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Should I be kind to others or myself?

An intervention study of kindness and self-kindness on wellbeing

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Abstract

The improvement of wellbeing is an important topic in the field of psychology and kindness interventions are known to be capable of improving wellbeing. If an act of kindness can improve wellbeing in an individual, it is important to know who to aim the act at and how long the effects last. The aim of the current study is to better understand how kindness and self-kindness can help increase wellbeing by comparing an other-oriented and a self-oriented Acts of Kindness group to a waitlist control group and to each other. Furthermore, effect maintenance was studied using a six week follow-up. A single-blind randomised controlled design was used, containing three conditions: other-oriented Acts of Kindness (n = 43), self-oriented Acts of Kindness (n = 52) and the waitlist control group (n = 67). Participants were retrieved from the general Dutch population. Outcome measures were emotional, social, psychological and overall wellbeing from the MHC-SF which were measured directly before the intervention, directly after the intervention and six weeks after the intervention. The results show that other-oriented kindness has a significant positive effect on psychological wellbeing when compared to the waitlist control group. This effect is maintained until six week follow-up. Emotional, social and overall wellbeing did not significantly increase after the other-oriented kindness when compared to the waitlist control group. There were also no significant increases in outcome measures when comparing the self-oriented kindness with the waitlist control group. When comparing the other- and self-oriented interventions, there is no significant difference. Since the other-oriented Acts of Kindness intervention had an effect on psychological wellbeing compared to the waitlist control group, other-oriented kindness interventions are preferred over self-oriented kindness interventions. Further research should be aimed at establishing the active ingredients of Acts of Kindness interventions.

Keywords: kindness, intervention, wellbeing, RCT

Introduction

Wellbeing

When the World Health Organization (WHO) first included wellbeing in the definition of health, this created a shift in focus from not having a disease or infirmity to a more positive look on health, meaning that being healthy also includes feeling well, mentally, socially and psychologically (WHO, 2005). This definition has since then been modified to be more exact. The latest proposed definition of mental health according to WHO is:

> … a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community (WHO, 2005, p.2).

From this definition it can be concluded that the WHO recognises three types of wellbeing, namely emotional, psychological and social wellbeing (Keyes, 2002).

Adults who score high on all three types of wellbeing had better emotional health, fewer workdays lost and experienced fewer limitations in daily life than people who scored low on wellbeing (Keyes, 2002). Wellbeing also has an effect on society as a whole. According to Walburg (2009), wellbeing is crucial for a society because wellbeing is the mental capital of our economy. Furthermore, working teams that have a more positive style of interaction are more efficient in communication and presenting and become more productive (Fredrickson & Losada, 2005), making the improvement of wellbeing an important goal. This underscores the importance of positive psychology, which is primarily aimed at improving wellbeing.

Positive psychology

Bolier et al. (2013) shows that positive activities can improve wellbeing. This meta-analysis assessed 39 positive psychology interventions containing 6,139 participants total and found a small-to-medium effect size on subjective wellbeing (d = 0.34) and a small effect size on psychological wellbeing (d = 0.23). Furthermore, Bolier et al. (2013) found no significant evidence that duration of the intervention, type of intervention (self-help, group or individual), recruitment manner and the presence of psychosocial problems had any effect on the successfulness of the interventions. According to Bohlmeijer, Bolier, Westerhof and Walburg (2015) the most effective way of improving wellbeing is through positive psychological interventions. Recently, research has also been aimed at finding out which components in the design of positive psychology interventions are important. The one most relevant for the current study is posed by Lyubomirsky and Layous (2013), who among other things make a distinction between other-oriented and self-oriented positive psychological interventions.

Other-oriented versus self-oriented interventions

Lyubomirksy and Layous (2013) start a discussion on activity features and person features to make a good person-activity fit. Things such as the variety of activities, the motivation and effort of the person, but also whether an activity is other-oriented or self-oriented plays a role here. This focus on other-oriented versus self-oriented interventions fits with questions posed by Bolier et al. (2013). A good and well-known example of differences between other- and self-oriented interventions in the area of positive psychology is found in compassion. From the three directions of compassion as described by Gilbert (2014), two can be explained using this distinction in orientation. C*ompassion we can feel for another or others* would be other-oriented compassion and *compassion we can direct to ourselves* would be self-oriented compassion. In the same reasoning, other-oriented positive activities could be seen as a

kindness intervention derived from the construct of compassion and self-oriented positive activities can be understood as the concept of a self-kindness intervention derived from the construct of self-compassion.

Kindness and compassion

To understand kindness, self-kindness and their background, it's useful to put everything in the context of compassion. Kindness is a part of compassion as self-kindness is a part of self-compassion (Neff, 2003a, 2003b). According to Paul Gilbert compassion is "a sensitivity to the suffering of self and others and a commitment to do something about it" (Killing Buddha, 2015). Research on compassion interventions shows effects from a reduction in pain severity and anger in patients with chronic pain (Chapin et al., 2014) to reductions in indicators of job burnout, depression, anxiety and stress (Fortney, Luchterhand, Zakletskaia, Zgierska, & Rakel, 2013). Both Neff (2003a, 2003b) and Gilbert (2014) have a definition of self-oriented compassion that will be referred to as self-compassion from now on. The effects of self-compassion interventions on wellbeing is more often researched. A meta-analysis by Zessin, Dickhäuser and Garbade (2015) shows the importance of self-compassion for individuals' wellbeing. Research shows there is a positive relationship between self-compassion and wellbeing (Akin, 2014; Hall, Row, Wuensch, & Godley, 2013; Leary, Tate, Adams, Allen, & Hancock, 2007; Soysa & Wilcomb, 2015). For these reasons, it was considered of importance to see the possibilities of other-oriented versus self-oriented kindness interventions.

