

Built to Care:  
Health Benefits of Support-Giving

Sarah Dembling<sup>1,2</sup>, Zoe F. Damon<sup>1</sup>, & Tristen K. Inagaki<sup>1,2</sup>

<sup>1</sup>Department of Psychology, San Diego State University, San Diego, CA, USA

<sup>2</sup>SDSU-UC San Diego Joint Doctoral Program in Clinical Psychology, San Diego, CA

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Sarah Dembling: [sdembling4423@sdsu.edu](mailto:sdembling4423@sdsu.edu)

Zoe Damon: [zoe.fisherdamon@gmail.com](mailto:zoe.fisherdamon@gmail.com)

Tristen Inagaki: [tinagaki@sdsu.edu](mailto:tinagaki@sdsu.edu)

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### **Abstract**

Support-giving – behaviors that make others feel cared for, address another’s needs, or prevent a need from arising – is a key contributor to the well-established link between social relationships and health. Emerging research findings posit that humans are built to care – that support-giving is an innate behavior with neurobiological roots shared across species. In this review, we first discuss theoretical perspectives highlighting people’s intrinsic supportive nature and the neural mechanisms that encourage support-giving behaviors. When humans lean into their giving natures, they can experience benefits such as improved physical health and increased social connectedness. We review the emerging experimental evidence, with a particular focus on research suggesting support-giving reduces physiological responding related to poor health, and increases social and emotional well-being. We also discuss possible moderators to the relationship between support-giving and health, such as effectiveness of giving and choice in giving. Additional research that manipulates supportive behavior or implements support-giving interventions will further clarify why and when support-giving affects health. By leaning into their giving nature, individuals may be able to further optimize the health benefits of social relationships.

*Keywords:* social support, prosocial behavior, social connection, social ties and health, altruism, helping, caregiving

Social relationships, including both the quantity and quality of relationships, robustly predict health. Those with stronger or more social relationships tend to have better health whereas those lacking relationships tend to do worse (Holt-Lundstad, 2024). Early indications of the association came from the now seminal observations of Emile Durkheim who noted that suicide appeared in those less socially integrated (Durkheim, 1951). Nearly three decades following the publication of Durkheim's observations, empirical findings confirming an association between social relationships and health (Berkman & Syme, 1979; House et al., 1982) inspired entire research programs on the contribution of social integration, received and perceived support, and positive and negative social interactions to the link (Cohen & Syme, 1985; Uchino 2004). Efforts to clarify why social relationships contribute to health continue today.

An overlooked behavior, especially in the early history of research on social relationships and health, is support-giving, defined as behaviors that make others feel cared for, address another's needs, or prevent a need from arising (Dembling & Inagaki, 2025). That is, part of what makes social relationships "good" for health might not just be the care received from others, but also the care given to others. Theoretical perspectives highlighting humans' giving nature (Brown & Brown, 2015; Inagaki & Orehek, 2017; McAuliffe et al., 2020; Preston, 2013; Zaki & Mitchell, 2013) alongside research findings linking support-giving behavior with longevity shed new light on the health-relevance of support-giving (Brown et al., 2003; Chen et al., 2021; Roth et al., 2018). Thus, support-giving—in the form of socially supportive behavior toward close others, prosocial behavior, volunteering, and charitable giving, as some examples—may be a route by which social relationships contribute to health in positive ways.

The current review examines research on support-giving and health to advance the arguments that (a) humans are built to care for others and (b) when they lean into their giving natures, they benefit. We start with evidence suggesting humans have innate tendencies to care for others with attention on brain mechanisms that facilitate such behavior. If the brain is wired to promote support-giving behaviors, these behaviors may be evolutionary advantageous and health beneficial. Experimental evidence has begun to emerge, suggesting supporting others might indeed improve health. The focus of this review is therefore on studies in which support-giving is manipulated prior to the measurement of physiological correlates of poor health, and social and emotional well-being. We then explore factors that may moderate the effect of support-giving on health, such as one's degree of choice in giving and effectiveness of giving. See Figure 1 for an overview. We also consider future directions for this line of work.

