-evaluation, positive relationships, and meaning in life). In turn, those with higher eudaimonic experiences were more likely to report increased levels of SWB, overall flourishing, and general levels of kindness at the end of the intervention. As expected, the mediation analysis revealed positive indirect effects of kindness condition on positive affect, life satisfaction, flourishing, and kindness via these eudaimonic

experiences. It should be noted that Paper 3 also included specific dispositional eudaimonic indicators as outcome variables, including peer relationships, self-esteem and purpose in life, but condition membership did not have any significant effect on these outcomes.

Together, the findings from Papers 2 and 3 show that kindness-based interventions may not be as beneficial for adolescent well-being as they are for adult populations. It is clear from the current papers that, when compared with social tasks, kindness-based interventions do not improve overall levels of well-being. However, the current studies do provide a nuanced assessment of the complex indirect pathways from kindness to well-being, suggesting there may be a combination of positive and negative pathways. Acts of kindness are more likely, in comparison with generic or self-focused socialising, to have eudaimonic qualities that may be particularly important mechanisms in improving certain aspects of well-being, particularly positive affect. Furthermore, the specific role of self-transcendence supports and extends the notion that kindness has an other-focused motivational component, as identified in Paper 1. The results also show that kindness can have positive effects on well-being outcomes, particularly SWB and flourishing, to the extent that it is more likely to evoke aspects of eudaimonia. These effects were true for a single retrospective memory of kindness, as well as for sustained kindness practice over a period of weeks. Importantly though, both studies found that kindness did not have positive overall effects on the well-being outcomes; the positive effects emerged *only* via the ratings of eudaimonia concerning the acts performed. In fact, Paper 3 showed that the group instructed to do self-focused socialising were significantly more likely to experience an increase in life satisfaction and flourishing than the kindness group. Furthermore, the kindness group saw significantly larger reductions in dispositional levels of gratitude, compared with the control group. Thus,

the results demonstrate that kindness practice has the potential for positive predictive value on well-being, but only to the extent that it is effective at triggering eudaimonic experiences. In its absence, a kindness task may be *less* effective in promoting aspects of well-being than a self-focused conversational activity.

Moderating Factors

A final aim was to identify moderating factors that may influence these pathways, including activity-level and individual-level features. Participants in Paper 1 were able to initiate insightful discussions about the complexities of kindness in everyday life, identifying a range of social and individual factors that can influence the way in which kindness is enacted, as well as the impact it has on well-being. These moderators included the giver's socio-cognitive skills, such as empathy and perspective-taking; the giver's baseline levels of well-being; the level of relatedness between giver and recipient; and broader social-contextual factors, such as expressed gratitude, contagion effects, and reciprocity. Furthermore, the triggers and motives identified by the participants (as discussed above) also functioned as moderating factors, such that the type of trigger or motive may influence the type of behaviour enacted or the effect it has on the giver. For instance, self-focused and non-autonomous acts were not thought to have any benefit with respect to a giver's own well-being.

Building on these qualitative findings, the subsequent papers included activity-level (Paper 2) and individual-level (Paper 2 and 3) moderators in their experimental investigations. The reflective kindness task (Paper 2) included an experimental manipulation such that the memories systematically varied according to a) whether or not the kindness was prompted by a need on the part of the recipient (needs-prompted vs. unprompted), and b) the familiarity of the recipient (familiar vs. unfamiliar). We

also tested for moderation according to age and gender (Papers 2 and 3). There were no significant effects for recipient-familiarity or gender. However, the effects did differ according to recipient need and participant age (Paper 2), such that the indirect pathway from kindness condition to well-being via self-transcendence was significant for 11- to 12-year-olds only among those allocated to the needs-prompted condition. In contrast, both needs-prompted and unprompted memories were rated as evoking higher levels of self-transcendence and positive self-evaluation among the 14- to 15-year-olds. Although the indirect pathway to well-being *via* self-transcendence was only significant for the needs-prompted group, the indirect pathway via pride was significant for 14- to 15-year-olds in both kindness groups, suggesting that positive self-evaluation may be a more consistent mechanism. Overall, these findings show that the need of the recipient may be a particularly important moderator during adolescence and that this may influence the extent to which a kind act is accompanied by feelings of eudaimonia. Importantly, this activity-level moderator was dependent on age-related differences, such that the acts of kindness were more consistently effective among the older participants for triggering eudaimonia and thereby increased positive affect. This suggests that the developmental context is also important, but findings across the papers were mixed as age-related differences were not identified in Paper 3.

Theoretical Implications

The findings of this thesis offer useful advances to theoretical frameworks for studying kindness, with significant contributions to our understanding of its conceptualisation among adolescents, as well as of the specific eudaimonic qualities of kindness that contribute to well-being.

Kindness as a Multidimensional Construct

This thesis highlights the need to consider kindness as a multidimensional construct, consisting of both behavioural manifestations as well as specific psychological motivations. This is a novel contribution to developmental research, providing evidence that adolescents recognise, appreciate, and highlight the way in which kindness cannot be reduced simply to prosocial behaviour but is firmly grounded in motivation. Partly because of this, it provides a useful theoretical framework for studying kindness as a phenomenon distinct from other social constructs such as prosociality and compassion.

