Social Support

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Social support is a network-based phenomenon and concept rooted in classic sociological work. Comte (1875 [1852], p. 314), who coined the term sociology, states that "all mental action depends on social support." Seminal work by Durkheim, Simmel, and Tönnies recognizes the importance of support from social ties. Despite the long recognition, social support was not given systematic research attention until the mid-1970s for its protective role for health (Caplan, 1974; Cassel, 1976; Cobb, 1976; Dean and Lin, 1977; Kaplan et al., 1977; Lin et al., 1979). Dean and Lin (1977: 408) foresee it as "the most important concept for future study." The five decades-long literature on social support is dominated by health topics and establishes social support as a "fundamental cause" of health (Link and Phelan, 1995; for reviews, see Crocker et al., 2017; Song, 2019; Song et al., 2011; Thoits, 2011; Turner and Turner, 2013; Uchino et al., 2012; see Figure 1).

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Despite its substantial popularity and voluminous development, "social support" still stimulates debates on its conceptualization and operationalization. It is confounded with other network-based concepts without clear differentiation. Its double-edged—protective and harmful—function for health has been given unbalanced attention. In comparison to its salubrious function, its deleterious function has received less scrutiny. Empirical results on its health returns are abundant but not always consistent. We begin this chapter by clarifying the definition and typology of social support. We then turn to its distinction from other network-based concepts, theorize their relationships with each other through a pair of competing theories (social resource versus social cost), and summarize empirical findings (Lin, 1983, 1986a, 2001; Song, 2020; Song and Pettis, 2020; Song et al., 2021). We further explain its double-edged function using this pair of theories, identify its diverse roles for health, and, for the purpose of generalizability and representativeness, selectively review studies of nationally representative data of the general population, unless noted otherwise. We conclude with future research directions.

Conceptualization of Social Support: Definition and Typology

Social support has diverse conceptualizations. Many of them suffer from two shortcomings that endanger its unique and broad theoretical value: lack of precision and functionalist health protection assumption (Song, 2019; Song et al., 2011). Imprecise definitions lead to broad, inconsistent, and invalid operationalizations and measurements, and mixed and inconclusive findings. Some do not explain the meaning of support

(Cassel, 1976; Lin et al., 1979). Some explain the meaning of support using more upstream (e.g., social interaction, integration, relations, ties, and bonds) or downstream (e.g., meaning) concepts (Caplan, 1974; Cobb, 1976; Pearlin et al., 1981; Thoits, 2011). Some constrain support to be a direct "interpersonal transaction" between one provider and one recipient (House, 1981; Kahn and Antonucci, 1980; Shumaker and Brownell, 1984) and ignore support chains involving indirect ties (Lin et al., 1978). Some nail down the nature of social support as an exchange (Shumaker and Brownell, 1984), and neglect the existence of nonreciprocal support (George, 1986; Rook, 1987). Some recognize only strong tie-based support or argue against social networks as support sources to include strangers as support providers (Lin, 1986a; Shumaker and Brownell, 1984; Thoits, 1995). Support comes from both strong and weak ties, and strangers (including those in cyberspace) exemplify extremely weak ties (Granovetter, 1995 [1974]; Lin et al, 1978; Wellman, 1981; Wellman et al., 1996; Small, 2017). Finally, some list a few types of support and neglect other types (Berkman, 1984).

The other shortcoming some definitions share is the functionalist health protection assumption, based on which social support is defined by its protective health effect, especially its stress-buffering role (e.g., Caplan 1974; Cobb, 1976; Cohen and McKay, 1984; House et al., 1988; Kaplan et al., 1977; Lin and Ensel, 1989; Pearlin et al., 1981; Shumaker and Brownell, 1984; Thoits, 1995). Some scholars hold this assumption partly because social support emerged as a post-hoc speculative explanation for the salubrious effects of relational factors found in human and animal studies in the 1970s, and partly because health scholars are primarily interested in disease prevention and health promotion. This assumption has four problems. First, it mixes social support with its

consequences and falls into the trap of functionalist tautology, which makes operationalization and measurement difficult and renders hypothesis testing impossible (Lin, 2001). Second, this assumption recognizes social support only when people have needs to meet and ignores its presence in other situations. People not looking for jobs can receive job information (Granovetter, 1995 [1974]; Lin and Ao, 2008). Third, this assumption simplifies the complexity and variability of social support and weakens its theoretical breadth and depth. Social support is a neutral concept. It is not always supportive or effective and sometimes is null and even harmful (Barrera, 1986; Turner and Turner, 2013). Furthermore, this assumption reserves the theoretical utility of social support only for health consequences and ignores its non-health consequences. It serves as a major mechanism, but the exact term "social support" is missing in some network-based theories (e.g., social capital, structural hole, and weak ties) on social stratification and economic sociology (Burt, 1992; Coleman, 1990; Granovetter 1995 [1974]).