### **Are Humans Built to Care?**

Prior to the 1990s, assumptions that humans are self-focused and asocial by nature were predominant in Western psychology (e.g., Becker, 1976; Freud, 1961; Piaget, 1959; Skinner, 1953). From this perspective, social relationships are tools for achieving personal gains or obstacles to individual goals, and expending energy caring for others is inefficient when instead one could be caring for themselves. These beliefs persist today, despite evidence suggesting the contrary (Yuan et al., 2022). However, views on inherent individualism have been challenged to emphasize that while humans can be selfish, they are also naturally inclined to help others. Indeed, some of the most influential theories on social cognition instead propose that humans are fundamentally social beings with other-focused goals. For instance, findings from psychological anthropology argue that one of the core innate and intrinsically motivated components of social life is communal sharing (Fiske, 1992). This is exemplified by the cross-cultural practice of

sharing food, tools, and other resources. Other perspectives posit that caring for others is an innate behavioral system in humans that alerts individuals to the needs of others and motivates them to provide comfort and assistance (Bowlby, 1988; Feeney & Collins, 2001).

Ideas that humans are innately other-focused and have tendencies to give are further supported by theories on parental caregiving – specifically, support given from a parent or other primary caretaker toward their infant to promote the infant’s wellbeing – and the evolutionary biology of support-giving. As an altricial species, infant mammals are born vulnerable and requiring significant parental care. Therefore, as opposed to precocial species with relative independence at birth, mammalian caregiving behaviors are essential to ensure infant survival. As such, parental caregiver presence during infancy is a species-expected stimulus that developing individuals suffer without (Bowlby, 1988; Tottenham, 2012). Caregivers are likewise sensitive to proximity to the infant, especially during times of need, and engage in support-giving behaviors, such as holding and rocking, that both provide care and maintain proximity to keep the infant safe (Brown et al., 2011; Brown & Brown, 2015; Solomon & George, 1996).

Considering the prevalence of support-giving and its evolutionary relevance, we address the idea that humans might be built to care for others. Previous work supporting the notion that humans innately give to others demonstrates support-giving behaviors in young children, and across cultures, suggesting that support-giving behavior is intuitive (Zaki & Mitchell, 2013). Spontaneous helping behaviors (e.g., opening a cabinet for someone whose hands are full, offering useful information to others) are observed in children as young as 18 months of age (Warneken & Tomasello, 2009). Notably, these types of behaviors are seen at ages that typically precede the development of executive functions supporting social learning such as delay of gratification (Garon et al., 2008). Beyond childhood, there is a high prevalence of support-giving

throughout life, with adults reporting daily engagement in supportive behavior (American Time Use Survey, 2023). This might include giving support to one's children or romantic partner, as roughly 2 out of 5 U.S. family households have children at home (U.S. Census Bureau, 2024) and roughly 58% of U.S. adults are married or cohabitating with a partner (Fry, 2025). People also spend time giving support to those outside of their closest network members. In 2023, over 75.7 million Americans (roughly 28.3% of the American population) reported formally volunteering (AmeriCorps & U.S. Census Bureau, 2024). Support-giving is additionally widespread and observed across cultural contexts (Aknin et al., 2013; Chen et al., 2012; Henrich et al., 2005). The ubiquitous nature of support-giving provides observational evidence suggestive of the giving nature of humans. What mechanisms might be in place to facilitate these support-giving behaviors?

