

PROSOCIAL BEHAVIOUR AND WELL-BEING

A Qualitative Study on Types of Prosocial Behaviour and Their Effect on Well-Being

Elisabeth Charlotte van den Berge (s1880624)

University of Twente

Abstract

People with a high level of mental well-being have less psychopathology and a better quality of life. Prior studies show that an intervention focussed on prosocial behaviour led to enhanced mental well-being. However, it was not yet investigated what kind of prosocial behaviour leads to better mental health. Therefore this qualitative study examined what type of prosocial behaviour participants performed when they were instructed to do five acts of kindness a week during six weeks. In addition, this study examines whether specific prosocial behaviours (e.g. comforting, complementing, giving and showing interest) are related to a positive change on mental well-being. Eighteen males and 151 females participated. Results demonstrated that behaviours from the main area Being Active lead to a higher level of well-being compared to behaviours from the main areas Social, Material and Mindset. There were no statistical significant correlations between specific prosocial behaviours and a positive change on mental well-being.

Introduction

Concepts such as altruism, prosocial behaviour and kindness are comprehensively discussed in literature but it is not always clear how they relate to each other. Prosocial behaviour is defined as a set of different behaviours that are intended to be beneficial for others (Batson, & Powell, 2003; Eisenberg, & Mussen, 1989). Altruism is a potential underlying motivation of prosocial behaviour. It is the opposite of egoistic motivation to execute prosocial behaviour (Batson, & Powell, 2003; Batson, & Shaw, 1991; Eisenberg, & Mussen, 1989; Knickerbocker, 2003). Whereas altruism is purely driven by helping others in regard of their needs, egoistic motivation is entirely self-interested. Usually, prosocial behaviour is motivated by a compound of both altruistic and egoistic motives. Kindness is defined as a combination of positive feelings, opinions and actions towards others and is characterised by prosocial behaviour with altruistic motivation (Knafo, & Israel, 2012). Social functioning is an important component of well-being (Keyes 1998). Study shows that interventions that focus on kindness enhance well-being (Chancellor, Margolis, Jacobs Bao, & Lyubomirsky, 2018; Layous, Lee, Choi, Lyubomirsky, 2013; Nelson, Layous, Cole, & Lyubomirsky, 2016). Well-being prevents the onset of psychopathology and improves the quality of life (Seligman & Csikszentmihalyi, 2000).

Well-being

Well-being is comprehensively studied and discussed in psychological literature. Keyes (2002) describes well-being as someone's subjective evaluation of their life in terms of affect, psychological functioning and social functioning. This definition contains three aspects of well-being. Firstly, emotional well-being is defined as the presence of positive feelings, absence of negative feelings and general life satisfaction (Diener, 1984; Keyes, 2002). Secondly, psychological well-being which is defined as self-realisation in terms of purpose of life, self-acceptance, environmental mastery, personal growth, positive relations with others and autonomy (Ryff, 1989; Ryff & Keyes, 1995). Thirdly, social well-being which is defined as the subjective evaluation of functioning in society (Keyes 1998).

A high level of well-being is related to a low mortality rate in both healthy and diseased populations (Chida & Steptoe, 2008). Also, well-being is positively associated with better physical health, prosocial behaviour, and creative and flexible thinking (Huppert, 2009). People with a high level of well-being and who are free of mental disorders for the last twelve months, have less missed workdays, less limitations through health in their daily activities,

less helplessness, more resilience, more intimacy and clearer live goals (Keyes, 2005). Therefore it is worthwhile to design interventions that enhance well-being.

Prosocial behaviour and well being

Several experimental en longitudinal studies show that interventions with a focus on prosocial behaviour enhance well-being (Chancellor, Margolis, Jacobs Bao, & Lyubomirsky, 2018; Layous, Lee, Choi, Lyubomirsky, 2013; Nelson, Layous, Cole, & Lyubomirsky, 2016). In those studies the participants were instructed to perform acts of kindness for a few weeks. After this intervention the well-being of the participants in all studies increased.