Consistent with other qualitative research (Bergin, Talley, & Hamer, 2003; Binfet & Gaertner, 2015), participants of Paper 1 identified a wide range of behavioural examples of kindness – such as social inclusion, complimenting and proactive support – that went beyond those typically referred to in prosocial research with children and adolescents. Developmental research is predominantly focused on a smaller range of prosocial behaviours, typically sharing, helping, and comforting (Dunfield, 2014). This finding highlights the need to consider a broader range of behaviours that are salient to youth, and to continue to ascertain the perspectives of children and adolescents in research. Beyond this expanded account of prosocial behaviour, participants also provided substantial depth about the motivational component of kindness. As described above, kindness was thought to depend upon an other-focused motivational stance. This supports the theoretical notion that kindness is a distinct psychological construct, consisting of both prosocial behaviour and other-focused motivations (Knafo & Israel, 2012; Peterson & Seligman, 2004). It falls under the bracket of prosociality but differs from the broader concept as it has this essential motivational component, whereas prosociality is, by definition, purely behavioural (Dovidio, Piliavin, Schroeder, & Penner, 2006; Eisenberg, Fabes, & Spinrad, 2006; Weinstein & Ryan, 2010). It also

differs from other related terms, such as compassion. Compassion is conceptualised in the context of alleviating suffering and distress (Roeser & Eccles, 2015), whereas young people clearly recognised that kindness can occur in the absence of any particular distress or other need on the part of the recipient.

Importantly, the fact that adolescents were able to identify the specific motivational quality of kindness provides a strong rationale for further efforts to study kindness within this age group. Typically, developmental research in this area has hitherto been focused on prosocial behaviour, but the findings of Paper 1 show that the related but distinct phenomenon of kindness is also highly relevant to adolescents. Although this paper was not able to test whether age-related differences exist across childhood and adolescence, it does reveal the significance of this topic for developmental research. Given that many of the triggers, behaviours and motivations identified by the participants are also known to be associated with developmentally sensitive competencies, such as perspective-taking and moral reasoning (Benish-Weisman, Daniel, Sneddon, & Lee, 2019; Eisenberg et al. 2006), these conceptualisations and enactments of kindness may differ across age. Indeed, some of the behaviours (e.g., forgiveness) were not identified in a similar study with younger children aged 5 to 6 years (Binfet & Gaertner, 2015), further underlining the need for studies that capture young people's voice; the developmental context should be considered with care as the specific nuances of kindness may differ significantly across age. In fact, the retrospective kindness task of Paper 2 had differential effects from early to mid-adolescence, suggesting that there may be subtle differences in understanding and enactment of kindness across this age range. This points to the need for a uniquely developmental perspective on kindness; the results from the present work show that studies of kindness in youth samples should not simply focus on tweaking

methodologies used in experiments with adults (e.g., do three kind acts for four weeks; Alden & Trew, 2013) to ensure they are developmentally suitable, but should also consider deeper questions about the way in which conceptualisations of kindness themselves change across development. Indeed, previous research has demonstrated that adolescents become increasingly concerned with other people's thoughts and feelings as they grow older (Eisenberg et al. 2006; Tashjian, Weissman, Guyer, & Galvan, 2018). The present combination of results from qualitative and quantitative analyses offers a powerful theoretical impetus to consider both the types of behaviour and the motivational components that are meaningful for young age groups.

Another important implication regarding the nature of kindness arises from the evidence regarding the eudaimonic qualities associated with acts of kindness. Indeed, an other-focused motivation positions kindness as a self-transcendent act and self-transcendence is a key component of eudaimonia (Diener et al. 2010; Huta, 2016). This finding was supported by Paper 2 given that the older adolescents in the kindness condition were significantly more likely to experience self-transcendence than participants in the social control condition. As mentioned above, this is also in line with developmental research showing that adolescents take an increasingly self-transcendent approach to prosocial acts as they get older (Tashjian et al. 2018). Furthermore, both younger and older participants were also more likely to experience positive self-evaluation whilst being kind, another component of eudaimonia (Huppert & So, 2013; Ryff, 1989). These results are in line with previous research showing that prosociality predicts self-esteem and self-efficacy (Brown, Hoyer, & Nicholson, 2012; Zuffianò et al. 2014a) and that kindness is associated with self-transcendence (Piff, Dietze, Feinberg, Stancato, & Keltner, 2015). It provides experimental evidence that kindness is distinct from other social behaviours given that the eudaimonic qualities were significantly

greater than for the acts performed or recollected by a matched social control group.

Paper 3 also found that kindness was characterised by higher levels of overall eudaimonia than a more self-focused socialising interaction, and the antecedents identified in Paper 1 are also theoretically relevant to conceptions of eudaimonia. For instance, the participants stressed the importance of autonomous motivation and relationship-focused goals in enactments of kindness, both of which are features of theories of eudaimonia (Ryff, 1989; Diener et al. 2010; Ryan & Deci, 2000).

Researchers must therefore consider the importance of eudaimonic experiences – such as autonomy, social relationships, and self-transcendence – in kindness-based research and interventions.

