

A prototype analysis of self-gratitude: Towards a broadening of the concept of gratitude

In the course of the last 20 years, gratitude has become a particularly active and fertile research field, notably in the USA and in the UK (e.g., Wood et al., 2010). Based on these studies, gratitude can now be considered a useful emotion in the promotion of mental health (for a review, see Jans-Beken et al., 2019). Interventions involving gratitude have demonstrably resulted in improvements in the areas of meaning of life and satisfaction with life (e.g., Flinchbaugh et al., 2012; Wong et al., 2017), self-esteem (Rash et al., 2011) and optimism (Jackowska et al., 2016; Kerr et al., 2015). Gratitude is a measurable predictor of subjective well-being (Jans-Beken et al., 2018; Morgan et al., 2017), since the practice of gratitude increases positive emotions (Ouweneel et al., 2014; Wolfe & Patterson, 2017). It has also been shown to be related to a reduced risk of the emergence of psychopathologies (Kendler et al., 2003), and to lower levels of depression and anxiety (Southwell & Gould, 2017), and trait gratitude predicts lower levels of depressive and anxiety-related symptomatology (Petricchi & Couyoumdjian, 2016). From a social perspective, gratitude increases the perceived quality of relationships (Algoe et al., 2010), the comfort with which one can express relationship issues (Lambert & Fincham, 2011), and predicts the quantity of prosocial behaviors (Grant & Gino, 2010; McCullough et al., 2001; Tsang & Martin, 2019). These results should be interpreted cautiously though, given the weak to moderate effect sizes observed (for meta-analyses, see Cregg & Cheavens, 2021; Davis et al., 2016; Dickens, 2017).

However, these data are not based upon a unified concept of gratitude: the three most frequently used indicators pertain to three different conceptions of gratitude (Adler & Fagley, 2005; McCullough, et al., 2002; Watkins et al., 2003), with the concepts themselves being sourced in philosophical and theological research (Emmons & Crumpler, 2000) or in the researchers'

conceptions (Watkins et al., 2003). As a result, most researchers opt for a ‘narrow’ definition, considering the experience of gratitude to be determined by the presence of a beneficiary, a benefit, and a benefactor (Lambert et al., 2009). This is particularly true in interpersonal or other-oriented conceptions of gratitude (Emmons & McCullough, 2003). Others, however, adopt what can be described as a ‘broad’ vision (e.g., ‘generalized gratitude’, Lambert et al., 2009, or ‘dyadic gratitude’, Gulliford et al., 2013), considering gratitude as the awareness and appreciation of that which is valuable and meaningful to oneself. Three approaches emerge from these conceptualizations (Rusk et al., 2016): researchers can solely take the narrow vision into account, as for example Emmons and McCullough (2003), or they can treat these two approaches together as do Seligman et al. (2005), or they can see the two approaches as two varieties of a superordinate concept as do Lambert et al. (2009).

Despite the multiplicity of conceptualizations, and even the broadest among them, self-gratitude has for a long time never been envisaged. Emmons appears to be the first author referring to it (Emmons, 2004, 2007; Emmons & Crumpler, 2000), and puts it aside: ‘*One does not talk about being grateful to oneself*’ (Emmons & Crumpler, 2000, p.57). We consider the subject to have been rejected too hastily. Recent research investigates the relation between gratitude and the self, suggesting that grateful people have a positive and compassionate relationship with the self (Homan & Hosack, 2019). This research addresses a new or at least another perspective on the gratitude experience, which deserves interest and development. To illustrate this point, Skrzelinska and Ferreira (2020) assure that: ‘People can also practice self-gratitude’ (p.2).

There are more reasons for which we consider it pertinent to study self-gratitude. First, it is apparent that the definition of gratitude as used in research is narrower than that employed by the population as a whole (Lambert et al., 2009). Indeed, the prototype analyses carried out in the USA and UK reveal in particular the inclusion of ‘generalized gratitude’ — defined as ‘*being grateful for all sorts of gifts in life, including the presence of cherished others in one’s*

life' (Lambert et al., 2009, p.1194) — in the understanding and use of gratitude by layperson (Lambert et al., 2009), as well as the possibility of gratitude being associated with a negative experience (Morgan et al., 2014). Characteristics like feelings of being indebted, of obligation or also of jealousy, envy, greed or awkwardness can be part of the experience of gratitude (Lambert et al., 2009; Morgan et al., 2014). Gratitude as perceived by the population as a whole thus seems to be '*more complex than simply an acknowledgment and appreciation of a valued benefit*' (Lambert et al., 2009, p. 1204). Just as the presence of a benefactor and the involvement of only positive emotion have been questioned in relation to gratitude experience, so too can the requirement of gratitude being directed outwards rather than toward the self.

Furthermore, the work of Chow and Lowery (2010) indicates that personal responsibility appears to influence the experience of gratitude in achievement contexts. The authors highlighted the lack of information on what the subject feels in the course of experiencing gratitude. It is thus possible to question self-experience in achievement contexts: does the individual feel self-gratitude over what has been achieved? Finally, we consider that currently there is no support which enables the experience of self-gratitude to be qualified as '*unusual*' (Emmons, 2004, p.554) or '*awkward*' (Emmons, 2007, p.4). It is only a study of the concept which will enable us to adopt a position concerning its suitability and viability. In addition to this argument in favor of the study of self-gratitude, it is also possible to consider the recent development of the research field on self-compassion (Neff, 2003). Whilst (Western) conceptions of compassion were previously dominated by a focus on compassion for others (Neff, 2003b), self-compassion is now an accepted and well-studied construct in its own right (Barnard & Curry, 2011; Elices et al., 2017). Indeed, research has demonstrated that interventions based on self-compassion practices improve clinical symptoms and increase well-being (e.g., Ferrari et al., 2019). Working on self-gratitude may show that self-gratitude

practices can have similar beneficial effects, which could offer new avenues for well-being and mental health promotion.

