Social support interventions  
Do they work?  

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Abstract  

Presence of support has repeatedly been linked to good long-term health outcomes based on demonstrations of better immune function, lower blood pressures, and reduced mortality (among others). Despite a massive literature on the benefits of support, there is surprisingly little hard evidence about how, and how well, social support interventions work. Using a computerized search strategy, 100 studies that evaluated the efficacy of such interventions were located. The presenting problems ranged from cancer, loneliness, weight loss, and substance abuse to lack in parenting skills, surgery, and birth preparation. For the purpose of review and evaluation, studies were subdivided into (1) group vs. individual interventions, (2) professionally led vs. peer-provided treatment, and (3) interventions where an increase of network size or perceived support was the primary target vs. those where building social skills (to facilitate support creation) was the focus. On the whole, this review provided some support for the overall usefulness of social support interventions. However, because of the large variety of existing different treatment protocols and areas of application, there is still not enough evidence to conclude which interventions work best for what problems. Specific methodological and conceptual difficulties that plague this area of research and directions for future research are discussed. © 2001 Elsevier Science Ltd. All rights reserved.

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1. Introduction

The past two decades have seen an eruption of research on social support. Studies have repeatedly demonstrated a link between low levels of social support and poor mental and physical health outcomes (Berkman, 1985; Bloom, 1990; Cohen, 1988; House, Landis, & Umberson, 1988) and have subsequently fueled the development and evaluation of interventions designed to improve social support for those bereft of this resource. Such interventions have taken many forms and have targeted highly variable populations. Unfortunately, at this time, there is no consensus as to the most effective form of intervention or whether certain interventions are better suited to particular populations. It is not even clear whether social support interventions (as designed in the past) are actually successful at improving support, especially as perceived by the client (Lakey & Lutz, 1996). Given that no published review is available elsewhere, the primary objective of this paper is to provide some order to this expansive, but confusing, literature by classifying the interventions in a manner hopefully useful to both researchers and practitioners. The studies within each grouping are reviewed and the methodological problems highlighted. A further objective is to review the difficulties in translating social support research into effective interventions.

2. What is “social support”?

Social support has been conceptualized in many ways. Highlighted features are the structural aspects of social networks (e.g., the size of a person’s social circle or the number of resources provided), functional aspects of social support (e.g., emotional support or a sense of acceptance), and enacted support (e.g., provision of specific supportive behaviors, such as reassurance or advice, in times of distress), as well as the subjective perception of support by the recipients (Cohen, 1988; House et al., 1988; Lakey & Lutz, 1996). Support has been defined in a more interpersonal light as an exchange between providers and recipients. Three main types of supportive social interactions have been described: emotional, informational, and instrumental (Antonucci, 1985; House & Kahn, 1985; Kahn & Antonucci, 1980). Emotional support involves verbal and nonverbal communication of caring and concern and is believed to reduce distress by restoring self-esteem and permitting the expression of feelings. Informational support, which involves the provision of information used to guide or advise, is believed to enhance perceptions of control by reducing confusion and providing patients with strategies to cope with their difficulties. Instrumental support involves the provision of material goods (e.g., transportation, money, or physical assistance) and may also help decrease feelings of loss of control.

The concept of social support is at times confused by the notion that support can emerge from both natural and more formal support systems. Natural support systems include both family and friendship networks. More formal support is provided by professionals (such as mental health and medical professionals, through self-help of individuals with similar problems) and through social or community ties (such as clubs.
or religious groups). Presumably, natural support networks are a more enduring source of support, while other forms of support may be more transient. However, whether one or the other is a superior source of support is not clear. How support is conceptualized and operationalized within an intervention may be critical in determining the ultimate success of that intervention.

3. Sampling method

Review material was drawn from computer searches of the Medline and PSYCinfo systems for the complete years of 1970–1999 and the first 7 months of 2000, as well as from searches of secondary sources (e.g., references cited in papers identified with the first search strategy). In both Medline and PSYCinfo, searches were performed using the keywords “social support and intervention,” “social support and treatment,” and “social support and therapy.” This produced a total of 3610 references in Medline and 3669 references in PSYCinfo with considerable overlap in references between the sources. More specific searches using combinations of the keywords “social support,” “support,” “intervention,” “therapy,” and “treatment” were also conducted in each system. A total of 848 references in Medline and 405 (largely overlapping) references in PSYCinfo were identified. The majority of the references was eliminated because they did not test intervention efficacy. The search was then narrowed to include only studies that specifically stated that the improvement of social support was a goal of treatment. Studies were excluded if descriptions of the intervention were insufficient to allow categorization. Studies were also excluded if efforts to improve social support were only one component of a larger treatment of program. Such studies make it impossible to draw conclusions regarding the efficacy of the social support component of treatment. Since the search was not limited to a particular patient population, the interventions reviewed span a wide range of populations, including the elderly, those suffering from medical illnesses, psychological disorders, women during labor, smokers, and so on. Unfortunately, due to the paucity of studies in this area with superior research designs, it was necessary to also include studies without randomized, controlled research designs. Studies that did not report inferential statistics were excluded, unless they utilized an innovative intervention strategy. Unfortunately, many studies did not provide pre–post measures of social support, although they targeted improvement in this variable. Because these studies are conceptualized as social support interventions, they will be reviewed, but there are clear limits on the interpretability of the results of such studies because they fail to reveal whether presumed mediating changes in social support account for changes in other outcome variables.

This selection strategy resulted in the inclusion of a total of 100 studies. The review is primarily narrative in nature for several reasons. The wide range of different social support interventions and targeted populations prohibited evaluation of treatment outcome using meta-analysis. The problem of pooling “apples and oranges” — different disorders, therapies, and client populations — in meta-analysis has been discussed in detail by Eysenck (1978) and Wilson (1985). Furthermore, many of the studies were plagued by notable design
flaws (which will be discussed); thus, a meta-analysis would potentially lead to a distorted picture of social support intervention effectiveness (as discussed by Wilson).

4. Categorization of social support interventions

Social support interventions vary in several important ways. A categorization scheme for the different interventions was devised in order to most effectively present and evaluate outcomes. To do this, a series of meetings of faculty, graduate students, and research assistants familiar with the relevant literature was organized. It was ultimately decided that a three-tier classification scheme would be most useful. A small group of graduate students independently tried out this classification scheme on a subsection of the papers. The high interrater correlations that resulted suggested that the system was reliable. The three subtypings are described in detail below.

Firstly, interventions clearly differ in whether a *group* or *individual* treatment format is utilized. This distinction is important for several reasons. At present, it is unclear whether group or individual support is more effective. Additionally, as group formats tend to be the more cost- and time-effective option, determining their usefulness is important to the real-world implementation of such programs.

Secondly, close attention was paid to how support had been conceptualized by identifying whether a given intervention was targeted at directly providing support (e.g., providing emotional, informational, or instrumental support, or increasing enacted support) or whether it attempted to produce enduring changes in naturally occurring support (e.g., developing or improving social skills so that support is increased in the natural environment, implementing strategies to improve perceived social support, or making changes in social networks). These two different approaches have very different conceptual underpinnings. Support provided by others is believed to strengthen coping resources, render a sense of being supported, and ultimately lead to a reduction in psychological or general health symptoms (Lakey & Lutz, 1996). On the other hand, interventions targeted at training social skills or improving the naturally occurring social environment are based on the belief that people can create and maintain support systems (or their perception of the support received from these systems) if they acquire the necessary skills. The resulting improvements in support are assumed to improve health and well-being.

Finally, it is important to determine the source of the support within a given intervention. This is most applicable to interventions focused on providing support. Support provided by a family member or friend and by other persons with similar difficulties (here on in entitled ‘peers’) will be discriminated from support provided by a professional caretaker (i.e., medical professional, psychologist, nurse, or social worker). Other interventions may not specifically provide support from a certain source but may work to increase the support received or perceived in the participant’s natural environment.

Within each of the above categorizations, several specific questions are asked. Are social support interventions within the specific “category” effective? If so, what kind of effects (i.e., psychological or health outcome) are observed? Are effects maintained over the long term? If
mixed results are observed, we discuss possible reasons for intervention success vs. failure. Any methodological problems that limit the interpretability of the studies are discussed.

4.1. Group interventions

4.1.1. Group interventions that provide support through family and/or friends

Support interventions that include family members or friends in treatment have the benefit of using the patient’s natural support system. There are numerous studies that have investigated the efficacy of social support interventions that include family members or friends in a group setting (see Table 1).

For the eight studies reviewed here, the inclusion of a family member or friend as a source of support was an adjunct to an existing treatment for a specific problem. Benefits from the core treatment were observed in all eight studies. Three studies reported additional gains attributable to the inclusion of significant others in the interventions (Blanke et al., 1990; McNabb et al., 1989; Wing & Jeffrey, 1999) while two others failed to do so (Nyamathi et al., 1998; Wilson & Brownell, 1978). Even positive outcomes, however, tended not to be stable over time (Brownell et al., 1978; Radojevic et al., 1992; Rosenthal et al., 1980). Seven out of the eight studies did not include a measure of support. The studies that reported significant improvements were not without serious flaws. For example, one of the treatment conditions assessed by McNabb et al. (1989) involved treatment of the spouse for coalcoholism. This group and the intervention were likely qualitatively different than the other treatments and comparisons may have been inappropriate.

Most of the above studies evaluated interventions that primarily involved behavioral training of the family member or friend or simply inclusion of the family member or friend in therapy. The exception to this pattern is the recent study by Wing and Jeffrey (1999), who tested a more comprehensive support intervention that included intragroup activities, alternating providing and receiving support, group problem solving, and an intergroup competition. The support intervention was evaluated with friends recruited by the participants, as well as with teams of three other people the participants had not previously met. Of the studies reviewed in this section, this was the only one to include a social support measure, revealing that the support manipulation improved the maintenance of weight loss for those recruited with friends and those who were not. Interestingly, addition of support strategies had the strongest influence on those recruited alone, perhaps because those recruited with friends already had high levels of support within the group at baseline. This study indicates that support from friends is more beneficial than support from previously unknown persons when used in conjunction with behavior therapy for weight loss. Furthermore, success of this intervention may indicate that more comprehensive social support treatment protocols may be useful and that alternating between receiving and giving support may be most beneficial.