Also, in a study of Nelson-Coffey, Bohlmeijer and Schotanus-Dijkstra (Submitted) the effect of prosocial behaviour on well-being was investigated. In this study, participants were divided into two different groups. The first group was instructed to perform five acts of kindness for others on one day per week for six weeks. The second group was instructed to perform five acts of kindness for themselves on one day per week for six weeks. They could decide for themselves what they would like to do as an act of kindness. During the process, the participants described their actions of choice in a journal. Even though the well-being of both groups improved significantly after the intervention, no significant differences were found between performing kindness for others or for themselves on mental well-being. This result is contradictory with a previous study of Nelson et al., (2016) which shows that prosocial behaviour has a greater positive impact on well-being than self-focussed behaviour.

Various activities of prosocial behaviour

Prosocial behaviour can be performed in different ways. One person might for example compliment someone as an act of kindness, but someone else might donate money to a charity foundation. There is not yet scientific literature available on diversity in acts of kindness. Therefore, also is not known which specific act of kindness has a greater impact on level of well-being than other acts of kindness. However, Sin and Lyubomirsky (2009) demonstrated in their meta-analytical study of positive psychological interventions, that interventions that are put in more effort, also have a greater impact on well-being.

The most important examples of prosocial behaviour from literature can be summarised as sharing, helping, comforting, cooperating, donating blood, donating money, volunteering and complementing (Batson & Powell, 2003; Brief & Motowidlo, 1986; Sharifian, 2008; McCann, Ball, & Ivanoff, 2000; Weinstein & Ryan, 2010).

Current study

The aim of this study is to determine what different kinds of prosocial behaviours lead to better mental health. The primary aim of this study was to determine what different kind of prosocial behaviour the participants reported. It was expected that the examples of prosocial behaviour as mentioned in the literature, such as helping, cooperating, donating, sharing and volunteering, would also be discovered in the qualitative journals of the participants. The secondary aim of this study was to explore which prosocial behaviour activities are significantly correlated with a higher level on mental well-being after the intervention. It was expected that one or more of the discovered categories from the first research question, would significantly correlate with gaining more mental well-being.

Method

Design

The first research question was analysed with a qualitative content analysis of the journals of the participants. In those journals the participants wrote down what acts of kindness they performed during the intervention period of six weeks. The level of well-being of the participants was measured before the intervention (pretest) and after the 6-week intervention (posttest). All the participants gave online informed consent.

Participants

The participants in the current study (n=169) consisted of 18 male participants (10.7%) and 151 female (89.3%) participants, who had applied for a large study on the efficacy of happiness exercises from the University of Twente. Participants were excluded when they were under 18 years old or if they did not fill-out the entire baseline questionnaire. Also, participants which had serious anxiety or depressive symptoms were excluded. Furthermore, people had to agree with the informed consent, have an e-mail address, have a working internet connection, understand Dutch and experience a moderate or low level of well-being to be included for this study. The average age of the participants was 48.71 (SD = 9.82). The youngest participant was 23 years old and the oldest participant 70 years old. The highest completed education of the participants was asked: 43.2% (n=73) completed university, 35.5% (n=60) completed higher professional education, 9.5% (n=16) completed high school, 9.5% (n=16) completed secondary vocational education, 2.4% (n=4) completed lower education.

Intervention

The participants were instructed to conduct five acts of kindness on one day per week, over a period of six weeks. They could decide themselves what kind of activities they wanted to perform. Every week an email was sent to the participants with the same instructions for the following week. The day after the participants performed the kind acts, they were instructed to complete an online journal wherein they were asked how many kind acts they had performed yesterday and to describe for every activity what they did and with whom.

Procedure and analysis of quantitative coding

Based on literature, a coding scheme was developed in order to evaluate the first research question. This coding strategy is known as the deductive approach because the codes derive from literature and are used to analyse the data (Mayring, 2000). The examples of prosocial behaviour that were discovered in literature and that were transformed into codes were: comforting, complementing, cooperating, giving, helping and volunteering (Batson & Powell, 2003; Brief & Motowidlo, 1986; Sharifian, 2008; McCann, Ball, & Ivanoff, 2000; Weinstein & Ryan, 2010). The following four codes were provided with a definition that derived from literature: comforting, complementing, cooperating and volunteering. For the other codes that were found in literature, a definition was formulated based on the data. After the development of this coding scheme based on literature, the data was explored by reading some of the activities participants conducted. Categories that were not found in literature, but were discovered in the journals of the current study, were added to the coding scheme. These codes were: doing chores, friendliness to strangers, helping, investing time, serving, showing interest, giving and gratefulness. These categories were derived from the data and were therefore developed according to the inductive approach (Mayring, 2000). This was required to get a representation as complete as possible in the variety of prosocial behaviour.