In sum, the findings from this thesis position kindness as distinct from positive social behaviour more generally and reiterate the importance of studying kindness as a distinct construct with an other-focused motivational stance. Furthermore, the three papers suggest that kindness has eudaimonic qualities and orientations that differentiate it from other social behaviours. This is the first programme of work to provide randomized, experimental evidence that kind acts consist of – and are recalled as – eudaimonic experiences in adolescent populations.

The Overall Effects of Kindness on Well-being in Adolescents

One of the primary hypotheses predicted that kindness-based experimental tasks, when compared with social control groups, would improve well-being outcomes for participants. However, our papers provided evidence to the contrary. This is a significant contribution for the literature currently focussed on the well-being benefits of kindness for the giver. In Paper 2, there were no significant differences between the groups with respect to the total effects on well-being measures. In fact, in Paper 3, the

self-focused conversation group were more likely to experience an increase in life satisfaction and flourishing than the kindness group via direct effects. The total effect was cancelled out for flourishing but life satisfaction continued to be better for the control group even after controlling for the significant indirect effects of kindness. These findings were surprising, particularly given increasing experimental evidence that kindness has beneficial effects on well-being in adults (Curry et al. 2018). This further demonstrates the complexity of studying kindness in adolescents. Thus, it is very valuable to provide evidence that the beneficial effects on adults may not be true for adolescents when they engage with relatively comparable activities. These are the first studies, to our knowledge, that have tested via randomised controlled methods the effects of kindness on well-being in 11- to 12- and 14- to 15-year-old participants. The fact that the studies reported in Papers 2 and 3 were unsuccessful in boosting well-being is a novel finding for this growing body of research and should encourage researchers to consider alternative methodologies when attempting to replicate these effects in younger populations. It is highly possible that simply replicating adult paradigms is not sufficient for triggering the same well-being benefits in adolescent samples given the developmental sensitivities during this time.

The lack of overall effects may be due to the variation in the extent to which participants were able to enact kindnesses that satisfied the necessary feelings of eudaimonia. Indeed, adolescence is a sensitive period for relevant developmental competencies, such as self-transcendent moral reasoning (Eisenberg, Morris, McDaniel, & Spinrad, 2009) and participants may, therefore, have varied in the extent to which they had other-focused motivation, for instance. The age-related differences identified in Paper 2 also indicate that these eudaimonic qualities of kindness may become more attainable as age increases and, therefore, that successful acts of kindness may require

specific and age-appropriate support. Furthermore, the type of recipient need (Paper 2) was shown to influence the effect of kindness on well-being, so other nuances of kindness may be important for triggering these eudaimonic qualities. Moreover, dispositional moderators, such as baseline well-being and socio-cognitive abilities, were identified by participants in Paper 1. The present work thus implies that the conditions under which kindness is most likely to be characterised by eudaimonia must be a key component of theoretical frameworks within positive psychology. This may be particularly relevant for theories that suggest that engaging specifically with eudaimonic *activities* or *behaviours* is important for achieving enduring well-being (e.g., Ryan & Deci 2001; Ryff & Singer, 1998; Steger et al. 2008).

It is also possible, however, that alongside the variability in eudaimonia, there may also be competing indirect effects unique to kindness that have a *negative* effect on well-being (when compared with a social activity), cancelling out the overall effects. As stated in Papers 2 and 3, mediation analysis theories indicate suppressor effects as a potential reason for why indirect effects are identified in the absence of an overall effect (Rucker et al., 2011). Indeed, in Paper 2, the social task was just as likely – when compared with kindness – to consist of some aspects of eudaimonia, including meaning in life and social connection. Positive relationships are thought to have important implications for well-being (Brown & Larson, 2009), and are considered an essential component of eudaimonia (Ryan & Deci, 2001), so it is plausible that there may be other variables, or other aspects of eudaimonia, that are more likely to be triggered by general socialising, than by kindness causing suppression. This further rationalises the need to investigate the specific aspects of eudaimonia that are associated with being kind and whether school-based kindness-based interventions have any negative effects. Moreover, there may also be some variables that kindness does not promote or upon

which it may have a negative impact. In Paper 3, gratitude reduced over time in both conditions. Although it remains unclear whether this reduction was due to general temporal changes across the whole population or whether it was driven by the intervention itself, the kindness group were significantly *more* likely to have reduced levels of gratitude than the self-focussed conversation group. Given that gratitude has been consistently shown to promote well-being (Wood, Froh, & Geraghty, 2010), these reductions in gratitude may have suppressed the positive effects of kindness. It is possible that the self-focussed group were provided with more opportunities to notice the good things in life, or that the kindness group were so focussed on *being* kind that they were less inclined to notice times when they *received* kindness themselves. Therefore, the intervention design may have had unintended consequences of diminishing gratitude or, at least, may have been less effective than the social task at protecting against general reductions of gratitude during this period. Other research has shown that kindness can have negative consequences, although this tends to be in extreme cases of engaging with high levels of kindness such that time for other activities and self-care becomes limited (Grant & Schwartz, 2011). However, other potentially negative consequences of kindness should be considered in future research. Overall, it may also be important for future research to consider potential suppressor variables in its assessment of kindness, particularly when attempting to differentiate it from another positive endeavour, such as social activities.