Prototype Analysis

In order to study the concept of self-gratitude, one should first measure what the population in general understands by the term, with a view to avoiding the trap of using too narrow a definition. Based upon this data, it is possible to come up with a definition in line with what individuals understand by the term. An understanding of how the population as a whole understands self-gratitude is necessary if the research data is to be interpreted in the most accurate way in terms of the participants' representation of the concept (Lambert et al., 2009). Following the work of Lambert et al. (2009), and Morgan et al. (2014), we employed a prototype analysis. It consists of an investigation of the mental representations associated with a particular concept (Rosch, 1975). The key to this approach is that the concepts are tightly organized around a prototype, that is to say around the characteristics which are most specific to the concept (Rosch & Mervis, 1975). Other attributes are organized around this prototype, based upon the extent to which they resemble it (Rosch et al., 1976). That is to say, the further away from the prototype the characteristics are, the less they share elements with it, and the less they are related to the concept (Rosch & Mervis, 1975). This specific organization forms the internal structure of the concept. In order that the concept be identified, two conditions must be fulfilled (Fehr & Russell, 1991; Rosch, 1973). Firstly, the subjects must be able to distinguish the characteristic attributes of the concept in terms of their degree of centrality, that is to say in terms of their level of importance in the concept. In this way, some attributes will be defined as 'central' while others will be termed 'peripheral'. Secondly, it must be established that the internal structure thus constituted has an influence on the cognition relative to the concept. Several methods can achieve this such as recognition tasks (Fehr, 1988; Lambert et al., 2009), mental recall (Fehr, 1988), judgement using fictional characters (Morgan et al., 2014), lexical

decision-making (Fehr & Russell, 1991). It is held that the convergence of these measures increases the degree of confidence with which it is possible to state that a concept possesses an internal structure (Fehr, 1988).

This tried and tested method has enabled numerous concepts to be studied, such as those of emotion, (Fehr & Russell, 1984), of love and of commitment (Fehr, 1988), of modesty (Gregg et al., 2008), of virtue (Gulliford et al., 2020), or of gratitude (Lambert et al., 2009; Morgan et al., 2014).

This approach can be useful in the construction of a conceptual framework for self-gratitude, and to an extension of the concept of gratitude. It is through analyzing the understanding and the usage of self-gratitude by the population in general that we are able better to define this concept so as *'to measure it accurately, teach it successfully, and foster it effectively'* (Morgan et al., 2014, p.292).

The main objective of this research was to study the way in which the French population as a whole understands, defines and uses the concept of self-gratitude. In Study 1, we collected a list of the attributes considered by the participants to be typical of self-gratitude. The valence of each characteristic is also measured. In Study 2, a second group of participants evaluated the centrality of the previously-gathered attributes. With regard to the proposition formulated by Morgan et al. (2014), the role of the frequency and valence of the characteristics in the construction of the internal structure is analyzed. Finally, in Study 3, we hypothesized that the centrality of the characteristics has an influence on the cognition relative to the concept through the use of a recognition task based on a story.

Study 1

The first step in the prototype analysis of a concept is to list the attributes which the participants consider to be characteristic of the concept being studied (e.g., Fehr, 1988; Fehr & Russell, 1984). In this case, therefore, the participants listed the characteristics, which they consider

typical of self-gratitude. They also evaluated the valence of each characteristic listed (Lambert et al., 2009; Morgan et al., 2014).

Method

Participants

There were 152 participants in this study. The sample consisted of a majority of women (72.4%) who had taken part in higher education (96.7%). The age range of the participants was from 18 to 66 ($M_{age} = 25.7$, $SD = 9.34$). About two out of three participants (65.1%) were students. The rest were managers (17.8%), employees (5.9%), jobseekers (3.9%), craftsmen, traders and business owners (3.3%). Intermediate professions (2%), manual workers (1.9%) and farmers (0.7%) completed the sample. All participants were adults and of French mother tongue.

Procedure

This study was run on line using the platform 'SphinxDeclic'. The participants in the study were recruited through social media. The first author shared on his profile the online survey, and volunteers freely shared this publication on their own. Participants, who freely volunteered to participate without any compensation, received an Information and Consent Form which explicitly presented the object and aim of the study, as well as their right to withdraw. This study was carried out in accordance with the 1964 Helsinki declaration and its later amendments. Informed consent was obtained from all participants included in the study.

Before starting the task, the participants were asked to answer a closed question 'Do you know what gratitude is?' and then to provide their own short definition of the concept. They were then invited to list the attributes and characteristics which they felt defined the concept of self-gratitude. The instruction used was adapted from the work of Fehr and Russell (1984), Lambert et al. (2009), Morgan et al. (2014). The participants were then asked to measure the valence of the characteristics that they had listed on a five-point Likert scale (from 1 = *very negative* to 5 = *very positive*). This choice of a five-point scale is justified in particular by the wish to avoid

forcing them to make a choice through the provision of a neutral reply (Chyung et al., 2017). Furthermore, this type of scale was used by Morgan et al. (2014) in their prototypical analysis of the concept of gratitude.

Data analysis

In order to be able to group the characteristics in broader categories based upon their linguistic and semantic resemblance, (Morgan et al., 2014), we use the procedure as defined by Fehr (1988), adapted from the one developed by Rosenberg and colleagues (Rosenberg & Jones, 1972; Rosenberg & Sedlack, 1972, as cited in Fehr, 1988; Lambert et al., 2009; Morgan et al., 2014). This process was carried out by two independent coders (who were briefed beforehand about this specific categorization), and consists of two stages. The first step was to identify the linguistic units used by the participants. Those elements consisting of a single word are easily identified. However, the participants were also able to use sentences or groups of words. In these cases, the coders must decide whether the sentence or group of words used, refers to a single or to several characteristics. In this process, words modified by the addition of an adjective, adverb or conjunction were considered to be a linguistic unit. For example, 'big smile' was treated as if it were 'smile'. When the participants used expressions, which referred to several characteristics, the coders ordered the sentence in order to separate the different linguistic units, on condition that each on its own made sense.

The second stage in this process was to group the linguistic units in categories of attributes. Items are considered to belong to the same category if (i) they correspond to different forms of the same word, being part of the same lexical family, (ii) are altered by an adjective or an adverb, or (iii) are considered to be similar in terms of meaning. For instance, 'success' was put in the 'accomplishment' category, in the same way that the attributes 'feeling valued' and 'to be considered at one's true value' were grouped in the category 'recognition of one's value'.

The independent coders were instructed to find a balance between synthesis and retaining the maximum of elements. A ‘conservationist’ approach enables the emergence of categories which reflect a single concept. The process of synthesis, by grouping together similar categories, enables the avoidance of repetition.

Then, the consistency between coders was measured using Cohen’s Kappa. The consistency between the coders is satisfactory ($K = .73$). Any disagreements between the coders were resolved by a third coder. Based on the analysis grid described above, the third coder chose which item between the two proposed by independent raters was closer to the verbatim of the participant.