An argument can be made that involvement of the spouse might be especially helpful. However, the findings reviewed here do not clearly implicate spousal involvement as superior to either other family member or friend involvement. The complexity of marital relationships and the fact that they can be a major source of stress as well as support must be considered. Hagedoorn et al. (2000) assessed three ways of providing spousal support to cancer patients
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<tr>
<td>Blanke, Stanek, and Stacy (1990) — 22 employees of a large corporation</td>
<td>Education with spouse support (spouses attended eight sessions with employee).</td>
<td>Random assignment to educational program with or without spousal support.</td>
<td>No</td>
<td>Both groups showed improvement in nutritional knowledge. Support group had significantly greater decreases in dietary cholesterol, saturated fat, and calories.</td>
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<td>Brownell, Heckerman, Westlake, Hayes, and Monti (1978) — 29 overweight men and women</td>
<td>Cooperative spouses included in 10-week BT for obesity; taught modeling skills and to give emotional/instrumental support.</td>
<td>Assigned to either (1) BT with spouse training; (2) cooperative spouse, BT alone; or (3) noncooperative spouse, BT alone; 3- and 6-month follow-ups.</td>
<td>No</td>
<td>No significant differences in weight loss at posttreatment; participants in BT with spouse training lost significantly more weight at follow-ups than other groups.</td>
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<td>McNabb, Der-Karabetian, and Rhoads (1989) — 80 participants hospitalized for alcoholism</td>
<td>Varying degrees of spousal involvement in treatment.</td>
<td>Nonrandomly assigned, based on spouse participation, to either (1) one to three therapy sessions/week; (2) four or more therapy sessions/week; or (3) spouses received coalcoholism treatment; 6-month follow-up.</td>
<td>No</td>
<td>Strong association between level of spousal involvement and abstinence at follow-up.</td>
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<tr>
<td>Nyamathi, Flaskerud, Keenan, and Leake (1998) — 241 homeless and drug-addicted women</td>
<td>Inclusion of a supportive person (selected by the participant) in treatment.</td>
<td>Randomly assigned by shelter to either (1) AIDS education, alone; (2) AIDS education, with support; (3) specialized AIDS education (traditional education + coping enhancement strategies), alone; or (4) specialized AIDS education, with support.</td>
<td>No</td>
<td>Significant differences in risk behaviors, cognitive factors, and psychological functioning observed across all groups. Participation of a supportive person did not have an effect on any of the outcome measures administered.</td>
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<td>Authors</td>
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<td>Radojevic, Nicassio, and Weisman (1992) — 59 RA patients</td>
<td>Family member included in treatment. Education about how RA affects the family. Behavioral skills taught to help family assist in pain coping and increasing functioning.</td>
<td>Randomly assigned to either (1) CBT + family support, (2) CBT alone, (3) education and family support, or (4) no-treatment control; 2-month follow-up.</td>
<td>No</td>
<td>CBT groups had significantly greater improvement in physical symptoms at posttreatment and follow-up than other groups. CBT + family support superior on swelling measures at posttreatment but was the same as CBT alone at follow-up.</td>
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<td>Rosenthal, Allen, and Winter (1980) — 43 overweight women</td>
<td>Varying degrees of husband involvement in 8-week BT for obesity; taught behavioral techniques and to give emotional/instrumental support.</td>
<td>Random assignment to full husband involvement, partial husband involvement (four sessions) or no husband involvement; 3-year follow-up.</td>
<td>No</td>
<td>Significant weight loss in all groups. Husband involvement groups showed greater weight loss and better husband helpfulness than no-involvement groups at posttreatment, but not follow-up. No significant differences in weight loss at posttreatment or follow-ups.</td>
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<td>Wilson and Brownell (1978) — 32 overweight women</td>
<td>Relatives included in 8-week behavioral self-control therapy for obesity; taught behavioral skills and to give emotional/instrumental support.</td>
<td>Random assignment to family member present or family member absent conditions; 3- and 6-month follow-ups.</td>
<td>No</td>
<td>No significant differences in weight loss at posttreatment or follow-ups.</td>
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<td>Wing and Jeffrey (1999) — 166 overweight men and women</td>
<td>Intragroup activities (e.g., working on assignments), providing and receiving support, group problem-solving, and an intergroup competition; recruitment strategy of involving friends in treatment.</td>
<td>Random assignment to one of four conditions: (1) recruited alone, BT; (2) recruited alone, BT + social support intervention; (3) recruited with three friends, BT; (4) recruited with three friends, BT + social support intervention; 4- and 10-month follow-ups.</td>
<td>Social Support Scales for Eating and Exercise Behavior (Sallis et al., 1987)</td>
<td>Support intervention showed significant improvements in perceived support. Most effective for those recruited alone. Participants in (4) more likely to finish treatment and maintain weight loss at 10-month follow-up than other groups; participants in (3) and (4) had greater weight loss at follow-ups than those recruited alone.</td>
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<td>Authors and sample</td>
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<td>Hinrichsen et al.</td>
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<td>(1985) — 57 adults and 57 adolescents with scoliosis; 142 parents</td>
<td>Peer support groups; an opportunity to receive and provide support with others in similar situations.</td>
<td>Cross-sectional; extensive survey questionnaires sent to members of scoliosis self-help groups and to nonparticipants who had inquired about, but not joined, peer support groups.</td>
<td>Three-item global measure of support&lt;sup&gt;a&lt;/sup&gt;</td>
<td>No significant differences in social support. Scoliotic adults and parents of scoliotic adolescents reported satisfaction with the groups’ provision of emotional support, information, and helping opportunities.</td>
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<td>Humphreys and Noke</td>
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<td>(1997) — 2337 male veteran substance abuse inpatients</td>
<td>12-step peer support group programs; opportunity to provide and receive support with those in similar situations.</td>
<td>1-year longitudinal design. After intake, social network, social network influence, and posttreatment involvement in peer support groups were followed.</td>
<td>Life Stressors and Social Resources Inventory (Moos &amp; Moos, 1994); Social Network Social Influence Scale (Collins, Ement, &amp; Zywiak, 1990)</td>
<td>After controlling for baseline support, peer support group involvement predicted having social networks with more close friends, more frequent contact, higher overall quality, and lower support for substance abuse than at intake.</td>
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<td>Humphreys et al.</td>
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<td>(1999) — Same as above</td>
<td>Same as above.</td>
<td>Same as above; 1-year follow-up.</td>
<td>Same as above.</td>
<td>Support group involvement predicted reduced substance use at follow-up. Structural equation modeling indicated enhanced social networks and increased active coping responses mediated effects.</td>
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<td>Study</td>
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<td>Intervention</td>
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<td>Jones (1992) — 77 women who expressed an interest to join an eating problems self-help group</td>
<td>Two self-help groups (women with bulimia and compulsive eating habits). Leaders led two meetings to provide structure. Manuals provided. Met 2.5–3 h weekly. Leaders attended every 3 months.</td>
<td>Women were assigned to appropriate self-help group depending on their symptoms. Followed for (at least) 12 months.</td>
<td>No</td>
<td>20% of bulimic women improved, compared to 50% of women with compulsive eating problems. All women remaining in the groups for 12 months or more improved. 86% of women who remained in groups for over 6 months improved.</td>
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<td>Maton (1988) — 144 participants from three self-help groups</td>
<td>Peer support groups; opportunity to give and receive support with similar others and relieve acute and chronic stress (Compassionate Friends, MS Groups) and to teach behavioral control (Overeaters Anonymous).</td>
<td>No control group; within-group analysis of relationship between social support and well-being, group appraisal.</td>
<td>Measure of support provided, received, and bidirectional support&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Providing support positively related to well-being and group appraisal; receiving support positively related to perceived benefits and group satisfaction; bidirectional supporters reported more favorable well-being and group appraisal than receivers or providers.</td>
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<td>Rathner et al. (1993) — 15 bulimic women (10 attenders, 5 nonattenders)</td>
<td>Guided self-help group. Initial meeting held by two professionals; afterwards attending meetings once a month and upon request. Manual provided. At least 15 months of meetings.</td>
<td>Ten women who decided to attend the self-help group made up the treatment group and five women who decided not to attend the self-help group made up the control group.</td>
<td>No</td>
<td>After 15 months, five attenders no longer met criteria for bulimia nervosa. Three nonattenders improved to subclinical level. Only attenders showed improvement in drive for thinness, bulimia, depression, and psychosocial adjustment.</td>
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<sup>a</sup> Measure designed by authors; no information psychometrics provided.  
<sup>b</sup> Preliminary validation information provided.
in a cross-sectional study. Active engagement (i.e., involving the patient in discussions and using constructive problem-solving methods) was found to be positively associated with marital satisfaction, especially for those patients with poor psychological and physical condition, whereas protective buffering (i.e., hiding one’s concerns) and overprotection (i.e., unnecessary help and excessive praise for accomplishments) were negatively associated with marital satisfaction for those with high levels of psychological or physical impairment. These results highlight the complexity of marital relationships and clearly indicate that targeting and assessing ways in which support is provided may be important in determining whether or not particular forms of support (e.g., emotional or instrumental) are beneficial. This is a potential direction for future research.

4.1.2. Group interventions that provide support through peers (self-help groups)

Peer support or ‘self-help’ groups constitute a large portion of the health services system (Maton, 1988). In the United States alone, 3–4% of the population is involved in self-help groups over a 1-year period (Kessler, Mickelson, & Zhao, 1997). Self-help groups provide an arena within which participants can both provide and receive support (most often emotional support) and this reciprocity is hypothesized to foster more favorable well-being (Maton, 1987). Furthermore, peer support groups provide members an opportunity to develop friendships and rebuild lasting social networks after a crisis (Rappaport et al., 1985). Despite their widespread use and popularity, there are relatively few studies that have empirically investigated the outcome of such groups. On the other hand, results of the available studies are encouraging (see Table 2). Five out of six studies reported improvements in general well-being or specific symptomatology (Hinrichsen, Revenson, & Shinn, 1985; Humphreys, Mankowski, Moos, & Finney, 1999; Humphreys & Noke, 1997; Jones, 1992; Rathner, Bonsch, Maurer, Walter, & Sollner, 1993). The remaining study did not find ‘negative’ results. Maton (1988) approached the question of peer support group efficacy in a slightly different manner by addressing process issues.

Social support was assessed in four out of six studies and improvements on various measures of social support (including expanded social networks, more frequent contact, and higher overall quality) were observed (Humphreys et al., 1999; Humphreys & Noke, 1997). Is social support the active ingredient in peer support group interventions? The work of Humphreys et al. suggests that enhanced structural and functional aspects of support as a result of peer support group involvement, in combination with improved coping skills, indeed mediate the observed effect of decreased substance abuse at 1-year follow up.

Maton (1988) examined the relationship of social support to well-being and group appraisal among members of three different self-help groups: Compassionate Friends (time-delimited stress), Multiple Sclerosis (MS; chronic stress), and Overeaters Anonymous (behavioral control). The social support measure included three subscales, namely Support Provided, Support Received, and Friendship. A fourth subscale, Bidirectional Support, was defined as persons high on both Support Provided and Support Received subscales (note that Support Received is equivalent to perceived support.). Receiving social support increased perceived group benefits and group satisfaction, while providing support and friendship were positively related to well-being and group appraisal. Bidirectional supporters reported more
favorable well-being and group appraisal than Receivers and Providers. These results provide insight into the process of peer support groups as providing and receiving support had beneficial effects on well-being and group satisfaction, and those who did both fared better than those who engaged in only one or the other.