Research on the effect of kindness based interventions shows that these interventions can improve wellbeing (Otake, Shimai, Tanaka-Matsumi, Otsui, & Fredrickson, 2006). A meta-analysis by Galante, Galante, Bekkers and Gallacher (2014) shows that kindness-based meditation interventions had a positive effect on improving wellbeing and social interactions. Curry, Rowland, Zlotowitz, McAlaney and Whithouse (2018) did a meta-analysis on the

overall effect kindness interventions have on wellbeing. Their study also mentions a specific kindness based intervention called the Acts of Kindness intervention.

Acts of Kindness

The meta-analysis from Curry et al. (2018) of 21 studies containing 2,685 participants shows that the overall effect of kindness interventions on wellbeing is small-to-medium (d = 0.38 [0.27, 0.49]). This overall effect fits well with the effect sizes reported by Bolier et al. (2013) earlier when it comes to the effect of positive psychology intervention on subjective and psychological wellbeing. Other-oriented Acts of kindness could be described as helping fellow students or colleagues with work, holding open doors, complimenting others, giving gifts, cooking a special meal for a friend or relative, paying for a cup of coffee for someone behind you in line or doing charity work at a local organisation. Self-oriented Acts of Kindness could be described as small, simple treats that cost relatively little money or effort. Examples of self-oriented Acts of Kindness are treating yourself to a nice cup of coffee or delicious piece of pie, buying your favourite magazine or eating your favourite meal, taking five minutes extra break from work or giving yourself a compliment. Even though the duration of the intervention and the amount of kindness behaviour per week differed greatly per study in the meta-analysis by (Curry et al., 2018), it is clear what an act of kindness is. Acts of Kindness can be "holding a door for someone at university, greeting strangers in the hallway, helping other students preparing for an exam…" (Curry et al., 2018, p. 18). For an act to be an act of kindness, no distinction is made on whether it is aimed at someone you know or a complete stranger(Curry et al., 2018).

A study by Nelson, Layous, Cole and Lyubomirsky (2016) that compares other-oriented kindness with self-oriented kindness shows that prosocial behaviour (doing Acts of Kindness for others or for the world) leads to greater increases in psychological flourishing

than self-focused and neutral behaviour did. This gives an indication that an other-oriented Acts of Kindness intervention might improve wellbeing more than a self-oriented Acts of Kindness intervention and a control group, especially when it comes to psychological wellbeing. The current study contained, apart from a control group, an intervention where participants were asked to perform five Acts of Kindness one day every week for six weeks either other-oriented or self-oriented.

Despite promising evidence for the effectiveness of Acts of Kindness interventions in improving wellbeing, there are as yet a number of knowledge gaps. It is clear that the character trait of kindness and counting kind behaviour to and from others can raise happiness, kindness and gratefulness (Otake et al., 2006) and can increase flourishing in people (Nelson et al., 2016), but it is still not clear whether an Acts of Kindness intervention has any effect on emotional, psychological, social and overall wellbeing, individually. It is also of importance to study which type of wellbeing is most significantly improved through the use of an Acts of Kindness intervention to better understand the improvement of wellbeing. Furthermore, it was also found that most studies about kindness interventions and their effect on wellbeing had small populations. Therefore, Galante, Galante, Bekkers and Gallacher (2014) suggested well-conducted large RCTs on this subject. Lastly, little is known about effect maintenance and more research like that of Nelson et al. (2016) is warranted to confirm or better understand the influence the orientation (other-oriented versus self-oriented) can have on interventions, as assumed by Lyubomirsky and Layous (2013), especially when researching the Acts of Kindness intervention.

Current research

The aim of the current randomised controlled trial is to test the efficacy of two Acts of Kindness interventions (other-oriented and self-oriented) in improving emotional, social,

psychological and overall wellbeing in the Dutch population compared to a waitlist control condition. Furthermore, the other-oriented and self-oriented Acts of Kindness interventions will be compared to each other to ascertain which is the most effective.

Firstly, it is hypothesised that a six week Acts of Kindness intervention (other-oriented or self-oriented) leads to significant higher emotional, social, psychological and overall wellbeing in the Dutch adult population compared to a waitlist control group. Secondly, it is hypothesised that an other-oriented Acts of Kindness intervention is more effective than a self-oriented Acts of Kindness intervention in increasing emotional, social, psychological and overall wellbeing. Lastly, it is hypothesised that effects of other-oriented but not self-oriented Acts of Kindness interventions on emotional, social, psychological and overall wellbeing are maintained until six weeks after the intervention.

Methods

Design

In this study, a single-blind randomised controlled design was employed with two experimental conditions (other-oriented Acts of Kindness intervention and self-oriented Acts of Kindness intervention) and one waitlist control condition. The researchers were aware of all possible interventions and knew exactly which participant followed which intervention, but participants themselves were not aware of which interventions they could possibly get, what the content of every intervention was and which outcome measures were measured. Measurement took place at baseline (T0), six weeks after baseline (T1) and a follow-up twelve weeks after baseline (T2).