### **Brain Mechanisms Underlying and Nudging Support-Giving**

In addition to theoretical perspectives and behavioral evidence, there is evidence for neural mechanisms that facilitate support-giving behaviors. First, a large literature describes the brain mechanisms in place that facilitate parental caregiving to offspring. Initial evidence for the neurobiological components of a parental caregiving system comes from non-human animal studies (reviewed in Preston, 2013). Within these studies, removing parts of the neural circuit involved in parental caregiving, such as the ventral striatum and septal area, reduces or eliminates giving behaviors such as tending to pups (Carlson et al., 1968; Cruz & Beyer, 1972; Flannelly et al., 1986; Fleischer & Slotnick, 1978; Hansen, 1994; Hansen et al., 1991; Lee et al., 1999; Lee et al., 2000). In humans, the same brain regions implicated in the parental caregiving system are also activated in response to opportunities to give to those other than offspring (Inagaki, 2018). In response to behaviors signaling need, the same biological mechanisms

involved in the parental caregiving system are involved during supportive behaviors toward other individuals, such as strangers (Genevsky et al., 2013; Harbaugh et al., 2007), family members (Telzer et al., 2010), and romantic partners (Inagaki & Eisenberger, 2012; Collins & Feeney, 2000). Therefore, deeply supportive behaviors are embedded in humans' neural architecture and are relevant for support-giving across different relationships over the lifespan.

In addition to research focused on brain activity in response to experimental tasks involving support-giving, there is emerging evidence that brain processes that are spontaneously activated prior to supportive behavior may facilitate the tendency to behave in supportive ways. Specifically, research examines the role of the default mode network (DMN) when the brain is in its tonic state in promoting supportive behavior (Inagaki et al., 2020; Inagaki & Meyer, 2020). The DMN is a widely studied group of interconnected brain regions with a high level of neural activity during introspection, mind-wandering, and other spontaneous or passive moments (Andrews-Hannah, 2012). Activity in the DMN decreases during cognitively effortful tasks, such as focusing one's attention to an external stimulus. As such, the DMN is said to be active when someone is in a 'resting state' and as its name suggests, is the state people 'default' to when not engaged in goal-directed behaviors (Raichle et al., 2001).

The DMN gained attention as an important contributor to social cognition and communication, insofar as resting state cognition is viewed to be social in nature. Both theoretical perspectives (e.g., Dunbar, 2004; Tomasello et al., 2005; Mesoudi et al., 2006) and findings on similarities between the brain's activation during resting state and social cognitive tasks (Meyer et al., 2012; Schilbach et al., 2008) suggest that humans are predisposed to social thinking. As such, people may return by default to social thinking when not faced with a task.

Neural activity in the moments preceding support-giving provides insight into whether the resting brain facilitates intuitive support-giving behaviors. Specifically, activity in the DMN predicts decisions to give support to close others a few seconds *before* one makes their decision (Inagaki et al., 2020). In one study, activity in the dorsomedial prefrontal cortex (dmPFC), a core region of the DMN, was measured immediately (i.e., 2-6 seconds) before participants responded to offers to: (a) give raffle tickets to a close other in need while forgoing tickets for themselves, (b) receive tickets for themselves without a cost for their close other, and (c) make arbitrary decisions unrelated to support (i.e., a neutral decision). Greater activity in the dmPFC before responding to offers predicted faster decisions to give (vs. make a neutral decision) a mere few seconds later suggesting that the brain at rest ‘nudges’ giving behavior toward close others. dmPFC activity was not related to decisions to receive for the self. That is, within a participant, greater spontaneous activity in the dmPFC during brief periods of rest predicted increased speed of subsequent support-giving, but not rewarding oneself. Other findings similarly suggest that DMN activity influences the giving-related decisions people make in their daily lives. That is, greater connectivity of the DMN during a 9-minute period of rest, a measure of the synchronization among regions, predicts support-giving behavior toward a close other in one’s daily life outside of the scanning environment (Inagaki & Meyer, 2020). Notably, DMN connectivity predicted support-giving behavior but not receiving or perceiving support, suggesting some specificity for giving. In addition, findings remained even after controlling for individual differences in social behavior that may also relate to more support-giving, such as extraversion, further supporting the idea that individuals are naturally inclined to behave in ways that support others.