Results

A total of 1068 attributes of self-gratitude were gathered, an average of 7.02 characteristics per participant. The coding process resulted in the emergence of 178 categories, of which 123 were named by only one or two participants. For this reason, they were removed from the study, being considered remote. This included categories such as ‘religion’, ‘my heart leapt’ or ‘wanting to laugh’. There thus remained 55 target categories (see Table 1). The frequency scores of these categories are expressed as percentages.

The majority of characteristics are observed to have a positive valence ($M = 4.33$; $SD = 0.51$). However, certain negative categories do appear, such as ‘narcissism’, ‘egocentrism’, ‘a feeling that is not easy to experience’.

[Insert Table 1 about here]

Discussion

Close analysis of the target characteristics recorded makes it possible to relate the concept of self-gratitude to conceptualizations of gratitude as found in the classic viewpoint, (e.g., McCullough et al., 2002) and in the prototypical one (e.g., Morgan et al., 2014). The notion of

recognition appears to be an important one, considering the frequency rates. Three categories refer to this notion whether it be recognition ‘of one’s value’ (frequency rate of 27.63%), ‘of one’s efforts’ (4.61%), or more generally ‘a feeling of recognition’ (46.05%). Attributes such as ‘felt after an action’, ‘accomplishment’ or ‘introspection’ and ‘being able to take a step back’ appear to suggest that self-gratitude can be experienced in the here and now but also in hindsight.

The target categories present the concept of self-gratitude in its cognitive (e.g. ‘positive thoughts’), emotional (e.g. ‘able to be moved’, ‘satisfaction’) and behavioral dimensions (e.g. ‘able to thank oneself’). Self-gratitude appears to be associated in the laypeople’s representation with a benevolent attitude toward oneself and to self-acceptance. These elements occur frequently, in the form of ‘recognition of one’s own value’, ‘taking care of oneself’, ‘being in harmony with oneself’ or, to a lesser extent ‘self-respect’ and ‘being able to pardon oneself’. These features are interesting in regard to links between gratitude and forgiveness, self-compassion or empathy (Homan & Hosack, 2019; Skrzelinska & Ferreira, 2020). Furthermore, other dimensions of well-being are found to be present among the characteristics identified, such as optimism, humility or pride. The presence of these elements can be explained in terms of the methodology used, which also brings out factors generally associated with the concept being studied (Gulliford & Morgan, 2017). For example, ‘recognition of one’s value’ and ‘self-esteem’ could appear similar or synonymous, but are considered as distinct in the analysis. Indeed, ‘recognition of one’s value’ appears for the raters as a feature of self-gratitude — this item suggesting the process of appraisal of ‘one’s value’ as a benefit generating self-gratitude —, whereas ‘self-esteem’ seems to be a concept generally associated with self-gratitude.

Overall, the features seem to suggest a new type of gratitude that acknowledges the role of the self. Within this, some features indicate a generalized sense being ‘grateful for’ (e.g., ‘[grateful toward oneself] for making progress; [grateful toward myself] for my qualities and abilities’),

and other features indicate a new triadic structure where the beneficiary is oneself (e.g., ‘grateful toward oneself for doing something good for myself’). Thereby both dyadic and triadic forms of conceptualizations appear in laypeople’s representation. This could be explained by the prompt given to the participants which did not direct them towards a specific conceptualization of self-gratitude. In doing so, it prevents researchers from adopting a narrower definition of self-gratitude than the laypeople’s one and also interfering with laypeople’s representation of the concept. However, more studies are necessary to examine more precisely these two perspectives on self-gratitude.

This study concentrates on those characteristics which come to mind when the participants are questioned on the concept of gratitude toward oneself. It does not examine the importance attached to each of these characteristics within the concept. The aim of our second study was to evaluate the centrality of these attributes.

Study 2

The second stage of the analysis of the prototype of a concept involves establishing a hierarchy of the characteristics in terms of their centrality (e.g., Fehr, 1988; Lambert et al., 2009). In order to bring out the prototypical structure of a concept, the participants must be able to distinguish between the central and peripheral characteristics. In addition, a high level of agreement among the participants indicates the specific nature of this organization.

The 55 target categories identified in Study 1 were presented to the participants in Study 2. Each category had to be given a centrality score. Our hypothesis was that the scores for frequency and valence (from Study 1), and centrality scores (from Study 2) would be covariant.

Method

Participants

The 146 participants in this online study were principally students (90.4%), and women were slightly more represented (52.1%). Managers (5.4%), Jobseekers (2.7%) and Employees (1.4%) completed the sample. The age range was from 19 et 49 ($M_{\text{age}} = 23.56$, $SD = 6.5$). The participants were all adults of French mother tongue. None of them had participated in Study 1.

Procedure

As with Study 1, this study was carried out online using the ‘SphinxDeclic’ platform and in accordance with the 1964 Helsinki declaration and its later amendments. The participants were recruited through email from two schools of higher education, using the snowball sampling method. They freely volunteered to participate without any compensation. The participants were presented with the categories identified in Study 1. For each one, they had to evaluate the centrality of the category in terms of the concept of self-gratitude using an eight-point Likert scale (1 = *not central at all*; 8 = *extremely central*).

The categories were randomly presented to prevent the order of presentation influencing ratings.

Results

The statistical treatment of the results was carried out using the statistical treatment software SPSS Statistics version 23. The centrality score of each characteristic of self-gratitude can be found in Table 1. Reliability testing was performed on the level of agreement between participants. Firstly, a coefficient of intra-class correlation (ICC) was determined. The ICC makes it possible to calculate the coherence of the data produced from the 146 participants concerning the 55 categories identified in study 1. The ICC obtained is entirely satisfactory ($ICC = .979$, $p < 0.001$). In order to obtain other elements to demonstrate the consistency

between the participants, a Cronbach Alpha was also calculated. We inverted the data matrix in order to consider the participants as items and the categories measured as cases (Lambert et al., 2009; Morgan et al., 2014). The consistency is exceptionally high ($\alpha = .98$).

Analysis of the scores of frequency and centrality identifies a moderate correlation ($r = .31, p < .05$), leading us to conclude that the more a characteristic is central, the more often it is identified by the participants. The valence score appears highly correlated with centrality ratings ($r = .78, p < .001$), which suggests that the more a characteristic is central, the more it is positive. The frequency and valence scores are also related ($r = .28, p < .05$).

