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The epidemiology of love: Historical perspectives and implications for population-health research

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ABSTRACT

Since the 1990s, research studies and theoretical work have made the case for altruistic and compassionate love as a psychosocial determinant of physical and mental health and well-being. Empirical findings and the deliberations of various conferences, working groups, and think-tank initiatives have laid the groundwork for a field that has been referred to as the epidemiology of love. This article provides a narrative history of this field, beginning with early work in psychology and in sociology. These precursors include decades of psychological studies of romantic, sexual, affectional, and interpersonal bonds, preceded by the work of sociologist Pitirim Sorokin in the 1950s detailing his taxonomy of the multiple aspects and dimensions of altruism and love. More recently, research at the intersection of altruism, love, spirituality, and human flourishing has emerged, including studies of physical and mental health. Currently, funded initiatives are developing applications of this research to global population health.

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Introduction

In 1998, a working meeting was held in Washington, DC, bringing together representatives from the foundation sector, the National Institutes of Health (NIH), and a small group of invited academic scientists, predominantly psychologists. Contributors were tasked with making presentations on respective 'classical sources of human strength,' another term for the classical virtues or those constructs falling under the rubric of what psychologists refer to as positive psychology and sociologists call prosocial behavior. Each presentation summarized the history of research on a particular construct, efforts at assessment and theory-building, and any evidence of health-related outcomes. The papers were subsequently published in a special issue of *Journal of Social and Clinical Psychology* (Snyder & McCullough, 2000). Alongside papers on hope, self-control, forgiveness, gratitude, humility, wisdom, and spirituality – constructs for which at least something of a research field existed – was a paper on what was termed 'the epidemiology of love' (Levin, 2000). By this phrase was meant the study of love as a psychosocial exposure construct or variable in relation to population-wide health outcomes: rates of morbidity, mortality, disability, and indicators of physical and mental health.

As with the other constructs summarized at the meeting, research on the population-health effects of love was conceived here as a subset of the larger domain of

psychosocial epidemiology. The latter is the branch of epidemiology that investigates exposures from among those constructs typically studied by psychologists, psychosomatic researchers, and other behavioral scientists (Kivimäki et al., 2018). As in the social and behavioral sciences generally, constructs of interest within psychosocial epidemiology are typically 'negative' in polarity, such as stress, Type A, loneliness, hassles, and so on. In recent years, however, as positive psychology has emerged within academic psychology and the study of prosocial behavior within sociology, interest in positive, other-regarding psychosocial constructs has begun to pique the interest of epidemiologists and scientists who conduct epidemiologic analyses (see, e.g., Levin, 2007; VanderWeele et al., 2020).

A well known example is the study of religious influences on population health and well-being. The idea of an 'epidemiology of religion' was first proposed in the 1980s (Levin & Vanderpool, 1987), and since then other such 'positive' constructs have been proposed as subjects for population-health studies. These include, for example, Type B behavior (Kaplan, 1992), the flipside of Type A; transcendent experiences (Levin & Steele, 2005); and, more recently, human flourishing (VanderWeele, 2017). These constructs, however, are yet to receive much traction among epidemiologists, which itself has a longstanding focus on negatively defined outcomes

and exposures. Into this narrative stepped the proposal of an epidemiology of love, in the broader context of altruistic and compassionate other-regard, and not limited to defining love primarily in the context of romantic and affectional behavior for which a strong literature has existed in psychology for several decades (Sternberg & Sternberg, 2019).

This paper traces the development of epidemiologic research on love, in the broader sense of loving other-regard across human domains, narrating its history from its earliest appearances in the social and behavioral sciences. An important caveat: this paper focuses on basic research on love using epidemiologic and other population-health methods, not on evaluative research of intervention studies or other applied research on clinical or public health programs seeking to enhance compassion or caring or altruism. That subject merits its own detailed review.