Eudaimonia as an Explanatory Mechanism in the Effect of Kindness on Well-being

This programme of work also provides a significant contribution towards understanding the explanatory processes that underpin the effect of kindness on a giver's well-being. Specifically, the papers of this thesis point towards the eudaimonic

qualities of kindness as important explanatory mechanisms. In line with our hypotheses, positive indirect effects of kindness on increased life satisfaction, positive affect, and flourishing (as well as overall self-reported kindness) were identified across the two experimental papers. These positive effects occurred *via* eudaimonia, in contrast with general and self-focused socialising, and were present for a single memory of kindness, as well as sustained kindness practice. These are the first studies, to our knowledge, that have systematically identified explanatory mechanisms for effects of kindness in an adolescent sample. Moreover, the qualitative findings of Paper 1 also identified eudaimonic aspects of kindness (as discussed above) and these were thought by young people to influence the effects on well-being, further supporting the notion that eudaimonic qualities of kindness are important mechanisms. This provides an important step towards understanding the beneficial effects of kindness on youth, has important implications for the way in which future research is designed, and identifies developmentally-relevant facilitators and barriers to enacting kindnesses that are most likely to be beneficial for well-being, particularly given that the indirect effects were the only positive impacts shown.

Overall, the indirect effects demonstrate that kindness has positive effects on well-being in youth populations, but only to the extent that it is more likely than other social activities to consist of eudaimonic experiences. This maps onto theories stating that eudaimonia can be achieved via value-driven behaviours such as contributing to the greater good (Steger et al. 2008). Furthermore, it supports an emerging body of evidence that identifies eudaimonic indicators as mediators in the effect of kindness on well-being in adults (Aknin, Sandstrom, Dunn, & Norton, 2011; Brown et al. 2012; Hill & Howell, 2014; Martela & Ryan, 2016; Wiwad & Aknin, 2017). Importantly, this thesis provides novel evidence that this can also be observed in adolescents, both within

a single session and across an extended period of time. Specifically, the way in which kindness is enacted appeared to be highly important for its beneficial effects on the adolescent giver. Indeed, there was variability in the extent to which a kind act evoked eudaimonia for the participants, yet this was the explanatory force behind subsequent improvements to well-being outcomes. Overall, this provides new insights into the nature of well-being, and has implications for broader positive psychology frameworks (Steger, Kashdan, & Oishi, 2008). It implies that kindness is not associated with well-being merely because it promotes positive social interaction, but also because of specific experiential factors that arise from the kind interactions.

Practical Implications

This thesis has practical implications for the way in which kindness-based well-being interventions are designed and implemented. Results from the present work highlight that kindness research with adolescents should not simply tweak methodologies already used in experiments with adults, but should carefully consider the way in which conceptualisations, knowledge, and enactments of kindness change across development and within school contexts. Furthermore, the findings of this research can inform wider attempts to create a kind and happy culture in specific social contexts, including social and emotional learning approaches in schools, as well as broader social initiatives, such as public policy campaigns.

Attempts to promote well-being via simple positive activities, such as kindness, have been gaining increasing attention due to recent interest, rooted in positive psychology, in identifying factors that contribute to human flourishing (Carr, 2013; Seligman, 2011). Perhaps the most prominent practical implication of the present work for this enterprise is that of the indirect pathway via eudaimonia that was foreshadowed

in the qualitative analysis of Paper 1 and systematically brought out in the quantitative analysis of Papers 2 and 3. Whereas the majority of kindness-based well-being interventions simply instruct participants to do an act of kindness (Alden & Trew, 2013; Rowland & Curry, 2018) or reflect on a previous kindness (Otake et al. 2006), the present findings highlight the importance of promoting kindnesses that are, specifically, characterised by eudaimonia. Although there is substantial evidence that kindness-based interventions are effective at boosting SWB (Curry et al. 2018), there are still wide variations and inconsistent results. Interventions that emphasise a greater focus on acts that are self-transcendent, instil a sense of pride, and include meaningful, social interaction may be more successful. The qualitative findings from Paper 1 show that young people themselves voice this perspective, given that the participants claimed to have experienced greater well-being benefits from acting kindly when the kindness was characterised by aspects of eudaimonia, such as autonomy and self-transcendence. In short, interventions must promote a more eudaimonic orientation to kindness, rather than just the execution of a kind behaviour. There are many public well-being initiatives that include kindness as a key aspect of their campaign. For instance, ‘Give’ has been named as one of the “Five Ways to Well-being”, a set of actions that were developed by the New Economics Foundation as part of the UK Government’s Foresight Project on Mental Capital and Well-being (Aked, Marks, Cordon, & Thompson, 2008). Others include Action for Happiness, a national charity with the aim of improving well-being across all aspects of society; giving is one of their 10 keys to happier living (Alfonso, Datu, & King, 2018; King, 2015). It has been over 10 years since Five Ways to Well-being was launched and yet there are increasing concerns about the rise in mental health problems (e.g., World Health Organisation, 2014) and declining levels of well-being (McFall, 2012; Taggart, Lee, & McDonald, 2014) particularly among young adults and

adolescents, both in the UK and internationally (Keiling et al. 2011; Storrie, Ahern, & Tuckett, 2010). Furthermore, there is a shortage of mental health services for young people (CAMHS Review, 2008; DfE & DoH, 2015). Consequently, there has been a growing interest in promoting well-being in schools (Banerjee, McLaughlin, Cotney, Roberts, & Peereboom, 2015; McFall, 2012; McLaughlin, 2015). Thus, well-being promotion remains an important task, but may benefit from an approach that considers the specific mechanisms through which the activities are most likely to be beneficial. Furthermore, the findings of this thesis imply that well-being initiatives should move beyond SWB outcomes as the primary target for measurement, and, instead should focus attention on assessing, recognising, and celebrating both hedonic and eudaimonic aspects of flourishing.