### **Interim Summary**

Research suggests that there may be multiple neural mechanisms contributing to support-giving behaviors. Evidence of the role of the ventral striatum and septal area in support-giving alongside evidence that the brain's spontaneous, unprompted activity increases support-giving behavior further back the idea that humans are built to give. However, there are limitations of neuroimaging perspectives. For instance, future research is needed to address whether moments of rest drive naturalistic supportive behavior outside of the scanner, and to link portions of the DMN with downstream physical health outcomes.

Nonetheless, if it is true that humans default to giving, what might the implications be of being built this way? Evolutionarily advantageous behaviors tend to be rewarding, ensuring they persist over time. Thus, we turn to our second argument: that when humans lean into their giving natures, they benefit. The innate advantages of giving include better health and well-being. In the following sections, we review emerging evidence that support-giving contributes to health.

### **Mixed Correlational Findings on Support-Giving and Health**

Correlational evidence suggests that giving is beneficial for health, alongside correlational evidence that certain forms of support-giving are not good for health. On the one hand, multiple large studies examining support-giving behaviors across five to seven years suggest that support-giving positively contributes to longevity (Brown et al., 2003; Roth et al., 2013; Roth et al., 2018). Moderate levels of support—compared to those who provide very low or high levels—also have the lowest all-cause mortality risk over a 23-year period (Chen et al., 2021). These findings remain true even when accounting for factors that might influence longevity, and among different modalities of support-giving, such as volunteering or caregiving for an ill relative (Brown et al., 2009; Fredman et al., 2010; Fredman et al., 2015; O'Reilly et al., 2008; O'Reilly et al., 2015; Ramsay et al., 2013; Roth et al., 2013; Roth et al., 2018). On the other hand, a large

literature shows that informal caregivers for ill or disabled family members report higher levels of depression and psychological stress compared to non-caregivers (National Academies of Sciences, Engineering, and Medicine, 2016; Pinquart & Sorenson, 2003; Schulz & Sherwood, 2008), outcomes often linked to increased mortality risk (Cuijpers et al., 2014; Prior et al., 2016). In one well-known study, caregivers who also reported experiencing caregiver strain (i.e., mental, emotional, and physical difficulty helping or arranging for help) had a higher mortality risk than non-caregivers over a 4-year period (Schulz & Beach, 1999). Correlational evidence therefore suggests that support-giving behavior relates to both better and worse health.

Although it provides insight into an important relationship, correlational evidence linking support-giving or caregiving with longevity is limited, as we cannot determine the causal direction or rule out third variables that may be at play. Some aspects of prolonged caregiving of an ill family member, such as the disease context or unmitigated communion behavior, cannot be experimentally manipulated. It is possible for instance that associations between caregiving and increased longevity are explained by a healthy-carer bias, wherein healthy individuals are more likely to be caregivers to begin with (Fredman et al., 2009; McCann et al., 2004). It is also possible that those in support-giving roles, including caregiving, have other characteristics that may be health-beneficial, such as being more extraverted or social, or having more resources. Regarding findings on associations between caregiving and poor health outcomes, it is difficult to disentangle whether the poor outcomes are due to support-giving itself, or if the decline of a loved one, loss of social connection, control over the situation, or the neglect of their own health needs, as just some examples, are driving factors.

Similar to studies examining support-giving and longevity, there is mixed evidence regarding the relationship between support-giving and physiological health. For instance, a growing body

of evidence shows support-giving can also relate to reduced physiological correlates of poor health, such as inflammation (Cole, 2019; Furman et al., 2019; Inagaki et al., 2023; Seeman et al., 2020), resting and stress-induced blood pressure (Piferi & Lawler, 2006; Vasan et al., 2001), and cardiac measures of sympathetic nervous system responding (Jurkiewicz & Oveis, 2025), potentially leading to better health. In adolescents, a higher frequency of volunteering was associated with lower metabolic health and lower odds of diabetes (Chen et al., 2026). On the other hand, some findings link support-giving (specifically caregiving for a family member with dementia) to increased proinflammatory cytokine production (Kiecolt-Glaser et al., 2003) and decreased antibody response (Vitaliano et al., 2003), which are related to poorer health outcomes. As with the findings on support-giving and longevity, these correlational findings leave open questions as to the direction of effects and what features of supportive behavior are health promoting vs. damaging.