Partial correlations were performed: after checking the 'valence' variable, the 'frequency x centrality' correlation is no longer significant ($r = .16, ns$), as is the case with the 'frequency x valence' variable after checking the centrality ($r = .05, ns$). However, the 'valence x centrality' correlation is little affected by a check of the 'frequency' variable ($r = .76, p < .001$).

In order to be able to understand the role of the 'valence' variable within the 'frequency - centrality' relationship, we carried out a mediation model.

The simple mediation model to predict the centrality using frequency and valence is significant, explaining 62.44% of the centrality variance. An indirect effect of frequency on centrality is identified, $b = 0.018, 95\%BCa CI[0.007, 0.032]$. These results suggest that the 'frequency - centrality' relationship is significantly mediated by the valence of the characteristics.

[Insert Figure 1 about here]

Discussion

Participants were able, with a high level of agreement, to identify the characteristics according to their centrality, some being more central than others. Thus, the first condition of the prototypical analysis was fulfilled.

In line with previous research (e.g. Lambert et al., 2009; Morgan et al., 2014), it appears that the ‘frequency’, ‘valence’ and ‘centrality’ are closely related. We also find significant differences between the rankings of frequency and centrality (Morgan et al., 2014). For example, the feeling of recognition, the most frequently cited characteristic, is only 26th in terms of centrality. Still more significant differences can also be observed, for instance for ‘pride’, the third most cited attribute but nonetheless peripheral when considered in terms of its centrality.

Morgan et al. (2014) argue that the frequency scores ‘*reflect a largely uncritical and spontaneous listing of features*’ (p. 287) whereas the centrality scores reflect ‘*critical and measured judgement calls*’ (p.287). These views are based upon two thought systems, one empirical/intuitive, the other rational/analytical (Epstein, 2010) and on the premise that the responses in Study 1 are spontaneous while those in Study 2 are more thoughtful (Morgan et al., 2014). It can be argued that this form of dichotomous reasoning is simplistic. On the one hand, while Epstein (2010) considers the empirical/intuitive system to be more sensitive to concrete than to abstract information, it can be argued that listing the characteristics of a concept is an eminently abstract task. And, on the other hand, when participants are asked to list three responses after they have been shown a range of images, their first response would be seen as having used their empirical/intuitive system whereas their third would indicate a rational/analytical process (Epstein, 2010). In our study, the participants do not provide three answers on average, but seven. It is therefore possible to consider that both systems are involved in carrying out the task. The same process can be applied in the centrality judgements. Epstein (2010) in fact highlights the interaction of these systems, comparing it to a dance in which the response of one system causes associations within the other system, potentially resulting in a different response.

Moreover, to associate the levels of frequency and centrality as proof of the centrality of the characteristics could be relevant, not due to a different form of reasoning, but rather to highlight a significant influence of the frequency score on the centrality rating. The literature on this subject, however, tends to emphasize that frequency is not related to the internal structure of a category (Mervis et al., 1976; Rosch et al., 1976). Furthermore, measuring the partial correlation did not enable to identify a significant relationship between the two variables when controlling for the valence. So the observed effect of the ‘frequency - centrality’ relationship was rather due to the ‘valence’ variable, which raises questions as to its weight in the decision on the centrality of the characteristics. Valence thus appears to be the major predictor of the centrality of the characteristics and significantly mediates the ‘frequency - centrality’ relationship. The valence of the characteristics could also be of use in the constitution of the internal structure of the concepts. This possibility does, however, require further investigation. These results raise questions about the meaning of the ‘frequency’ variable, which is in line with Morgan et al. (2014) who underlined that it could be of use in the understanding of concepts among laypersons. Including the frequency rankings in the process of establishing the internal structure of the concepts can however be viewed, given our findings, as not useful. As Morgan et al. (2014) suggested, the ‘frequency’ variable may be tainted by an empirical dimension. A distinction should thus be made between the empirical measurements and those related to the internal structure of the concepts.

Study 3

The third step in the analysis of the prototypical organization of the concept involves identifying the influence of the internal structure on cognition. To do this, we designed a task using the recognition paradigm (Fehr, 1988; Gulliford et al., 2020; Lambert et al., 2009). Our hypothesis is that the internal structure of the concept of self-gratitude has an impact on the performance

of a memory recognition task. If from a list that includes a number of distracters, the participants correctly recognize more central features from the story, and also falsely recognize more central distractors than peripheral ones, then we will be able to say that the concept of self-gratitude is prototypically organized.

Method

Participants

The study was carried out with 108 participants ($M_{age} = 23.8$; $SD = 8.01$, 18 – 54 years), mostly females (86.1%), and students (85.2%). Managers (7.4%), craftsmen, traders and business owners (2.8%), employees (1.9%), intermediary professions (1.9%), and jobseekers (0.9%) made up the sample. All the participants were adults of French mother tongue. None of them had participated in the previous studies of this research project.

Procedure

As before, this study was carried out on line on the ‘SphinxDeclic’ platform, in accordance with the 1964 Helsinki declaration and its later amendments. The participants were recruited from within a higher education institution, using the snowball sampling method. They freely volunteered to participate without any compensation.

Following the procedure used by Lambert et al. (2009), the participants begin by reading a story involving three episodes of self-gratitude, as experienced by a young student about to graduate. The first episode described the moment when the final thesis was printed; the second episode described a moment during the graduation ceremony; the third described a moment after, shared with friends. They are instructed to read the story carefully because they will be asked questions about it.

For each episode featuring self-gratitude, there are two associated central and two peripheral characteristics. In this way, the participants will be exposed to twelve characteristics, six central

and six peripheral. These attributes have been chosen by the lead researcher in terms of their degree of centrality and their valence scores. Indeed, to ensure that the centrality is the defining factor in the results of the experiment, we checked the valence of the central and peripheral characteristics and found the average valence of the central characteristics ($M_{valence} = 4.47$; $SD = 0.15$) to be equivalent to that of the peripheral characteristics ($M_{valence} = 4.47$; $SD = 0.10$). The average scores for centrality differ considerably (respectively, $M_{centralité} = 6$; $SD = 1.47$ and $M_{centralité} = 4.81$; $SD = 1.57$). Items included in the story were, for episode 1 ‘*taking care of oneself*’, ‘*peace of mind*’, ‘*feeling of recognition*’ and ‘*bodily warmth feeling*’; for episode 2 ‘*recognition of one’s value*’, ‘*serenity*’, ‘*self-confidence*’ and ‘*able to help oneself*’; for episode 3 ‘*take a step back*’, ‘*full consciousness*’, ‘*luck*’ and ‘*satisfaction*’.