Overall, peer support group participants are quite satisfied with these groups but these findings must be interpreted with caution because none of the six studies reviewed employed a randomized control group design to evaluate the efficacy of the peer support group. There is a growing literature which suggests that peer support group participants tend to be of higher socioeconomic status, have significantly higher life stress, more accessible social support networks, are more likely to use professional assistance, and use more active and interactive coping strategies than persons who do not use such groups (Gidron, Guterman, & Hartman, 1990; Lieberman, 1986; Wister, 1995). This suggests that any positive impact produced by peer support groups may be limited to those who independently join such groups.

Davison, Pennebaker, and Dickerson (2000) asked a slightly different question regarding self-help groups: what kind of illness experiences prompt patients to seek each other’s company? Generally speaking, support seeking in the form of self-help groups was highest for diseases considered stigmatizing (e.g., AIDS, alcoholism, and breast and prostate cancer) and lowest for equally damaging, but less “embarrassing”, diseases (e.g., heart disease). The differences were not trivial. For example, AIDS patients were 250 times more likely to participate in a self-help group than hypertension patients, and this is likely due to stigmatizing qualities of the disease, which may cause alienation from one’s usual support network, producing social anxiety and increasing the value of mutual support. These findings provide important clues as to what patient populations may be most in need of support but it is unclear whether these patients specifically seek out unstructured, peer-centered groups or would be willing to participate in other forms of support interventions, nor is it known what form of intervention would be most efficacious.

4.1.3. Support groups as a means for providing social support

There are several studies that examine the viability of organized support groups led by a professional (e.g., psychologist, psychiatrist, nurse, or social worker; see Table 3). Although nondirective, the leader facilitates discussion of the emotional issues and personal experiences of the group members. Similar to peer support groups, these support groups provide members with an opportunity to both receive and provide support. Formal skill training is not a component of these groups.

Eight of the 16 studies reported favorable outcomes of support group interventions. Improvements were observed on both psychological and medical outcome measures (Andersson, 1985; Kelly et al., 1993; Rahe et al., 1979; Schmitt & Wooldridge, 1973; Spiegel & Bloom, 1983; Spiegel et al., 1981, 1989, 1999). A further four studies reported moderate improvements on only psychological outcome measures. However, in one of these studies, the support group did not out-perform a stress management condition (Shearn & Fireman, 1985), and in two others, the support group was inferior to a cognitive-behavioral therapy (CBT) condition at posttreatment (Bottomley et al., 1996; Edelman et al., 1999). In the third study (Benum et al., 1987), improvements were claimed but inferential
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<td>Andersson (1985) — 108 elderly women (68 in treatment, 40 in control)</td>
<td>Four group meetings. Topics discussed included role of the retiree, the residential area, social and medical services, and opportunities for leisure activities. Intended to provide a basis for social comparisons and opportunity to find a confidant.</td>
<td>Randomized no-treatment control group design.</td>
<td>UCLA Loneliness Scale (short version) (Russell, Peplau, &amp; Cutrona, 1980); social contact frequency(^a)</td>
<td>Within-group comparisons showed improved psychological symptoms, social contacts, and decreased blood pressure in intervention group. Between-group comparisons showed that treatment group had more social contacts and decreased blood pressure at posttreatment.</td>
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<td>Benum, Anstrop, Dalgard, and Sorensen (1987) — 100 middle-aged women at risk for mental health problems (50 in each condition)</td>
<td>Focused on increasing perceived support and establishing social networks. Encouraged to give and receive support and function in group. To improve group cohesion, engaged in common tasks (e.g., painting and preparing food).</td>
<td>Randomized, no-treatment control group design.</td>
<td>Global measures of social network size(^a)</td>
<td>No inferential statistics performed. Participants in treatment group made friends within groups and improved existing social networks. Improvements in self-esteem demonstrated. Changes more pronounced among more active participants.</td>
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<td>Bottomley, Hunton, Roberts, Jones, and Bradley (1996) — 31 cancer patients</td>
<td>8-week unstructured treatment. Promoted open discussion of ideas and feelings. Facilitated by two therapists.</td>
<td>Nine patients consecutively allocated to a CBT Group coping group and eight to support group. Control group was 14 patients who declined therapy but completed measurement battery; 3-month follow-up.</td>
<td>Social support (i.e., emotional support)(^b)</td>
<td>No differences in emotional support or socializing opportunities observed. CBT group showed more improvement in psychological states and coping than support group, but improvement in both groups. No differences at follow-up (note: two patients in CBT group died).</td>
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<tr>
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<tr>
<td>Edelman, Bell, and Kidman (1999) — 47 breast cancer patients (37 at follow-up)</td>
<td>12 weekly 2-h sessions. Encouraged to discuss thoughts, feelings, experiences, and to support each other.</td>
<td>Randomly assigned to one of two conditions: (1) group CBT and (2) supportive therapy; 4-month follow-up.</td>
<td>Three questions regarding social support*.</td>
<td></td>
</tr>
<tr>
<td>Jacobs, Ross, Walker, and Stockdale (1983) — 81 Hodgkin’s Disease patients</td>
<td>Eight weekly peer support meetings led by an oncologist, psychologist, and a social worker. Designed to stimulate discussion about common problems and concerns.</td>
<td>Random assignment to either (1) education (printed material), (2) education no-treatment control, (3) peer support group, or (4) peer support group no-treatment control (two studies).</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Kelly et al. (1993) — 68 depressed men with HIV infection (27 in CBT, 14 in social support group, 27 in control)</td>
<td>Eight weekly 90-min sessions. Discussion of feelings and concerns. Adoption of supportive and encouraging roles toward others encouraged.</td>
<td>Randomly assigned to one of three conditions: (1) CBT, (2) social support therapy, or (3) assessment only control condition; 3-month follow-up.</td>
<td>Social Provisions Scale (Cutrona, 1989)</td>
<td></td>
</tr>
<tr>
<td>Payne and Blanchard (1995) — 34 patients with irritable bowel syndrome (IBS; 12 in treatment groups, 10 in control)</td>
<td>8-week support group. Targeted issues related to IBS development and maintenance. Focused on specific topics and open discussions. Encouraged to support each other.</td>
<td>Participants were randomly assigned to the support group, cognitive therapy, or a symptom-monitoring control group; 3-month follow-up.</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>
Table 3 (continued)

<table>
<thead>
<tr>
<th>Authors and sample</th>
<th>Support intervention</th>
<th>Design</th>
<th>Measure of support</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rahe, Ward, and Hayes (1979) — 61 postmyocardial infarction patients (39 in treatment, 22 in control)</td>
<td>Participants received brief (six sessions) group therapy that involved both education and supportive discussion.</td>
<td>Randomized, no-treatment control group design; 3-year follow-up.</td>
<td>No</td>
<td>Neither group showed improvement on coronary risk factors. Support/education group successfully altered several coronary-prone behaviors. At follow-up, educational information was forgotten.</td>
</tr>
<tr>
<td>Schmitt and Wooldridge (1973) — 50 male surgical patients (25 in each condition)</td>
<td>Combined support/education group intervention. Information about procedure and how to facilitate recovery; opportunity to discuss concerns and fears.</td>
<td>Randomized, matched standard care control group design.</td>
<td>No</td>
<td>Verbal reports indicated decreased anxiety and tension, better sleep, and fewer fearful recollections. Less urinary retention, anesthesia, pain medication, and faster discharge in treated participants.</td>
</tr>
<tr>
<td>Shearn and Fireman (1985) — 105 RA patients</td>
<td>10-week support group led by psychologist. Focused on information exchange, relationship building, and decreasing social isolation.</td>
<td>Random assignment to either (1) mutual support group, (2) stress management group, or (3) no-treatment control.</td>
<td>No</td>
<td>Support group and stress management group showed greater improvement in joint tenderness than control group. Did not differ significantly from controls on other physiological/psychological variables.</td>
</tr>
<tr>
<td>Spiegel, Bloom, and Yalom (1981) — 58 women with metastatic carcinoma of the breast (34 in treatment, 24 in control)</td>
<td>Weekly supportive group meetings led by psychiatrist, social worker, and a counselor in breast cancer remission. Self-disclosure, sharing of mutual fears/concerns emphasized.</td>
<td>Randomized, standard care control group design.</td>
<td>No</td>
<td>At posttreatment, the treatment group demonstrated improved mood, fewer maladaptive coping strategies, and were less phobic than the control group.</td>
</tr>
<tr>
<td>Spiegel and Bloom (1983) — same as above</td>
<td>Same as above.</td>
<td>Same as above.</td>
<td>No</td>
<td>Support groups more successful at reducing self-rated pain sensation and suffering than control sample. Improvements in mood noted.</td>
</tr>
<tr>
<td>Study</td>
<td>Group Description</td>
<td>Treatment Duration</td>
<td>Comparison</td>
<td>Outcome</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Spiegel, Bloom, Kraemer, and Gottheil (1989) — 86 women</td>
<td>Same as above.</td>
<td>Same as above;</td>
<td>No</td>
<td>At 10-year follow up, the women in the support group have survived twice as long (on average) as the controls.</td>
</tr>
<tr>
<td>women with metastatic carcinoma of the breast (50 in treatment, 36 in control)</td>
<td></td>
<td>10-year follow up.</td>
<td></td>
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</tr>
<tr>
<td>Spiegel et al. (1999) — 111 breast cancer patients within 1 year of diagnosis</td>
<td>12 weekly 90-min sessions. Emphasis on pain management, thought/emotion expression, offering support, and new ways to cope.</td>
<td>Longitudinal design. Women received treatment and assessed at 3, 6, and 12 months. Therapy conducted at 10 (US) sites.</td>
<td>No</td>
<td>Depression and anxiety symptoms were significantly reduced at 6- and 12-month follow ups. Uniformity of treatment effect across sites.</td>
</tr>
<tr>
<td>Telch and Telch (1986) — 41 cancer patients</td>
<td>Support group involved discussion of feelings, concerns, and problems.</td>
<td>Random assignment to (1) coping skills instruction condition, (2) support group condition, or (3) waitlist control condition.</td>
<td>No</td>
<td>Coping skills condition had significantly lower scores on tension, depression, anger, fatigue, and confusion and higher scores on vigor and self-efficacy than other two conditions. Support group was superior to the controls (differences may be due to deterioration within control group).</td>
</tr>
<tr>
<td>Telleen, Herzog, and Kilbane (1989) — 56 mothers of children under 7</td>
<td>Support group held 2 days/week. Discussion of parenting problems. Education on parent–child communication, child management techniques, alternatives to physical punishment, etc.</td>
<td>Support group condition included mothers with children under age 7 in group for 3 months. Education condition included mothers who participated for 3 months. Matched control group.</td>
<td>Parenting Social Support Index (Telleen, 1985)</td>
<td>Support group showed greater decreases in isolation and increases in support in the parenting role than controls. Education group associated with greater decrease in social isolation than controls. Number of sources of support and child related stress decreased in both treatment groups. Well being and depressive symptoms not affected in both groups.</td>
</tr>
<tr>
<td>(16 in support group, 22 in parent education, 23 in control)</td>
<td></td>
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</tbody>
</table>

a Measure designed by authors; no psychometric information provided.
b Preliminary validation work reported to be adequate.
Table 4
Social support skills training group interventions