The findings of this thesis were observed within a classroom context, and the results thus can also inform the development of social and emotional learning (SEL) approaches in schools. SEL approaches are a common method for promoting social and emotional development and well-being in children and adolescents (Banerjee, Weare, & Farr, 2014), focused on the acquisition of core competencies in self-awareness, self-management, social awareness, relationships skills and decision making (Collaborative for Academic, Social and Emotional Learning, 2013). Given this, prosocial and kindness-based activities are a common theme within these curricula, as are more general social activities, such as social skills development. The findings from all three papers suggest that the social aspects of SEL curricula may benefit from promoting kind acts that are characterised by eudaimonia and, importantly, that kind acts are likely to be qualitatively different – and have differential effects – compared with other social tasks and activities. Thus, kindness should be considered as a potentially useful method to incorporate within SEL, even where other social tasks, designed to promote social skills

development are already included. Furthermore, the results of these papers suggest that the effectiveness of kindness tasks may be facilitated or hindered by variations in developmentally-sensitive competencies such as empathy and moral reasoning (Bosco, Gabbatoer, & Tirassa, 2014; Eisenberg et al. 2006; Tashjian et al. 2018). This is particularly important in the school context and implies that students of different age groups may require differentiated SEL programmes with varying degrees of instructional support, or diversified kindness tasks (e.g., needs-prompted vs. unprompted), in order to successfully foster acts that are characterised by eudaimonia. However, further research is needed to provide a more nuanced understanding of the specific moderators that are influential and how this may differ across age. Even so, this thesis does provide some initial developmental considerations for the design of kindness-promotion in schools.

Given the complexity of promoting kindness in adolescents, implementation methods are also likely to be quite important in school settings. One approach may be to include the student voice in the design and delivery of SEL curriculums. Paper 1 was able to provide substantial information regarding the experiences, knowledge and perspectives of the adolescents that participated. This highlights the value of listening to students' perspectives. Thus, in light of the many possible moderators that may influence the success of a kindness intervention, student participation may be a useful way to individualise kindness-based tasks. Indeed, listening to students may highlight some of the individual- and activity-level moderators that are prominent for the students taking part. In fact, previous theorists have highlighted the need to carefully consider the person-activity fit of positive activities such as kindness, in view of how the individual and activity-level moderators interact (Luyomobirsky & Layous, 2013). Although beyond the scope of the current thesis, another important factor includes the

contextual support for students. In the context of SEL, teachers are primarily responsible for delivering the intervention. As such, kindness-based interventions should consider the role of the school and its teachers in delivering the task, particularly given that previous evidence has shown implementation to be an important predictor for success of positive activities and SEL interventions (Nelson et al. 2015; Durlak, Weissberg, Dymnicki, Taylor & Schellinger, 2011).

Other contexts where the findings of this thesis may be applied include broader social initiatives such as public policy campaigns that seek to foster a kinder culture within the community. There is growing recognition that kindness is important for societal well-being. This is reflected by an expanding number of policy and national campaigns designed to promote kindness within public services, workplaces, and communities. For instance, a recent report, published by Carnegie Trust UK (Unwin, 2018) discusses the importance of promoting kindness within public services, raising challenging questions about how to balance a rational, systems-based attention to procedures and fairness with a relational, flexible consideration of the interpersonal dimension. Kindness-based campaigns have also been launched prominently and explicitly within large organisations. For example, the University of Sussex has just included kindness as one of its top priorities in its new Strategic Framework (University of Sussex, 2018). Even at the government level, kindness has been introduced in policy documents such as the Scottish National Performance Framework (Scottish Government, 2018). International campaigns such as the United Nations Sustainable Development Goals are focussed on promoting peace and prosperity for people and planet on a global scale (United Nations, 2018) and associated campaigns present kindness as a prominent theme for achieving these goals (United Nations Education, Scientific and Cultural Organization, 2018). Yet, there is a big question about how to

deliver such a promise within organisations that are dominated by rational, standardised and outcomes-focussed systems. As highlighted in the findings of this thesis, there is likely to be variation in the extent to which individuals engage with kind acts that have eudaimonic qualities.