Participants and procedure

Participants were recruited through advertisements in nationwide daily papers like the Volkskrant, in the online newsletter called Psychologie Magazine and on social media. People who were interested in taking part in the study were referred to the registration website. On this website those people obtained information about the study and they could find the registration procedure there as well. The letter of information for participants can be found for reading and downloading on the website. After filling in a contact form potential participants were given a link to the online informed consent form. After giving consent, the participants were redirected to the online screening questionnaire, containing demographics, the Centre for Epidemiological Studies Depression Scale (CES-D) and the Generalized Anxiety Disorder 7 items (GAD-7).

Participants had to be at least 18 years old, needed access to the internet and a functioning email address, have sufficient Dutch language proficiency to be able to fill in the questionnaire, have enough time to perform the Acts of Kindness activities at least once every week for six weeks and lastly, participants needed to give consent for the study by filling in the online informed consent. People were excluded from the study if they measured moderate or high on depressive and anxiety symptoms according to the CES-D and the GAD-7. People who were excluded because they scored moderate or high on either the CES-D, the GAD-7 or both were advised to seek help from their general practitioner. The people applying for participation in the study were not explicitly informed about the inclusion and exclusion criteria, so this would not influence the scores on the screening questionnaire.

Participants that adhered to the inclusion criteria obtained an email with a link to the first questionnaire (T0). As soon as enough participants had finished the registration and screening phase and completed the T0-questionnaire randomisation took place.

Randomisation was stratified by gender and level of education and was carried out at the University of Twente.

Figure 1 shows a flowchart of the path that participants took and the amount of participants per group during the current study. It also shows drop-out. No significant difference was found for drop-out across the different groups ($p < .05$).

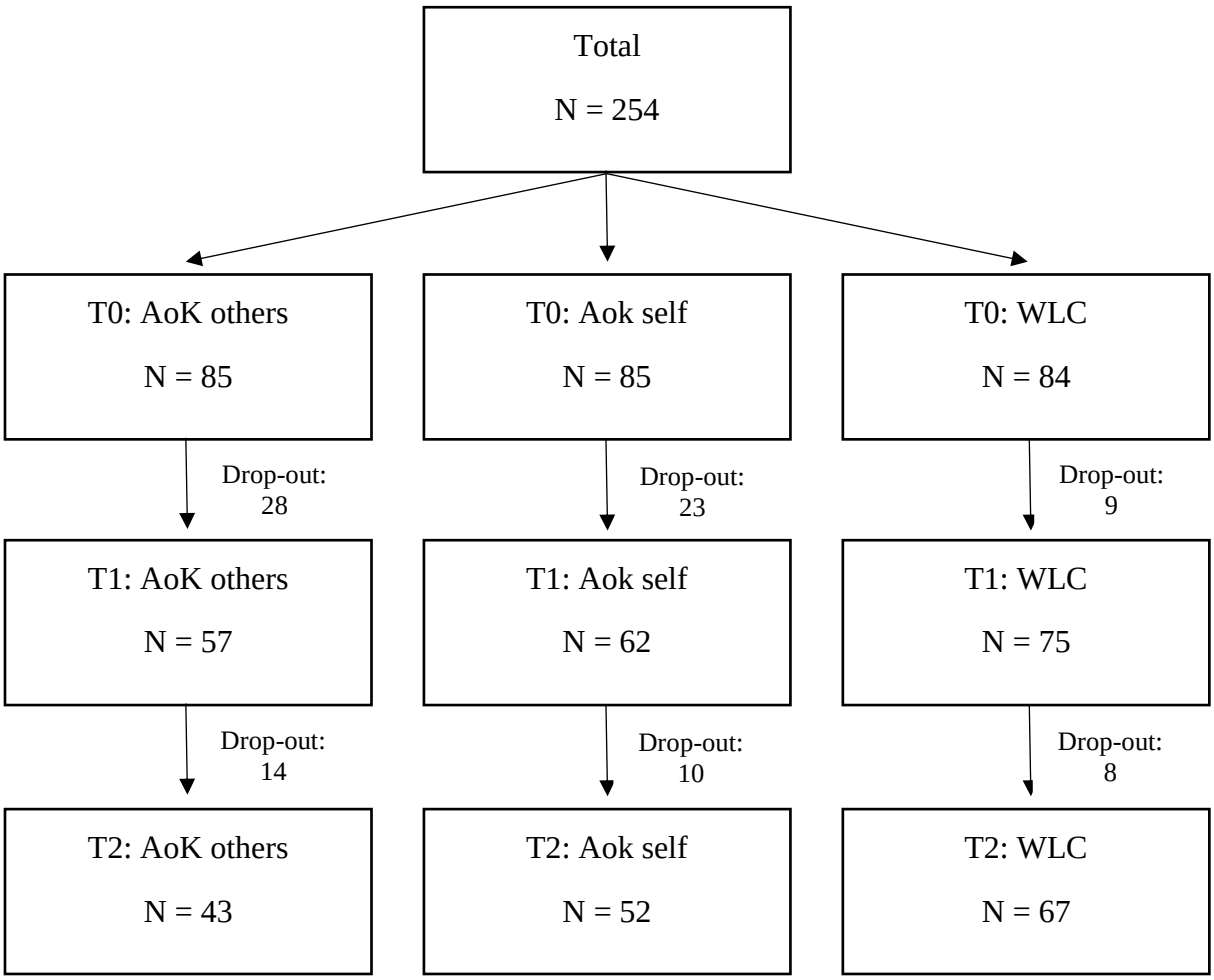

Figure 1. Flowchart of participants.