<table>
<thead>
<tr>
<th>Authors and sample</th>
<th>Support intervention</th>
<th>Design</th>
<th>Measure of support</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand, Lakey, and Berman (1995) — 51 low perceived support community residents</td>
<td>13-week group treatment. Focused on improving perceived support. Taught conflict resolution skills, assertion, and responding to criticism. Cognitive restructuring.</td>
<td>Randomized waitlist control design.</td>
<td>Perceived Support from Family and Friends (Prociando &amp; Heller, 1983)</td>
<td>Perceived social support was found to increase from family members, but not from friends, in the participants who received the intervention. Changes in cognition about the self were larger than changes in perceived support.</td>
</tr>
<tr>
<td>Barth and Schinke (1984) — 33 pregnant and parenting adolescents</td>
<td>Assertiveness training, interpersonal problem-solving, and awareness of social network were components of treatment.</td>
<td>Quasiexperimental (i.e., no random assignment) no-treatment control design.</td>
<td>How social support measured not specified.</td>
<td>Treatment group used more verbal skills during role-played conflict situations, performed better on social skill measures (e.g., assertion), and showed better problem solving than no-treatment group.</td>
</tr>
<tr>
<td>Friedland and McColl (1992) — 88 stroke patients (48 in experimental group, 40 in control)</td>
<td>6 to 12 psychoeducational sessions. Emphasis on importance of the informal support network and social support*.</td>
<td>Randomized, no-treatment control group design (control group was free to engage in other support groups).</td>
<td>Social Support Inventory for Stroke Survivors (McColl &amp; Friedland, 1989); Interpersonal Support Evaluation List (Cohen et al., 1985) Supervisor support/ supportive feedback (based on Abbey, Abramis, &amp; Caplan, 1985)*</td>
<td>No significant differences between the groups were observed for source, quantity, quality, or type of social support or for any aspect of psychosocial adjustment. At posttreatment, treatment group demonstrated improvements in work team climate (but not functioning), depressive symptomatology, and somatization in those most at risk for leaving their jobs. Resulted in increased supervisor support and higher levels of supportive feedback in general.</td>
</tr>
<tr>
<td>Heaney, Price, and Rafferty (1995) — 1375 human service workers</td>
<td>Caregiver Support Program; six 4–5-h sessions. Education about benefits of support, evaluation of support networks, skills for exchanging support, conflict resolution, and asking for help.</td>
<td>Human service workers were randomly assigned (by group home in which they worked) to a “Caregiver Support Program” or a no-treatment control.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample</th>
<th>Intervention Duration</th>
<th>Intervention Focus</th>
<th>Design</th>
<th>Outcome Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lovell and Hawkins (1988) — 10 abusive mothers</td>
<td>26-week intervention. Focused on increasing perceived support, support networks, stress/anger management, assertiveness, etc.</td>
<td>One-group pretest–posttest design.</td>
<td>Social network density and quality of relationship. Only percentages provided. Attendance associated with social networks increases. Professionals represented about 1/3 of social contacts. Low support perceived from social networks. Few differences between groups noted. Parents who received social support skills training reported increased contacts with professional caretakers than control parents.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lovell and Richey (1997) — 38 parents at risk for child maltreatment (22 in treatment, 16 in control)</td>
<td>Same as above.</td>
<td>Quasiexperimental (i.e., no random assignment) standard treatment control group (i.e., discussion about home management, career planning, and relationships) design.</td>
<td>Community Interaction Checklist (Wahler, Leske, &amp; Rodgers, 1979); daily contacts diary forms</td>
<td></td>
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</tr>
<tr>
<td>Monti, Curran, Corriveau, DeLancey, and Hagerman (1980) — 46 male psychiatric patients (23 in social skills training, 23 in sensitivity training)</td>
<td>Four 1-h sessions per week for 5 weeks. Focused on giving/receiving compliments and criticism, starting conversations, and assertion at work and in intimate relationships.</td>
<td>Randomized, alternate treatment control group design. Alternate treatment was sensitivity training (i.e., audiotape with effective relating techniques, discussion, and in-group exercises); 6-month follow-up.</td>
<td>Rathus Assertiveness Schedule (Rathus, 1973); Simulated Social Interaction Test.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monti et al. (1979) — 30 psychiatric patients (10 in each condition)</td>
<td>10 1-h sessions. Treatment same as above.</td>
<td>Randomized, alternate treatment and standard care control group design. Alternate treatment was bibliotherapy.</td>
<td>Same as above.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Richey, Lovell, and Reid (1991) — six women at risk for child maltreatment</td>
<td>12-week intervention. Focused on relationship skills; taught to identify strengths/weaknesses in social networks, indicators of support. Training in assertiveness and conversational skills. Group discussions, exercises, rehearsal, modeling, feedback, and reinforcement.</td>
<td>One-group pretest–posttest design.</td>
<td>UCLA Loneliness Scale (Russell et al. 1980); Network Orientation Scale (Vaux et al., 1986); support satisfaction (Tardy, 1985)</td>
<td>Increases in personal network size, quality, and proportion of daily contacts, satisfaction with support provided by friends, and duration of contacts. Loneliness and attitudes about utilizing support showed slight improvements. A decrease in satisfaction with family supports observed.</td>
<td></td>
</tr>
<tr>
<td>Authors and sample</td>
<td>Support intervention</td>
<td>Design</td>
<td>Measure of support</td>
<td>Results</td>
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<tr>
<td>Shepherd (1978) — 13 psychiatric patients (six in treatment, seven in control)</td>
<td>12 sessions over 6 weeks. Social skills taught; rehearsal, role play, feedback, homework.</td>
<td>Randomized, standard care control group design.</td>
<td>Behavioral ratings&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Significant greater improvement in social behavior ratings for treatment group relative to control group.</td>
<td></td>
</tr>
<tr>
<td>Stravynski, Marks, and Yule (1982) — 22 psychiatric outpatients with social skill deficits (11 in each condition)</td>
<td>10 sessions. Social skills training involved identification of social target, modeling, rehearsal, feedback, and self-monitoring.</td>
<td>Randomized, alternate treatment design.</td>
<td>Social Avoidance and Distress (Watson &amp; Friend, 1969), behavioral ratings&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Both groups showed improvements in depression, anxiety, and social behaviors. No differences between the groups. Gains maintained at follow-up.</td>
<td></td>
</tr>
<tr>
<td>Stravynski, Belisle, Marcouiller, Lavallee, and Elie (1994) — 28 persons diagnosed with Avoidant Personality Disorder</td>
<td>Eight 90-min sessions. Focused on self-introductions, asking questions, responding, expressing feelings, initiating social activities, and expressing disagreement. Real life exposure also received four sessions in “real life” situations.</td>
<td>Randomly assigned to social skills training or social skills training + real life exposure; 3-month follow-up.</td>
<td>Social Avoidance and Distress (Watson &amp; Friend, 1969), Social Situations Questionnaire (Bryant et al., 1976)</td>
<td>Both groups demonstrated improvements in avoidance, anxiety, in number and variety of social engagements, and in frequency and quality of social behaviors. No differences between the groups. Effects maintained at follow-up.</td>
<td></td>
</tr>
<tr>
<td>van Dam-Baggen and Kraaimatt (1986) — 131 psychiatric patients (96 in treatment, 35 in control)</td>
<td>17 weekly sessions, 1-1/2 h each. Training in basic social skills (e.g., giving and receiving feedback), specific social skills (e.g. making/refusing requests and initiating conversations), and self-management skills.</td>
<td>Randomized, standard care control group design; 3-month follow-up.</td>
<td>Assertiveness Schedule (Wolpe &amp; Lazarus, 1966), support rating&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Social skills training group demonstrated significant improvements in assertion and social skills relative to control group. Differences maintained at follow-up.</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> This group did not involve the teaching of specific social support skills. Because the primary objective of this group was to improve social support in the natural environment, we did not consider it a group designed to provide support.

<sup>b</sup> No psychometric information on modified version provided.

<sup>c</sup> Measure designed by authors; no psychometric information provided.
statistics were not performed. The remaining four studies did not find any benefit to social support groups (Jacobs et al., 1983; Payne & Blanchard, 1995; Telch & Telch, 1986; Telleen et al., 1989).

It is unusual to find numerous studies assessing social support interventions for the same patient population. However, eight of the aforementioned studies targeted cancer patients and revealed mixed evidence for this population. Favorable results were reported in Spiegel and Bloom’s (1983) and Spiegel et al.’s (1981, 1989, 1999) studies, but not in others (Bottomley et al., 1996; Jacobs et al., 1983; Telch & Telch, 1986), with a general trend of fairly consistent improvements in quality of life but not in improved life expectancy.

4.1.4. Social support skills training group interventions

Interventions that target social skills attempt to improve naturally occurring support systems by teaching relationship skills; the professional group leaders are directive and follow a defined curriculum. Although group members may be encouraged to be supportive of each other, the primary focus is the teaching and practicing of specific social support skills. Table 4 describes these studies.

Nine of the 13 studies report benefits of social support skills training (Barth & Schinke, 1984; Brand et al., 1995; Heaney et al., 1995; Monti et al., 1979, 1980; Shepherd, 1978; Stravynski et al., 1994; van Dam-Baggen & Kraaimatt, 1986). Results of the remaining four studies were less encouraging. Lovell and Hawkins (1988), Lovell and Richey (1997), and Richey et al. (1991) evaluated the effectiveness of group interventions designed to teach social support skills to mothers and parents at risk for child maltreatment. The findings suggest moderate increases in personal support networks, but much of this appeared to stem from increased contacts with professional caretakers. While the increased links with professionals might facilitate further teaching, it does not generalize to improvements in naturally occurring (and enduring) social support and it may also foster ongoing dependency. A decrease in satisfaction with family supports was also reported (Richey et al., 1991). However, these studies had very small sample sizes. All of the studies in this section measured social support, although one did not specify how it was measured and several did not provide psychometric information about the instrument that was used.

Friedland and McColl (1992) also failed to find notable improvements as a result of social skills training (which was primarily psychoeducational), emphasizing importance of the informal support network and social support to well-being. Less emphasis was placed on specific skills training. No significant differences were found between stroke patients who received the intervention and those who did not on any measure of social support or psychological adjustment. This intervention was very long (18 months) and was plagued by a high attrition rate. The authors suggest that the intervention may have been more effective if implemented at an earlier stage poststroke (i.e., before existing supports began to recede and psychiatric symptomatology, such as depression, began to appear).

