Part I
Established Areas of Intervention

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Gratitude Interventions

A Review and Future Agenda

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Gratitude is highly prized. A small sampling of quotes reveals the power and potential of this virtue. "Whatever you are in search of – peace of mind, prosperity, health, love – it is waiting for you if only you are willing to receive it with an open and grateful heart," writes Sarah Breathnach in the *Simple abundance journal of gratitude*. Elsewhere she refers to gratitude as "the most passionate transformative force in the cosmos." Another popular treatment of the topic refers to it as "one of the most empowering, healing, dynamic instruments of consciousness vital to demonstrating the life experiences one desires" (Richelieu, 1996). Lock and key metaphors are especially common; gratitude has been referred to as "the key that opens all doors," that which "unlocks the fullness of life," and the "key to abundance, prosperity, and fulfillment" (Emmons & Hill, 2001; Hay, 1996).

How do these extraordinary claims regarding the power and promise of gratitude fare when scientific lights are shone on them? Can gratitude live up to its billing? In this chapter we review the growing body of work on gratitude and well-being, explore mechanisms by which gratitude interventions elevate well-being, and close by presenting what we consider important issues for the next generation of gratitude intervention studies to address.

What Is Gratitude and How Is It Measured?

Gratitude is a feeling that occurs in exchange-based relationships when one person acknowledges receiving a valuable benefit from another. Much of human life is about giving, receiving, and repayment. In this sense, gratitude, like other social emotions, functions to help regulate relationships, solidifying and strengthening

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them (Algoe & Stanton, 2011). Feelings of gratitude stem from two stages of information processing: (i) an affirmation of goodness or "good things" in one's life, and (ii) the recognition that the sources of this goodness lie at least partially outside the self. This cognitive process, furthermore, gives rise to behavioral consequences, specifically the "passing on of the gift" through positive action. As such, gratitude serves as a key link in the dynamic between receiving and giving. It is not only a response to kindnesses received, but it is also a motivator of future benevolent actions on the part of the recipient (see Emmons, 2007 for a review).

Since the emergence of gratitude research in the past 20 years, the two main questionnaires that have been widely administered to measure gratitude are the six-item Gratitude Questionnaire (GQ-6; McCullough, Emmons, & Tsang, 2002) and the 44-item Gratitude, Resentment and Appreciation Test or the GRAT (Watkins, Grimm, & Hailu, 1998). Both measures conceptualize gratitude as a trait, or disposition – in other words, a generalized tendency to first recognize and then emotionally respond with thankfulness, after attributing benefits received through benevolence to an external moral agent (Emmons, McCullough, & Tsang, 2003). When measuring dispositional gratitude, researchers examine gratitude as an "affective trait," or an individual's innate tendency toward grateful experience (Watkins, Woodward, Stone, & Kolts, 2003). State gratitude, rather, is experienced after a positive event has occurred and as a result usually promotes further reciprocal, prosocial behavior (Wood, Maltby, Stewart, Linley, & Joseph, 2008). Individuals who reported greater dispositional gratitude also reported experiencing greater state gratitude daily (McCullough, Tsang, & Emmons, 2004); this is largely due to grateful people processing positive events differently than those less grateful. Specifically, people with greater trait gratitude perceived a benefactor's actions toward them more positively (more costly, valuable, and genuine) than their less grateful counterparts, thus demonstrating greater increases in state gratitude (Wood et al., 2008).

The 44-item GRAT includes the three dimensions of trait gratitude: resentment, simple appreciation, and social appreciation (Watkins et al., 1998). Participants complete the GRAT by answering questions such as, "I believe that I am a very fortunate person" and "I'm really thankful for friends and family" using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree with the statement) (Watkins et al., 2003). Retrospective self-report is the primary method used when measuring gratitude (Emmons, Froh, & Mishra, in press). Further, the self-report scales noted above such as the GRAT (Watkins et al., 1998) and the GQ-6 (McCullough et al., 2002) are measuring dispositional gratitude. State gratitude on the other hand is measured through gratitude interventions where participants are partaking in positive psychology exercises such as, keeping a gratitude journal, writing a gratitude letter, and then delivering the letter (Emmons et al., in press). The benefits derived from participating in these gratitude-inducing exercises are examined by measuring positive outcome variables such as

happiness, life satisfaction, and overall well-being at post-intervention follow-up (Bono, Emmons, & McCullough, 2004; McCullough et al., 2004; Seligman, Steen, Park, & Peterson, 2005). Other means for assessing trait gratitude are through attributional measures and free response. With attributional measures, gratitude is measured indirectly through participants' analysis of helping scenarios and their attribution of the help as being either autonomous or controlled (Emmons et al., in press). For example, grateful individuals are more likely to perceive the help as autonomously motivated versus controlled (Emmons et al., in press). Free response measures ask participants to spontaneously answer questions revolving around the subject of gratitude (Emmons et al., in press). For example, participants may be asked about a time when they felt grateful or about a person for whom they were grateful (Emmons et al., in press).