After reading the story, the participants first carried out an interference task which involves writing a short paragraph on their daily routine, then listing three foods which they eat every day, and finally writing two sentences on what they do in a typical morning, afternoon and evening. This task was identical to the one used by Lambert et al. (2009). After this, they begin the recognition task. Participants were asked to identify, among a list of assertions (e.g., ‘Jean recognizes his value’, ‘Jean feels like he is self-sufficient’), those which were present in the story at the beginning of the study. This list contains twelve attributes of self-gratitude contained in the story and twelve distracter attributes (6 central, 6 peripheral). These distracters were randomly selected from the list of categories, ordered according to their centrality score. Both correct (i.e. features present in the story) and incorrect (i.e. distracters) recognition will allow us to study the influence of internal structure on recognition scores. The order in which the twenty-four affirmations are presented was randomized in order to eliminate any potential effect due to their order of presentation.

Results

Once the study had been carried out and before the results were analyzed, we identified one attribute (i.e. *feeling of warmth*), described in the first experience of self-gratitude that was also present in several elements in the third experience. We therefore decided to exclude this item from the analysis. So, eleven characteristics which were present (6 central and 5 peripheral) were analyzed. This had no significant effect on the valence check ($M_{valence} = 4.5$; $SD = 0.63$).

Overall, that is to say including all the attributes, the central characteristics were identified more often than the peripheral characteristics ($t(107) = 5.383$, $p < 0.001$, $d = 0.94$).

At a more detailed level, we anticipated the central attributes being more frequently recognized in the story than the peripheral ones. However, no significant difference was observed ($t(107) = 1.129$, *ns*). The participants recognized respectively 68% and 65% of the central and peripheral characteristics.

As far as the distracters were concerned, the hypothesis was that the central characteristics would be more falsely recognized more frequently than the peripheral characteristics. There was a significant difference between the recognition mean scores of the central and peripheral characteristics ($t(107) = 5.193$, $p < 0.001$, $d = 1.03$). This indicated that the participants had certainly better recognize the central distracters than the peripheral ones, respectively 23% (central) and 12% (peripheral). In other words, this difference indicated that participants were more likely to state that a central feature was present in the story, even though it was absent, than a peripheral characteristic.

In order to gain a fuller appreciation of the results, we examined, as in Study 2, the role of valence in memory recall. We conducted repeated measures ANOVA with recognition mean scores of the 13 features (i.e., features present in the story and distracters) as dependent variable and Centrality (Central, Peripheral) and Valence (Positive, Negative) as repeated measures. Significant main effects of Centrality ($F(1,107) = 11.4$, $p < .001$, $\eta^2_p = .096$) and Valence ($F(1,107) = 81.6$, $p < .001$, $\eta^2_p = .433$) were observed. A significant interaction involving

Centrality and Valence ($F(1,107) = 86.1, p < .001, \eta^2_p = .446$) was also noticed. Overall, mean recognition scores in the Central condition ($M = .456, SE = .186$) were significantly higher than those observed in the Peripheral condition ($M = .364, SE = .132$). In the same way, mean recognition scores in the Positive condition ($M = .478, SE = .167$) were also higher than those found in the Negative condition ($M = .341, SE = .137$). Post hoc analysis of the interaction effect between Centrality and Valence was conducted using the Tukey test with $p = .05$. Recognition mean scores were significantly higher in the Central and Positive condition ($M = .441, SE = .208$) and the Central and Negative condition ($M = .486, SE = .236$) than those observed in the Peripheral and Negative condition ($M = .258, SE = .141, p < .001$). Moreover, recognition mean scores were significantly higher in the Peripheral and Positive condition ($M = .551, SE = .218$) than what was found in the Central and Positive condition. Finally, recognition mean score was significantly higher in the Peripheral and Positive condition than in the Peripheral and Negative condition.

Discussion

The results of the recognition task demonstrated the partial influence of the internal structure of self-gratitude on the relative cognition of the concept. The participants demonstrated higher levels of (false) recognition for the central characteristics over the peripheral characteristics for the attributes that were not present in the story. These results are similar to those of Fehr (1988) concerning the concepts of love and commitment. Further analysis confirms previous results. The main effect of Centrality condition allows us to support the claim that internal structure influenced cognition. Indeed, centrality influenced recognition scores. These results may constitute partial evidence in favor of the prototypical organization of the concept of self-gratitude. However, if this concept is organized in a prototypical way, then why can we not detect this effect in the characteristics present in the story? We see two possible explanations. On the one hand, the participants could have turned to the interpretative register, leading them

to infer that distracters are present in the story. In this context, it is easier to infer the presence of the central attributes than that of the peripheral characteristics. This explanation is however not fully satisfying, since, in constructing the task, we attempted to control this skewing effect through a very explicit instruction. On the other hand, the valence of the characteristics could have influenced the way in which the participants recognized them. Our analysis supports this assumption. A main effect of the Valence condition was observed, giving evidence that the valence of the features influenced recognition scores. Furthermore, the significant interaction between Centrality and Valence implies that both had a role in the recognition score. Indeed, central and positive features were more recognized than peripheral and negative characteristics. However, some competitive results invite us to be cautious considering the prototypical organization of self-gratitude. Peripheral and Positive features were more recognized than Central and Positive ones. It could indicate that self-gratitude is subject to greater individual differences or variability in this experience. Inconsistent results during the prototypical exploration of a concept were already mentioned in the literature in the field, as for love and commitment (Fehr, 1988) or also virtue (Gulliford et al., 2020). Overall, the results offer only partial evidence that this construct is prototypically organized. Future research is required to examine this construct in more detail and to explore the possibly diverse lived experiences of self-gratitude.