Five studies targeted psychiatric populations (Monti et al., 1979, 1980; Shepherd, 1978; Stravynski et al., 1982; 1994; van Dam-Baggen & Kraaimatt, 1986). The skills training consistently improved assertion and social functioning. Improvements were maintained for
Table 5  
Studies that compare different group structures

<table>
<thead>
<tr>
<th>Authors and sample</th>
<th>Support intervention</th>
<th>Design</th>
<th>Measure of support</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bright, Baker, and Neimeyer (1999) — 98 depressed outpatients</td>
<td>Focused on interpersonal insight, disclosure skills, feedback, emotional expression, and problem brainstorming. Led by two professional or two paraprofessional therapists.</td>
<td>Randomized into either (1) CBT led by two professionals, (2) CBT led by two paraprofessionals, (3) support group led by two professionals, or (4) support group led by two paraprofessionals.</td>
<td>No</td>
<td>Paraprofessionals as effective as professionals in reducing depressive symptoms. At posttreatment, more patients in professionally led CBT group were nondepressed than in paraprofessionally led CBT group.</td>
</tr>
<tr>
<td>Haley, Brown and Levine (1987) — 54 dementia caregivers</td>
<td>(1) 10 session support group; discussion, mutual support, and psychoeducation; (2) 10 session support/skill group (addition of relaxation and cognitive interventions).</td>
<td>Randomized, waitlist control group design.</td>
<td>Portions of Health and Daily Living Form (Moos et al., 1984), Social Network Satisfaction</td>
<td>Neither group showed significant improvements on any of the outcome measures.</td>
</tr>
<tr>
<td>Helgeson, Cohen, Shulz, and Yasko (1999) — 312 women with breast cancer</td>
<td>Eight weekly group meetings. Education about breast cancer and treatment. Peer discussion group shared experiences/feelings. Combination therapy did both.</td>
<td>Randomly assigned to either (1) educational intervention, (2) peer discussion group, (3) combination therapy, or (4) control group; 6-month follow-up.</td>
<td>Support scale, a measure of negative interactions with network</td>
<td>Educational groups showed significantly greater changes in adjustment than peer discussion groups (posttreatment and follow-up). Peer discussion groups had adverse effect on vitality and physical/social functioning. Increased negative interactions in peer discussion groups. Educational groups showed greater benefits on physical functioning of women with more difficulties (e.g., lacked support/resources). Peer discussion groups more</td>
</tr>
</tbody>
</table>
Pickett, Heller, and Cook (1998) — 131 members of 14 support groups (four professionally led, 10 family-led)

Dynamics of groups varied; all emphasized provision of emotional support.

Existing support groups followed for 1 year.

No

Preliminary validation work reported to be adequate.

Toseland, Rossiter, and Labrecque (1989a) — 56 caregivers of elderly parents

One group led by two social workers, the other by peers. Both leaders encouraged discussion and mutual support. Professionally led group was structured and included education and problem-solving.

Randomized, respite-only control group design.

Network size change, extent of change, support satisfaction," Community Resource Scale"  

Both groups showed significant improvements in network size, psychological status, and personal change. Professionally led groups more improved in psychological functioning. Peer led groups had greater increases in informal support networks.

Significant changes in personal caregiving problems and social network increases in all groups. No differences in psychological status or burden. No treatment superior on any outcome measure.

Toseland, Rossiter, and Labrecque (1989b) — 73 family caregivers

Two above interventions along with a third support intervention (professionally led with stress management component, no education).

Same as above.

Same as above.

*Scales not indicated.

*Measure designed by authors; no psychometric information provided.
as long as 6 months (Monti et al., 1980). However, it is not clear whether the social functioning changes generalized beyond the treatment setting.

Brand et al. (1995) conducted an interesting study that investigated the efficacy of a treatment that combined psychoeducation, social skills training, and cognitive-behavioral techniques designed to increase perceived support. This treatment is quite different from others described in this section because its primary objective was to increase perceived support. Perceived social support (measured by a well-validated measure) was found to increase from family members, but not from friends, in the intervention group. Brand et al. suggest that observed changes in self-esteem and frequency of self-reinforcement might have mediated the increase in perceived support. Interestingly, changes in self-cognition were larger than changes in perceived support. Overall, the study showed that perceived support can be modified and suggested mechanisms by which such change might take place.

4.1.5. Group interventions that combine provision of support with social skills training

One study was located that combined provision of support with social skills training. This intervention, tested in a randomized, controlled trial, aimed to improve support and decrease distress and grief in HIV-seropositive and HIV-seronegative homosexual men who had recently lost a friend or partner (Goodkin et al., 1999). The supportive component of treatment involved group discussion and the provision of mutual support, while the skills component focused on social support skills and coping styles. Treatment groups were homogenous in terms of HIV serostatus. Unfortunately, a measure of social support was only included to test the possibility of failure of randomization. At posttreatment, overall distress was reduced and grief recovery accelerated in men who received the intervention. Significant effects were not observed for depression or anxiety. These results provide evidence that a combined support provision/social support skills training group may be effective in reducing distress and grief in these men.

4.1.6. Comparison of different types of group structures

Seven studies were found that attempted to answer the question of what form of social support group is superior (see Table 5).

In this category, target populations were particularly diverse. Fortunately, the sample sizes tended to be fairly large. Two large N studies could be found for cancer populations. Summary conclusions made little sense given the diversity of these studies.

Haley et al. (1987) evaluated comparative effectiveness of two different group social support interventions for dementia caregivers: a support group that included discussion, mutual support, and psychoeducation, and a support/skills group that included the same elements as the support group, as well as relaxation training and cognitive interventions aimed at managing negative cognitions. Neither group showed significant improvements on any of the outcome measures (social support or psychological symptomatology). The authors posit that heterogeneity in caregivers’ initial levels of distress may have made it difficult for group means to show changes.

Helgeson et al. (1999) compared three different forms of support groups for women with breast cancer: educational groups, emotion-focused peer discussion groups, and a combina-
tion of the two. Women in the educational groups showed greater improvements on measures of adjustment (e.g., social and physical functioning, positive affect) than women in the other groups immediately following treatment and at 6-month follow-up. Peer discussion groups had a negative effect on vitality and physical and social functioning, and negative interactions within the group setting were reported. Using the same sample, Helgeson et al. (2000) found that educational groups led to greater benefits in physical functioning in women who commenced treatment with more difficulties (e.g., lacked support), whereas peer discussion groups were helpful for women who lacked support from their partners or physicians. Interestingly, peer discussion groups were harmful (with regard to physical functioning) for women who already had high levels of support.

Pickett et al. (1998) compared professionally led and family-led support groups for families of persons with mental illness. No differences emerged between the groups. The remaining three studies addressed different variations of the question of whether professionally led or peer-led support groups are superior. Toseland et al. (1989a) compared the relative effectiveness of such interventions for family caregivers of elderly parents. Both groups encouraged discussion and mutual support, but the professionally led group was more structured and included education and problem solving. Improvements were observed in both groups. Professionally led groups produced the greatest improvements in psychological functioning, and peer-led groups produced the greatest increases in informal support networks. Differences in the process of the two treatment groups were noted. The professionally led groups were more effective at keeping discussions focused on caregiving issues, while the peer-led groups spent more time socializing and sharing personal experiences and feelings. These differences in process may explain outcome differences between the groups. A later study by Toseland et al. (1989b) compared the two support interventions described above to a third support intervention (professionally led: involved the supportive elements of other groups with the addition of a stress management component). All three interventions showed significant changes in caregiving problems and increases in social network size, but no differences in psychological status or burden were noted. The treatments consistently resulted in increased social network size but did not consistently produce changes in psychological status or other variables, suggesting that design changes may be necessary.

Bright, Baker, and Neimeyer (1999) compared support group interventions led by two professionals or two paraprofessionals to CBT led by two professionals or two paraprofessionals. Paraprofessionals were as effective as professionals in reducing depressive symptoms. Improvement was equivalent and of clinical significance in both support therapy and CBT, which is encouraging. Similar to the results of Toseland et al. (1989a, 1989b), a clear superiority of one form of group facilitation over the other was not evident.

4.2. Individual interventions

4.2.1. Individual interventions that provide support through family and/or friends

Although there is a variety of studies on support provision by close family members or friends, discussion here is limited to interventions in which improving social support was one of the explicit goals of treatment. Four such studies were located (see Table 6).
<table>
<thead>
<tr>
<th>Authors and sample</th>
<th>Support intervention</th>
<th>Design</th>
<th>Measure of support</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dadds and McHugh (1992) — 22 single parents of children with conduct problems</td>
<td>CMT with adjunctive ally support. Allies were family members/ friends of parents instructed to give emotional/instrumental support.</td>
<td>Random assignment to standard CMT or CMT with adjunctive ally support.</td>
<td>Perceived Support Scale Family and Friends (Procidiano &amp; Heller, 1983)</td>
<td>Improvements observed in both groups at posttreatment and at 6-month follow-up. No additional gains observed in the adjunctive ally condition. Perceived social support was not greater in the ally condition than in the CMT-alone condition.</td>
</tr>
<tr>
<td>Hughes, Hymowitz, Ockene, Simon, and Vogt (1981) — 4103 male smokers</td>
<td>Behavioral smoking intervention from Multiple Risk Factor Intervention Trial. Spouse smokers invited to join as source of support and positive reinforcement.</td>
<td>Randomly assignment to treatment or control group. 6–8-year follow-up.</td>
<td>No</td>
<td>Smoking intervention demonstrated higher self-reports of abstinence and lower thiocyanate levels in the support group than in the control group.</td>
</tr>
<tr>
<td>Keller and Galanter (1999) — 30 cocaine-dependent patients (10 in treatment, 20 in control)</td>
<td>Network Therapy; 48 session, 24-week substance abuse therapy. Family/friend support, CBT-relapse prevention techniques, and community reinforcement.</td>
<td>Ten patients seeking treatment served as treatment group; control group consisted of other cocaine-dependent controls.</td>
<td>No</td>
<td>Network Therapy patients had significantly less positive urinalysis than standard treatment patients.</td>
</tr>
<tr>
<td>Qiu and Lu (1994) — 663 schizophrenic patients (560 patients in 48 guardianship networks; 103 usual care patients)</td>
<td>Patients assigned guardian (usually family member) who provided instrumental support (e.g., assisted patient in obtaining/taking medications, called physician if sign of relapse, etc.).</td>
<td>Compared status of schizophrenic patients in communities with guardianship networks to those in communities without.</td>
<td>No</td>
<td>Compared with patients not enrolled in guardianship networks, patients with guardians had significantly lower rates of hospital admissions, lower rates of socially disruptive behavior, and lower levels of psychopathological symptoms.</td>
</tr>
</tbody>
</table>
Overall, results of such studies were promising. Three of four studies reported beneficial effects of including significant others in individual treatment but only one measured social support. Unfortunately, each study utilized very different interventions (although all involved family members) and targeted diverse treatment groups. Keller and Galanter (1999) investigated the efficacy of Network Therapy, a cognitive-behavioral substance abuse therapy that utilizes the support of family and friends within a community-based substance abuse program, and reported favorable results. Unfortunately, the study lacked random assignment, social support was not measured, and the unique contribution of the support provision by spouses was not examined. Hughes et al. (1981) reported the results of the smoking cessation intervention included in the MRFIT. The smoking intervention used behavioral techniques and included spouses as a source of support and positive reinforcement. The smoking intervention was successful (6- and 8-year follow up) in terms of both higher reports of abstinence and lower thiocyanate levels (i.e., more objective measure of smoking behavior).