A strict, neutral, network-based, and tie- and type-unbounded definition is required to overcome these two shortcomings. Based on the review, we favor the concise definition of social support as *the aid or help from social networks*. This definition narrows down social support to one specific operationalizable aspect of relational content, leaves the door open for its involved ties and complex typology, separates it from its preceding network-based determinants and other aspects of relational contents, eliminates the functionalist health protection assumption, and releases its full potential theoretical value for examining health and non-health outcomes.

Social support has multifaceted forms and is typologizable on at least six dimensions. In terms of its contents, it is emotional (liking, love, empathy), instrumental

(goods and services), informational (information about the environment), or appraisal (information relevant to self-evaluation) (House, 1981). In terms of role relationships, social support comes from kin versus nonkin or primary versus secondary group members (Dean and Lin, 1977; Kahn and Antonucci, 1980). In terms of tie strength, social support comes from strong (or close) versus weak ties (Granovetter 1995 [1974]; Lin et al, 1978; Wellman, 1981). In terms of its contexts, social support is routine (within an ordinary situation) versus nonroutine (within a crisis) (Lin, 1986c). In terms of its reality and virtuality, it is offline versus online (Drentea and Moren-Cross, 2005; Song and Chang, 2012; Wellman et al, 1996). In terms of its directions, it is receiving (flowing from network members or alters to individuals or egos), providing (flowing from ego to alters), or exchanging (flowing reciprocally between ego and alters) (House, 1981; Wellman, 1981). In terms of its subjectivity or objectivity, it is perceived versus objective (actual, received, or enacted) (Caplan, 1979; Barrera, 1986). Received support can be further typologized on two dimensions. In terms of its solicitation, it is solicited (sought and obtained) versus unsolicited (obtained without seeking) (Barrera, 1986; Eckenrode and Wethington, 1990). In terms of its visibility, it is visible or explicit versus invisible or unnoticed (Bolger et al., 2000; Thoits, 2011). A cross-tabulation following these typologies produces already 3,840 forms of support. In the rest of this chapter, we focus more on receiving support as providing and exchanging support is given less attention in the literature. We center on support from diverse alters. The literature on family support and caregiving is reviewed elsewhere (Roth et al., 2015; Umberson and Thomeer, 2020).

Distinction and Network Contingency of Social Support

The distinction between social support and other related network-based concepts is blurred. Some put social networks and social integration under the rubric of social support or subsume social support together with social networks, social cohesion, and social integration under the umbrella of social capital (Coleman, 1990; Elliott, 2000; Lin et al., 1999; Putnam, 2000; Roxburgh, 2006; Turner, 1999). Such entangled conceptualizations jeopardize the unique theoretical utility of these concepts and confound their causal relationships with each other.

The above rigorous definition of social support helps distinguish social support from other related network-based concepts (Lin, 2008; Song, 2011, 2019; Song and Lin, 2009; Song et al., 2010, 2011). A social network is "a specific set of linkages among a defined set of persons, with the additional property that the characteristics of these linkages as a whole may be used to interpret the social behavior of the persons involved" (Mitchell, 1969: 2). Social networks are not a theory but a perspective from which network-based theories and concepts are derived (Pescosolido, 2006a). Social cohesion is the degree of social bonds and social equality within social networks, indicated by trust, norms of reciprocity, and the lack of social conflict (Kawachi and Berkman, 2000; Sampson et al., 1997). Social integration is the extent of participation in social networks, indicated by engagement in social roles and activities and cognitive identification with alters (Brissette et al., 2000; Moen et al., 1989). Social capital is resources embedded in social networks, which can be operationalized as alters' resources or status (accessed status) (Lin, 2001). Among diverse theoretical approaches to social capital, we adopt

Lin's strict network-based approach to distinguish social capital from other network-based concepts (Burt, 2019; Song and Chen, 2021).