Every description of one activity is called a fragment. A maximum of 30 activities could be reported per participant throughout the six weeks. During and after the development of the coding scheme, all fragments were divided into the different codes. Only one (the most applicable) code could have been assigned per fragment. Fragments that did not indicate an act of kindness or that were not clear on what activity the participant executed, were assigned to the code *not relevant*.

After the coding process, some changes were made to the coding scheme. Firstly, a few codes were combined. The code *donating* was merged with the code *giving*. Donating

was defined as the donation of money or goods to official charity organisations but since there were only 8 fragments within this code and the content of the two codes corresponded, the codes were put together into one: *giving*. Another code that exists of multiple former codes is the code *investing time*. Originally, *babysitting* and *giving a ride* were independent codes. Those fragments were added to the code *investing time* which originally only focussed on visiting, hosting visitors or doing something together with people. Secondly, a few codes were divided in multiple categories because the diversity within the code was too heterogeneous. The code *helping* was split into the codes *helping* and *doing chores*. This has been done because a lot of people did chores to help one another, but this differs from the spontaneous ways of helping like picking up keys that someone might have dropped. Thirdly, the name of the code *thanking* was changed into *gratefulness*, because it more relevant to the content of this code.

After the coding process succeeded, another rater was asked to divide the fragments into the different categories. This was required in order to estimate the inter-rater reliability. The second rater used the coding scheme as developed by the first rater. Based on the feedback of the second rater, a few adjustments were made in the coding scheme. The code titled *conversation* was changed into the code *friendliness to strangers*. Therefore, the first rater analysed the data again in order to assign the fitting fragments under this code. Also the code *investing time* became better defined because it was not entirely clear for the second rater what was meant by it. In Table 1 the final version of the coding scheme is represented. Also the definition of the codes and the variation within the codes is shown in Table 1.

According to this Cohen's Kappa Coefficient, the inter-rater reliability of the raters of this coding scheme is estimated to be $Kappa = 0.72$ ($p < 0.001$), 95% CI (0.70, 0.74). This means that according to Landis and Koch (1977) a substantial agreement between the raters is found. The Cohen's Kappa Coefficient of the categories varied between 0.56 for the code *investing time* and 0.94 for the code *complementing*. This means that the subscales varied between moderate agreement and almost perfect agreement.

Measurement instruments

At pre- and posttest, the participants had to complete the Dutch version of the 14-item Mental Health Continuum Short Form (MHC-SF). This is a questionnaire that measures well-being on emotional, social and psychological well-being. Answers could be given on the 6-point likertscale that varied from *never* (0) to *(almost) always* (5). For analysing, the total sum score of mental well-being on this test is used. Study on the psychometrical qualities of this test

shows that it has a high internal consistence and an average test-retest reliability (Lamers, Westerhof, Bohlmeijer, ten Klooster, & Keyes, 2011). Also, this study confirms the convergent and discriminant validity of the test. Cronbach's alpha of the current sample from the MHC-SF is 0.90 at pretest and 0.92 at posttest.

Statistical analysis

To evaluate the qualitative aspects of this study, ATLAS.ti 7.0.80 is used. This computer program helps labelling qualitative data and can be used to analyse it. The second rater used Atlas 8.3.1 to label the fragments.

To evaluate the quantitative aspects of this study, SPSS 20 was used. This is a computer program that helps with analysing quantitative data. The inter-rater reliability is estimated based on Cohen's Kappa, which shows the agreement of coding between the two raters.

To examine which prosocial behaviour activities were associated with a high level of well-being, Pearson's correlation coefficient is used. Total scores for each code could vary between 0-30. The scores of the participants on every category were compared with the change score of mental well-being. The change score of mental well-being was calculated by subtracting the pre-test score on the MHC-SF from the post-test score on the MHC-SF. A positive change score indicates improvement of well-being after the intervention.