Qiu and Lu (1994) compared schizophrenic patients from townships with ‘guardianship’ networks (guardians were usually family members) to schizophrenic patients from townships without these guardianship networks. This intervention differs from those described previously in that instrumental, not emotional, support was provided. Patients with guardians had significantly lower rates of hospital admissions, lower rates of socially disruptive behavior, and lower levels of psychopathological symptoms. Evaluation of the clinical status of patients was done by a nonblind evaluator. Communities were not randomly assigned to guardianship network status; it is possible that important differences between the communities (i.e., quality of the mental health services) may have influenced the results.

The findings of Dadds and McHugh (1992) were not as promising. These researchers assessed the role of social support in the outcome of behavioral family therapy for child conduct problems. Single parents of children with conduct problems were randomly assigned to standard child management training (CMT) or CMT with adjunctive ally support. Improvements were observed in parent and child behavior, perceived social support, and parental depression for both groups at posttreatment and at 6-month follow-up. No additional gains were observed in the adjunctive ally condition. Interestingly, perceived social support was not greater in the ally condition than in the CMT-alone condition.

Overall, the observed effectiveness of including spouses and/or family members in treatment as a source of support is encouraging but it is unknown whether the inclusion of the natural support network in treatment actually increases perceived support or makes a unique contribution to treatment success.

4.2.2. Individual interventions that provide support through peers

Peer interventions at the individual level have taken many different forms. For details on the 14 studies, see Table 7.

Results are encouraging because there is a critical mass of studies and the clear majority shows favorable outcomes (9/14). It should be noted that three of the studies were conducted by the same research group and tested the same intervention (women in labor received the support of a lay female companion; Kennell et al., 1991; Klaus et al., 1986; Sosa et al., 1980). While the consistent positive findings on hard outcome measures are encouraging, it
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<td>Bogat and Jason (1983) — 26 male and female participants on a waiting list of a “Friendly Visitor Program”</td>
<td>(1) Network-building visiting program; peer volunteers reinforced and encouraged community activity involvement, or (2) relationship-oriented visiting program; peer volunteers used empathy and concern.</td>
<td>Randomized, nonequivalent control group design. (Control group of elderly persons who had indicated desire for a friendly visitor by had no such contact at the time of the study).</td>
<td>Number of current and desired networks, telephone calls, and visits assessed.</td>
<td>At posttreatment, groups did not significantly differ on outcome variables. Network-building visiting program showed directionally higher benefits on psychological indices. Relationship-building group showed more directional change on desired networks and number of telephone calls and visits.</td>
</tr>
<tr>
<td>Harris, Brown, and Robinson (1999) — 86 women with chronic depression (43 in treatment, 43 in control)</td>
<td>Women paired with a female volunteer; met at least once a week. Volunteer acted as a friend, listening, and facilitating confiding. Telephone contact with a similar other.</td>
<td>Randomized, waitlist control group design. Excluded if recently started psychological treatment but not if in ongoing treatment or using antidepressants. Random assignment to assessment only condition or 5 weeks of staff telephone contact. Staff contact participants randomly assigned to continue contact or be paired in dyads to continue phone contact with similar other.</td>
<td>Loneliness Scale (Paloutzian &amp; Ellison, 1982); Perceived Social Support Scale (Prociadano &amp; Heller, 1983)</td>
<td>Women who received the intervention demonstrated significantly higher rates of remission than controls. This finding was not related to any ongoing treatments. Although all groups showed some improvement in mental health scores over time, no differences were observed between the groups. No differences in perceived social support.</td>
</tr>
<tr>
<td>Heller, Thompson, Trueba, Hogg, and Vlachos-Weber (1991) — 265 low-income, community-living, elderly women with low perceived social support</td>
<td>All patients received standard support services. Treatment group received three supportive telephone calls (sharing feelings/experiences) from former cancer patients.</td>
<td>Treatment and control groups (not clear if randomly assigned); patients blind as to group assignment; 6- and 12-week follow-ups.</td>
<td>No</td>
<td>Results 6 and 12 weeks after starting study showed no differences in emotional distress between groups, indicating that peer support provided did not provide incremental benefits to the support already provided.</td>
</tr>
<tr>
<td>Study</td>
<td>Participants</td>
<td>Intervention</td>
<td>Control</td>
<td>Measures</td>
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<tr>
<td>Ireys, Sills, Kolodner, and Walsh (1996)</td>
<td>45 mothers of children with juvenile RA (25 in treatment, 20 in control)</td>
<td>15-month intervention. Mothers paired with mothers of young adults with JRA. Focused on informational support, affirmational support (e.g., praising positive aspects of parenting), and emotional support. Telephone contact, individual meetings, and small group events.</td>
<td>Randomized, no-treatment control group design.</td>
<td>Perceived availability of support, a Impact on Family Scale item, b Multi-dimensional Social Support Inventory item.</td>
</tr>
<tr>
<td>Kennell, Klaus, McGrath, Robertson, and Hinkley (1991)</td>
<td>412 women in labor (212 in support condition, 200 in control)</td>
<td>Same as above.</td>
<td>Same as above.</td>
<td>No</td>
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<tr>
<td>Klaus, Kennell, Robertson, and Sosa (1986)</td>
<td>465 women in labor (168 in support condition, 249 in control)</td>
<td>Same as above.</td>
<td>Randomized, standard care control group design.</td>
<td>No</td>
</tr>
<tr>
<td>Kulik and Mahler (1987)</td>
<td>27 male coronary bypass patients</td>
<td>Differential roommate status (pre- or postoperative, similar or dissimilar surgery).</td>
<td>Preoperative patients assigned roommate similar or dissimilar in surgical status (preoperative/postoperative) and similar or dissimilar in surgery type (cardiac/noncardiac) based on bed availability.</td>
<td>No</td>
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<tr>
<td>Pirie, Rooney, Pechacek, Lando, and Schmid (1997) — 734 smokers in a community smoking cessation contest; 60% identified a support person.</td>
<td>Support person agreed to give noncritical advice and support to the smoker in his/her efforts to quit smoking. No other attempts made to modify support persons behavior.</td>
<td>Community smoking cessation contest; participants not involved in clinic programs. Support group participants identified a support person; controls were those who did not.</td>
<td>Brief telephone survey assessed perceived support level.</td>
<td>3 months after the designated quit date, self-reported smoking cessation rates significantly greater in the group who had selected a support person. New residents who received peer counseling improved moderately on measures of social functioning compared to controls. Effect of providing support on the peer counselors was also evaluated; results indicated that peer counselors improved in appearance and grooming. Women who received report showed lower rate of perinatal problems (e.g., cesarean section and meconium staining), shorter length of labor, were more awake during delivery, and stroked and smiled at infants more than controls.</td>
</tr>
<tr>
<td>Scharlach (1988) — 30 nursing home residents (15 in treatment, 15 in control)</td>
<td>Approached by peer counselor, casual conversation attempted. If new resident agreeable, provided information, discussed what to expect, and coping strategies.</td>
<td>Newly admitted nursing home residents randomly assigned to be paired with peer counselors (socially well-functioning residents who received peer counseling training) or to the standard care control condition.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Sosa, Kennell, Klaus, Robertson, and Urrutia (1980) — 40 healthy women in labor (20 in support condition, 20 in control)</td>
<td>Support of a lay female companion.</td>
<td>Random assignment to treatment or standard care control group. 103 mothers admitted to control and 33 to treatment to obtain 20 per group with uncomplicated deliveries.</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Study Authors and Year</td>
<td>Sample Description</td>
<td>Intervention Details</td>
<td>Randomization and Design</td>
<td>Outcome Measures</td>
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<tr>
<td>Sullivan, Campbell, Angelique, Eby, and Davidson (1994) — 141 women with abusive partners (71 in treatment, 70 in control)</td>
<td>Advocacy services for women with abusive partners. Focused on helping access resources (i.e., instrumental support) and providing emotional support; 4–6 h of advocacy services/week for first 10 weeks postshelter.</td>
<td>Randomized, standard care control group design; 6-month follow-up.</td>
<td>Adult’s Social Support Questionnaire (Bogat, Chin, Sabbath, &amp; Schwartz, 1983)</td>
<td>Advocacy group reported increased effectiveness in obtaining resources, increased perceived social support, and improved quality of life. At follow-up, improved quality of life maintained, but perceived social support differences subsided. No differences on physical or psychological abuse level or psychological symptoms.</td>
</tr>
<tr>
<td>Thoits, Hohmann, Harvey, and Fletcher (2000) — 190 male coronary artery bypass graft (CABG) patients (100 in treatment, 90 in control)</td>
<td>Daily visits of at least 30 min (minimum of 4 h total) by male volunteers with prior CABG surgery. Volunteers received training that reviewed support giving.</td>
<td>Monthly alteration of assignment to control and experimental conditions after random start date (to avoid contamination). 1-year follow up.</td>
<td>Satisfaction with social support$^a$</td>
<td>Intervention not associated with emotional or physical improvements; associated with greater percentage of activity limitations at follow-up. Patients who talked to fellow cardiac in-patients showed improvements in emotional and physical well-being over time.</td>
</tr>
<tr>
<td>West, Edwards, and Hajek (1998) — 172 smokers recruited by mailshot (35 pairs of smokers in buddy condition; 51 notional pairs in solo condition)</td>
<td>Smokers in buddy condition paired with other smokers in that condition. Encouraged to contact each other at least once/day for first week and any time support needed.</td>
<td>Randomized, standard treatment control trial; participants in treatment conditions received nicotine replacement therapy if requested and attended four sessions with a nurse.</td>
<td>No Percentage of smokers still abstinent from smoking 4 weeks after the designated quit date was significantly higher in buddy condition than control condition. This finding verified by expired air carbon monoxide concentration.</td>
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</table>

*a Measure designed by authors; no psychometric information provided.