Findings from the Science of Gratitude

Gratitude is foundational to well-being and mental health throughout the life span. From childhood to old age, accumulating evidence documents the wide array of psychological, physical, and relational benefits associated with gratitude (Emmons & McCullough, 2003; McCullough, Kilpatrick, Emmons, & Larson, 2001). In particular, dispositional gratitude has been shown to uniquely and incrementally contribute to subjective well-being (McCullough et al., 2004; Watkins et al., 2003, Wood, Joseph, & Maltby, 2008), and to result in benefits above and beyond those conferred by general positive affect (Bartlett & DeSteno, 2006; Froh, Yurkewicz, & Kashdan, 2009). For example, dispositional gratitude encourages more positive social interactions, in turn making people better adjusted and accepted by people around them, and finally leading to well-being (McCullough et al., 2001). Dispositional gratitude has also been found to be positively associated with prosocial traits such as empathy, forgiveness, and willingness to help others. People who rate themselves as having a grateful disposition perceive themselves as having more prosocial characteristics, expressed by their empathetic behavior and emotional support for friends within the last month (McCullough et al., 2002). Other benefits have extended to the physical realm including longer sleep and improved sleep quality and more time spent exercising (Emmons & McCullough, 2003).

Interventions to Increase Gratitude in Adults

Numerous research findings, briefly reviewed above, have highlighted gratitude's positive relationship to subjective well-being and psychological functioning. We

will now describe and discuss the empirical evidence behind some widely used gratitude interventions for adults.

Counting blessings

In the seminal gratitude interventions study (Emmons & McCullough, 2003), participants were randomly assigned to one of three conditions: counting blessings, listing hassles, or a no-treatment control (Study 1). People who were randomly assigned to keep gratitude journals on a weekly basis exercised more regularly, reported fewer physical symptoms, felt better about their lives as a whole, and were more optimistic about the upcoming week compared to those who recorded hassles or neutral life events (Emmons & McCullough, 2003, Study 1). Study 2 was an extension of the first study in that a fourth condition was added: downward social comparison. Participants completed weekly reports which asked questions pertaining to physical health and psychological well-being, and were also provided instructions for the condition to which they were assigned (counting blessings, listing hassles, downward social comparison). In each condition, participants listed weekly up to five things they were grateful for, listed five hassles they encountered, or made downward social comparisons indicating ways in which they were better off than others. The daily gratitude journal-keeping exercise resulted in higher reported levels of the positive states of alertness, enthusiasm, determination, attentiveness, and energy compared to a focus on hassles or a downward social comparison (Emmons & McCullough, 2003, Study 2). Participants only in the gratitude condition responded to the following instruction, "There are many things in our lives to be grateful about. Think back over the past week and write down on the lines below up to five things in your life that you are grateful or thankful for" (Emmons & McCullough, 2003, p. 379). Results from both Study 1 and Study 2 showed that individuals in the gratitude condition (counting blessings) reported higher instances of prosocial behavior – they were more likely to report having helped someone with a personal problem or having offered emotional support to another, relative to the hassles or social comparison condition. This indicates that, relative to a focus on complaints, an effective strategy for producing reliably higher levels of pleasant affect is to lead people to reflect, on a daily basis, on those aspects of their lives for which they are grateful (Emmons & McCullough, 2003).

In Study 3, participants with neuromuscular disease were assigned to either the gratitude condition (i.e., counting blessings) or a no-treatment control condition. Participants in both conditions completed 21 "daily experience rating forms" that asked questions about their daily affect, subjective well-being, and health behaviors. Results indicated that individuals in the gratitude condition experienced greater positive affect, were more optimistic, and felt more connected to others than those in the control condition. Spouses of individuals in the gratitude condition also confirm the results of this intervention, indicating increases in their partners' positive affect and life satisfaction (Emmons & McCullough, 2003).