Note. AoK others = other-oriented Acts of Kindness; AoK self = self-oriented Acts of Kindness; T0 = baseline measurement; T1 = post-measurement; T2 = six week follow-up; WLC = waitlist control group.

Furthermore, the mean age of the participants was 50. Many of the participants were female (88%), Dutch of origin (94%), married or in a relationship (49%), lived with their partner (60%) and finished higher vocational education (78%). Table 1 contains the demographic characteristics of the participants. At baseline participants scored average on emotional, social, psychological and overall wellbeing (M = 2.94, M = 2.56, M = 2.87 and M = 2.80, respectively).

Table 1

Baseline characteristics of the participants (N = 162)

Baseline characteristics	AoK others (*n* = 43)	AoK self (*n* = 52)	WLC (*n* = 67)
Age, years			
Mean (*SD*)	52.14 (*9.47*)	48.77 (*8.48*)	50.28 (*9.50*)
Range	27-69	29-64	23-64
Gender, *n* (*%*)			
Male	5 (*11.6*)	7 (*13.5*)	8 (*11.9*)
Female	38 (*88.4*)	45 (*86.5*)	59 (*88.1*)
Nationality, *n* (*%*)			
Dutch	41 (*95.3*)	46 (*88.5*)	65 (*97.0*)
Other	2 (*4.7*)	6 (*11.5*)	2 (*3.0*)
Marital status, *n* (*%)*			
Married/registered partnership	21 (*48.8*)	24 (*46.2*)	35 (*52.2*)
Not Married (never married, divorced, widowed)	22 (*51.2*)	28 (*53.8*)	32 (*47.8*)
Living situation, *n* (*%*)			
With partner	28 (*65.1*)	30 (*57.7*)	39 (*58.2*)
Without partner	15 (*34.9*)	22 (*42.3*)	28 (*41.8*)
Educational level (highest level completed), *n* (*%*)			
Low (primary school, lower vocational education)	0 (*0.0*)	3 (*5.8*)	3 (*4.5*)
Intermediate (secondary school, vocational education)	10 (*23.3*)	8 (*15.4*)	12 (*17.9*)
High (higher vocational education, university)	33 (*76.7*)	41 (*78.8*)	52 (*77.6*)
MHC-SF scores, Mean (*SD*)			
Emotional	3.02 (*.78*)	2.93 (*.84*)	2.88 (*.85*)
Social	2.68 (*.79*)	2.57 (*.71*)	2.54 (*.72*)
Psychological	2.85 (*.71*)	2.87 (*.81*)	2.88 (*.76*)
Overall	2.87 (*.67*)	2.77 (*.72*)	2.77 (*.68*)

Note: AoK others = other-oriented Acts of Kindness; AoK self = self-oriented Acts of Kindness; WLC = waitlist control group

Conditions

In the control condition participants were put on a waitlist. They were told that before the experiment could start, a baseline of their normal fluctuations in wellbeing should be measured, before they could start the intervention. For ethical reasons they were allowed to

pick their own experimental condition intervention of six weeks after twelve weeks of waiting. The experimental conditions were an other-oriented Acts of Kindness and a self-oriented Acts of Kindness intervention. All participants in the experimental group started their interventions at the same time and had six weeks to complete the intervention. Participants in both groups were told to do five Acts of Kindness on one week day, meaning that only one day a week the participant should do all five Acts of Kindness. They were also asked to write in a diary the next day what kind of act, how many activities they performed and for whom they performed those activities. The difference between the two experimental groups was mainly that the first was other-oriented and the second was self-oriented. Participants in the other-oriented Acts of Kindness group were additionally told that it did not matter whether the recipient of the kind act was aware of this and that it does not have to be the same person every time. Participants were asked to fill in an online diary of the specifics of the Acts of Kindness they did (the other-oriented Acts of Kindness group was asked to add who the recipient of their kind act was).

Measures

The 14-item Mental Health Continuum-Short Form (MHC-SF) was used to measure the primary outcome variable, namely wellbeing (Keyes, 2002). The MHC-SF measures emotional wellbeing (3 items), social wellbeing (5 items) and psychological wellbeing (6 items). The emotional wellbeing subscale consists of life satisfaction and positive feelings. The social wellbeing subscale consists of five dimensions: social acceptance, social actualization, social contribution, social coherence, and social integration. The psychological wellbeing subscale is based on six dimensions: self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth (Lamers, Westerhof, Bohlmeijer, ten Klooster, & Keyes, 2011). Participants filling in the MHC-SF were asked to

fill in how often they experienced specific feelings throughout the last four weeks. Items were rated on a 6-point Likert scale with answer options ranging from “never” (0) to “(almost) always” (5). Higher mean scores imply a higher level of wellbeing. The Dutch translation of the MHC-SF showed that its three subscales have adequate to high reliability and both the convergent and discriminant validity of the MHC-SF were judged to be good, suggesting that the scale is a good measurement for wellbeing. The current research showed high reliability for the total MHC-SF, emotional and psychological wellbeing ($\alpha = .91$, $\alpha = .84$ and $\alpha = .84$ respectively) and adequate reliability for social wellbeing ($\alpha = .73$).