Telling this story serves to triangulate a variety of major players, primarily, but not exclusively, from the foundation sector and among private institutes funded by this sector. These include the John Templeton Foundation (JTF), the Fetzer Institute, the now shuttered National Institute for Healthcare Research (NIHR), the NIH's original Office of Alternative Medicine (OAM) (now the National Center for Complementary and Integrative Health), the Institute of Noetic Sciences (IONS), the Task Force for Global Health (TFGH), and the Institute for Research on Unlimited Love (IRUL), as well as academic researchers at several top-tier institutions, including Harvard, Baylor, Duke, Case Western Reserve, UNC, and elsewhere.

Research on love

In the article on 'Love' in Mircea Eliade's multivolume *The Encyclopedia of Religion*, the author, J. Bruce Long, noted, 'The concept of love, in one form or another, has informed the definition and development of almost every human culture in the history of the world – past and present, East and West, primitive and complex' (Long, 1987, p. 31). Love has been described, alternately, as 'a motivational force,' 'a substantive theme,' and 'a universally active potency' (p. 31). Not surprisingly, according to Long, multiple approaches to definition and conceptualization exist, grounded in (a) the nature of the object of love or affection, (2) the type of feeling or attitude involved, (3) the emotional arousal quality of the experience, and (4) the effects that are manifested in a loving relationship. He also notes that competing definitions of love and its antecedents and outcomes can be identified across the major faith traditions, including

in Confucianism, Taoism, Hinduism, Buddhism, Christianity, and Judaism. Religious scholarship on love within these traditions continues, such as a recent extended *d'rash*, or commentary, on Jewish biblical and rabbinic perspectives on loving God (Levin, 2015).

For at least half a century, psychologists have taken the lead role in sorting through these various competing conceptual and theoretical issues. The diversity in perspectives observed across cultures and religions is no less visible in the scholarly takes on this construct within psychology. One hoping for a definitive account on what love really *is* will find this elusive. In constructing this brief review of research, for example, a choice had to be made between (a) a more expansive or inclusive definition of love based on as yet unknown or unvalidated criteria or dimensions or (b) a more narrowly cast and pragmatic definition in which studies were selected on the basis of their referencing the word 'love' no matter the respective definition or specific context. The latter approach was taken, for the most part, sticking to the working definition of an other-regard which is self-described or modified by variations of the words 'love' or 'loving.'

The psychology of love

Psychological studies of love – or, rather, of a variety of constructs that authors have referred to as love – date to the 1950s. This work includes development of conceptual taxonomies of types or expressions of love, theoretical perspectives on love and its antecedents and outcomes, and a variety of measurement schemata and instruments. Throughout this literature, love has been defined by and expressed mostly as affectional interpersonal relationships and behavior, notably relating to romance, dating, marriage, sex, friendship, and parenting.

Conceptual work has laid out definitions and boundaries of love. These differentiate, for example, emotional vs. physical vs. intellectual love (Benoit, 1955), genuine vs. pseudo love (Fromm, 1956), being love vs. deficiency love (Maslow, 1962), love vs. liking (Rubin, 1970), romantic vs. conjugal love (Driscoll et al., 1972), compassionate vs. passionate love (Berscheid & Walster, 1978), and more. Theoretical writing has featured formulation of mid-range theories and models from various perspectives, including attachment theory (Bowlby, 1969), focusing on affectional bonds; triangular theory (Sternberg, 1986), emphasizing intimacy, passion, and commitment; and psychoanalytic theories (Solomon, 1955), positing stages of love. There have also been efforts to unpack broader meta-theoretical perspectives, such as

contrasting essentialist and prototype perspectives. The former distinguishes among characteristics such as romantic, parental, compassionate, and altruistic love (Hegi & Bergner, 2010); the latter differentiates types of love on the basis of dozens of competing emotions (Fehr & Russell, 1991).