Three Good Things

The benefits of gratitude were further confirmed in another study that compared the efficacy of five different interventions that were hypothesized to increase personal happiness and decrease personal depression (Seligman et al., 2005). Participants randomly assigned to the "Three Good Things" intervention were instructed to write down each day three good things that had happened to them over the course of one week and attribute causes to these positive events (Seligman et al., 2005). Although this intervention did not procure immediate benefits, individuals in the Three Good Things condition experienced lasting effects, with an increase in happiness and decrease in depressive symptoms seen three and six months later (Seligman et al., 2005).

Grateful self-reflection

In a cross-cultural intervention study (Chan, 2010) Chinese teachers voluntarily participated in an eight-week-long "self-improvement project" aimed at increasing individual self-awareness through the process of self-reflection. Participants' gratitude, subjective well-being, happiness, meaning derived from life, and teacher burnout were assessed. Participants were asked weekly to record three good things that had occurred, for eight weeks. Teachers then reflected on these positive occurrences using Naikan meditation-inspired questions. The Naikan meditation represents a form of reflection that not only focuses on the self but also on others. Participants were asked to meditate on the following questions: What did I receive? What did I give? What more could I do? These questions appeared to orient the individual not only to think gratefully but also to be more prosocial (e.g., What more could I do?) (Chan, 2010). Teachers who were more grateful (indicated at pre-test) reported more gratitude, less teacher burnout (emotionally drained, depersonalized), and considered meaning in life of greater importance at post-test.

In another cross-cultural study (Boehm, Lyubomirsky, & Sheldon 2011), foreign-born Asian Americans and Anglo Americans participated in an online intervention study to assess cultural differences in reported life satisfaction after a gratitude intervention. A factorial design was utilized where Anglo Americans and Asian Americans were randomly assigned to one of three conditions: practicing optimism, expressing gratitude, and listing the past week's experiences (control). In the optimism condition, participants wrote about "their best possible life in the future," and in the gratitude condition participants wrote letters of appreciation to those for whom they were grateful.

Cultural differences were noted in both the optimism condition and gratitude condition. Overall, Anglo Americans benefited most from the interventions, experiencing the greatest changes in life satisfaction from baseline across all activities (Boehm et al., 2011). Among Asian American participants, the gratitude intervention was most effective, with modest increases in life satisfaction over time; however, Asian Americans in the optimism condition reported very little change

in life satisfaction after participating in the intervention (Boehm et al., 2011). This finding suggests that gratitude interventions with a collectivist orientation (i.e., focus on family and others) may be more beneficial in non-American cultures than are activities with an individualistic orientation (i.e., focus on self and personal accomplishments) (Boehm et al., 2011).

The "Gratitude Visit"

Grateful reflection and acknowledgment in the form of gratitude letters helps foster an appreciation of others and encourages a grateful orientation (i.e., appreciating the benefits – big and small – in one's life) (Emmons & McCullough, 2003; Seligman et al., 2005). In a study comparing several positive psychology interventions, individuals were asked to write a letter to someone to whom they were grateful and then to deliver their letter in person. Individuals who completed this activity reported large gains in happiness and reductions in depression up to one month later (Seligman et al., 2005). Although the gains only lasted one month (compared to six months for some of the other interventions), the magnitude of change was the greatest for this gratitude intervention when compared to the other interventions tested. To date, the Gratitude Visit remains *the* most powerful positive psychology intervention in terms of degree of change. It can be speculated that the hyperemotional nature and behavioral follow-through involved in this intervention are two characteristics which foster the powerful effects.

In another study, Lyubomirsky, Dickerhoof, Boehm and Sheldon (2011) assessed the role of self-selection and effort in fostering the positive benefits (positive affect, life satisfaction, happiness) of grateful intervention. Participants unknowingly self-selected the condition they were a part of by choosing to participate in either a "happiness intervention" (high motivation) or a "study involving cognitive exercises" (low motivation) (Lyubomirsky et al., 2011, p. 394). Based on their selection, participants were then randomly assigned to one of three conditions: a gratitude condition, optimism condition, or control group. The variables examined (positive and negative affect, life satisfaction, happiness, and effort) were combined to represent an overall factor: well-being (Lyubomirsky et al., 2011). Within this study, participants in the gratitude condition were asked to write "gratitude letters" but not send them, while participants in the optimism condition envisioned and wrote about their "best possible selves" (Lyubomirsky et al., 2011).