General discussion

The work of Lambert et al. (2009) and of Morgan et al. (2014) highlighted the restricted view that research has of the concept of gratitude. The current research aimed to broaden this view further by considering the concept of gratitude applied to the self (from the laypeople's perspective). Our results are the first conclusive elements in favor of the prototypical organization of the concept of self-gratitude, in the light of the criteria laid down by Rosch (1975). Based on the characteristics gathered in the course of Study 1, the participants were

able to identify features pertaining to the concept of self-gratitude. In Study 2, the characteristics could be organized according to their degree of centrality, to a highly satisfactory level of reliability. Through these processes, the internal structure of the concept could be defined. As a result of Study 3, there emerged partial evidence of the influence of this specific concept organization on cognition, with participants more often falsely recognizing the central attributes of self-gratitude than the peripheral attributes. These first studies focusing on self-gratitude seem to indicate that this specific concept could be organized prototypically, as is the case with gratitude. Overall, the current research indicates that laypeople can meaningfully think about self-gratitude. However, we view these results as preliminary and as the jumping-off point for further studies. Given the heterogeneity of results and the methodology of the prototype approach, more studies have to be conducted to produce various measures of the influence of internal structure on cognition. Only the convergence of these measures could allow us to stand that self-gratitude is prototypically organized (Fehr, 1988).

What is more, these defining characteristics identified in Study 1 present strong similarities with the concept of gratitude (in its classic and prototypical versions). Self-gratitude is here represented in its emotional, cognitive and behavioral dimensions, sharing numerous attributes with the concept of gratitude (Morgan et al., 2014). Recognition can be viewed as an essential feature and the measurement of a benefit is clearly visible in the characteristics, suggesting a process similar to that of gratitude (Rusk et al., 2016; Wood et al., 2008). Compared to the gratitude prototype, we observed that more than a third of the features of the self-gratitude concept are related to the self. This may constitute a difference with the gratitude concept, and indicate a broadening of gratitude. In this prototype analysis, it also appears that the concept of self-gratitude is associated with other self-constructs such as self-acceptance or self-kindness. Notably, while there a small number of negatively valenced features were associated with self-gratitude in Study 1 (such as narcissism and egocentrism), most elements were positive

valenced in nature (such as the aforementioned element of self-acceptance and others such as self-respect and recognizing one's own value). This suggests some possible synergy with concepts like self-compassion which counter self-centeredness and self-judgment (Neff, 2003a); self-gratitude does not have to entail conceited performance evaluations or boastings of one's achievements. The relation between these concepts and self-gratitude is to be explored in further research since the current study investigates only the laypeople's representation. These elements as a whole make it possible to form an understanding of the layperson's view of the concept of self-gratitude and thus opens a new field for investigation. Some features and verbatim of the participants appear to refer to dyadic and triadic structures of the self-gratitude concept. Thus, we propose a first definition for each understanding. A dyadic perspective on self-gratitude brings us to define it as the acknowledgment and appreciation of meaningful benefits involving the self (e.g., I'm grateful toward myself for my qualities). From a triadic perspective, self-gratitude could be defined as the acknowledgment and appreciation of benefits partly caused by oneself (e.g., I'm grateful toward myself for having worked so hard to pass exams). Thus, the experience of gratitude directed toward an object can take three different forms: toward a non-human entity, toward another human entity, toward oneself. In this sense, the concept of gratitude toward oneself constitutes a conceptual broadening of gratitude for further examination.

Lastly, this research project has implications with regard to the methodology of prototypical analysis. Until the research carried out by Morgan et al. (2014), the frequency of the characteristics was not considered to have a significant link with centrality (Mervis et al., 1976). Our results appear to go in the same direction, when one includes the valence of the characteristics in the analysis. This does not mean that the frequency of the characteristics is not useful to measure. We think it is the first step in gauging personal experience without demonstrating the importance of the characteristics of the concept. As a consequence, it may

not be pertinent to take this measure into account in the composition of the internal structure of the concepts, as proposed by Morgan et al. (2014). Studies 2 and 3 suggest that valence plays a leading role in the internal structure of the concept, being a predictor of centrality and enabling the characteristics to be recognized. These results can thus be considered as indicating a way forward towards a supplementary indicator of the centrality of the characteristics in the concepts, at least in that of gratitude toward oneself.

The current studies also have their limitations. Firstly, the aim of the mediation analysis is to highlight the causal link between the variables (Judd et al., 2014); yet the correlational nature of our data does not enable to infer a causal link between the variables. Secondly, it is important to bear in mind that prototype analysis does not make it possible to identify the elements which are ‘intrinsically’ characteristic of the concept of the attributes pertaining to it (Gulliford & Morgan, 2017). It is, for example, possible to consider pride as an experience generally associated with gratitude toward oneself rather than typically characterizing the concept studied. Moreover, and as discussed above, it is only through several converging studies that it becomes possible to claim with confidence that a concept is prototypically organized (Fehr, 1988). Further research is necessary to be able to confirm the initial findings contained in these studies and the distinction of self-gratitude from related constructs such as pride and self-kindness. Finally, the convenience sampling that was used in the three studies impedes a generalization of the results, given that our samples were not demographically representative of the general French population.

The concept of self-gratitude thus deserves further attention from researchers in the field of psychology. Further research is necessary in order to dig more deeply into the development of the theory, in particular through collecting accounts of experiences of self-gratitude, in order to understand the from this experience takes and what consequences this may have in terms of prevention and mental health promotion. Carrying out and evaluating the effectiveness of self-

gratitude interventions would appear to be the next major challenge in determining the pertinence of this concept.

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The authors have no conflict of interest to declare that are relevant to the content of this article.

References

- Adler, M. G., & Fagley, N. S. (2005). Appreciation: Individual differences in finding value and meaning as a unique predictor of subjective well-being. *Journal of Personality, 73*(1), 79-114. <https://doi.org/10.1111/j.1467-6494.2004.00305.x>
- Algoe, S. B., Gable, S. L., & Maisel, N. C. (2010). It's the little things: Everyday gratitude as a booster shot for romantic relationships. *Personal Relationships, 17*(2), 217-233. <https://doi.org/10.1111/j.1475-6811.2010.01273.x>
- Barnard, L. K., & Curry, J. F. (2011). Self-compassion: Conceptualizations, correlates, & interventions. *Review of general psychology, 15*(4), 289-303. <https://doi.org/10.1037/a0025754>
- Chow, R. M., & Lowery, B. S. (2010). Thanks, but no thanks: The role of personal responsibility in the experience of gratitude. *Journal of Experimental Social Psychology, 46*(3), 487-493. <https://doi.org/10.1016/j.jesp.2009.12.018>
- Chyung, S. Y. Y., Roberts, K., Swanson, I., & Hankinson, A. (2017). Evidence-based survey design: The use of a midpoint on the Likert scale. *Performance Improvement, 56*(10), 15-23. <https://doi.org/10.1002/pfi.21727>