Measurement approaches have included several unique scales and indices, such as the Love Scale (Rubin, 1970), containing 13 ladder items on romantic love attitudes; the Erotometer (Bardis, 1971), totaling 50 Likert items on heterosexual love; and the Love Component Scales (Critelli et al., 1986), which were a list of 63 Likert items on romantic love relationships. The most theory-rich and empirically studied measurement tradition was based on writing about love-styles (Lee, 1973), or the ‘colors of love.’ This approach differentiates six types of love: eros (romantic/passionate love), ludus (game-playing, serial love), storge (friendship, affection, companionship, familial love), mania (obsessive love, in love with being in love; conceived of as eros x ludus), pragma (rational, computer dating, arranged marriage; ludus x storge), and agape (selfless, altruistic love; eros x storge). Early operational versions of this approach included the SAMPLE (Laswell & Lobsenz, 1980), with 50 agree/disagree items; and the Love Attitudes Scale (Hendrick & Hendrick, 1986), with 42 Likert items. Throughout the 1990s, psychometric research focused on validating versions of these instruments, with mixed results (see, Hendrick et al., 1998). Detailed summaries exist of early work in this field (Sternberg & Barnes, 1988), and of research over the subsequent three decades (Sternberg & Sternberg, 2019).

Research on the psychology of love continues to the present. The field – its conceptual scope, theoretical diversity, and consideration of outcome constructs – has broadened and deepened. Among the most significant work of late has been research on love in the larger context of ‘positive interpersonal processes’ (Algoe, 2019) and ‘positivity resonance’ (Frederickson, 2016). This work, as well as continued conceptual development (Lomas, 2018, 2021) and efforts to link love and compassion to hard population outcomes such as morbidity or mortality rates (Ironson et al., 2018), has contributed to a better understanding of the psychological mechanisms by which social relationships impact on health.

In sum, the psychology of love literature by now has contributed over half a century of solid empirical research, including on occasion studies of health outcomes (e.g., Esch & Stefano, 2005; Traupmann & Hatfield, 1981), and it continues to make significant contributions to our knowledge of the antecedents and consequences of positive social interaction. As

this field evolves, it has become an exciting frontier for academic psychology. This is despite the apparent lack of consensus as to what love is, how it should be defined, and the identity of its components or characteristics. It remains, for psychology, that ‘no one has a single, simple definition that is widely accepted’ (Brehm, 1985, p. 90). We see this exemplified by the existence of an entirely distinctive perspective on love originating in sociology, predating work in the psychology of love, and with a substantially different conceptual and theoretical focus.

The sociology of love

Ground zero for the sociological study of love is the research and writing of Pitirim Sorokin at Harvard (see, Sorokin, 1963). A Russian expat, Sorokin is a major historical figure in sociology, having founded Harvard’s Department of Sociology in 1931. For decades, he produced significant works on the history of ideas and on sociological theory and gained a reputation as a maverick figure in the field, as well as perhaps its most expansive thinker. He especially focused on ‘macro’ trends in culture and civilization and, unlike others in his field, did not neglect the spiritual dimension of human social life (e.g., Sorokin, 1957).

In 1949, with funding from the Lilly Endowment, Sorokin established the Harvard Research Center in Creative Altruism. For the next decade, he sponsored conferences and research symposia, conducted studies, and published books and essays all on the topic of love. For Sorokin, love was something quite a bit more encompassing a construct than its usage, years later, in academic psychology:

Love is like an iceberg: only a small part of it is visible, and even this visible part is little known. Still less known is love’s transempirical part, its religious and ontological forms. For the reasons subsequently given, love appears to be a universe inexhaustible qualitatively and quantitatively. (Sorokin, 1950, p. 3)

In *The Ways and Power of Love* (Sorokin, 1954), Sorokin published a famous taxonomy of the types of love, in the form of an orthogonal matrix. Along one axis were the six ‘aspects’ of love, akin to domains: religious, ethical, ontological, physical, biological, psychological, and social. Along the other axis were the five ‘dimensions’ of love, more akin to traits: intensity, extensity, duration, purity, and adequacy. Sorokin’s taxonomy served as the basis of a measurement instrument to assess love, developed in the 1990s (see, Levin & Kaplan, 2010); more on this later.

In sum, whereas psychological research and writing on love is deep and diverse, focused on conceptual models and assessment related to interpersonal behavior and emotions, the sociological literature – Sorokin, mainly, and those who followed (see, Jeffries, 2005) – is more focused on something that could vaguely be termed ‘love,’ generally undefined, expressed across multiple human domains – social, cultural, religious – in ways that psychology is not. Within sociology, however, there has been little in the way of attention to broad conceptual and definitional issues and developing measures, in contrast to psychology.