Positive benefits were immediately observed, with "high motivation" participants reporting greater well-being compared to the "low motivation" participants at post-intervention follow-up (Lyubomirsky et al., 2011). Unfortunately, the intervention did not have a lasting effect, even for the "high motivation" group, at the six-month follow-up (Lyubomirsky et al., 2011). These findings suggest that other factors, such as motivation, effort, and willingness, may also contribute to the benefits that derive from gratitude interventions (Lyubomirsky et al., 2011). Further, in this study participants in the "high motivation" gratitude

condition who wrote a letter of appreciation but did not send it failed to experience the lasting effects of the intervention at the six-month follow-up compared with the low motivation condition (Lyubomirsky et al., 2011). This suggests that the Gratitude Visit may only have lasting positive effects when both the psychological (writing letter) and social (delivering letter) mechanisms of the intervention are at work.

Summary of gratitude interventions

Gratitude interventions in adults consistently produce positive benefits, many of which appear to endure over reasonably lengthy periods of time. Gratitude interventions lead to greater gratitude, life satisfaction, optimism, prosocial behavior (Emmons & McCullough, 2003), positive affect (PA) (Emmons & McCullough, 2003; Watkins et al., 2003, Study 4), and well-being (Lyubomirsky, Sheldon, & Schkade, 2005; Seligman et al., 2005), as well as decreased negative affect (NA) (Emmons & McCullough, 2003; Seligman et al., 2005; Watkins et al., 2003, Study 3), compared with controls, for up to six months. Similar findings, over shorter follow-up periods, have been documented in youth (Froh, Sefick, & Emmons, 2008). Despite these encouraging results, much remains unknown, including if children and adults can reap similar benefits from gratitude interventions.

Interventions to Increase Gratitude in Children and Adolescents

Given the benefits of the above-described interventions for adults, some researchers have suggested that gratitude interventions should be applied to many settings and populations so as to spread health, functionality, and happiness to more and more people and to society at large (Bono et al., 2004). Although gratitude interventions for youth surfaced only four years ago, initial findings are promising.

Counting blessings

The best evidence that gratitude can improve youths' well-being comes from three gratitude intervention studies. In one study, Froh, Sefick, and Emmons (2008) randomly assigned 11 classrooms of 6th and 7th graders (ages 11–14) to one of three conditions – gratitude, hassles, or a no-treatment control – to partially replicate Emmons and McCullough's (2003) "counting blessings" intervention. Participants completed the intervention activity daily for two weeks and measures of psychological, physical, and social well-being at pre-test, immediate post-test, and a three-week follow-up. Those in the gratitude condition were instructed to count up to five things they were grateful for, and those in the hassles condition

were asked to focus on irritants. Gratitude journal entries included benefits such as: "My coach helped me out at baseball practice," "My grandma is in good health, my family is still together, my family still loves each other, my brothers are healthy, and we have fun everyday," and "I am grateful that my mom didn't go crazy when I accidentally broke a patio table."

Counting blessings, compared with hassles, was related to more gratitude, optimism, life satisfaction, and less negative affect. Students who claimed feeling grateful for receiving help from others reported more positive affect. In fact, the relation between feeling grateful for help from others and positive affect became stronger during the two-week intervention and was strongest three weeks after the intervention ended. Gratitude in response to aid also explained *why* students instructed to count blessings reported more general gratitude. Recognizing the gift of aid – yet another blessing to be counted – seemed to engender more gratitude.

Most significantly, students instructed to count blessings, compared with those in the hassles or control conditions, reported more satisfaction with their school experience (i.e., find school interesting, feel good at school, think they are learning a lot, and are eager to go to school; Huebner, Drane, & Valois, 2000) immediately after the two-week intervention and three weeks after completing it. Expressions of school satisfaction included: "I am thankful for school," "I am thankful for my education," and "I am thankful that my school has a track team and that I got accepted into honor society." School satisfaction is positively related to academic and social success (Verkuyten & Thijs, 2002), and many early and late adolescents indicate significant amounts of dissatisfaction with their school experience (Huebner, Valois, Paxton, & Drane, 2005). Therefore, inducing gratitude in students via counting blessings may be a viable intervention for mitigating negative academic appraisals while promoting a positive attitude about school. Holding such a view predisposes students to improving both their academic and social competence and may help motivate them to get the most out of school.