Given that the current thesis involved work with adolescent populations, we cannot directly generalise to adult populations. However, we expect the current findings may also be applicable in adult contexts, particularly given that eudaimonic aspects of well-being have also been shown to mediate and moderate the effect of kindness on well-being in adult samples (Feng & Guo, 2017; Martela & Ryan, 2016; Nelson et al. 2015). In addition, the adult literature is still relatively limited with respect to testing the effect of kindness campaigns and organisation-based initiatives, rather than experimental paradigms or online intervention. Thus, the current findings may still be useful considerations for applied research in organisations. Importantly though, given the age group of the current work, this application should not be directly generalised to adult populations but may be a useful consideration. Although acts-of-kindness interventions are shown to be effective at boosting well-being in adults (Curry et al., 2018), the effect sizes are small to medium suggesting there is still a great deal of variability in effectiveness. Thus, given the evidence of eudaimonic mechanisms in adults, and the results of the current research, it is possible that these campaigns may have greater levels of efficacy if they also seek to explicitly promote kindnesses that are likely to consist of eudaimonic experience rather than just focussing on the behaviour. A focus on meaningful and self-transcendent motivations, rather than the acts of kindness *per se*, is likely to be fundamental to successfully creating a kind culture within organisational practices. Indeed, campaigns that are ultimately driven by increasing productivity, or attempts to try and systematise kindness, may be ineffective.

It is clear from the findings in Paper 1 that a prosocial act is not truly kind unless it has an other-focused motivation. Without this motivation, it is unlikely to benefit the recipient, giver, or even the wider social context. Thus, kindness campaigns could consider being particularly explicit about this motivational component and seek to foster self-transcendent orientations – ensuring that these are driving the organisational campaigns in the first place – rather than just promulgating the display of prosocial behaviours for self-enhancing reasons.

Limitations and Future Directions

Overall, this thesis provides a valuable and novel contribution to understanding the conceptualisation of kindness, the impact of kindness on adolescents' well-being, as well as the mechanisms through which it has a positive effect. However, there are some methodological, measurement, and design limitations of this work, many of which provide useful directions for future research.

Firstly, although Paper 1 provided the opportunity to gain an in-depth, qualitative understanding of adolescent conceptualisations of kindness, the focus group methodology resulted in a relatively small sample size that was neither representative of all adolescents, nor sufficient for addressing subgroup differences. Thus, the results are not generalizable to the wider population and the findings cannot be considered exhaustive. Still, this method was an important first step in providing a uniquely detailed understanding of how adolescents perceive kindness (Daley, 2013) and focus groups were shown to be a useful method for ascertaining depth of understanding given that the adolescents are able to interact with one another, rather than speaking one-to-one with a researcher (Gibson, 2007; Punch, 2002). Furthermore, the discussions were participant-led, allowing us to identify issues that may have otherwise been missed

(Braun & Clarke, 2006). Even so, future research could consider extending this work via the use of additional focus groups and also via large-scale surveys. This would involve work with a much larger and more representative sample of adolescents and may provide a more exhaustive dataset regarding adolescents' representations of kindness, as well as the social and psychological factors that influence it.

Importantly, a large-scale survey study would be able to identify whether the conceptions of kindness identified in Paper 1 are shared across a diverse range of demographic groups, with attention to variables such as age, gender, ethnicity, and economic status. For instance, large-scale survey data within adults has shown that values, such as commitment to others, vary not only at the individual level, but also between cultural groups (Vignoles, Smith, Becker, & Easterbrook, 2018) and previous research with adolescents has shown that the types of prosocial behaviour enacted can differ according to the gender of the actor (Eagly, 2009; Eisenberg et al. 2009). Moreover, a sequential survey design would identify changes over time and provide a more explanatory account of developmental and temporal pathways both at the individual and group levels. Similarly, a larger-scale qualitative study conducted at multiple time points could also provide useful insights into changing conceptions of kindness across adolescence, whilst retaining the depth of understanding that was provided by Paper 1. Qualitative longitudinal techniques are thought to provide useful insights in the way phenomena change for individuals that go beyond those that can be identified with quantitative techniques, within both education (Thomson & McLeod, 2015) and positive psychology frameworks (Hefferon, Ashfield, Waters, & Synard, 2017). These alternative methods would be highly informative for organisations that are seeking to promote kindness in schools, as well as for the design of future experimental

research. They are also likely to identify a larger number of potential mechanisms of kindness that may moderate or mediate its impact on well-being.

Moving beyond the adolescents' own conceptualisations of kindness, this thesis had important limitations with respect to systematic assessment of the specific nature of the kindnesses enacted. Indeed, participants' knowledge of kindness in Paper 1 does not necessarily reflect their proclivity or capacity to act in this way. In a similar vein, although Papers 2 and 3 were able to differentiate the eudaimonic qualities of kindness from that of general socialising – an innovative and valuable contribution to kindness-based research – the relatively simple measurement of these eudaimonic experiences did not provide an exhaustive or detailed evaluation of this prominent finding. Future research should seek to study the eudaimonic qualities of kindness in more depth. One important step would be to develop a more sophisticated measure that includes a more complete list of eudaimonic experiences and more in-depth measurement of each aspect. For instance, self-transcendence concerns a particular state of consciousness that connects one with the whole outside of oneself, and thus it does involve paying attention to others' emotions (as it was measured in this thesis) but also has many other cognitions and states of awareness that would be useful to include in future research (Levenson, Jennings, Aldwin, & Shiraishi, 2005). Given the contextual constraints within a school (such as time limits) alongside the fact that the outcome variables were initially our primary interest, this thesis did not include all aspects of eudaimonia in the state-level measure and the ratings were based on single items. For instance, neither autonomy, purpose or competence (Ryan & Deci, 2000; Ryff, 1989) were included in the eudaimonia ratings. The chosen set of ratings did provide an efficient, easy-to-administer and developmentally attainable way to compare the eudaimonic nature of kindness with that of general socialising, and the brevity of the chosen questionnaire

approach allowed us to work with large experimental samples. However, given that the eudaimonic ratings were found to be an important explanatory mechanism for the impact of kindness on well-being, a more in-depth measure would be a useful extension of this work.