Other approaches to love

Besides Sorokin’s sociological writing and the more recent studies by psychologists, the concept of love, generally left undefined or only fuzzily bounded, has been a popular topic among New Age authors, among researchers on complementary and integrative medicine, and in the large lay-oriented self-help literature. In the presentation of this topic, however, certain corners are often cut – conceptually, theoretically, methodologically – leading to misinterpretations of research evidence.

For example, the bestselling *Love and Survival* (Ornish, 1998) reviewed published studies that addressed neither love nor survival; the author primarily cited the long familiar (to social scientists) literature on social support and health. Over its various editions, different subtitles were used, including *The Scientific Basis of the Healing Power of Intimacy*, but the studies cited did not really address the construct of intimacy nor did they investigate healing; they were mostly population surveys of health outcomes. This is not a criticism of the scope of this outstanding book, nor of these excellent studies; the author did a fine job summarizing this work for lay audiences. It just has little to do, explicitly or implicitly, with love or with longevity or the healing of disease. This underscores the difficulties encountered in writing for popular audiences on constructs so emotionally laden and conceptually complex and thus easily misconstrued (e.g., love, healing, spirituality).

Toward an epidemiology of love: A narrative timeline

Beginning in the 1970s, research studies began appearing which pointed to love-related constructs or variables as correlates or predictors of physical and mental health outcomes. This work was published in psychology, sociology, medical, psychiatric, epidemiologic, and alternative medicine journals. The following review is

necessarily selective and does not impose a particular definition or conceptual model of love. What these studies have in common is simply explicit usage of the term love in describing the construct under study, whether or not one would have been better advised to use a different descriptor, such as prosocial behavior or positive affective bonds.

Another important note: from the perspective of epidemiology, for example, it really does not matter what one’s definition of love is – methodologically, any such definition can be accommodated, so long as it can be reliably and validly operationalized, quantified, and assessed. The effort here, as above in reviewing the psychological studies, is simply to provide an overview of early studies of health outcomes in which investigators promised to examine effects of something that they termed ‘love,’ or something close to it, whether or not they offered an explicit case definition, so to speak, with inclusionary and exclusionary criteria. These have included a number of fascinating behavioral and population studies of various clinical outcomes related to physical or mental health.

Behavioral research on love included a variety of experimental and observational studies. One study found that watching a documentary film about Mother Teresa led to an elevated concentration of S-IgA and for one hour in subjects asked to recall times in their life when they were loved (McClelland, 1986). Another study determined that experiencing love, defined as positive affect plus absence of social isolation, was associated with greater self-esteem in a sample of multiple sclerosis patients (Walsh & Walsh, 1989). In a fascinating experiment from the Institute of HeartMath, focused loving intentions produced greater entrainment of heart rate variability, pulse transit time, and respiration, indicative of exceptional self-regulation of internal states, in subjects unversed in biofeedback techniques (McCraty et al., 1993). Finally, loss of love was the strongest predictor of completed or attempted suicide behavior in a sample of hospitalized Japanese psychiatric patients (Hattori et al., 1995).

Population studies affirmed the generally salutary effect of love, defined in various ways. Love received from one’s wife was associated with a lower five-year incidence of angina pectoris (Medalie & Goldbourt, 1976) and duodenal ulcer (Medalie et al., 1992). A loving relationship with one’s parents was associated with a lower rate of cancer mortality (Thomas, 1976), and having received parental love in childhood led to less chronic disease morbidity in midlife due to coronary artery disease, hypertension, ulcers, and alcoholism (Russek & Schwartz, 1997). By contrast, adolescents reporting little

love for their parents were found to experience greater levels of psychological distress (Marinoni et al., 1997). Finally, affirming having '[q]uestioned God's love for me' predicted a 22% increased risk of two-year mortality among middle-aged and older hospitalized patients (Pargament et al., 2001).