Conceived from a social network perspective, social support is separated from its structural contexts including the other three network-based concepts (House et al., 1988; Lin et al., 1999; Song, 2011; Song and Lin, 2009). In the theoretical causal chain (see Figure 2), social cohesion is most upstream followed by social integration, social capital, and social support. This chain can be theorized by extending a pair of competing theories or models: social resource versus social cost. Social resource theory emphasizes the protective function of social resources (resources embedded in social networks) (Lin, 1983, 1986a, 2001; Song, 2011, 2019; Song and Lin, 2009). To extend this theory, we expect the linkages between these four network-based concepts to be positive. The more cohesive the network norm, the more active ego's network participation, the greater the pool of alters' resources ego accumulates, and the greater the quality and quantity of social support alters are willing or able to provide. In contrast, social cost theory highlights the detrimental function of social costs (costs embedded in social networks) and predicts the linkages between these four network-based concepts to be negative (Song, 2020; Song and Pettis, 2020; Song et al., 2021). When the network norm of reciprocity becomes unbearably burdensome, ego's motivation in social integration decrease, and ego's accumulation of social capital and receipt of social support decline. Furthermore, from a longitudinal and life course perspective, network-based concepts are dynamic and their relationships with each other are dynamic and reciprocal over time (Dean and Lin, 1977; Fischer and Beresford, 2015; Perry and Pescosolido, 2012). The satisfying versus unsatisfying receipt and use of social support reinforce or undermine the

degree of social integration, the availability of social capital, and the strength of social cohesion.

<Figure 2 to be added here>

The literature on the network contingency of social support provides more evidence for social resource theory than for social cost theory. Social integration in general generates social support. As for perceived support, social integration (network size, number of face-to-face contacts, number of proximal ties, having a confidant relationship, and direct contacts with children, friends, and relatives) is positively associated with perceived instrumental and emotional support in a community study of older adults (Seeman and Berkman, 1988). Restricted (versus diverse) social network groups are negatively associated with perceived support among older adults (Harasemiw et al., 2018). The number of friends is positively associated with four types of perceived support, whereas results on the number of relatives and acquaintances are inconsistent (Lubbers et al., 2019). Both face-to-face and mediated contact are positively associated with perceived support (Patulny and Seaman, 2017). The frequency of church attendance is positively associated with perceived support from church members (Nooney and Woodrum, 2002). Network size generates no more perceived friend support after exceeding 13 friends among adolescents (Falci and McNeely, 2009). As for received support, people with bigger networks or higher degrees of social participation are more likely to receive unsolicited job information or seek health information from friends or relatives (Lin and Ao, 2008; Song and Chang, 2012). The frequency of church attendance

is positively associated with received support from church members among African American adults (Taylor and Chatters, 1988). The frequency of religious attendance is positively associated with 4 out of 13 types of received support and with the variety of received support indirectly via network size in a community of adults (Ellison and George, 1994). A community study measures perceived and received instrumental and expressive support and three indicators of social integration (participation in community organizations, the number of weekly contacts, and having an intimate relationship) (Lin et al., 1999). The first indicator of social integration is directly positively associated with received instrumental support and indirectly positively associated with all four types of support via its second indicator and with perceived and received instrumental support via its third indicator. The three similar indicators of social integration are all positively associated with four types of support in Taiwan (Son et al., 2008). Network size is positively associated with exchanging emotional support in a community study (Plickert et al., 2007).

The association between social capital (as accessed status) and social support depends on the routine versus crisis situations. Accessed occupational status is positively associated with the receipt of unsolicited job leads or perceived support (Lin and Ao, 2008; Verhaeghe et al., 2012). Accessed educational status is positively associated with seeking health information from friends or relatives (Song and Chang, 2012). Knowing people at the highest organizational levels is positively associated with received influence-conferring support but not with received task or personal support among employees of a company (McGuire and Bielby, 2016). Having more educated alters is negatively associated with received informal recovery support in two communities after a

hurricane (Beggs et al., 1996). Individuals with less education may possess disaster-relevant occupational skills.

The positive association between social cohesion and social support varies. Thinking of dense (closer ties between alters) versus sparse networks positively predicts perceived support in an experimental study (Lee et al., 2020). Dense networks are positively associated with perceived emotional (but not instrumental) support only among men in a community study (Haines and Hurlbert, 1992). Living in countries with more generalized trust is positively associated with perceived support from sources beyond family and friends, especially for the Roma, across 12 European countries (Sendroiu and Upenieks, 2020).