*b Preliminary validation information on modified version of scale provided.
is not clear whether these studies are replications or use the same sample of participants. Two studies conducted by different research groups demonstrated the efficacy of peer support on smoking cessation. Pirie et al. (1997) reported that ‘quitters’ who selected a support person had higher cessation rates than those who did not, and West et al. (1998) found that ‘quitters’ randomly assigned to a ‘buddy’ condition had higher abstinence rates than control participants.

Peer support has proven efficacious with other patient populations, including coronary bypass patients awaiting surgery (Kulik & Mahler, 1987), nursing home residents (Scharlach, 1988), women with chronic depression (Harris et al., 1999), and mothers of children with juvenile RA (Ireys et al., 1996). In some studies, peer support consisted of pairing the participant with a peer volunteer (Harris et al., 1999; Scharlach, 1988), while in others, peers with similar conditions or experiences provided support (Ireys et al., 1996; Kulik & Mahler, 1987). Interestingly, Scharlach observed beneficial effects of the support condition on the peer supporters as well as on the supportees, providing evidence for the advantages of providing support.

Sullivan et al. (1994) conducted a very well-designed study that took a slightly different approach to providing peer support, in which advocacy services were provided to women with abusive partners. Advocates focused on helping the women access needed community resources (i.e., instrumental support) while providing emotional support. At posttreatment, women who received the advocacy intervention reported increased effectiveness in obtaining desired resources, increased perceived social support, and improved quality of life. At 6-month follow-up, improved quality of life was maintained, but differences in perceived social support subsided. This may be due to the transient nature of the provided support, which could be corrected by providing as-needed services.

A tenth study provided some less promising findings, but only at first glance. Thoits et al. (2000) found that male CABG patients did not benefit psychologically or physically from support provided by previous CABG patients who made personal hospital visits, despite reporting satisfaction with the support provided. However, the authors note that the openward structure of the hospital likely accounted for lack of effects; the majority of patients were interacting with fellow cardiac patients who were themselves facing and recuperating from similar problems or procedures, regardless of whether they were in the experimental or control condition. In fact, further analysis showed that patients who frequently spoke to fellow cardiac patients experienced physical and emotional well-being improvements at follow-up. Thus, “similar others” may not need special training or be specially introduced into existing treatment programs if open ward or shared room facilities already exist. Thoits et al. (2000) do note it may be useful to separate first-time cardiac patients from “return cases,” as they may act as negative role models. This may be a consideration in room designation or ward design.

Results from the remaining three studies were not encouraging. Two of these evaluated the impact of telephone support from similar others (cancer patients; Houts et al., 1986; low-income elderly women; Heller et al., 1991). No benefit of telephone contact was observed in either study. Moreover, Heller et al. (1991) did not observe any differences in perceived support between those who received telephone contact and those who did not.
4.2.3. Individual interventions that provide support through professionals

In most cases, the support interventions involved a combination of emotional support, informational support, and/or instrumental support, making it difficult to assess the unique contribution of support provided by a professional. An overview is given in Table 8.

Of the 18 studies, nine reported generally positive effects of professionally led individual support interventions. Birmaher et al. (2000), Brent et al. (1997), and Renaud et al. (1998) conducted three studies that targeted adolescents diagnosed with Major Depressive Disorder. Supportive therapy was compared to CBT and Systemic Behavior Family Therapy. At posttreatment, all three treatments showed significant reductions in suicides and functional impairment, although supportive therapy was inferior to CBT in terms of rate of depression diagnoses. However, at 2 years posttreatment, no differential effects between therapies remained. Interestingly, results suggested that milder forms of depression might benefit from initial supportive therapy (more so than in CBT or Systemic Behavior Family Therapy).

A third study examined a professional intervention that provided primarily instrumental support for mentally ill participants. It was found to produce improvements in social support, family burden, and satisfaction (Chandler et al., 1996). Less hospital care, greater workforce participation, fewer group and institutional housing arrangements, and more leisure activity were also reported for the interventions participants compared to controls. Norbeck et al. (1996) conducted a randomized trial of a short-term (four sessions) social support intervention for African American low-support, pregnant women. Despite the brevity of the intervention, the rate of low birth weight in the infants of these women was significantly lower in the women who received the intervention as compared to the controls.

Five of the studies reporting positive results targeted cardiac patients: myocardial infarction patients (i.e., Frasure-Smith & Prince, 1985, 1989; Thompson, 1989; Thompson & Meddis, 1990) and hypertensives (Irvine & Logan, 1991). These interventions were associated with significant reductions in myocardial infarction recurrences and mortality (Frasure-Smith & Prince, 1985; 1989), significant improvements in anxiety and depression (Thompson, 1989; Thompson & Meddis, 1989), and decreases in alcohol consumption and blood pressure levels (Irvine & Logan, 1991). Frasure-Smith et al. (1997) replicated a similar intervention as that described earlier (Frasure-Smith & Prince, 1985) and found that the supportive intervention had no survival impact thus contradicting their earlier findings. Of great concern was the observation that women in the treatment group showed marginally higher cardiac and all-cause mortality than women in the control group. The previous studies conducted by Frasure-Smith et al. had not included women. The surprising results of this more recent study underline the potential importance of designing sex-specific treatments for cardiac patients.

A study by Wolfer and Visintainer (1975) that involved providing informational and emotional support to children awaiting minor surgery and their parents also reported positive results. Interestingly, a study that evaluated a similar supportive intervention directed at adults awaiting cardiac catheterization or coronary cineangiography (Finesilver, 1978) found only moderate benefits of professional support. Lower levels of distress were observed, but no differences in mood or cooperation were noted.

In total, eight studies did not clearly support use of individual interventions that provide professional support. Findings of Finesilver (1978) and Frasure-Smith et al. (1997) have
Table 8
Individual interventions that provide support through professionals

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<tbody>
<tr>
<td>Birmaher et al. (2000) — 100 adolescents diagnosed with Major Depressive Disorder</td>
<td>Same as above.</td>
<td>Same as above; 2-year follow-up.</td>
<td>No</td>
<td>No long-term differential effects of the three therapies; 80% of patients recovered.</td>
</tr>
<tr>
<td>Brent et al. (1997) — 107 adolescents diagnosed with Major Depressive Disorder</td>
<td>12–16 sessions with 2–4 booster sessions. Nondirective supportive therapy (control condition). Provided support and identification/expression of feelings.</td>
<td>Random assignment to either (1) CBT, (2) Systemic Behavior Family Therapy, or (3) Nondirective Supportive Treatment.</td>
<td>No</td>
<td>All conditions showed significant reductions in suicidality and functional impairment. CBT showed a lower rate of Major Depressive Disorder at posttreatment than supportive therapy.</td>
</tr>
<tr>
<td>Burgess et al. (1987) — 153 myocardial infarction patients (77 in treatment, 76 in control)</td>
<td>Focused on providing support and improving perceived support and supportive interactions within natural social network. Led by masters’ level nurses to patients and close family members. Some CBT interventions.</td>
<td>Randomized usual care control group design; 13-month follow up.</td>
<td>Revised support network strain measure(^a)</td>
<td>At 3 months posttreatment, treatment group was significantly less distressed and less dependent on family support than controls. At 13 months follow up, differences have subsided. Intervention did not result in an increase in the return to work rate.</td>
</tr>
<tr>
<td>Calsyn, Morse, Klinkenberg, Trusty, and Allen (1998) — Study 1: exact N not reported; Study 2: 165 persons who were homeless or mentally ill</td>
<td>“Assertive Community Treatment” (ACT): treatment team provided instrumental support (e.g., obtaining resources, arranging transportation, and assisting with daily activities). 24-h emergency services provided. Individual client contact.</td>
<td>Study 1: random assignment to either (1) ACT, (2) access to drop-in centers, or (3) outpatient psychotherapy. Study 2: random assignment to either (1) ACT, (2) ACT with community worker, or (3) case management.</td>
<td>Modified version of Arizona Social Support Interview Schedule(^a) (Barrera, 1980); four items from Personality and Social Network Adjustment Scale(^a) (Clark, 1968)</td>
<td>Study 1: no differences in social network size or other support areas at 12 months. ACT group reported more professionals in social networks than other groups. Study 2: study 1 results replicated. (2) received more instrumental support than other groups.</td>
</tr>
<tr>
<td>Study</td>
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<td>Intervention</td>
<td>Outcomes</td>
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<td>Chandler, Meisel, Hu, McGowen, and Madison (1996) — Site 1: 156 participants with serious mental illness (127 in treatment, 129 in control); Site 2: 160 participants with serious mental illness (125 in treatment, 135 in control)</td>
<td>&quot;Integrative Service Agency Model&quot;: primarily instrumental support, but clients and family members were involved in determining the service direction. Randomized, standard care control group design.</td>
<td>Not clear how social support was measured. Significantly greater improvements in social support, family burden, and treatment satisfaction than controls. Not clear how constructs measured. Less hospital care, greater workforce participation, fewer group/institutional housing arrangements, and more leisure activity in treatment group. Treatment cost higher than standard care.</td>
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<tr>
<td>Finesilver (1978) — 40 patients awaiting cardiac catheterization or coronary cineangiography (20 in each condition)</td>
<td>Informational support designed to familiarize the patient with their condition, events likely to occur before, during, and after procedure, and with techniques used. Emotional support. Randomized, standard care control group design.</td>
<td>No Supportive intervention reported lower levels of distress during catheterization. No differences observed between groups on mood levels before and after procedure, cooperativeness during procedure, or distress with sensations experienced.</td>
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<tr>
<td>Frasure-Smith and Prince (1985) — 453 male myocardial infarction patients (229 in treatment, 224 in control)</td>
<td>For 1 year, patient visits from nurses if stress levels increased above criterion point or if rehospitalized. Nurses provided support and information. Arranged additional treatment if necessary. Randomized, standard care control group design.</td>
<td>No Treatment group showed a significantly greater decline in stress than controls. No differences observed in rehospitalizations. Significantly fewer deaths in the treatment group than the control group.</td>
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<tr>
<td>Frasure-Smith and Prince (1989) — 461 male myocardial infarction patients</td>
<td>Same as above</td>
<td>Same as above; 7-year follow-up. No Treatment group experienced significantly less myocardial infarction recurrences than controls.</td>
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<td>Frasure-Smith et al. (1997) — 1376 myocardial infarction patients (692 in treatment, 684 in control)</td>
<td>Same as above.</td>
<td>Same as above.</td>
<td>No</td>
<td>No survival impact of treatment. Women in the treatment showed higher cardiac and all-cause mortality. Small impact on anxiety and depression.</td>
</tr>
<tr>
<td>Irvine and Logan (1991) — 110 hypertensive men and women (55 in support group, 55 in relaxation therapy)</td>
<td>Supportive therapy (nonspecific control condition) involved discussion of stress high levels of blood pressure.</td>
<td>Randomized, alternate treatment control group design.</td>
<td>No</td>
<td>Both treatments facilitated decrease in alcohol consumption and indirectly influenced blood pressure levels (i.e., alcohol consumption positively correlated with diastolic blood pressure and change in diastolic blood pressure at outcome). Telephone support not effective at preventing relapse. Participants who relapsed significantly more likely to resume abstinence if they received telephone support (at 6- and 24-month follow up).</td>
</tr>
<tr>
<td>Lando, Pirie, Roski, McGovern, and Schmid (1996) — 1083 smokers (524 in intervention, 541 in control)</td>
<td>Telephone support provided by professionals 3, 9, and 21 months after quitting. Participants could request up to nine more phone calls. Addressed discouragement and self-efficacy.</td>
<td>After 15-session smoking cessation clinic, random assignment to telephone support or control; 2-year follow up.</td>
<td>No</td>
<td>Interpersonal psychotherapy and supportive therapy with imipramine showed significantly greater decreases in depression than supportive therapy or CBT.</td>
</tr>
<tr>
<td>Markowitz et al. (1998) — 101 HIV-positive men and women</td>
<td>16 weeks of treatment. Supportive psychotherapy involved the provision of emotional and instrumental support.</td>
<td>Randomly assigned to either (1) interpersonal psychotherapy, (2) CBT, (3) supportive psychotherapy, or (4) supportive psychotherapy with imipramine.</td>
<td>No</td>
<td>APT showed significantly greater improvement in anxiety, adjustment to cancer, and coping strategies than supportive intervention (posttreatment and follow-up).</td>
</tr>
<tr>
<td>Moorey, Greer, Bliss, and Law (1998) — 47 cancer patients (25 in Adjuvant Psychological Therapy (APT), 22 in Supportive Counseling)</td>
<td>Eight weekly sessions (spouses attended if/when appropriate). Emotional support provided.</td>
<td>Random assignment to either (1) APT (CBT-focus) or (2) supportive therapy; 4-month follow-up.</td>
<td>No</td>
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<tr>
<td>Study</td>
<td>Participants</td>
<td>Intervention Details</td>
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<tr>
<td>Norbeck, Dejoseph, and Smith (1996)</td>
<td>114 African American low-support, pregnant women (56 in treatment, 58 in control)</td>
<td>Four standardized sessions with a nurse. Focused on social support, self-esteem, and relationships that affect self-esteem. Support provision from nurse and mobilization of natural support.</td>
<td>The rate of low birth weight was significantly lower in the intervention group than the control condition.</td>
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<tr>
<td>Renaud et al. (1998)</td>
<td>100 adolescents diagnosed with Major Depressive Disorder</td>
<td>Same as above; 2-year follow-up.</td>
<td>Rapid responders to treatment showed better outcome at acute treatment and follow-up. Patients more likely to respond, or not at all, in the supportive therapy. Intervention group reported significantly less anxiety and depression than controls. Maintained at 6-month follow up.</td>
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</tr>
<tr>
<td>Thompson and Meddis (1990)</td>
<td>60 male myocardial infarction patients (30 in treatment, 30 in control)</td>
<td>Four 30-min sessions. Supportive/educational intervention led by nurses. Reactions/feelings about heart attack and rehabilitation discussed and emotional and informational support provided. Spouses included.</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Thompson (1989)</td>
<td>Same as above</td>
<td>Same as above; supporters included.</td>
<td>Anxiety and depression significantly reduced in treatment patients and spouses compared to controls.</td>
<td></td>
</tr>
<tr>
<td>Villar et al. (1992)</td>
<td>2235 women at risk for delivering a low birth weight infant (1115 in treatment, 1120 in control)</td>
<td>Four home visits by social worker. Patient-selected support person shared all intervention activities. Emotional and informational support provided.</td>
<td>No differences between groups observed in risk of low birth rate, preterm delivery, intrauterine growth retardation, type of delivery, length of hospital stay, or perinatal or neonatal morbidity in the first 40 days.</td>
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<tr>
<td>Wolfer and Visintainer (1975) — 80 children scheduled for minor surgery and their parents</td>
<td>Emotional and informational support (sequences of events, sensory experiences, role expectations, appropriate responses, and previews of procedures through play techniques).</td>
<td>Randomized, standard care control group design.</td>
<td>No</td>
<td>Children showed less upset behavior, more cooperation, lower pulse before and after painful procedures, shorter time to voiding, and better posthospital adjustment compared to controls. Parents demonstrated lower anxiety and increased satisfaction with information and care provided.</td>
</tr>
</tbody>
</table>