Given these mixed findings, we turn to intervention and experimental studies for clarity on the causal direction of support-giving and health. One important note is that while experimental evidence can increase confidence in positive associations between support-giving and health among non-caregivers, mixed findings among caregivers remain unresolved due to the difficulty of experimental manipulation in the context of caregiving. Furthermore, there are currently no experimental manipulations of support-giving in samples of caregivers in the research literature. Therefore, we focus on support-giving's impact on health-relevant physiological pathways (e.g., inflammation, blood pressure) and socioemotional health in samples of non-caregivers.

## **Experimental Evidence on Support-Giving and Health**

### ***Physiological Pathways***

Random assignment to support-giving interventions decreases physiological correlates of poor health and stress. Writing a note for a close friend in need of support (versus a neutral writing condition) reduced systolic blood pressure during a subsequent social stress test (Inagaki & Eisenberger, 2016). Additionally, writing supportive letters over 6 weeks to strangers from a younger generation decreased pro-inflammatory gene expression for older women (Moieni et al., 2019). Remarkably, support-giving also benefits health among young, relatively healthy individuals. In a randomized control trial, 10 weeks of volunteering improved cardiovascular risk profiles in a group of 10<sup>th</sup> graders free of chronic illness (Schreier et al., 2013). Specifically, adolescents who participated in a volunteering intervention involving giving support to younger children showed reduced levels of systemic inflammation and cholesterol as well as decreased body mass index (markers of cardiovascular risk) compared to a non-volunteering control group. In another intervention, inflammatory gene profiles were examined following 4 weeks of either acts of kindness toward others, acts of kindness toward the world in general, self-focused kindness, or a neutral control task (Nelson-Coffey et al., 2017). Acts of kindness toward others reduced inflammatory gene expression, while no significant changes were found in the other 3 groups. Similarly, performing kind acts for others once a day for 4 weeks reduced inflammatory gene expression compared to doing kind acts for the self (Regan et al., 2022).

Together, findings from experimental studies suggest that support-giving reduces physiological indicators of poor health. This appears to be true for support-giving delivered via different modalities and time periods, across multiple age groups, and targeted at different types of recipients (e.g., close others, strangers). Short-term reductions in inflammation and stress-induced cardiovascular responding following support-giving may contribute to longer-term health, such as longevity, via repetition over time. That is, support-giving that occurs frequently

or consistently – such as daily support given to a loved one – might be the most protective for long-term health outcomes, though this possibility awaits further research, especially given correlational findings reviewed above about caregiving for an ill family member and health.

### ***Social and Emotional Well-being***

In conjunction with findings on support-giving's impact on physiological pathways, another key benefit of support-giving is its role in increasing social and emotional well-being (e.g., Hui et al., 2020; Skov et al., 2024). For instance, being assigned to buy an item for charity led to higher reported levels of positive affect compared to buying the same item for oneself (Aknin et al., 2013), and being assigned to perform acts of kindness for others, versus a control condition, reduced depressive and anxiety symptoms (Naclerio et al., 2026). Furthermore, individuals experienced greater feelings of social connection when giving support to close others (compared to giving to charities; Inagaki & Ross, 2018). Support-giving via physical touch may additionally draw individuals closer to others beyond the known effects of physical touch alone (Inagaki & Eisenberger, 2012). Specifically, holding a romantic partner's arm when the partner was in need (thus eliciting support) increased feelings of social connection compared to simply touching them when they were not in need. Support-giving may play a particular role in facilitating or maintaining relationships between individuals that are already close, contributing to health via fostering social closeness.