In addition, other network features (e.g., tie contents, role relationships, tie strength, homophily or heterophily, and physical access) also shape social support. In a community study, the average number of contents per tie decreases perceived instrumental support only for women, whereas the proportion of kin among alters increases perceived instrumental support only for men (Haines and Hurlbert, 1992). In another community study, parents and adult children offer more emotional aid, services, and financial aid; siblings supplement the provision of services; extended kin is least supportive and less companionable (Wellman and Wortley, 1990). Also, stronger ties supply wider support and offer more emotional aid, small services, and companionship; homophilous ties by employment status offer small services and financial aid; heterophilous ties by age provide small services; physically accessible ties tend to provide services. Same-faith ties are more likely to offer received support (Merino, 2014). Stronger ties are positively associated with three forms of received support among

employees of a company (McGuire and Bielby, 2016). A community study reports positive associations between giving and receiving three forms of received support (Plickert et al., 2007). Also, giving one type of support is associated with getting other types of support in turn. Being a neighbor, a parent, or an adult child is positively associated with exchanging support of major and minor services.

Social Support and Health

The double-edged health consequences of social support can be explained through the pair of competing theories: social resource versus social cost. Social resource theory dominates the social support and health literature. Based on the health protection assumption, it expects social support to protect health (Lin, 1983, 1986a, 2001). Possible psychosocial mechanisms include advancing status, enhancing healthy norms and lifestyles, decreasing stress exposure, reinforcing psychological resources and positive psychological reactions, improving access to health care, and boosting the immune system (Berkman et al., 2000; Lin, 1986b; Lin and Ao, 2008; Lin et al., 1979; House et al., 1988; Pearlin et al., 1981; Song, 2020; Song et al., 2021; Thoits, 2011; Uchino et al., 2012).

Social support also has detrimental consequences on which an integrative perspective is necessary but missing. The recently proposed social cost theory helps integrate our understanding of such consequences (Song et al., 2021). According to this theory, social support can damage health as detrimental social costs. Multiple psychosocial mechanisms are possible: the misfit between the attributes (e.g., amount, timing, source, and content) of social support and recipients' needs and situations;

recipients' negative perception of social support as unhelpful, unwanted, and even destructive especially when social support is miscarried by providers (e.g., overprotection, interference, and imposition); burdensome obligations for recipients to repay the help and upsetting over-reciprocating or over-benefiting exchanges; harmful upward or negative social comparison; reduced psychological resources and negative psychological feelings; stressful reactions and risky behaviors (Barrera, 1986; Bolger and Amarel, 2007; Coyne et al., 1988; Eckenrode and Wethington, 1990; Fisher et al., 1982; Rook, 1987; Shinn et al., 1984; Song, 2014; Song and Chen, 2014).

From a social causation perspective, social support plays four roles in the production of health: main/direct, indirect, mediating, and moderating or interaction effects (see Figure 2; Dean and Lin, 1977; House et al., 1988; Lin, 1986b; Lin and Ensel, 1989; Pearlin et al., 1981). First, as social resource theory and social cost theory respectively predict, social support adds a unique explanatory power to the etiology of health and protects or harms health directly net of other determinants. Second, it prevents or causes disease indirectly through the aforementioned psychosocial mechanisms. A pair of competing hypotheses (stress prevention versus stress induction) expect social support to protect or damage health through deterring or inducing the occurrence of stressors (Dean and Lin, 1977; Lin, 1986b; Lin et al., 1979; Pearlin et al., 1981). Third, social support acts as an intermediate factor linking its precursors to health. As mentioned earlier, some upstream network-based factors influence health via social support. A pair of competing hypotheses (support mobilization versus deterioration) expects stressors to trigger the mobilization of or weaken the availability of social support (Dean and Lin, 1977; Lin et al., 1979; Eckenrode and Wethington, 1990). Finally, social support interacts

with other determinants to mitigate or exacerbate their health effects. The most examined interaction-effect hypothesis is the stress-buffering hypothesis (Cassel, 1976; Cobb, 1976; Dean and Lin, 1977; Kaplan et al., 1977; Pearlin et al., 1981; Wheaton, 1985). Four matching propositions hypothesize the interaction between social support and the attributes of ties or recipients' purposes and needs. The tie-purpose matching proposition expects social support from strong and homophilous ties to improve expressive actions and that from weak and heterophilous ties to advance instrumental actions (Lin, 1983). The stressor-buffer matching proposition argues that different types of support buffer the effects of different types of stressors (Cohen and McKay, 1984; Cutrona, 1990). The source-type matching proposition states that significant others and experientially similar others provide different types of support to meet different needs (Thoits, 2011). The support-need matching proposition maintains that social support is protective when meeting recipients' needs but is less so or even harmful otherwise (Song and Chen, 2014).