An alternative methodology, such as a reflective diary-based study (Nezlek, Newman, & Thrash, 2017; Zimmerman & Wieder, 1977) or event sampling methods (Hui & Kogan, 2017; Reis & Gable, 2000; Napa Scollon, Prieto & Diener, 2009), may also be a useful direction for future research as these methods may be more effective at identifying a wider range of eudaimonic functions that naturally occur whilst being kind. This would provide a much more nuanced understanding of how kindness is qualitatively different to general socialising and may provide useful data on the types of kindnesses that young people enact during an intervention. Although the participants' free responses in Papers 2 and 3 were briefly checked to ensure that the descriptions did signify acts of kindness, there is a need for future research to include a more elaborate methodology for coding participants' reflections on kindness. Previous research with adults has used diary and event sampling methods to track daily behaviours (e.g., eudaimonic acts or spending time in nature) and link these behaviours with concurrent and subsequent levels of well-being (MacKerron & Mourato, 2013; Steger et al. 2008). However, the acts that were tracked by Steger and colleagues were identified as eudaimonic *a priori* and participants were directed to engage with these specific acts. Future research could use similar methods to track *naturalistic* acts of kindness – rather than providing specific acts to engage with – to identify the range of eudaimonic qualities that may occur whilst being kind.

Furthermore, in the context of an intervention study, a diary or event sampling method may provide useful data regarding the activity-level moderators. Indeed,

tracking the individual differences in the specific types of kindnesses enacted may provide some explanation of the within-group variation in eudaimonia. For instance, specific types of kind behaviour, or kindnesses that occur within particular locations or social contexts, may be more likely to consist, psychologically, of a eudaimonic experience. Although Papers 2 and 3 were able to identify that a kindness task was significantly more likely to consist of a eudaimonic experience, we were unable to identify why there was within-group variation. Therefore, we were not able to make any definitive conclusions about *how* to promote kindness that is most likely to have these eudaimonic qualities or *who* is most likely to achieve a kindness that is eudaimonic. The challenge then, for future research, is to identify the most effective way to foster these specifically eudaimonic acts of kindness in youth. Although the between-groups analysis employed in Paper 2 allowed us to identify participant age and recipient need as potentially important moderators, a detailed analysis of within-group variation would be an interesting direction for future studies aiming to identify the conditions under which kindness is most likely to be characterised by eudaimonia. This would further inform the operational definition of kindness (when compared with other social constructs) as well as the specific activities and design of kindness-based interventions. For instance, many of the policy or school-based initiatives mentioned above direct participants to *be* kind or *do* kind acts (Aked et al. 2008; Rowland & Curry, 2018; Layous, Nelson, Oberle, Schonert-Reichl & Lyubomirsky, 2012) but may be even more effective if the instructions provide evidence-based guidance on how to foster acts of kindness that have eudaimonic qualities, and how to adapt activities dependent on individual-level differences.

Furthermore, although this study identified some important age-related differences in Paper 2, the extent to which these findings can be reliably interpreted is

limited given the selection of measures used to assess the eudaimonic ratings and the well-being outcomes. It is indeed possible that developmentally-relevant competencies, such as self-transcendent moral reasoning and perspective-taking (Eisenberg et al. 2009), may influence the extent to which a kind act has beneficial effects on young adolescents, compared with older adolescents. However, these same developmental competencies may also influence the extent to which young adolescents are able to process and respond to the kinds of questionnaires used in investigations of kindness and well-being. Although the measures used in Papers 2 and 3 have been validated in the age range of our participants, some argue that well-being measures, such as life satisfaction and meaning in life should not be included for younger children (Coffey, Warren, & Gottfried, 2015), reasoning that even where children are able to read and answer the questions they may not be able to think about or process them in the same way as older participants. Even feelings of pride require an element of cognitive evaluation that is not required for more basic emotions such as joy and sadness (Abe & Izard, 1999). Thus, measuring life satisfaction, meaning, pride, and self-transcendent experiences in 11- to 12-year-olds may not yield the same pattern of results as in 14- to 15-year olds, irrespective of the experimental task. Indeed, 14- to 15-year-olds would be expected to have more life experience to base these judgements upon, as well as more advanced abstract thinking skills (Christie & Viner, 2005; Dumontheil, 2014). Thus, it is possible that the age-related differences could be due to the differences in processing, rather than the effects of being kind *per se*. However, some condition-based differences were still observed within younger adolescents, suggesting that the measures were effective at identifying effects on their evaluation of their own well-being. Furthermore, age-related differences were not observed in Paper 3, suggesting that the pattern of well-being responses was comparable across the two age-groups. Even so, the measurement

technique does raise some questions regarding the interpretation of these findings and would benefit from further investigation. The findings of this thesis still identify some developmental differences, providing an important and highly-needed contribution to this area of research, but a more focused measure of well-being outcomes may provide more clarity regarding the interpretation of these effects. One possible solution may be to include an in-depth qualitative follow-up, at the end of the intervention, with a smaller sample of semi-structured interviews. Another alternative may be to include teacher and parental reports, in addition to the self-reports, for each participant. A triangulated approach such as this may prove to be more reliable as the well-being outcomes will not depend entirely on self-report methods. Indeed, previous studies have shown that a multi-informant approach has high predictive value in predicting the mental health of children and adolescents (Goodman, Ford, Corbin, & Meltzer, 2004; Goodman & Goodman, 2009).