- Cregg, D. R., & Cheavens, J. S. (2021). Gratitude interventions: effective self-help? A meta-analysis of the impact on symptoms of depression and anxiety. *Journal of Happiness Studies*, 22(1), 413-445. <https://doi.org/10.1007/s10902-020-00236-6>
- Davis, D. E., Choe, E., Meyers, J., Wade, N., Varjas, K., Gifford, A., ... & Worthington Jr, E. L. (2016). Thankful for the little things: A meta-analysis of gratitude interventions. *Journal of counseling psychology*, 63(1), 20-31. <https://doi.org/10.1037/cou0000107>
- Dickens, L. R. (2017). Using gratitude to promote positive change: A series of meta-analyses investigating the effectiveness of gratitude interventions. *Basic and Applied Social Psychology*, 39(4), 193-208. <https://doi.org/10.1080/01973533.2017.1323638>
- Elices, M., Carmona, C., Pascual, J. C., Feliu-Soler, A., Martin-Blanco, A., & Soler, J. (2017). Compassion and self-compassion: Construct and measurement. *Mindfulness & Compassion*, 2(1), 34-40. <https://doi.org/10.1016/j.mincom.2016.11.003>
- Emmons, R. A. (2004). Gratitude. In C. Peterson & M. Seligman (Eds.). *Character strengths and virtues: A handbook and classification* (pp. 553-568). Oxford University Press.
- Emmons, R. A. (2007). The new science of gratitude. In *Thanks! How the new science of gratitude can make you happier* (pp. 1-18). Houghton Mifflin Co.
- Emmons, R. A., & Crumpler, C. A. (2000). Gratitude as a human strength: Appraising the evidence. *Journal of Social and Clinical Psychology*, 19(1), 56-69. <https://doi.org/10.1521/jscp.2000.19.1.56>
- Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology*, 84(2), 377-389. <https://doi.org/10.1037/0022-3514.84.2.377>
- Epstein, S. (2010). Demystifying intuition: What it is, what it does, and how it does it. *Psychological Inquiry*, 21(4), 295-312. <https://doi.org/10.1080/1047840X.2010.523875>

- Fehr, B. (1988). Prototype analysis of the concepts of love and commitment. *Journal of Personality and Social Psychology*, 55(4), 557-579. <https://doi.org/10.1037/0022-3514.55.4.557>
- Fehr, B., & Russell, J. A. (1984). Concept of emotion viewed from a prototype perspective. *Journal of Experimental Psychology: General*, 113(3), 464-486. <https://doi.org/10.1037/0096-3445.113.3.464>
- Fehr, B., & Russell, J. A. (1991). The concept of love viewed from a prototype perspective. *Journal of Personality and Social Psychology*, 60(3), 425-438. <https://doi.org/10.1037/0022-3514.60.3.425>
- Ferrari, M., Hunt, C., Harrysunker, A., Abbott, M. J., Beath, A. P., & Einstein, D. A. (2019). Self-compassion interventions and psychosocial outcomes: A meta-analysis of RCTs. *Mindfulness*, 10(8), 1455-1473. <https://doi.org/10.1007/s12671-019-01134-6>
- Flinchbaugh, C. L., Moore, E. W. G., Chang, Y. K., & May, D. R. (2012). Student well-being interventions: The effects of stress management techniques and gratitude journaling in the management education classroom. *Journal of Management Education*, 36(2), 191-219. <https://doi.org/10.1177/1052562911430062>
- Grant, A. M., & Gino, F. (2010). A little thanks goes a long way: Explaining why gratitude expressions motivate prosocial behavior. *Journal of Personality and Social Psychology*, 98(6), 946-955. <https://doi.org/10.1037/a0017935>
- Gregg, A. P., Hart, C. M., Sedikides, C., & Kumashiro, M. (2008). Everyday conceptions of modesty: A prototype analysis. *Personality and Social Psychology Bulletin*, 34(7), 978-992. <https://doi.org/10.1177/0146167208316734>
- Gulliford, L., & Morgan, B. (2017). The meaning and valence of gratitude in positive psychology. Dans N. J. L. Brown, T. Lomas, & F. J. Eiroa-Orosa (Éds.). *The Routledge*

International Handbook of Critical Positive Psychology (pp. 53-69). Routledge.

<https://doi.org/10.4324/9781315659794>

Gulliford, L., Morgan, B., & Jordan, K. (2020). A prototype analysis of virtue. *The Journal of Positive Psychology*, 1-15. <https://doi.org/10.1080/17439760.2020.1765004>

Gulliford, L., Morgan, B., & Kristjánsson, K. (2013). Recent work on the concept of gratitude in philosophy and psychology. *The Journal of Value Inquiry*, 47(3), 285-317.

<https://doi.org/10.1007/s10790-013-9387-8>

Homan, K., & Hosack, L. (2019). Gratitude and the self: Amplifying the good within. *Journal of Human Behavior in the Social Environment*, 29(7), 874-886.

<https://doi.org/10.1080/10911359.2019.1630345>

Jackowska, M., Brown, J., Ronaldson, A., & Steptoe, A. (2016). The impact of a brief gratitude intervention on subjective well-being, biology and sleep. *Journal of Health Psychology*, 21(10), 2207-2217. <https://doi.org/10.1177/1359105315572455>

Jans-Beken, L., Jacobs, N., Janssens, M., Peeters, S., Reijnders, J., Lechner, L., & Lataster, J. (2019). Gratitude and health: An updated review. *The Journal of Positive Psychology*, 1-40.

<https://doi.org/10.1080/17439760.2019.1651888>

Jans-Beken, L., Lataster, J., Peels, D., Lechner, L., & Jacobs, N. (2018). Gratitude, psychopathology and subjective well-being: Results from a 7.5-month prospective general population study. *Journal of Happiness Studies*, 19(6), 1673-1689. <https://doi.org/10.1007/s10902-017-9893-7>

doi.org/10.1007/s10902-017-9893-7

Judd, C. M., Yzerbyt, V. Y., & Muller, D. (2014). Mediation and moderation. Dans H. Reis, & C. M. Judd (Éds.). *Handbook of Research Methods in Personality and Social Psychology* (pp. 653-676). Cambridge University Press.