The "Gratitude Visit"

In another intervention study, children and adolescents from a parochial school were randomly assigned to a gratitude intervention or a control condition (Froh, Kashdan, Ozimkowski, & Miller, 2009). This study partially replicated Seligman et al.'s (2005) "Gratitude Visit" study using a youth population. Participants in the gratitude condition were asked to write a letter to a benefactor whom they had never properly thanked, to read the letter to him/her in person, and to then share their experience with others in the same condition. To illustrate, one 17-year-old female wrote and read the following letter to her mother:

> I would like to take this time to thank you for all that you do on a daily basis and have been doing my whole life … I am so thankful that I get to drive in with you [to school] everyday and … for all the work you do for our church … I thank you for being there

> whenever I need you. I thank you that when the world is against me that you stand up for me and you are my voice when I can't speak for myself. I thank you for caring about my life and wanting to be involved … for the words of encouragement and hugs of love that get me through every storm. I thank you for sitting through countless games in the cold and rain and still having the energy to make dinner and all the things you do. I thank you for raising me in a Christian home where I have learned who God was and how to serve him … I am so blessed to have you as my mommy and I have no idea what I would have done without you.

Participants in the control condition were asked to record and think about daily events. Findings indicated that youth low in positive affect in the gratitude condition reported greater gratitude and positive affect at post-treatment and greater positive affect at the two-month follow-up than youth in the control condition. Thus, although 44% of the gratitude studies published to date found support for gratitude interventions compared against conditions inducing negative affect (e.g., recording hassles) (Froh, Kashdan, et al., 2009), this study suggests that there may be specific individuals – namely, those low in positive affect – who may benefit more.

Learning schematic help appraisals

The most promising intervention study, as we hinted earlier, seems to be one conducted by Froh et al. (in press) that increased gratitude by training individuals' benefit appraisals. Using the youngest children targeted by interventions to date, this study employed a novel technique of strengthening children's schematic help appraisals. Classrooms of children (8–11 years) were randomly assigned to a school-based gratitude curriculum or an attention-control curriculum. School psychology interns taught participants in the gratitude condition about the social-cognitive determinants of gratitude via structured lesson plans. Lessons adhered to the following outline: the introduction (session 1), understanding benefactors' intentions when being a beneficiary (session 2), understanding the cost experienced by benefactors when giving a benefit (session 3), understanding the benefits of receiving a gift bestowed by a benefactor (session 4), and the review/summary, which incorporates all components of the previous sessions (session 5). Using the methods of classroom discussions, acting out different role plays, and writing down personal stories in a "gratitude journal," the intern emphasized the connection between positive things happening to them and the actions of a benefactor. Across five sessions the intern explained that whenever others are nice to us, they may be doing so on purpose (illustrating intention), using their resources (illustrating cost), and helping us (illustrating benefit).[1]

Students in the attention-control condition were also provided with structured lesson plans that followed an outline but they focused on neutral topics, such as events of the day. Similar to the gratitude condition, the attention-control

condition lessons included classroom discussions, writing assignments, and role-playing activities. Importantly, the general structure of the attention-control sessions closely mirrored that of the gratitude condition lessons in terms of task assignment but not in terms of content.

Across two different studies, the authors found that children can be taught to become more aware of the social-cognitive appraisals involved in circumstances of receiving help from another, and that this schematic change makes children more grateful and benefits their well-being. A weekly intervention obtained such effects in the long term (up to five months later). A daily intervention produced these effects immediately (two days later) and showed further that children behaviorally expressed gratitude more (i.e., wrote 80% more thank you cards to their Parent Teacher Association) and that their teachers even observed them to be happier, compared to those in the control condition. Evidence thus supported the effectiveness of this intervention.