The socioemotional role of support-giving behaviors has also been examined in large studies across multiple countries. In randomized control trials involving over 4,000 individuals across three countries, support-giving via weekly acts of kindness over four weeks decreased loneliness in two out of three of the countries, further suggesting impacts of support-giving on increased social connection (Lim et al., 2025). In a 4-week intervention, Fritz et al., (2023) found that both

social (i.e., interacting with others) and support-giving (i.e., performing acts of kindness toward others) conditions increased feelings of social connection over time relative to control conditions. In other words, although feelings of social connection increased after supporting others compared to control, the increase was no different from socializing with others. Finally, in a conceptual replication, support-giving (three acts of kindness toward others per week for two-weeks) reduced loneliness relative to a control group (Naclerio et al., 2026).

The effect of support-giving on social and emotional well-being has also been studied in older age and adolescence, life stages that present unique challenges to social and emotional well-being. In particular, there are socioemotional health benefits of volunteering in these age groups. In one intervention, older adults experiencing loneliness during the COVID-19 pandemic volunteered to deliver telephone-based counselling to peers (Yeung et al., 2025). Compared to a control group, those who volunteered reported decreased loneliness 6 months later. Furthermore, only those who continued to volunteer for more than 2 h per week after the 6 months continued to show decreased loneliness at 12 months, highlighting the importance of sustaining support-giving behaviors over time to see continued benefits. Similar effects appear in adolescent samples (Petruța & Stănculescu, 2025; Schreier et al., 2013). For instance, a school intervention aimed at teaching support-giving behavior to adolescents increased psychological well-being (i.e., perceived success in areas of life including relationships, self-esteem, purpose in life, and optimism) compared to a non-intervention control group (Petruța & Stănculescu, 2025). Together, evidence points to support-giving as a helpful intervention across often difficult social and emotional developmental periods.

Support-giving and well-being have also been examined among clinical populations. An intervention in individuals with depression examined the effects of prosocial spending, finding

decreased depressive symptoms and increased emotional positivity in those who gave even a small amount of money to charity daily (i.e., one Chinese cent per day over two months) compared to those on a waitlist control (Zhang et al., 2025). In other studies examining impacts of support-giving in cancer patients or survivors, providing help and advice to others diagnosed with cancer decreased distress in patients undergoing treatment (Rini et al., 2014) and increased eudaimonic well-being, characterized by feelings of meaning and purpose, in adolescent and young adult cancer survivors (Haydon et al., 2025).

The growing evidence on the benefits of support-giving and social and emotional well-being highlights the replicability of the effect across various modalities of support-giving, age cohorts, and clinical populations. That support-giving increases social and emotional well-being further substantiates the perspective that we are built to give, and may be a mechanism by which giving contributes to longevity. Yet, there is more to learn about possible factors that influence giving, and how to best optimize the benefits of giving to serve public health.

### **When is Support-Giving Beneficial?**

Understanding factors that impact the degree to which individuals benefit from support-giving can optimize the benefits of giving, delineate boundary conditions, and possibly clarify understanding of mixed correlational findings. Although more research is still needed, we consider the experimental evidence consistent with the influence of the effectiveness of one's support-giving in helping others and the degree of choice one has in their support-giving (Inagaki & Orehek, 2017).

Support-giving may be more beneficial when one believes that their support is indeed making a positive impact. That is, feeling like efforts to help someone else are futile could impede benefits. In one study, giving to a close other, such as a friend or family member,

increased perceived effectiveness with the target more than giving to an abstract cause (i.e., a charity), suggesting that the recipient of the support may be one part of a supportive exchange that matters for future benefits (Inagaki & Ross, 2018). Indeed, higher reports of effectiveness were correlated with greater activity in reward-related regions in response to giving (Inagaki & Eisenberger, 2012). Though this second finding is correlational, it provides initial evidence that perceived effectiveness might matter for downstream health measures. Additionally, an experimental study that manipulated perceived effectiveness of support-giving found that life satisfaction ratings were greater in those who perceived their support as effective versus ineffective for the receiver (Xin et al., 2025). However, this was only true when also given a choice to give social support. This brings in the importance of another factor relevant to the benefits of support-giving: the role of choice.