Statistical analyses

The analyses performed in this study was done using the statistical program SPSS version 24 (IBM Corp., 2017). First, descriptive statistics (Means/ SD) and Skewness and Kurtosis were computed to determine the distribution of the data. Using the acceptable limits of ±2 as prescribed by Gravetter and Wallnau (2014) the data was found to be within the acceptable limits for Skewness and Kurtosis. Therefore, the dataset is evenly distributed and can be analysed. Since listwise deletion was employed, only participants who filled in every questionnaire were included in the final analyses of this study (n = 162). Chi-square tests and One-Way ANOVAs were conducted to ascertain whether there were any differences between the three conditions at baseline in socio-demographic characteristics and baseline scores on emotional, social, psychological and overall wellbeing. Chi-square tests and One-Way ANOVAs indicate that there were no significant differences in socio-demographics and MHC-SF scores at baseline ($p \geq .012$). For all statistical analyses p-values of .05 or lower were considered significant.

Then three mixed ANOVAs were employed to compare the three conditions over time (T0, T1 and T2). The first mixed ANOVA measured the other-oriented Acts of Kindness

compared to the waitlist control group. The second mixed ANOVA measured the self-oriented Acts of Kindness compared to the waitlist control group. The last mixed ANOVA measured the other-oriented compared to the self-oriented Acts of Kindness group.

Cohen's *d* was calculated. First, pre-post and pre-follow-up effect sizes were calculated per condition, using Means and SDs. The following formula was used: Standardised mean effect size = $(M_2 - M_1) / SD_{pooled}$. Second, differences in pre-post and pre-FU effect sizes (Δd) were calculated per comparison. According to Cohen (2013) effect sizes of .2 were considered small, effect sizes of .5 were considered moderate and effect sizes of .8 were considered large. To test whether effects were maintained at the six week follow-up paired-samples t-tests were conducted to compare scores on emotional, social, psychological and overall wellbeing at T1 with T2 for both experimental conditions. Results of these paired-samples t-tests were only reported when there was actually an effect in previously performed mixed ANOVAs that could have been maintained.

Results

Drop-out and adherence

The current study started with 254 participants at T0, 192 participants at T1 and 164 participants at T2. This shows a dropout of 23.6% from T0 to T1 and a dropout from T1 to T2 of 16.5%. From T0 to T1, 28 (33%) participants who followed the other-oriented kindness intervention dropped out of the study. This was 23 (27%) participants for the self-oriented kindness intervention and 9 (11%) participants for the waitlist control condition. From T1 to T2, 14 (25%) participants who followed the other-oriented kindness intervention dropped out of the study. This was 10 (12%) participants for the self-oriented kindness intervention and 8 (11%) participants for the waitlist control condition. There are no significant differences in

group at baseline. Baseline, post-measurement and six weeks follow-up scores on emotional, social, psychological and overall wellbeing can be seen in Table 2.

Table 2

Descriptive statistics of emotional, social, psychological and overall wellbeing per assessment per condition

		AoK others (*n* = 43)	AoK self (*n* = 52)	WLC (*n* = 67)
Measures	Assessment	Mean (*SD*)	Mean (*SD*)	Mean (*SD*)
MHC-EW	Baseline (T0)	3.02 (.77)	2.93 (.84)	2.93 (.82)
	Post (T1)	3.31 (.83)	3.12 (.85)	3.10 (.85)
	6W-FU (T2)	3.29 (.72)	3.09 (.79)	3.10 (.81
MHC-SW	Baseline (T0)	2.68 (.79)	2.57 (.71)	2.59 (.74)
	Post (T1)	2.76 (.72)	2.71 (.74)	2.67 (.72)
	6W-FU (T2)	2.92 (.74)	2.76 (.77)	2.76 (.73)
MHC-PW	Baseline (T0)	2.95 (.71)	2.87 (.81)	2.89 (.76)
	Post (T1)	3.24 (.77)	3.07 (.88)	3.05 (.81)
	6W-FU (T2)	3.33 (.73)	3.12 (.77)	3.12 (.76)
MHC-total	Baseline (T0)	2.87 (.67)	2.77 (.72)	2.79 (.69)
	Post (T1)	3.08 (.69)	2.95 (.76)	2.93 (.71)
	6W-FU (T2)	3.17 (.63)	2.98 (.73)	2.98 (.69)

Note: 6W-FU = six week follow-up; AoK others = other-oriented Acts of Kindness; AoK self = self-oriented Acts of Kindness; EW = emotional wellbeing; MHC-SF = Mental Health Continuum – Short Form; PW = psychological wellbeing; SW = social wellbeing; WLC = waitlist control group

Adherence to the intervention was measured six times between the baseline and the post-measurement, one measurement for every week the participants did an activity. Adherence was ascertained by the question: “How many friendly activities did you perform yesterday?” The question is multiple choice with the answer options being: ‘5 activities’ (1), ‘4 activities’ (2), ‘3 activities’ (3), ‘2 activities’ (4), ‘1 activity’ (5) and ‘I didn’t perform any friendly activities the past week on a single day’ (6). Table 3 shows the self-reported adherence from participants every week they performed friendly activities.

Table 3

Self-reported adherence to the intervention by participants

Measurement	*Mean*	*n*
Week 1	1.87	150
Week 2	2.14	125
Week 3	2.43	113
Week 4	2.32	111
Week 5	2.31	97
Week 6	2.86	121

Participants gave a self-reported adherence of between 4 and 5 friendly activities performed on average throughout the first week of the intervention whereas from the second week onwards this dropped to around 3 to 4 friendly activities performed on average every week. This appears to be a high percentage of adherence to the intervention. However, the amount of participants who self-reported adherence were compared with the amount of participants that were still active during the week of self-reported adherence. This shows that on average 60% of the participants who actively participated in the interventions reported their own level of adherence [59.5%, 63.0%]. This means that there were participants who had not yet dropped out of the intervention who failed to report their adherence to the intervention. It is impossible to know how often the 40% of participants who failed to self-report their adherence performed friendly activities. It can be concluded that at least around 60% of the participants adhered average or good to the intervention throughout the six weeks of the intervention.