Results

Overall impression

There were a total of 2465 acts of kindness performed in total by 169 participants. The mean amount of activities of the participants that were performed was 18.79 (SD = 6.84). The participant with the least activities, performed three activities and the four participants with the most activities performed 30 activities. The acts of kindness could be divided into four main areas: social, being active, material and mindset. Twelve different categories of prosocial behaviour derived from those areas (Table 1). The first main area Social (40%) could be divided into the prosocial behaviour categories: *investing time* (13%), *comforting* (8%), *showing interest* (7%), *complementing* (6%) and *cooperating* (5%). The second main area Being Active (32%) could be divided into the prosocial behaviour categories: *helping* (14%), *serving* (9%), *doing chores* (7%) and *volunteering* (2%). The third main area Material (14%) existed of the prosocial behaviour category *giving* (14%). The fourth main area Mindset (12%) could be divided into the prosocial behaviour categories: *friendliness to*

strangers (9%) and *gratefulness* (3%). Some fragments were not dividable in one of the categories and were labelled as *not relevant* (2%). Figure 1 shows the main areas, the specific behaviours and their mutual connections with each other.

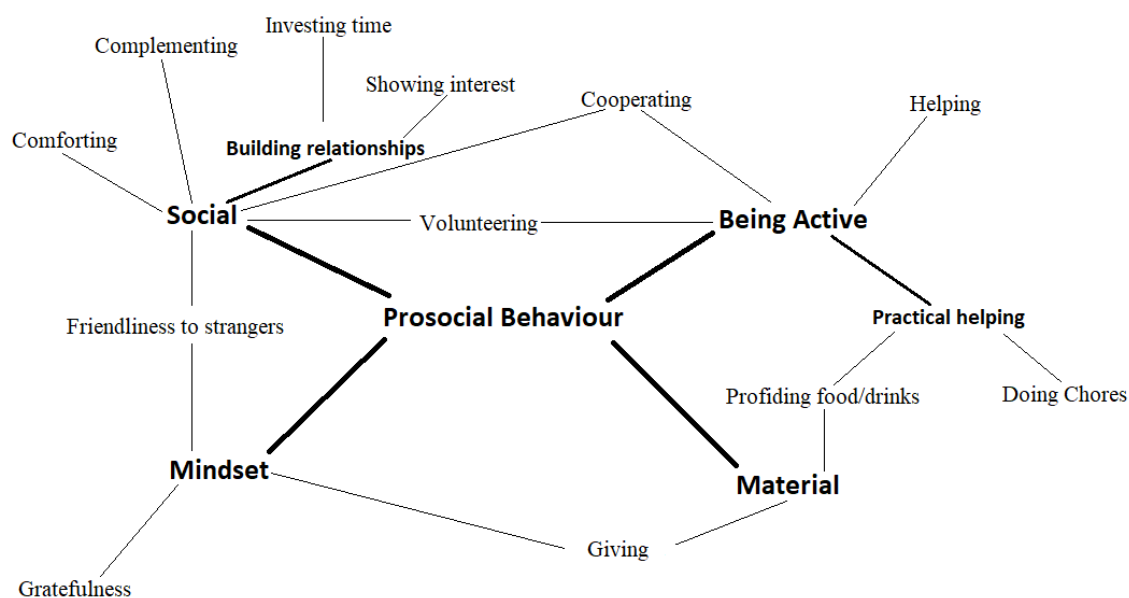


Figure 1. Codes in relationship with each other

Table 1 Coding scheme of the different categories of prosocial behaviour including definition, examples and variation within the code.