In 1994, the present author received a small research grant from IONS to develop a multidimensional measurement instrument based on Sorokin's taxonomy of love for use in a study of health outcomes in an academic primary-care sample. The intent was not to validate what could be claimed to be a definitive measure of love, but rather to specifically operationalize Sorokin's concepts into indices suitable for use in empirical studies. The resulting measure was called the Sorokin Multidimensional Inventory of Love Experience, or SMILE (see, Levin & Kaplan, 2010, for the validated short version of the scale). Ironically, Sorokin himself probably would not have approved, being a strident skeptic of quantitative questionnaire research as a means to assess attitudes (Sorokin, 1956).

Among the findings, the most intriguing involved the subscale assessing what Sorokin termed religious love. In separate analyses, this index explained nearly 10% of the variance in both self-ratings of health status (Levin, 2001) and depressive symptoms (Levin, 2002) even after adjusting for effects of the usual sociodemographic variables, for health (in the case of depressive symptoms), and, importantly, for the other religious indicators included in the study. In other words, a loving relationship with God was associated with greater physical and mental health above and beyond the effects already known to exist for religiousness in general. Affirming that 'I feel loved by God' and that God's love is 'eternal' and 'never fails' was found to be a statistically and substantively significant correlate of indicators of physical and mental health.

In the years following this study, and greatly influenced by the emergence of contemporaneous research and writing on positive psychology (e.g., Seligman & Csikszentmihalyi, 2000), a series of invited meetings was held to address the potential of constructs assessing other-regarding virtues such as love for health research. At the 1998 conference described at the start of this paper, the organizers' goal was to begin summarizing conceptual and theoretical work on positive psychology constructs and to encourage the development and validation of measures. The event was held in Washington, DC, with funding from JTF and the Fetzer Institute and with observers present from the NIH, the OAM, the private-sector NIHR, and various other governmental and think-tank-sector organizations. All of the presenters sat around a large table,

each one assigned a particular construct. As noted, presenters were almost all psychologists, except for one sociologist (Duke's Linda K. George) and one epidemiologist (the present author). Most of the presenters were clear-cut choices for their respective construct, except for love, for which not much of a published research base existed, except for the literature on romantic and affectional behavior. Serendipitously, the president of NIHR, physician David B. Larson, knew about the IONS-funded study to create a Sorokin-based love scale, and so he recommended the author to the JTF and Fetzer organizers.

In the presentation on love, the construct was conceived of not solely as a psychosocial exposure variable, as in population research on other social and behavioral factors in chronic disease, but as possibly an 'agent' in the epidemiologic sense, borrowing a model most typically used in the study of transmissible infectious pathogens. Admittedly, this was a bit fanciful, but it drew on the presenter's professional background. Love, it was proposed, may not be just a psychological state or trait or attitude or behavior, but also perhaps a substantive *thing*, a 'mysterious energy' in the words of Sorokin (1958). No precise recommendations were made as to how love-as-a-salutogenic-agent might be studied, methodologically speaking, but the suggestion was offered in the spirit of the meeting in order to underscore how there may be distinct ways to understand what love 'is,' and thus there may be a variety of ways to investigate its influences on health and well-being. To be clear, the approach used in the SMILE analyses and in all subsequent research has been as a standard psychological or psychosocial construct.

Following the meeting, in 2000, the proceedings were published as a special issue of a clinical psychology journal, co-edited by psychologist Michael E. McCullough, Larson's former research director (Snyder & McCullough, 2000). The issue featured the presentation on love, entitled, 'A Prolegomenon to an Epidemiology of Love: Theory, Measurement, and Health Outcomes' (Levin, 2000). Subsequently, as Fetzer and JTF began planning to roll out research funding initiatives for some of the classical virtues, including forgiveness and spirituality, high on the list was love.