Greater choice with regard to support-giving may also improve the giver's benefits. Some evidence for this appears in studies assessing the effect of support-giving on social and emotional well-being. In a study during which individuals were either instructed to give money to someone else or given the choice to keep or distribute money, giving out of choice rather than instruction led to the greatest well-being (Study 2, Weinstein & Ryan, 2010). In another study where individuals participated in voluntary or non-voluntary emotional support-giving, those allowed to volunteer with the choice to withdraw reported higher positive emotions, lower negative emotions, and greater life satisfaction compared to those who provided support as a requirement (Xin et al., 2025). These findings implicate the importance of choice in yielding socioemotional benefits toward those giving support. Taken together with questions about the effectiveness of support-giving, these results suggest that more support-giving alone is not always better for

health; instead, perceptions of the effectiveness of the supportive behavior and whether there is a choice may alter effects.

These moderators may shed light on the mixed findings in the caregiving literature, such as why caregiving is often associated with increased stress (Adelman et al., 2014). That is, caregiving for a loved one who is ill is often done with limited choice (i.e., high obligation) and may feel ineffective if one is witnessing a loved one decline. Thus, it is possible that caregiving only leads to better health when the caregiver perceives more effectiveness and has more choice in their support-giving, which is often not possible under caregiving conditions. The influence of effectiveness and choice in support-giving could benefit from additional research as experimental evidence including these moderators remains sparse.

### **Future Directions**

As evidence continues to increase and implicate support-giving as a meaningful contributor to health, additional experimental research that manipulates opportunities to care for others will clarify why, how, and when supporting others does or does not benefit health. For example, given experimental findings on support-giving and depression (e.g., Li & Ferraro, 2005; Musick & Wilson, 2003, Zhang et al., 2025), support-giving interventions in additional clinical populations could be promising future directions, especially as traditional social support interventions involving the receipt of support do not always lead to change (e.g., Mehta et al., 2024). Whether the support-giving that occurs within relationships is applicable to additional health-relevant processes, such as health-related decision-making (Gonenne, Ferrer, & Inagaki, 2025) and health behavior change (Huelsenitz, Rothman, & Simpson, 2022), is an understudied but equally interesting direction for research on support-giving.

If the roots of support-giving behavior stem from care given to close network members (Bowlby, 1982; Solomon & George, 1996), it is possible that giving to close others might lead to more health benefits than giving to less close members. For one, opportunities to support long-term relationship partners, such as a child or romantic partner, appear repeatedly over a lifetime thus allowing one to reach the levels of support-giving that previous research suggests is needed to see effects on longevity (Brown et al., 2009; Chen et al., 2021; Luoh & Herzog, 2002; Roth et al., 2018). Such repeated support-giving behavior may also increase opportunities to connect and strengthen social bonds (Inagaki & Eisenberger, 2012; Inagaki & Ross, 2018; Yeung et al., 2025). Of note, neural evidence that the brain at rest nudges supportive behavior has only been measured with close others as the targets of support. Thus, it remains an open question as to whether the brain similarly nudges supportive behavior directed to abstract causes or strangers and how long such effects might last. Due to the significant public health relevance of social connection, this is worth further investigation and implementation. Even if giving to close others results in the greatest benefits, such an effect would not preclude benefits from arising from giving to strangers or abstract causes. For those lacking access to close others, for instance during advanced age, or in the case of social isolation, volunteering that occurs consistently and frequently appears to be a good alternative (Nichol et al., 2024).