Area	Code	Frequency	Definition	Variation	Examples
Social (40%)	Investing time	331 (13%)	Making time to spend it with other people.	Visiting people Hosting visitors Making time to do something together with someone Calling people Babysitting Giving a lift	“visited an old lady” “invited a friend to stop by and eat soup”
	Comforting	208 (8%)	Alleviating emotional distress of others caused by disappointment or hurt (Burleson, 1985).	Listening to someone with problems Encouraging Soothing Sending cards to sick people Visiting sick people	“encouraged a friend on the phone”
	Showing interest	183 (7%)	Showing interest in other people.	Asking questions Listening Sending a card, message or letter Being involved with someone Emphasizing Giving advise	“sent a message to a friend in order to check how she is”
	Complementing	147 (6%)	Saying something nice by giving a favourable opinion or judgment to another person (Wolfson & Manes, 1980).	Saying something nice to someone Giving a favourable judgement or opinion Giving positive feedback	“complementing a friend about her clothing”
	Cooperating	129 (5%)	Contributing effort to the completion of tasks (Wagner, 1995).	Helping co-workers with workrelated stuff Yielding for someone elses benefit Helping someone else with achieving a mutual goal.	“asked a colleague if I could help with a task”
Being Active (32%)	Helping	332 (13%)	Doing something for something else in order to help them.	Doing something for someone else Attending people on something they are not aware of giving a helping hand when someone needs it	“called back a man in a restaurant that forgot his shawl” “caught a runaway dog in a park”

Table 1 (continued)

Area	Code	Frequency	Definition	Variation	Examples
Being Active (continued)	Serving	220 (9%)	Preparing drinks or food for other people.	Prepare a drink for someone Prepare food for someone	“made a tea for a co-worker” “made a delicious lunch for someone with a lot of diet wishes”
	Doing chores	172 (7%)	Performing routine activities in and around the house like cleaning, grocery shopping, doing the laundry and work in the garden.	Doing chores for own household Doing chores for another household	“ironing for my partner” “running errands for the neighbours”
	Volunteering	57 (2%)	Willingly offering to do a service without obligation or gaining money (Cnaan, Handy, & Wadsworth, 1996).	Voluntary work in an organisation Informal care if it is done on a regular basis	“volunteering: visiting a man in depth”
Material (14%)	Giving	348 (14%)	Giving material stuff or money to other people.	Giving material stuff to other people Paying for someone else (dinner, coffee) Lending stuff Donating blood, money or clothes to an organisation	“bought two dresses for grandchildren” “donated money to a charity organisation”
Mindset (12%)	Friendliness to strangers	227 (9%)	Being kind to strangers.	Making a friendly conversation with people Smiling to other people Greeting people Being warm in contact with other people Holding open doors Giving someone permission to go first in traffic or at a toilet	“chatted with a street salesman” “smiled to a passer-by”
	Gratefulness	69 (3%)	Expressing gratefulness for something to other people.	Expressing appreciation Saying thanks	“Thanked the bus driver after a ride”
Not relevant (2%)		42 (2%)			

Social

Investing time

The code *investing time* appeared 331 times. It can be in the form of visiting people. For example “visited an old lady” (participant 24). But also in the form of hosting visitors. For example “invited a friend to stop by and eat soup” (participant 194). Also, making time to do something together with someone is a form of investing time. For example “invited a friend to go for a walk together” (participant 309). Investing time can also be done by calling someone. For example “called mom” (participant 57). Babysitting is also part of investing time. For example “took care of grandchild for an extra morning” (participant 290). Giving a ride to other people is also part of investing time. For example “Picked up a friend with my car for a n appointment (participant 128).

Comforting

The code *comforting* appeared 208 times. Comforting has been done in several ways. A possible way is listening to someone with problems. For example “showing empathy to someone at the club night. Without force, I invited her to talk about her problems. I did not judge but listened and sympathised” (participant 103). Another way is encouraging someone. For example: “encouraged a friend on the phone” (participant 75). Also, soothing someone is part of comforting. For example a participant reported: “Calmed down an aunt that called early in the weekend with a concern about my dad.” (participant 26). Visiting people that are sick is also a form of comforting. For example “visited an sick acquaintance” (participant 299).

Showing interest

The code *Showing interest* appeared 183 times. Firstly, asking questions is a form of showing interest. For example “asking questions about the vacation of a co-worker” (participant 142). Secondly, listening is a form of showing interest. For example “listening to someone during the break (participant 121)”. Thirdly sending a card, felicitation, message or letter is a form of showing interest. For example “sent a message to a friend in order to check how she is” (participant 47). Fourthly, emphasizing is a form of showing interest. For example “emphasized with an co-worker” (participant 165). Fifthly giving advice is a form of showing interest. For example “giving friends advise about supplements (participant 231).