From a social selection perspective, health influences the availability and activation of social support (Tausig, 1986; Pescosolido, 2006b; Thoits, 1995). There are two possibilities. On one hand, poor health may provoke the recognition and mobilization of social support because of higher needs for help. On the other hand, poor health may produce lower social support because of its constraint on social interaction.

The foregoing theories and hypotheses apply to receiving support. As for providing support, it protects health through fostering psychological resources, maintaining network ties, and improving immune functioning (Crocker et al., 2017; Krause et al., 1999). It can also damage health via various forms of costly burdens (e.g., social, financial, psychological, emotional, physical, and time) (George, 1986; Song et al.,

2021). As for exchanging support, it is protective when being reciprocal but less so or even harmful when being under-benefitting or over-benefitting (Rook, 1987).

Receiving support, especially perceived support, has been given most research attention and its diverse protective roles are well documented. Perceived support protects health independently. Perceived support from family, friends, and spouse protects against risks of inflammation (Yang et al., 2014). Perceived support from family and friends is consistently associated with self-rated health across 139 countries (Kumar et al., 2012). The positive effect of parent and friend support decay on depression is stronger than the negative effect of parent and friend support growth among adolescents (Cornwell, 2003). Perceived care from parents and friends reduces depression among adolescents (Carter et al., 2015). Perceived friend support increases the receipt of both flu vaccinations and cancer screenings among husbands, and wives' perceived friend support increases husbands' receipt of prostate cancer screening (Han et al., 2019). Perceived emotional and instrumental support is negatively associated with four forms of psychological distress (Ross and Willigen, 1997). Perceived emotional support has a direct protective effect on three health outcomes (Ferraro and Koch, 1994). Among community studies, two out of four types of perceived support enhance cognitive functioning among older adults, and perceived emotional support does so for women only (Pillemer and Holtzer, 2016). Perceived emotional support has a direct protective effect on three health outcomes (Ferraro and Koch, 1994). Perceived instrumental support from family, friends and the partner protects against postpartum depression (Reid and Taylor, 2015). Perceived support from family or friends lowers the mortality risk of men but not women among older Mexican Americans (Hill et al., 2016).

Perceived support also plays an indirect or moderating role. It indirectly reduces depression via decreasing economic strain and increasing mastery (Pearlin et al., 1981). It and support satisfaction buffer the stressor-depression relationship (Landerman et al., 1989). Perceived support from the spouse and friends buffers the depression effects of different stressors (Jackson, 1992).

Perceived support protects health both directly and indirectly. It reduces psychological distress directly for men and indirectly for women via mastery (Gadalla, 2009). Perceived emotional support from family and friends is negatively associated with the risk of undiagnosed and uncontrolled hypertension, respectively, partly via health care utilization among older adults (Cornwell and Waite, 2012). In a community study, mothers' perceived instrumental support is positively associated with children's overall health partly via mothers' economic security and well-being (Turney, 2013). In another community study, current support (the number of close friends, the number of close relatives, and received socioemotional and instrumental assistance) has a negative effect on current depression and an indirect effect on subsequent depression via current depression (Aneshensel and Frerichs, 1982).

Perceived support plays both main and mediating roles. It explains away the effect of religious participation on depression among adolescents (Petts and Jolliff, 2008). It partially positively mediates the effect of accessed status on self-rated health (Verhaeghe et al., 2012). Parents' perceived support is negatively related to the risks of two out of seven health problems and partly explains third-and-higher-generation racial/ethnic disparities in health among children (Hamilton et al., 2011). Perceived support from family and friends partly mediates the association between fertility