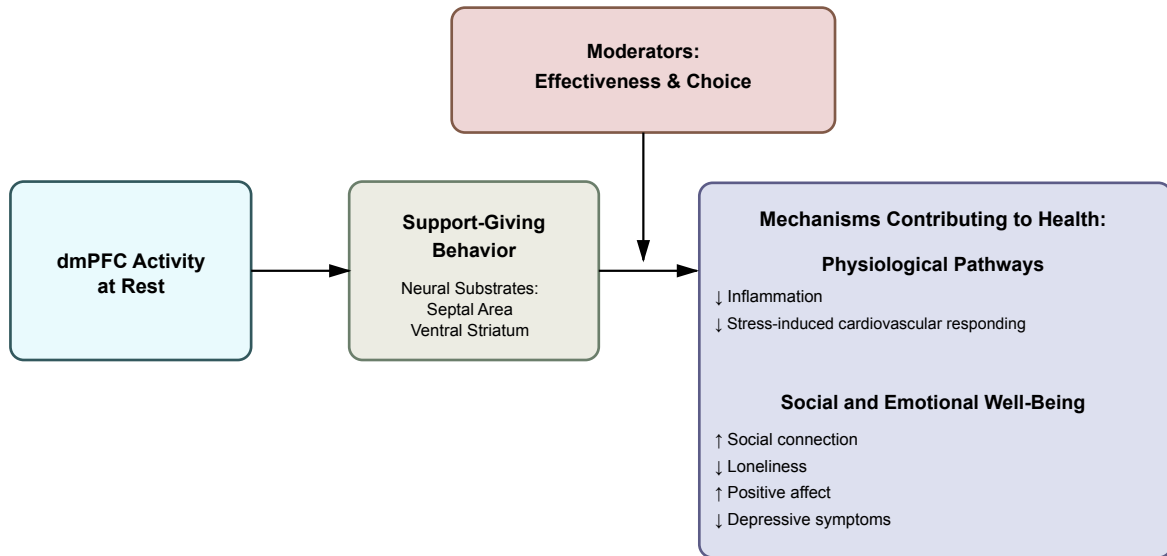
Interventions examining the effects of support-giving on both self-reported experience and physiological outcomes are also warranted to clarify mechanisms that contribute to the long-term health benefits of support-giving. In experimental research, support-giving does not alter self-reported stress (Inagaki & Eisenberger, 2016), and in some instances, giving may actually increase stress (e.g., caregiving strain, Perkins et al., 2013; Schulz et al., 1999). There are, however, more consistent benefits of support-giving on physiological outcomes (such as reduced

blood pressure and inflammation) and on positive self-report outcomes such as well-being.

Should it be the case that support-giving does indeed benefit health, but might sometimes still feel stressful, this would be an important take-away for future communication about support-giving. Rather than emphasizing how good someone should feel when giving to others, it might be more helpful to acknowledge that supporting others can be stressful or can produce negative feelings, even if the behavior ultimately still benefits health. Learning more about the factors that impact the benefits of support-giving can allow us to optimize the health benefits and tap into the helpful parts of supportive behavior.

### **Concluding Points**

Despite longstanding debates in psychology and related fields about the origins of people's giving nature and questions about why people act in supportive ways even when there are obvious costs to the self (e.g., Axelrod, 1981; Fehr & Fischbacher, 2003; Rand et al., 2012), humans spend time caring for others. The current perspective suggests that the default state is one that facilitates support-giving toward close others and therefore, that humans are built for such behavior and benefit when they do. With a growing empirical foundation showing that support-giving benefits health, additional large-scale intervention studies can help us to understand what mechanisms influence the link and aid in the development of models for feasible support-giving interventions that better public health. Ultimately, a solid understanding of how support-giving contributes to health provides a framework for harnessing individuals' natural giving inclinations to enhance well-being.



**Figure 1.** Why support-giving contributes to health. Spontaneous neural activity in the dorsomedial prefrontal cortex (dMPFC), even during momentary periods of rest, nudges support-giving behavior. Leaning into innate tendencies to give can result in benefits. Based on experimental evidence, support-giving behaviors (e.g., writing supportive letters, holding the arm of a partner in need, volunteering) can involve the engagement of the septal area and ventral striatum and lead to better health. Mechanisms to health include reductions in physiological correlates of poor health, such as decreased inflammation and stress-induced cardiovascular responding. Additionally, support-giving leads to increased social and emotional well-being, such as increased social connection, decreased loneliness, increased positive affect, and decreased depressive symptoms. Factors that may influence whether support-giving is health-beneficial include the perception of the effectiveness of the support and whether the giver feels they have the freedom of choice in their giving.

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