Effectiveness of Acts of Kindness on wellbeing

As can be seen in Table 4, all mixed ANOVA tests showed that emotional, social, psychological and overall wellbeing increased over time. However when the other-oriented Act of Kindness group was compared to the waitlist control group, and when the self-oriented Act of Kindness group was compared to the waitlist control group, no significant main effects were found on group indicating that the group the participants were in had no influence on the scores participants had on the scales of wellbeing. Furthermore, no significant interaction effects were found when comparing the other-oriented and self-oriented Acts of Kindness groups with the waitlist control group on any of the wellbeing scales. An exception was psychological wellbeing which showed a significant interaction effect ($F = 4.14$, $p < .05$) when comparing the other-oriented Acts of Kindness group with the waitlist control group. This means that scores of participants in the other-oriented Acts of Kindness group increased significantly more over time than scores of participants in the waitlist control group. Another interesting result is that, when comparing the other-oriented Acts of Kindness group with the waitlist control group, there is a marginally significant interaction effect on overall wellbeing ($F = 2.68$, $p = 0.07$).

Table 4

Results Mixed ANOVAs and Cohen's d of emotional, social, psychological and overall wellbeing over conditions

	Mixed ANOVA**			Cohen's *d*	
	Time: *F*	Group: *F*	Time*Group: *F*	T0-T1	T0-T2
AoK others vs WLC					
MHC-EW	4.82*	3.69	1.33	0.27	0.24
MHC-SW	6.22*	2.24	0.46	0.05	0.12
MHC-PW	8.82*	3.89	4.14*	0.34	0.41
MHC-overall	9.87*	3.88	2.68	0.25	0.29
AoK self vs WLC					
MHC-EW	3.30*	0.61	0.53	0.14	0.08
MHC-SW	4.71*	0.51	0.42	0.14	0.06
MHC-PW	4.58*	0.59	1.51	0.19	0.21
MHC-overall	6.07*	0.66	1.14	0.17	0.11
AoK others vs AoK self					
MHC-EW	6.43*	1.27	0.31	0.13	0.16
MHC-SW	5.60*	0.60	0.37	-0.09	0.06
MHC-PW	13.56*	1.22	0.52	0.15	0.20
MHC-overall	12.50*	1.15	0.42	0.08	0.16

Note: AoK others = other-oriented Acts of Kindness; AoK self = self-oriented Acts of Kindness; EW = emotional wellbeing; MHC-SF = Mental Health Continuum – Short Form; PW = psychological wellbeing; SW = social wellbeing; T0 = pre-measurement; T1 = post-measurement; T2 = six week follow-up measurement; WLC = waitlist control group

*$p < .05$

**When sphericity is not assumed, Huyhn-Feldt results are reported as according to Collier, Baker, Mandeville and Hayes (1967)

Table 4 also shows small effect sizes for emotional and overall wellbeing and moderate effect sizes for psychological wellbeing from T0 to T1 and from T0 to T2 when the other-oriented Acts of Kindness group is compared to the waitlist control group. Furthermore, effect sizes for psychological wellbeing from T0 to T1 and T0 to T2 were small when comparing the self-oriented Acts of Kindness group to the waitlist control group.

Effect of other-oriented versus self-oriented Acts of Kindness on wellbeing

Table 4 shows a significant main effect of time for emotional, social, psychological and overall wellbeing when comparing the two types of interventions, respectively. This means that the different measurements of time showed significantly different scores in emotional, social, psychological and overall wellbeing, meaning that scores increased over time. When comparing the two types of intervention, no significant main effect of group or interaction effects of time and group were found for emotional, social, psychological and overall wellbeing. Small effect sizes for emotional, psychological and overall wellbeing from T0 to T1 are shown in Table 4. There are no significant effect sizes from T1 to T2.

Effect maintenance of Acts of Kindness interventions

The mixed ANOVAs showed a significant interaction effect for time and group when comparing the other-oriented Acts of Kindness to the waitlist control group for psychological wellbeing, but none of the other analyses showed significant results. Therefore, effect maintenance was calculated for psychological wellbeing when comparing the other-oriented Acts of Kindness to the waitlist control group and no other condition or outcome variable. The paired sample t-test was performed per condition and outcome variable comparing T1 with T2. There was no significant difference in the scores on psychological wellbeing for T1 and T2 (t [34] = 1.07, p = .29) when comparing the other-oriented Acts of Kindness to the waitlist control group. This result suggest that the effect that the intervention had on psychological wellbeing has been maintained over the period of six weeks between T1 and T2, since no significant increase or decrease was found. This means that the positive effect of the other-oriented Acts of Kindness intervention on psychological wellbeing is maintained at least until the follow-up six weeks after the intervention ended.

Discussion

The current study was aimed at testing the efficacy of two Acts of Kindness interventions (other-oriented and self-oriented) in improving emotional, social, psychological and overall wellbeing in the Dutch population compared to a waitlist control condition. The other-oriented and self-oriented Acts of Kindness interventions where compared to each other as well. A secondary aim of this study was to examine whether there is effect maintenance for the interventions until a follow-up six weeks after the intervention.