In 1999, JTF and Fetzer held a second meeting, in follow-up to the 1998 event, this one focused specifically on the theme of Empathy, Altruism, and Agape and held at the Massachusetts Institute of Technology. It sought to address the question: How does the giving and receiving of altruistic love interact with personal well-being and health? About 30 scholars in the sciences, theology, religion, and philosophy were brought together to

discuss ‘the big questions that can be studied focused on exemplary lives of spirituality and love’ (Post, 2016), and the proceedings were published as the edited book *Altruism and Altruistic Love: Science, Philosophy, and Religion in Dialogue* (Post et al., 2002).

In 2001, following the meeting, JTF decided to move forward in a big way with love. Through a multimillion-dollar grant, they provided the funding to establish IRUL, under the direction of bioethicist Stephen G. Post, at the time professor at Case Western Reserve University School of Medicine. Incorporated as a 501(c)(3), its primary goal was ‘to greatly increase awareness of the emotional and health benefits of love, both for those who give it and receive it, through innovative scientific investigations in lively dialogue with the many spiritual and moral traditions that at their best converge on this universal law of life – our individual flourishing is inextricably connected with our contributing to the lives of others’ (The Institute for Research on Unlimited Love, 2020).

Post created a board of seven research advisors, each covering a particular field or discipline, including sociology, psychology, biology, psychiatry, biomedical science, theology, and medicine and public health, the latter under the direction of the present author. In 2002, with JTF support, IRUL sponsored a research funding competition. In the medicine and public health category, 77 letters of intent were submitted, 21 full proposals were invited, and three research studies were funded. Set-asides were provided, as well, for research advisors to write book-length projects, resulting in many published works (e.g., Fricchione, 2011; Johnson, 2011; Levin & Post, 2010; McCullough, 2008; Oord, 2010).

Post remains to this day the most prolific academic writer on the subject of love, in any context, including in relation to human well-being. Among his important works are an edited bibliography on love (Post et al., 2003); a book on the concept of ‘unlimited love’ (Post, 2003); a classic review article on altruism and health (Post, 2005), cited over 1000 times; a bestselling popular book on the physical and mental health consequences of being good (Post & Neimark, 2007); an impassioned monograph on ‘Godly love’ (Post, 2008); and, most recently, a memoir on God, love, and human connectedness (Post, 2019).

An especially important contribution was an edited book entitled, *Altruism and Health: Perspectives from Empirical Research* (Post, 2007), featuring contributions from a couple dozen prominent social, behavioral, and medical scientists. One of the chapters proposed an integration of positive psychology with epidemiologic theory, with the aim of promoting the idea of a ‘positive psychosocial epidemiology,’ using population-health research on love as an exemplar (Levin, 2007). This idea

has been taken up and expanded upon most recently by epidemiologist Tyler J. VanderWeele and his colleagues at Harvard who called for a ‘positive epidemiology’ which considers the health impact of ‘positive health assets’ (VanderWeele et al., 2020, p. 189), and not just the impact of negatives states or statuses on rates of disease or death.

Another important contribution was an edited book entitled, *Godly Love: Impediments and Possibilities* (Lee & Yong, 2012). This volume grew out of the JTF-funded Flame of Love Project at the University of Akron, whose working definition of ‘Godly love’ was as ‘the dynamic interaction between divine and human love that enlivens and expands benevolence’ (Lee & Yong, 2012:ix). Here we see a coming together of a variety of themes, involving both vertical (divine) and horizontal (social, interpersonal) relations, as well as the possibility of inner (psychological) growth. Inclusive chapters reflected on these themes in a variety of settings and contexts, including among Pentecostals and with application to topics as far afield as self-actualization and criminology. Godly love was also taken up in *The Heart of Religion: Spirituality Empowerment, Benevolence, and the Experience of God’s Love* (Lee et al., 2013), which considered this construct as contributory to healing and self-transformation.