Complementing

The code *complementing* appeared 147 times. Complementing can be done by saying something nice to someone. For example “Saying to a team member that she does not have to be so self-critical and that she is doing great” (participant 39). Also, giving a favourable judgement or opinion can be a way of complementing. For example “complementing a friend about her clothing”(participant 225). Giving positive feedback also a way to complement that the participants did do. For example “giving positive feedback to my colleague” (participant 143).

Cooperating

The code *cooperating* appeared 129 times. This can be done by helping co-workers with work related stuff. For example “asked a colleague if I could help with a task” (participant 13). Or by yielding for someone else’s benefit. For example “Letting my daughter sleep with me in my bed (highly exceptional)”(participant 13). Also, helping someone else with achieving a mutual goal. For example “suggested to drive 1.5 hours in the dark so my partner could drink” (participant 290).

Being active

Helping

The code *helping* appeared 332 times. Helping can be attending people on something they are unaware of. For example “called back a man in a restaurant that forgot his shawl” (participant 16). Also, helping can be giving a helping hand when someone needs it. For example “caught a runaway dog in a park” (participant 19), or “carried errands for a man in the store” (participant 32). Furthermore doing something for someone else in general is a form of helping. For example “checked an application letter for a friend” (participant 121).

Serving

The code *serving* appeared 217 times. Preparing a drink for someone can be in the form of coffee, thee or other drinks. For example “fetched tea for a co-worker” (participant 13). Preparing food is also a form of serving. For example “made a delicious lunch for someone with a lot of diet wishes” (participant 17).

Doing chores

The code *doing chores* appeared 172 times. Doing chores can be done for peoples own household. For example “ironing for my partner” (participant 23). But also for the household for someone else. For example “running errands for the neighbours” (participant 275).

Volunteering

The code *volunteering* appeared 57 times. Initially this involves voluntary work in an organisation. For example “volunteering: visiting a man in depth” (participant 125). Also it involves informal care if it is done on a regular basis. For example “provided informal care to my dependent mother that is 90 years old” (participant 89).

Material

Giving

The code *giving* appeared 348 times. Giving can be in the form of giving material stuff to someone else like “bought two dresses for grandchildren” (participant 333). Also it can be in the form of paying for someone else like “Paid for someone else’s coffee” (participant 335). Lending stuff is also a form of giving. For example “lent my car to my son” (participant 317). Furthermore the donation of blood, money or clothes to an organisation is also a form of giving. For example “donated money to a charity organisation” (participant 180).

Mindset

Friendliness to strangers

The code *friendliness to strangers* appeared 227 times. It appears as making a friendly conversation with someone. For example “chatted with an street salesman”(participant 19). Or smiling to other people “smiled to an passer-by” (participant 296). Greeting other people is also a form of friendliness to strangers. For example “saying good morning to the bus driver” (participant 165). Also, it appears as being warm in contact with other people. For example “kindly talked to a stranger (insecure drag queen in a bar)” (participant 43). Holding doors open for strangers is also part of this code. For example “holding the door open for an old man” (participant 23). Or giving someone permission to go first in traffic or at a toilet. For example “let someone go first at the counter” (participant 288).

Gratefulness

The code *gratefulness* appeared 69 times. Saying thanks is a form of expressing gratefulness. For example “Thanked the bus driver after a ride” (participant 218). Also expressing appreciation is a form of gratefulness. For example “letting a friend know that I appreciate our friendship” (participant 176).

Not relevant

This includes the fragments that were not able to be allocated a code. A total of 42 fragments were labelled not relevant. Firstly, when the act of kindness was not clear in the fragment. For example “fulfil the wishes of my daughter” (participant 47). Secondly, when a fragment seemed to only have benefitted the participant himself. For example “made an abstract” (participant 19).