Kendler, K. S., Liu, X.-Q., Gardner, C. O., McCullough, M. E., Larson, D., & Prescott, C. A. (2003). Dimensions of Religiosity and Their Relationship to Lifetime Psychiatric and

Substance Use Disorders. *American Journal of Psychiatry*, 160(3), 496-503. <https://doi.org/10.1176/appi.ajp.160.3.496>

Kerr, S. L., O'Donovan, A., & Pepping, C. A. (2015). Can gratitude and kindness interventions enhance well-being in a clinical sample? *Journal of Happiness Studies*, 16(1), 17-36. <https://doi.org/10.1007/s10902-013-9492-1>

Lambert, N. M., & Fincham, F. D. (2011). Expressing gratitude to a partner leads to more relationship maintenance behavior. *Emotion*, 11(1), 52-60. <https://doi.org/10.1037/a0021557>

Lambert, N. M., Graham, S. M., & Fincham, F. D. (2009). A prototype analysis of gratitude: Varieties of gratitude experiences. *Personality and Social Psychology Bulletin*, 35(9), 1193-1207. <https://doi.org/10.1177/0146167209338071>

McCullough, M. E., Emmons, R. A., & Tsang, J.-A. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, 82(1), 112-127. <https://doi.org/10.1037/0022-3514.82.1.112>

Mervis, C. B., Catlin, J., & Rosch, E. (1976). Relationships among goodness-of-example, category norms, and word frequency. *Bulletin of the Psychonomic Society*, 7(3), 283-284. <https://doi.org/10.3758/BF03337190>

Morgan, B., Gulliford, L., & Kristjánsson, K. (2014). Gratitude in the UK : A new prototype analysis and a cross-cultural comparison. *The Journal of Positive Psychology*, 9(4), 281-294. <https://doi.org/10.1080/17439760.2014.898321>

Morgan, B., Gulliford, L., & Kristjánsson, K. (2017). A new approach to measuring moral virtues: The multi-component gratitude measure. *Personality and Individual Differences*, 107, 179-189. <https://doi.org/10.1016/j.paid.2016.11.044>

Neff, K. D. (2003a). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity*, 2(2), 85-101. <https://doi.org/10.1080/15298860309032>

Neff, K. D. (2003b). The development and validation of a scale to measure self-compassion. *Self and identity*, 2(3), 223-250. <https://doi.org/10.1080/15298860309027>

Ouweneel, E., Le Blanc, P. M., & Schaufeli, W. B. (2014). On being grateful and kind: Results of two randomized controlled trials on study-related emotions and academic engagement. *The Journal of Psychology*, 148(1), 37-60. <https://doi.org/10.1080/00223980.2012.742854>

Petrocchi, N., & Couyoumdjian, A. (2016). The impact of gratitude on depression and anxiety : The mediating role of criticizing, attacking, and reassuring the self. *Self and Identity*, 15(2), 191-205. <https://doi.org/10.1080/15298868.2015.1095794>

Rash, J. A., Matsuba, M. K., & Prkachin, K. M. (2011). Gratitude and well-being: Who benefits the most from a gratitude intervention? *Applied Psychology: Health and Well-Being*, 3(3), 350-369. <https://doi.org/10.1111/j.1758-0854.2011.01058.x>

Rosch, E. (1973). On the internal structure of perceptual and semantic categories. Dans T. E. Moore (Ed.). *Cognitive Development and Acquisition of Language* (pp. 111-144). Academic Press. <https://doi.org/10.1016/B978-0-12-505850-6.50010-4>

Rosch, E. (1975). Cognitive representations of semantic categories. *Journal of experimental psychology: General*, 104(3), 192-233. <https://doi.org/10.1037/0096-3445.104.3.192>

Rosch, E., & Mervis, C. (1975). Family resemblances: Studies in the internal structure of categories. *Cognitive Psychology*, 7(4), 573-605. [https://doi.org/10.1016/0010-0285\(75\)90024-9](https://doi.org/10.1016/0010-0285(75)90024-9)

Rosch, E., Simpson, C., & Miller, R. S. (1976). Structural bases of typicality effects. *Journal of Experimental Psychology: Human perception and performance*, 2(4), 491-502. <https://doi.org/10.1037/0096-1523.2.4.491>

- Rusk, R. D., Vella-Brodrick, D. A., & Waters, L. (2016). Gratitude or gratefulness? A conceptual review and proposal of the system of appreciative functioning. *Journal of Happiness Studies*, 17(5), 2191-2212. <https://doi.org/10.1007/s10902-015-9675-z>
- Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist*, 60(5), 410-421. <https://doi.org/10.1037/0003-066X.60.5.410>
- Skrzelinska, J., & Ferreira, J. A. (2020). Gratitude: the state of art. *British Journal of Guidance & Counselling*, 1-13. <https://doi.org/10.1080/03069885.2020.1789553>
- Southwell, S., & Gould, E. (2017). A randomised wait list-controlled pre–post–follow-up trial of a gratitude diary with a distressed sample. *The Journal of Positive Psychology*, 12(6), 579-593. <https://doi.org/10.1080/17439760.2016.1221127>
- Tsang, J.-A., & Martin, S. R. (2019). Four experiments on the relational dynamics and prosocial consequences of gratitude. *The Journal of Positive Psychology*, 14(2), 188-205. <https://doi.org/10.1080/17439760.2017.1388435>
- Watkins, P. C., Woodward, K., Stone, T., & Kolts, R. L. (2003). Gratitude and happiness: Development of a measure of gratitude, and relationships with subjective well-being. *Social Behavior and Personality: An International Journal*, 31(5), 431-451. <https://doi.org/10.2224/sbp.2003.31.5.431>
- Wolfe, W. L., & Patterson, K. (2017). Comparison of a gratitude-based and cognitive restructuring intervention for body dissatisfaction and dysfunctional eating behavior in college women. *Eating Disorders*, 25(4), 330-344. <https://doi.org/10.1080/10640266.2017.1279908>
- Wong, Y. J., McKean Blackwell, N., Goodrich Mitts, N., Gabana, N. T., & Li, Y. (2017). Giving thanks together: A preliminary evaluation of the gratitude group program. *Practice Innovations*, 2(4), 243-257. <https://doi.org/10.1037/pri0000058>

Wood, A. M., Froh, J. J., & Geraghty, A. W. A. (2010). Gratitude and well-being: A review and theoretical integration. *Clinical Psychology Review*, 30(7), 890-905. <https://doi.org/10.1016/j.cpr.2010.03.005>

Wood, A. M., Maltby, J., Stewart, N., Linley, P. A., & Joseph, S. (2008). A social-cognitive model of trait and state levels of gratitude. *Emotion*, 8(2), 281-290. <https://doi.org/10.1037/1528-3542.8.2.281>