In line with expectations derived from Nelson et al. (2016) the current study shows that only psychological wellbeing has a significant interaction effect from T1 to T2 for the other-oriented Acts of Kindness group compared to the waitlist control group, whereas none of the other outcome measures significantly increased. Contrary to expectations there were no significant differences on the outcome variables over time when comparing the two interventions. This means that one intervention did not have a significantly higher effect on any type of wellbeing than the other. However, since the other-oriented Acts of Kindness intervention has a significant effect over time on psychological wellbeing when compared to the waitlist control group where the self-oriented Acts of Kindness does not, an other-oriented kindness intervention has preference over a self-oriented kindness intervention. Lastly, since the only significant interaction effect was found for the other-oriented Acts of Kindness intervention with psychological wellbeing, This was the only variable that could be tested for effect maintenance. The results show that the effects of the other-oriented Acts of Kindness intervention on psychological wellbeing are still there at the six week follow-up.

Discussion of main findings

The current study found that other-oriented kind behaviour is more effective in increasing psychological wellbeing than self-oriented kind behaviour. This is in line with Nelson et al.

(2016) which showed through a similar method to the current study of using the other-oriented and self-oriented Acts of Kindness interventions that prosocial behaviour leads to greater increase in psychological flourishing than self-focused and neutral behaviour. Since the methods were similar, no difference in results was to be expected. The lack of significant interaction effects on any type of wellbeing when comparing the waitlist control group with the self-oriented kindness intervention in the current study supports previous findings from Nelson et al. (2016) as well. The effect maintenance, up to six weeks after the intervention, found in the current study further shows the capabilities of improving psychological wellbeing through other-oriented Acts of Kindness. Knowing that there is a maintenance of the effect form the intervention still six weeks after the intervention has ended, shows that the other-oriented Acts of Kindness intervention is a viable intervention for improving psychological wellbeing.

Earlier research shows that kindness interventions can improve wellbeing (Otake et al., 2006) and kindness based meditation interventions have a positive effect on wellbeing and social interactions (Galante, Galante, Bekkers, & Gallacher, 2014). The results of the current study show less significant results, which might indicate that Acts of Kindness interventions are less effective in increasing wellbeing than meditation and counting interventions. Furthermore, effect sizes reported in the current research were lower than the small-to-medium overall effects of kindness interventions on wellbeing (d = 0.38, [0.27, 0.49]) as measured in the meta-analysis by Curry et al. (2018). Similar effect sizes for subjective and psychological wellbeing through positive psychology interventions were found by Bolier et al. (2013).

The difference as expected between other-oriented and self-oriented positive activities as mentioned by Lyubomirsky and Layous (2013) was not found. It is not clear whether this might be due to the kind of positive activity or because of the duration or intensity of the

intervention. Nevertheless, it is clear that other-oriented kindness has more effect on psychological wellbeing than self-oriented kindness when comparing the two interventions with a waitlist control group. This could possibly be explained when looking more closely at the constructs of emotional, social and psychological wellbeing. Emotional wellbeing is about life satisfaction and experiencing positive emotions (Diener, Suh, Lucas, & Smith, 1999). The five dimensions of social wellbeing are *social contribution, social integration, social actualization, social acceptance* and *social coherence* (Keyes, 1998). The six dimensions of psychological wellbeing are *self-acceptance*, p*ersonal growth, purpose in life, environmental mastery, autonomy* and *positive relations with others* (Ryff, 1989). Looking at the definition of emotional wellbeing, it is possible that an Acts of Kindness intervention is not intense enough to have a long-term effect on life satisfaction and the experiencing of positive emotions throughout an individuals' life. Similarly, it could be argued that social acceptance and social coherence could be significantly increased through an other-oriented Acts of Kindness intervention, but the constructs of social contribution, social integration and social actualization might be too broad to be effected by an Acts of Kindness intervention, especially one that is not other-oriented. The six dimensions of psychological wellbeing might be more easily influenced. Constructs such as self-acceptance, personal growth, environmental mastery, autonomy and positive relationships could conceivable be effected by the other-oriented Acts of Kindness intervention, where self-acceptance, personal growth and autonomy might be affected by the self-oriented Acts of Kindness intervention.

Strengths and limitations of the study

One of the strengths of this study is the fact that randomisation was stratified through sex and level of education and all demographic variables and baseline scores on wellbeing showed no baseline differences. This suggests that every significant result can be assigned to the actual

effect of the interventions on emotional, social, psychological and overall wellbeing, and not due to differences in the three groups at baseline.

Another strength of this research is the follow-up questionnaire that enables conclusions to be drawn about the short-term robustness of the effects the Acts of Kindness interventions have on emotional, social, psychological and overall wellbeing. This is further strengthened by the fact that participants answered the same questions of the MHC-SF (Lamers et al., 2011) every measurement. Furthermore, the multiple measurements provided the opportunity to shine light on effect maintenance six weeks after the intervention ended.

A concern in the current study is that the sample predominantly consists of women who have a higher educational level. Although this is a general concern in the field of psychology, in this specific case it might have influenced the study. It is possible that women perform different types of Acts of Kindness from men or that because of their gender the outcome of Acts of Kindness performed by women can be different from those of Acts of Kindness performed by men. However this unbalance in the male to female ratio is first and foremost an issue for external validity which makes the results of this study less generalisable to the male population.