Quantitative analyses

Correlations between the different categories and well-being

To examine which prosocial behaviour activities are significantly correlated with a higher level of mental well-being, pearsons correlation coefficient was used. Results demonstrate that the main area Being Active is significant and positively correlated with the change score in well-being. Thus, when participants performed activities of the main area Being Active more frequently, they also showed a higher increase of mental well-being. The other areas are negatively correlated with mental well-being, but are not significant. There is no statistical evidence that there is a correlation between one of the specific prosocial behaviour categories and the outcome measurement change score in well-being. However, the categories *volunteering*, *doing chores* and *helping* are marginally significant and positively correlated with the change score in well-being. Thus, when participants volunteered, performed chores or helping activities more frequently, they also showed a higher increase of mental well-being. All the categories and their correlation with each other and change score in well-being, are represented in Table 2. All the categories that marginally significantly correlated with the change score in well-being, are part of the main area Being Active. Remarkable is that most categories are negatively correlated with the change score in well-being. However, the categories that are significant or marginally significant, are all positive.

Table 2 Correlation matrix of the change score in mental well-being and the prosocial behaviour categories

Subscales	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Well-Being	1																
2. Social	-.04	1															
3. Investing time	.01	.58**	1														
4. Comforting	-.04	.45**	-.03	1													
5. Showing interest	.07	.51**	.08	.10	1												
6. Complementing	-.01	.54**	.05	-.04	.25*	1											
7. Cooperating	-.13	.28**	.07	-.15	-.14	.20	1										
8. Being active	.27*	-.08	.11	-.08	-.15	-.16	.05	1									
9. Helping	.19 ⁺	-.05	-.08	-.03	.04	-.06	.05	.58**	1								
10. Serving	-.06	-.02	.07	-.03	-.16	-.05	.13	.53**	-.03	1							
11. Doing chores	.18 ⁺	-.08	.15	-.11	-.14	-.15	.00	.71**	.20	.10	1						
12. Volunteering	.20 ⁺	-.04	.17	-.02	-.10	-.13	-.15	.43**	-.02	.00	.38**	1					
13. Material	-.07	.15	.07	.18 ⁺	.09	.05	.01	-.09	-.06	.15	-.16	-.22*	1				
14. Giving	-.07	.15	.07	.18 ⁺	.09	.05	.01	-.09	-.06	.15	-.16	-.22*	1	1			
15. Mindset	-.08	.18	.09	-.11	.18	.31**	.02	-.05	.11	-.05	-.15	-.06	.12	.12	1		
16. Friendliness to strangers	-.09	-.09	.06	-.11	.16	.13	.01	-.01	.12	-.07	-.09	.02	.07	.07	.91**	1	
17. Gratefulness	-.02	.25*	.09	-.04	.11	.47**	.01	-.10	.02	.02	-.17	-.17	.15	.15	.55**	.14	1

* $p < 0.05$, ** $p < 0.01$, ⁺ $p < 0.10$

Discussion

Main findings

The aim of this study was to examine what kind of prosocial behaviour leads to better mental health. Categories were discovered in four main area's. The Social area consists of investing time, comforting, showing interest, complementing and cooperating. Behaviours of this area are characterized by investing in there relationships in several ways. The Being Active area consists of helping, serving, doing chores and volunteering. Behaviours of this area are characterized by providing practical help for others. The Material area consists of giving. The behaviour of this area is characterized as sharing or giving material possessions. And the Mindset area consists of friendliness to strangers and gratefulness. The behaviour in this area is characterized by changing the way that they view situations prosocially. All the categories with prosocial behaviour that were discovered in the data are related with one or more of these areas. For example volunteering relates to both the Being Active area and to the Social area.

The main area Being Active is positive significantly related with a higher level of well-being. The other main areas have no significant correlation with a higher level of well-being, suggesting that behaviours from the main area Being Active lead to a higher level of well-being compared to behaviours from the main areas Social, Material and Mindset. This could be explained by the intensity of the activities of the area Being Active. The behaviours of this area probably cost more effort than the behaviours of the other main areas. For example volunteer work takes more time to do than giving someone a compliment. Former research already showed that a positive psychological intervention that costs more effort, leads to a greater improvement of well-being than interventions that costs less effort (Sin and Lyubomirsky, 2009). This could be the reason why behaviours of the main area Being Active lead to a higher level of well-being than behaviours of the other areas.