A further limitation regarding the experimental design of Papers 2 and 3 is that a neutral control condition was not included. Thus, although this thesis identified meaningful differences between kindness and general or self-focused socialising, it was unable to compare these effects with the general trajectory of change for students engaging in regular school activities. The control conditions within Papers 2 and 3 were positive activities, given that sociality is associated with a range of well-being indicators (Brown & Larson, 2009; Olsson, McGee, Nada-Raja, & Williams, 2013). Of course, the fact that significant differences were identified between kindness and these control conditions is a real strength of the present research; the selected conservative design has the benefit of precisely isolating the effect of kindness. Indeed, kindness has been shown to have no significant effects when compared with another positive task (Buchanan & Bardi, 2010; Kerr, O'Donovan, & Pepping, 2015) and meta-analyses

comparing positive psychology interventions, such as gratitude or kindness, with other positive psychology interventions tend to produce small effects, or non-significant results (e.g., Davis et al. 2016). Therefore, we would expect much larger effects if the kindness task was compared with a neutral or negative control task. For instance, some previous studies have directed control groups to track daily activities (Alden & Trew, 2013) and others have included a no-treatment control group (Froh, Sefick, & Emmons, 2008; Kerr et al. 2015), where participants simply complete the pre- and post-test measures but do not complete any intervention activities. In the context of the present study, future research should consider the addition of a neutral or inactive control group such as this, so that both the kindness and social control conditions can be compared with ‘business as usual’. This will provide a more nuanced interpretation of both the positive and negative effects, such that the changes for each group can be compared with the general, temporal patterns within the school. This will help to ascertain whether kindness is a useful addition to regular school curricula, and whether suppressor effects are due to school-level confounds that are more powerful than the positive effects of the kindness task. For instance, the kindness group in Paper 3 experienced a significantly larger reduction in gratitude, compared with the social group. An inactive control group would help to identify whether the intervention drove this negative change or whether external variables, such as examination pressure, were partly responsible; this is a plausible explanation given that the descriptive statistics showed a decline across both groups and the intervention took place in the latter part of the school year, when academic pressures may be high.

Lastly, it is also important to recognise that the intervention of Paper 3 was delivered by school teachers, a method that provided the most naturalistic and logistically feasible delivery of the intervention. It allowed for a large sample, including

all eligible students in the school, a task that would not have been feasible if the intervention was delivered by a researcher. Furthermore, evidence shows that teachers are able to effectively deliver SEL interventions in schools (Durlak et al. 2011). However, we did not measure the implementation of the intervention, an issue that is particularly relevant within the school context. Issues regarding implementation, such as intervention fidelity, teacher motivation, and contextual support such as support from teachers for students have been shown to moderate the effect of SEL curricula in schools (Durlak et al. 2011; Banerjee et al. 2014; Banerjee et al. 2016). Furthermore, evidence shows that contextual support, such as receiving supportive messages, is an important moderator for the success of positive psychology interventions (Nelson et al. 2015). Given that this thesis did not include direct measures of implementation, we were unable to ascertain whether this had any influence on the results. However, in Paper 3 attrition at post-test varied according to classroom membership, suggesting that classroom-level moderators, such as teacher support or implementation, may have had some influence on the participation of students. Therefore, future research should seek to investigate whether teacher- and school-level variations in implementation have an influential role in intervention success.

Overall Conclusions

Overall, this programme of research does not support the hypothesis that kindness-based intervention tasks will lead to increased well-being outcomes, when compared with a social activity such as spending time with others. However, the findings suggest that kindness does have some positive predictive value for adolescents, to the extent that it is more likely to be characterised by experiences of eudaimonia. This gives impetus to studying the complexities of kindness promotion in youth, rather than simply tweaking adult paradigms. The findings demonstrate how kindness is

qualitatively different to other social activities and provide a novel contribution to research on kindness and well-being. In addition, the effects of kindness were found to be moderated by the age of participants and the need of recipients, suggesting that there is a complex interplay of socio-contextual and developmental factors that may influence the effect of kindness on well-being. Furthermore, after controlling for the indirect effects of kindness on well-being via eudaimonia, there was evidence that students in a social control condition could be more likely to experience improved well-being. Thus, the findings of this thesis place great emphasis on the eudaimonic qualities of a kind act and highlight the importance of operationalising kindness as a multifaceted construct, consisting of both behavioural and psychological manifestations, both in the context of future research and within applied settings such as schools and public policy campaigns. Overall, the present work provides a strong agenda for future research to systematically examine the within-group variation in the extent to which a kind act is characterised by eudaimonia, and to further identify the conditions under which kindness is most likely to successfully promote well-being in adolescent populations.

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