trajectories and depression (Grundy et al., 2020). The mediating effect of perceived support on the relationships between social network structures and depression varies by types of support and marital status among older adults (Harasemiw et al., 2019). Perceived care from peers, parents and teachers is all negatively associated with depression and mediates the effect of same-sex attraction and the same pattern applies to perceived care from parents and teachers in the prediction of suicidal tendencies among adolescents (Teasdale and Bradley-Engen, 2010). Perceived friend support is negatively associated with depression and mediates the ill effects of small but not large networks among adolescents (Falci and McNeely, 2009). Among community studies, neighborhood disadvantage decreases depression through enhanced perceived support (Kim et al, 2010). Adverse childhood experiences are positively associated with adult mental health impairment partly via lower adult perceived support (Jones et al., 2018). Perceived support from partners, relatives, friends, and co-workers has main negative effects on depressive symptoms and major depressive disorder and mediates some effects of gender, age, marital status, and socioeconomic status (SES) (Turner and Lloyd, 1999; Turner and Marino, 1994). Extraversion protects against depression only for persons who have forewarning of the spousal death with perceived emotional support from friends and relatives as a mediator among older adults (Pai and Carr, 2010).

Perceived support plays both main and moderating roles. It decreases depression and buffers the effect of community SARS exposure among older adults (Wang et al., 2021). Perceived support from family and friends protects mental health and buffers the effect of unemployment (Milner et al., 2016). In comparison to moderate support, high support is most protective of mental health among long-term immigrants, and low

support is most detrimental for recent immigrants (Puyat, 2013). Among community studies, perceived co-worker support has a negative effect on depression and is a stress buffer only for men, whereas perceived partner support exerts a negative effect on depression for both gender groups (Roxburgh, 2006). Companionship exerts a negative effect on distress and serves as a stress buffer (Haines and Hurlbert, 1992). Perceived emotional support reduces depressive symptoms and protects physical health, but only for residents of higher-SES neighborhoods (Elliott, 2000). Perceived emotional support from family, friends and the spouse or partner has a stronger positive association with physical health and self-reported health in Tokyo (a support-approving cultural context) than in the United States, especially for those facing more stressors and having low neuroticism (Park et al., 2013). Perceived instrumental and partner support reduces maternal depression and is a stress buffer (Manuel, et al., 2012).

Perceived support plays three protective roles simultaneously as reported in three community studies. It has a negative effect on depression, mediates some positive effects of marriage and education, and interacts in a complementary manner with the level of control (Ross and Mirowsky, 1989). Social support (community support, network support, confidant support, and instrumental-expressive support) decreases depression directly and indirectly via suppressing current stressors and mediates the effect of prior stressors (Lin, 1986b). It exerts a negative effect on psychological distress, mediates the effect of personality only for blacks, and has an indirect negative effect via personal control only for whites (Lincoln et al., 2003).

A few studies examine the protective impacts of both perceived and received support. When married adults experience stressors, perceived support has a negative

effect on psychological distress and received spouse support does so indirectly via perceived support (Wethington and Kessler,1986). In a longitudinal online study, received offline (rather than perceived online) support is positively associated with life satisfaction (Trepte et al., 2015). Perceived emotional support and received instrumental support exert negative effects on depression, perceived emotional support mediates the effect of bonding relationships, and received instrumental support mediates the effects of belonging, bonding, and binding relationships in a community study (Lin et al., 1999).

Receiving support also plays diverse detrimental roles. Perceived support from family and friends increases two out of six inflammatory markers in the United States but not in Taiwan (Glei et al., 2012). Perceived emotional support from friends increases the hazard of death (Yang, Sun, and Choi, 2020). Received support is negatively associated with depression, and God-as-a-problem-solver buffers and exacerbates the stressor-depression relationship respectively among those receiving low and high support (Rainville and Krause, 2020). Receipt of prayer is positively associated with depression for those with a low religious salience (Upenieks 2020).

The double-edged function of receiving support can co-exist. The association between receipt of unsolicited job leads and depression is more positive for those in better-off financial situations but less so or even negative for those facing more economic strains in the United States and this positive association is indirect through financial dissatisfaction in urban China (Song 2014; Song and Chen 2014). In contrast to the protective effects of support from parents and teachers, higher peer support increases depression among adolescents (Meadows 2007). Perceived instrumental and emotional

support and received emotional support from the spouse has negative effects on depression, whereas received emotional support has a positive effect (Son et al., 2008).

A few studies focus on older adults. Perceived support from family is negatively associated with cognitive functioning, partially mediates the effects of neighborhood attributes, and protects cognitive functioning for women but not for men (Lee and Waite, 2018). Perceived support (attachment, reassurance of worth, and social integration) has a positive association with mental health, whereas perceived support as reliable alliance does the opposite; perceived support as reassurance of worth has a positive association with physical health, whereas perceived support as attachment does the opposite (Stephens et al., 2011). Increases in received emotional support enhance cognitive performance partly via reduced loneliness, especially for much older adults, whereas increases in received instrumental support lead to worse cognitive functioning (Ellwardt et al., 2013). Perceived care support increases survival rates, whereas received financial and medical support does the opposite (Feng et al., 2015).