There were twelve different categories of specific prosocial behaviour discovered: *comforting, complementing, cooperating, doing chores, friendliness to strangers, giving, helping, investing time, serving, showing interest, gratefulness and volunteering*. Only half of those categories were discovered on forehand in literature (Batson & Powell, 2003; Brief & Motowidlo, 1986; Sharifian, 2008; McCann, Ball, & Ivanoff, 2000; Weinstein & Ryan, 2010). The categories that were found overlap with the five dimensions of social well-being of Keyes (1998). Those dimensions are: social acceptance, social contribution, social coherence, social actualization and social integration. Behaviours as volunteering, doing chores and serving could enhance the feeling of social integration because they can give people a sense of

belonging in their communities and in society. Behaviours such as complementing, gratefulness, showing interest, investing time and friendliness to strangers could enhance social acceptance because they could stimulate people to see the good in other people and to trust them. Behaviours such as giving, doing chores, investing time, serving, helping and volunteering could enhance social contribution because it could give the participants a sense of importance. Behaviours like volunteering, friendliness to strangers and helping could enhance social actualisation because it could stimulate the belief that society has potential to progress. Behaviours like showing interest, helping and volunteering could enhance *social coherence* because it could help in caring about and understanding the world. Volunteering seems to have the most overlap with the five dimensions of social well-being according to Keyes (1998); more than the other specific types of prosocial behaviour.

Not one of the types of prosocial behaviour was significantly correlated with a higher level of mental well-being. This finding indicates that it does not matter what kind of prosocial behaviour will be performed for the intensity of the effect on mental well-being. However, *volunteering*, *helping* and *doing chores* was marginal significantly correlated with a higher level of well-being, suggesting that doing volunteer work, helping others or doing chores are more likely to lead to a higher level of well being compared to behaviours such as complementing or giving. In fact, a meta-analysis of 40 studies shows that there is a positive relationship between volunteering and the level of well-being (Jenkinson et al., 2013). Another study shows that generosity, that is closely related with the code *giving*, is also related to a higher level of well-being (Kasser, 2005). In addition, gratitude, that is comparable with gratefulness, is also strongly correlated with well-being (Wood, Froh, Geraghty, 2010). However, these studies only examined the effect of one specific prosocial behaviour on mental well-being, while other specific prosocial behaviour is not taken into account.

Remarkable is that volunteering is the one of the three categories with an indication for a correlation with a higher level of well-being, but it is the least performed prosocial behaviour activity of all the categories. If further research shows that volunteering indeed increases well-being better than other prosocial behaviour activities, prosocial behaviour intervention can thus put a focus on volunteering.

Limitations

Before the labelling process, it was decided to label every fragment with a maximum of one code. However, most fragments could be divided into more than just one category. For

example giving someone flowers in order to thank them could be categorised as giving and as gratefulness. The coding strategy therefore ignores some prosocial behaviours that in fact were performed by the participants. This could have caused a flawed representation of the actual activities that are performed.

Even though the different categories were carefully constructed, some of the categories overlap with each other. Categories were developed to be as clear as possible, however this might not have been as successful for every category. The inter-rater reliability varied between the categories between moderate and almost perfect. However, since the general inter-rater reliability of this study is substantial, expected is that it did not have major consequences for this study.

The external validity of this study is questionable. Male participants were underrepresented because most of the participants were female. Also, some people did many acts of kindness while other only did a few. This means that the sample can not be generalised to the population without caution.

Further research

Even though there were no significant correlations found in this study, there were three prosocial activities marginally related to increase mental well-being. A replication of the current study with a larger sample size could demonstrate actual differences between the categories. The character of this study was rather exploratory. Some types of behaviours were not executed often, therefore it was harder to see a significant correlation to mental well-being. Also, the types of prosocial behaviour were not defined prior to this study. Further research can explore those types of prosocial behaviour and their influence on mental well-being in further depth. Experimental study can examine what the influence of those different behaviours on mental well-being is. This type of research is more appropriate to examine the influence of different types of prosocial behaviour on mental well-being. Intervention then, must focus on a different type of prosocial behaviour. Every intervention condition must be instructed to do a specific type of prosocial behaviour and after that the intervention conditions can be compared to see if there is a significant difference in level of well-being.

The qualitative findings of this study might be relevant for the development of positive psychological interventions in the future. Kindness interventions can be shaped into more specific exercises like stimulating people to do volunteer work in order to increase their level of well-being.

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