At present, research studies and theoretical essays on love and health, according to various definitions of love and various methodologies, continue to be published. These include efforts to promote love, in the broader sense of altruistic and compassionate other-regarding behavior, as a public health intervention (Levine & Cooney, 2018). This trend in applied research on love is based on the observation, backed by empirical research, that ‘actions that are motivated by love, care, compassion, helpfulness, and respect improve both actor and recipient well-being’ (Levine & Cooney, 2018, p. 87). Accordingly, there have been several excellent studies published of late in the *Journal of Positive Psychology* identifying significant love-related correlates or predictors of a variety of physical- and mental-health-related outcomes, such as happiness and life satisfaction (Lucas et al., 2019), less anxiety (Demorest, 2020), pain sensitivity (Williams et al., 2018), subjective well-being (Purol et al., 2021), and HIV survival (Ironson et al., 2018).

New developments

Perhaps the most significant development for the study of love in relation to health and well-being has been the newfound interest in the concept of human flourishing. Derived from the Aristotelian *eudaimonia* (‘happiness’ or ‘good spirit’), empirical research on human flourishing has

increased rapidly in just the past several years. As characterized by Aristotle, the concept is ‘something akin to happiness or perhaps the contemporary construct of well-being, although deeper and more multidimensional and with more existential and other-regarding features. Essential core components are character, wisdom, and balance, in service together to the common good’ (Levin, 2020b, p. 405). Human flourishing holds considerable promise as a framework capable of incorporating conceptual and theoretical consideration of loving other-regard as a potential exposure in relation to the physical and mental health of people and populations (Levin, 2021; VanderWeele, 2017; VanderWeele et al., 2019).

This synergy and potential can be seen in the recent funding by JTF of a project entitled *The Construct and Assessment of Love* housed within Harvard’s Human Flourishing Program. The project aims ‘to synthesize current knowledge, advance the field, and develop a new set of conceptually grounded measures . . . [that] will provide the foundation to initiate a formal epidemiology of love’ (John Templeton Foundation, 2021). Also significant is a new Baylor-Harvard-Gallup collaboration to conduct global population-health research on human flourishing. This latter project entails a broad perspective on positive virtues and psychosocial states/traits that may impact on health and prosocial behavior, including compassionate other-regard. These two research programs underscore the natural synergy and connection among the constructs of love, human flourishing, and spirituality as potential determinants of personal and population health and well-being. Another frontier for this work is the possibility that love is not just a primary-preventive factor, to use the language of public health, but also therapeutic. The possibility that love can heal illness – and not just prevent it – may be a worthy subject for experimental interventions and trials (see, Dossey, 2019).

In January, 2020, right before the pandemic began, the TFGH convened a working conference on the theme of *The Epidemiology of Compassion and Love*, inspired in part by the epidemiology of love paper cited earlier (Levin, 2000). Under the auspices of the TFGH’s Focus Area on Compassion and Ethics, the conference presenters and participants ‘explored how epidemiological methods could be applied to investigating the role of compassion and love at various levels of health care and global health work – from the individual patient or community member, to the health workers providing essential medicines, to the national health system’ (The Task Force for Global Health, 2020). Besides promoting further epidemiologic research on love, evaluative research on programs

promoting compassionate other-regard was identified as one of the most significant frontiers for research on the health of populations.

At the meeting, among the presentations was a summary of studies of love and health up to now, along with a proposed agenda to advance research on this subject (Levin, 2020a). Echoing themes also underscored by the other presenters, the most pressing agenda points were these:

1. Conceptual development, including validation of measurement instruments for use across nations, cultures, and religions.
2. Epidemiologic studies of loving (including altruistic and compassionate) beliefs, attitudes, and behaviors in relation to population rates of physical and psychological morbidity, through inclusion of love-related measures in national and global population surveys.
3. Applied research on loving and compassionate health policies that can be translated into public health programs and interventions to address significant population-health disparities, through expanded focus on applications to disease prevention and health promotion efforts and global health development.

Just as in the 1970s when social support entered into the conversation about constructs applicable to sociomedical research, and similarly to religion in the 1980s and 1990s, positive psychology in the 2000s, and human flourishing more recently, it is hoped that assessment of love, in its broader context, will become a normal and accepted part of social and behavioral research on health and illness. This would be a welcome development that further expands the scope of ‘positively’ oriented constructs within psychosocial epidemiology and, ideally, contributes to a greater understanding of those social and behavioral assets that promote the health and well-being of populations.

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