In comparison to receiving support, providing support and its double-edged health effects receive less attention. Providing emotional support is positively associated with self-reported health for both men and women, and also mediates the positive health effect of religious practice, but only for men, among the elderly (Krause et al., 1999). Providing tangible, informational, and emotional support is positively associated with depression indirectly through negative interaction (Liang et al., 2001). Providing financial and instrumental support is associated with worse health in central and southern Europe but not in northern Europe (Craveiro, 2017).

Finally, exchanging support affects health. Under-benefitting and over-benefitting are negatively and positively associated with depression, respectively (Liang et al. 2001). Reciprocal (versus under- and over-benefitting) instrumental (rather than emotional) support protects against risks of all-cause mortality (Chen et al., 2021). Receiving emotional support is positively related to depressive and somatic symptoms in over-benefitting exchanges but negatively in reciprocal exchanges (Nahum-Shani et al., 2011). A shift from reciprocal support to over-benefitting is positively associated with depression among women but negatively among men (Väänänen et al., 2008).

Conclusion

Scholars have made significant advances in exploring the substance and dimensions of social support, developing its diverse measurement instruments, and examining its diverse roles for health inequalities. Future research is still needed to achieve a more coherent and comprehensive understanding of social support.

Social support is a distinctive, neutral, network-based concept. It has diverse definitions, some of which lack precision, confound it with other network-based concepts, or limit its application to health outcomes. Rather than going as far as Barrera (1986) who proposes the abandonment of the general concept of social support, we suggest a rigorous strategy to define social support by its precise neutral nature (aid from social networks). This definition separates social support from its structural (especially network-based) preconditions and functional consequences, recognizes its values in bridging health and non-health research fields, and helps reduce the inconsistency in its measurements and empirical results (Song, 2019). This definition also helps enhance the application of

social network analysis to social support research. Social integration receives much more attention as a precursor of social support. Future studies should measure more diverse network-based concepts jointly and examine their relationships with each other in a causal sequence. One urgent task is to examine how divergent types of social support interplay with network-based antecedents. The caveat is that social support should be captured more accurately through aid-related rather than general network instruments.

Social support is an empirical concept. Its doubled-edge function in the production of health inequalities receives imbalanced attention and requires the combination of two theoretical concepts: social resource and social cost. Social resource theory has been well examined and widely confirmed. A huge body of literature demonstrates the protective function of social support. In contrast, its detrimental function is examined and demonstrated in fewer studies. Social cost theory can help synthesize and integrate its adverse consequences. The two theories will form a balanced and comprehensive framework and stimulate future research to examine simultaneously the double-edged consequences of social support. “When one looks only for supportive ties, one finds only supportive ties” (Wellman, 1981: 179). Similarly, when one looks only for protective support, one likely finds only protective support.

Social support is a multidimensional concept. There is a bigger literature on receiving support than on providing or exchanging support. Within this literature, there are more studies on perceived than received support, on emotional and instrumental than other contents of support, and on support from family and friends than that from other alters. Different kinds of support come from disparate network-based preconditions. Perceived and emotional support has more consistent explanatory power in the prediction

of health, especially mental health. Unsolicited support and over-benefitting exchanges are promising directions for us to disentangle the mixed health consequences of received support. Considering the inconsistent results, various types and measures of support from diverse types of alters need to be simultaneously subjected to empirical examination to distinguish their different network-based antecedents and compare their health effects.

Social support is more than a stress buffer and plays diverse roles for health inequalities from the social causation perspective: main/direct, indirect, mediating, and moderating. Its main and moderating roles receive more attention than its mediating and indirect roles. There is more confirming evidence on its main role. It interacts with not only diverse forms of stressors but also various psychosocial factors (e.g., age, gender, immigration status, SES, religious belief, subjective well-being, neighborhood and societal contexts, personality, and psychological resources). It mediates the effects of many psychosocial factors (e.g., age, gender, sexuality, race/ethnicity, marital status, upstream or precedent network attributes, stressors, well-being, personality, and psychological resources). It affects health indirectly via diverse pathways (e.g., neighborhood attributes, social interaction, social support at later times, stressors, subjective well-being, psychological resources, and health care utilization). Future studies should explore these roles simultaneously. The aforementioned matching hypotheses need systematic examination. More cross-society comparative research is also needed to clearly map the institutional contingency of the social support-health relationship.