Next Steps for Gratitude Interventions

Use of gratitude in clinical therapy

Many of the gratitude interventions conducted up until now have found gratitude inductions to be effective in improving mental health and well-being in comparison to control groups that induce people to think about hassles or complaints. Many of the studies we have discussed in this chapter examine various outcomes that are clinically relevant. Researchers have also indicated ways to use gratitude interventions in therapeutic contexts and reasons why this would be beneficial (Bono & McCullough, 2006; Duckworth, Steen, & Seligman, 2005; Seligman, Rashid, & Parks, 2006). Further research, however, is needed before this can occur. Wood, Froh, and Geraghty (2010) lay out an agenda for the kinds of gratitude intervention studies that are needed if gratitude interventions are to be used for clinical therapy. First, they argue that more rigorous experimental studies are needed that compare gratitude inductions against true neutral control conditions (using either a no-treatment control or wait-list method) so that we can know the extent to which gratitude inductions actually produce improvements in individuals' health and well-being over doing nothing at all. Wood et al.'s argument for a stronger, more neutral control group is noteworthy as this will allow researchers to more accurately assess and understand the effects of the intervention. However, using an active control group is a wiser alternative to using a no-treatment control group when a fitting, neutral control is unavailable.

Wood et al. (2010) also argue that experiments using clinical samples are needed to examine whether gratitude interventions would be better than other common therapies known to be effective (i.e., "gold standards") for the treatment of mental disorder. Counseling psychologists are increasingly considering the use

of gratitude strategies in developing more sustained programs of intervention for a range of client groups, such as those experiencing depression, substance abuse, or bereavement (Nelson, 2009). Two recent studies have directly examined gratitude's potential for treating mental disorder. One study found that over a two-week period daily listing of up to six things for which one was grateful was as effective as daily automatic thought records in helping a community sample of people with severe body image dissatisfaction, compared to a wait-list control (Geraghty, Wood, & Hyland, 2010a); and another made this same finding with a community sample of people with excessive worrying, or generalized anxiety (Geraghty, Wood, & Hyland, 2010b). Notably, in both studies individuals who did the gratitude listing were twice as likely to stay in the treatment, compared to individuals who received the automatic thought record treatment. These studies provide examples of the kind of evidence that is needed for gratitude interventions to be employed for therapeutic purposes.

Other recent research indicates several fruitful avenues for the therapeutic use of gratitude in populations free of mental disorder, but experiencing other distress. For instance, one recent study found that the experience and expression of gratitude may help patients with metastatic breast cancer tap sources of social support and find improved quality of life (Algoe & Stanton, 2011). These findings suggest that gratitude may help people cope with the stress of lifelong or deadly diseases, issues that are becoming more pressing due to the growth of the elderly population in society. Gratitude may also be helpful in counseling married couples toward more fulfilling and satisfied relationships (Gordon, Arnette, & Smith, 2011). This is consistent with Algoe and colleagues' findings that gratitude can help boost sense of connection and satisfaction in romantic relationships (Algoe, Gable, & Maisel, 2010). Therefore, gratitude will likely play a valuable role in bringing comfort to more and more people in our world as such therapeutic applications are developed.

While gratitude is helpful in many populations, recent research has revealed that gratitude interventions can be detrimental to certain personality types. Sergeant and Mongrain (2011) examined the use of gratitude exercises with two vulnerable depressive personality types: self-critical individuals and needy individuals. Participants participated in the intervention for one week and follow-up assessment was conducted one, three, and six months later (Sergeant & Mongrain, 2011). Individuals were randomly assigned to participate in one of three conditions: a gratitude condition (listing daily five things to be grateful for), music condition (listening to uplifting music), or control condition (writing about childhood memories) (Sergeant & Mongrain, 2011). Interestingly, the gratitude exercise and music exercise only procured positive benefits for the self-critical individuals, with reported increases in self-esteem and decreases in physical symptoms. The needy individuals experienced negative effects as a result of participating in the music and gratitude exercises, reporting decreases in happiness and increases in physical symptomology (Sergeant & Mongrain, 2011).

Use of booster sessions to strengthen interventions

Are there ways to strengthen gratitude interventions so that they produce more long-term effects on well-being? Lyubomirsky and her colleagues make the case that gratitude interventions are most effective when they are distributed regularly over time, rather than all in one day, and when individuals intentionally and willfully engage in activities that match their lifestyle and interests (Lyubomirsky et al., 2005). These researchers have found that people are more likely to experience sustained levels of happiness if they endorse and personally commit themselves to positive exercises like optimistic thinking about their future and writing letters of gratitude to others. These findings suggest that including booster sessions would be a powerful method for strengthening gratitude interventions. To extend on Emmons and McCullough's (2003) intervention as an example, participants who previously kept a gratitude journal (see Emmons & McCullough, 2003) might want to do more entries a month or two later to refresh and "boost" the effects of partaking in this gratitude-inducing exercise.