Another concern is the intensity of the intervention, more precisely the possible difference of intensity per participant. The description of the interventions as written for the participants leaves a lot of room for differences per participant. Where one participant might perform Acts of Kindness that are smaller or easier for the participant to perform, another might try to perform bigger or more difficult Acts of Kindness. Since in the current research no discrimination was made between the two, bringing someone to the airport is measured as equal to paying someone's coffee. It is however likely that those are not equal in the effect they might have on emotional, social, psychological and overall wellbeing. This can therefore create a bias between participants who performed different types of Acts of Kindness, be it for

others or for themselves. Helping someone move for example is something you cannot do as an act of kindness for yourself, just like brining yourself to the airport is not considered a self-oriented Act of Kindness. Furthermore, the self-oriented group might be less incentivised to perform high intensity Acts of Kindness simply because they're not performing it for someone else. Therefore, it is possible that people who performed other-oriented Acts of Kindness performed higher intensity acts than people who performed self-oriented Acts of Kindness.

Lastly, the frequency of the Acts of Kindness might have had an influence on the outcome measurements. The intervention asked for people to perform five Acts of Kindness on a single day each week. It is possible that focusing on kindness for one day a week might not be enough to improve emotional, social and overall wellbeing in six weeks, since these constructs often seem more long-term (such as life satisfaction from emotional wellbeing). More frequently performed exercises throughout the week might change the results of the current study. Since data on adherence shows that around 60% of participants performed friendly activities on average three to four times every week for the six weeks the intervention lasted, it is not clear whether the friendly activities were performed often enough to be able to see significant changes. This is a general remark for research like the current study, as for example the study by Nelson et al. (2016).

Future research

Since the improvement of wellbeing is such an important topic (Fredrickson & Losada, 2005; Keyes, 2002; Walburg 2009) and this study shows that an other-oriented Acts of Kindness intervention has a significant positive effect on psychological wellbeing, much more research is needed on this subject to better understand the possibilities.

An important focus when doing further research on the topic is to more adequately keep track of the active ingredients of an Acts of Kindness intervention. Active ingredients are key to better understand this topic in a larger theory. An example is that the increase in wellbeing experienced might be dependent on who an other-oriented Acts of Kindness intervention is aimed at. Showing kindness to strangers might have a different effect on wellbeing than showing kindness to family or friends.. It might be the case that being kind to others improves wellbeing because humans are wired to help other people whereas being kind to yourself does not come with a good internal feeling just for helping someone, which would be in concordance with Gilbert's view of the evolutionary nature of compassion (Gilbert, 2014). Therefore, research that divides kindness to strangers and kindness to acquaintances is warranted to see if this plays a role in the effect or lack thereof on social wellbeing in particular. Another example is that due to the possibility that performing Acts of Kindness more often throughout the week might further increase effects on wellbeing. Therefore, it is recommended to increase frequency of performed Acts of Kindness in future research. Another active ingredient future studies should be aimed at is categorising the different types of Acts of Kindness in order to better understand the influence this might have on increasing wellbeing. Does it make a difference on the effect of wellbeing if you bring someone to the airport or help someone move instead of buying someone a cup of coffee or holding open a door for someone? This is something the current study did not analyse and something that might have an influence on the strength of the effect the interventions had on emotional, social, psychological and overall wellbeing. To research whether the type of Acts of Kindness has an influence on improving wellbeing, a study could be devised that first creates categories of the Acts of Kindness (for example big/intensive, neutral and small/superficial) through interviews and afterwards randomly assigns participants to groups that will then get different instructions according to the group they were assigned to. Therefore, a mixed method research

would be appropriate to get a more in depth understanding of possible bias through the categorisation of different acts performed.

Lastly, since psychological wellbeing is the only type of wellbeing out of emotional, social, psychological and overall wellbeing that has a significant increase as effect of the Acts of Kindness intervention, it is important to understand what parts of psychological wellbeing are increased by the intervention. What is it about being kind to others that raises our psychological wellbeing? Therefore, further research should be aimed at seeing how the six domains, *self-acceptance*, p*ersonal growth*, *purpose in life*, *environmental mastery*, *autonomy* and *positive relations with others*, (Ryff, 1989) are individually influenced by a kindness intervention. Here another mixed method research could be advised to understand the attribution of participants themselves when going through the Acts of Kindness intervention. Does helping others make participants feel like they have more positive relations with others? Do people like themselves more after helping someone else or helping themselves? This could give more insight into why an other-oriented Acts of Kindness intervention have a positive effect on psychological wellbeing while a self-oriented Acts of Kindness intervention has no significant effect.

Conclusion

The results of this study suggest that an other-oriented kindness intervention has a positive effect on psychological wellbeing. This effect is still present six weeks after the intervention has ended, showing that a short intervention can have an effect that maintains over a short period of time. Other-oriented kindness interventions seem to have no effect on emotional, social and overall wellbeing, just as self-oriented kindness interventions seem to have no effect on any type of wellbeing. Thus, being kind to others allows people to be more self-accepting, enjoy more personal growth, possibly gives a purpose in life, a feeling of

environmental mastery and autonomy and might create more positive relations with others. However, being kind to others does not seem to improve social acceptance, actualisation, contribution, coherence or integrity nor does it seem to enhance life satisfaction or positive emotions. Treating yourself nicely has no visible benefits when it comes to wellbeing at all. So, should you be kind to others or yourself? The advice is to be kind to others, because this can improve your psychological wellbeing.

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