Finally, social support is dynamic over time. The majority of empirical studies are cross-sectional. Their results are subject to questions in terms of robustness and causality. How social support and its changes may be in reciprocal causal relationships with the

changes of other network-based terms remains underexplored. The social selection perspective or how health influences social support also receives limited attention. Refined longitudinal national research designs are needed to disentangle the complicated causality puzzles.

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Figure 1. Journal articles with “social support,” and “social support” and “health” in topic (Social Sciences Citation Index, 1900-2021)

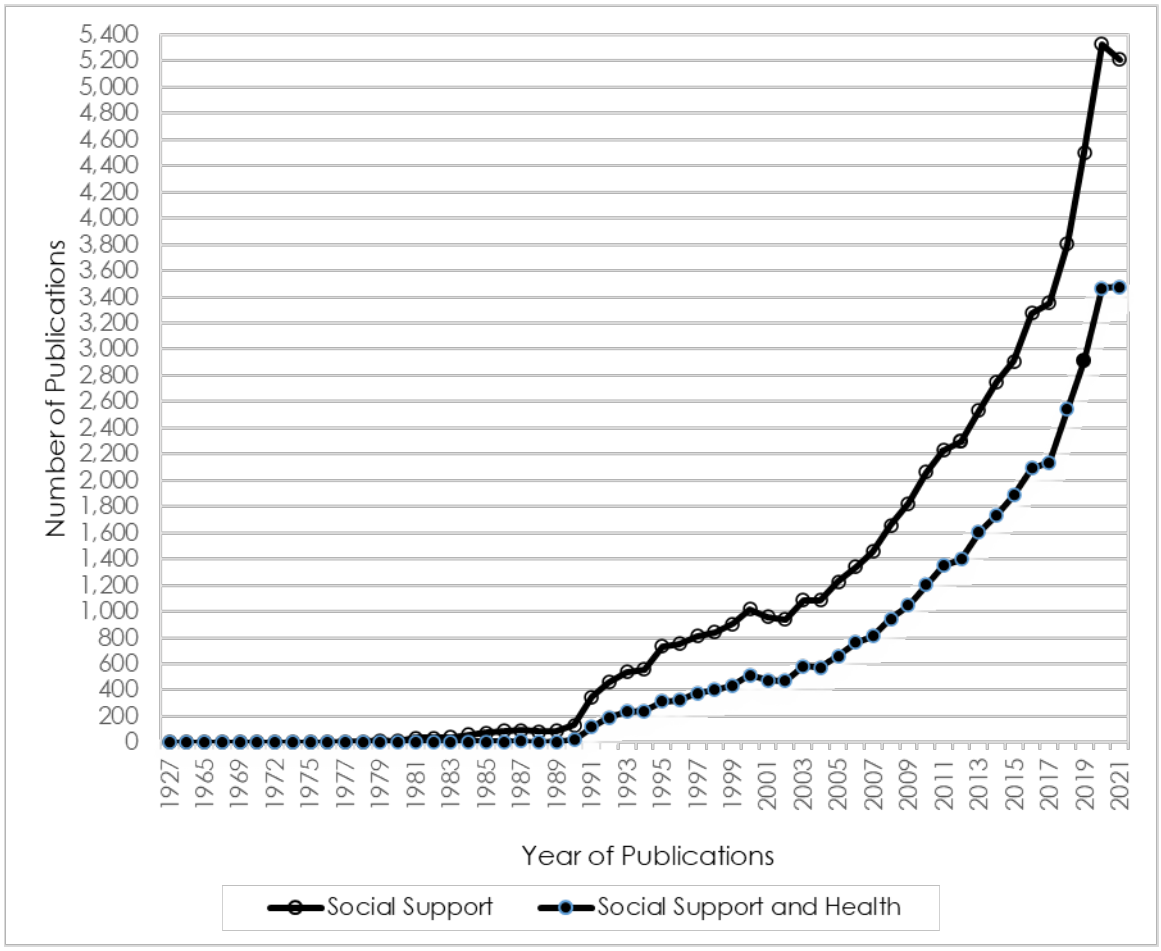

Figure 2. A conceptual model of the diverse roles of social support