There are at least two good reasons why booster sessions would help. First, they would remind individuals to continue to put gratitude exercises in practice in their daily lives. Second, they would also help refresh individuals' knowledge about how to do this. Because gratitude requires people to focus their attention on experiences of interpersonal benefits and to remember to express thanks, reminders and refreshers would help encourage both the experience and expression of gratitude. As we intimated earlier, combining cognitive and behavioral strategies may be a powerful method for strengthening gratitude interventions. Thus, boosters may encourage individuals to personally apply the intervention exercises to new situations and people in their lives so that the practices are more likely to instill in them an attitude of gratitude and grateful habits. The more gratitude takes root and has time to influence and become a part of people's relationships and life narratives, the more positive an impact it will have on their lives. We could expect more research in the future examining the generative function of gratitude and ways that gratitude interventions could be used to improve the functioning of relationships, groups, organizations, and communities. Undoubtedly, booster sessions will be involved in implementing such interventions so that impacts could permeate and transform such systems.

Consideration of moderators in interventions

There is evidence that gratitude benefits boys more than it does girls (Froh, Kashdan, et al., 2009). So research examining different mechanisms through which gratitude benefits males and females differently will help to produce better interventions. With the use of exercises that are better tailored to the sexes, individuals are more likely to personally "own" and commit to the interventions. The same could be said of other potential moderators, such as positive affect (Froh, Kashdan, et al., 2009), cultural factors, or attitudinal factors. Recent work by

Wood, Brown, and Maltby (2011) suggests that different people will experience different amounts of gratitude for help or gifts they are given, depending on the amount of help or size of gifts they are accustomed to receiving. A better understanding of how gratitude is experienced and expressed in different cultures and in different groups, then, may help improve our ability to use gratitude to promote well-being or peace for instance.

Yet another important moderator variable to consider is personal responsibility. Chow and Lowery (2010) found that in achievement contexts individuals do not experience gratitude without the belief that they are responsible for their success, even when they acknowledge the help they have received. This is a critically overlooked dimension of gratitude, which for the most part has been regarded as a phenomenon that depends on external attributions of responsibility for positive outcomes that one experiences in life. This research suggests that gratitude may serve a social capital function, enabling individuals to better achieve goals when they themselves, and other people, are more invested in the pursuit of those goals. Again, such knowledge can be used to improve upon gratitude interventions, especially those targeting younger populations. As noted above in relation to the Sergeant and Mongrain (2011) study, personality orientation must be considered when treating clinical populations in order to procure efficacious results when using positive psychology exercises for intervention.

Infusing gratitude into existing school curricula

Our intervention research with children aged 8–11 (Froh et al., in press) shows that gratitude could be easily infused into reading and writing programs in schools, something that is in line with the rise of social-emotional learning programs (CASEL, 2003). To positively transform school and community programs for youth, better understanding is needed of how to improve social settings to better promote positive youth development (Shinn & Yoshikawa, 2008). Social-emotional learning programs are one example of such efforts, and there is evidence that they are helping to improve both the academic and social development of students (Jones, Brown, & Aber, 2008). We believe gratitude can enhance literacy programs and complement social-emotional learning programs.

Modern forms of communication and interaction

Last but not least, yet another direction for gratitude interventions in the future will be techniques that use forms of communication that increasingly characterize our interactions in today's world – the use of digital and electronic modes of communication. We live in a wired culture where teenagers and adults are using social networking websites and cell-phones to chat, text, and convey information to each other. Therefore, future research will undoubtedly explore how these modes of communication and interaction can be used to promote the experience

and expression of gratitude. There is a book already exploring this very topic, entitled *I am gr8ful for you* (Serafini, 2011).

Conclusion

The research reviewed highlights the success and lasting effects of gratitude interventions on people's physical and psychological well-being. Taken together, these effects indicate improvements in both personal and relational functioning. The evidence, we think, provides implications for the well-being of people, groups, organizations, and society, and personal and global well-being. Specific to the latter, making nations more grateful may be best accomplished by first incorporating gratitude curricula into schools, for children and adolescents. How might the world be if we fostered a grateful generation? In our opinion, we think societies would improve in many ways. Families would enjoy stronger bonds; neighborhoods would become more supportive; schools would better invest in the strengths and possibilities of youth; and quite possibly, societies would become more cohesive, where people will continue to "pass on the gift" of gratitude.

Note

1 The manual is available on the second author's website.

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