* No psychometric information on modified instrument provided.
already been discussed. Burgess et al. (1987) evaluated an intervention designed to provide support to myocardial infarction patients and their close family members. Although improvements were observed on psychosocial indices at 3 months posttreatment, these effects dissipated shortly over a year later. Instrumental support provided in an ACT program for homeless or mentally ill persons did not provide any measured benefit outside of increased number of professionals in social networks of participants (Calsyn et al., 1998). This finding is in contrast to that of Chandler et al. (1996) who evaluated a conceptually similar intervention, another example of inconsistencies in findings.

Markowitz et al. (1998) examined the relative efficacy of four different treatments for depression in HIV-positive patients: interpersonal psychotherapy, CBT, supportive therapy, and supportive therapy plus imipramine. Supportive therapy alone was found to be inferior to interpersonal psychotherapy and supportive therapy with imipramine. Moorey et al. (1998) compared supportive therapy to APT (a CBT-based treatment for cancer patients) in cancer patients. Again, supportive therapy was inferior to the comparative treatment but still produced significant changes on some outcome variables (e.g., depression and state anxiety).

Villar et al. (1992) also report null effects of a professionally led individual support intervention. Women at risk for delivering low birth weight babies, accompanied by a support person of their choice, received four home visits by an experienced social worker. Despite a very large sample size, results indicated that the intervention did not have an effect on any of the outcome measures. Although a measure of social support was administered, results were not reported. Because the intervention was very brief, it may have lacked potency. However, as mentioned earlier, Norbeck et al. (1996) demonstrated that a short support intervention had demonstrable effects for a similar sample of women. Why such inconsistent results? One possibility is that the emphasis on learning about relationships that foster or limit self-esteem in the intervention implemented by Norbeck et al. was particularly fruitful.

Telephone support was used to encourage smoking abstinence and to encourage renewed quit attempts in smokers who had attended an intensive smoking cessation clinic (Lando et al., 1996). Calls were placed 3, 9, and 21 months after the ‘quit date.’ At each of these intervention points, participants had the option of receiving up to three additional calls. The telephone support was generally unsuccessful in sustaining abstinence or preventing relapse. However, participants who received the intervention were significantly more likely to resume abstinence after a relapse than those in the control condition (at 6- and 24-month follow ups). When these findings are compared to those of Pirie et al. (1997) and West et al. (1998), it appears that peer support is more effective than professional support for this population. It is important to note that this intervention utilized telephone support. In Section 4.2.2, the telephone had not proven to be an effective medium for support provision.

4.2.4. Social support skills training: individual interventions

Teaching social skills to unassertive persons through use of rehearsal, modeling, instruction, and behavioral feedback has proven effective in the laboratory (e.g., Eisler, Hersen, & Miller, 1973; McFall & Twentyman, 1973). Spurred by this initial research, seven studies evaluated individually based interventions focusing on teaching social skills rather than providing social support (see Table 9).
<table>
<thead>
<tr>
<th>Authors and sample</th>
<th>Support intervention</th>
<th>Design</th>
<th>Measure of support</th>
<th>Results</th>
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</thead>
<tbody>
<tr>
<td>Cole, Klarreich, and Fryatt (1982) — 120 female psychiatric outpatients (30 participants per condition)</td>
<td>Eight sessions. Trained observation, inference, and evaluation skills and modification of social behavior.</td>
<td>Random assignment to either (1) Interpersonal Skills Training, (2) Stress Management, (3) Attention-only, or (4) waitlist control.</td>
<td>Response Tendency Measure and Social Discomfort Index (Christensen et al., 1974), Community Adjustment Profile (Evenson &amp; Sletton, 1974)</td>
<td>Social skills training resulted in significantly greater improvements in social functioning than comparison groups.</td>
</tr>
<tr>
<td>Finch and Wallace (1977) — 16 male schizophrenic patients (eight in each condition)</td>
<td>12 1-h sessions, three times a week. Focused on speech fluency, volume, affect, latency of response, and content. Modeling and rehearsal of skills.</td>
<td>Randomized, standard care control group design.</td>
<td>Wolpe–Lazarus Assertiveness Questionnaire, behavioral ratings²</td>
<td>Treatment group significantly exceeded control group on self-report and behavioral measures of assertion and social skills.</td>
</tr>
<tr>
<td>Goldsmith and McFall (1975) — 36 male psychiatric patients (12 in each condition)</td>
<td>Three 1-h training sessions in a 5-day period. Focused on initiating conversations, rejection, assertion, and self-disclosures.</td>
<td>Randomized, alternate treatment and control group design.</td>
<td>Interpersonal Situation Inventory (Goldfried &amp; D’Zurilla, 1969); behavioral ratings²</td>
<td>Treatment group significantly exceeded control groups on self-report and behavioral measures of assertion and social skills.</td>
</tr>
<tr>
<td>Hansell et al. (1998) — 70 caregivers of children with HIV/AIDS (39 seropositive, 31 seronegative)</td>
<td>Monthly contacts over 12 months. Helped caregivers identify and access network resources that provided emotional, cognitive, and instrumental support.</td>
<td>Randomized, standard care control group design.</td>
<td>Tilden Interpersonal Relationship Inventory (Tilden, 1991)</td>
<td>Seronegative caregivers in treatment had significantly higher levels of social support than controls and seropositive caregivers in treatment. No differences in coping or stress. Support levels for seropositive caregivers in treatment decreased.</td>
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<tr>
<td>Authors and sample</td>
<td>Support intervention</td>
<td>Measure of support</td>
<td>Results</td>
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<tr>
<td>Hersen, Bellack, Himmelhoch, and Thase (1984) — 125 women diagnosed with unipolar depression</td>
<td>12-week program. Social skills instructions, feedback, practice, social perception training, and self-reinforcement; 6-month maintenance treatment.</td>
<td>Random assignment to (1) social skills training + pill placebo, (2) social skills training + amitriptyline, (3) amitriptyline, and (4) psychotherapy + pill placebo.</td>
<td>No</td>
<td>Each treatment resulted in significant reductions in depressive symptoms at 9 months. No differential treatment effectiveness.</td>
</tr>
<tr>
<td>Holmes, Hansen, and St. Lawrence (1984) — 10 psychiatric patients</td>
<td>Three 20-min sessions/week until improvement noted. Taught self-disclosure and conversational skills.</td>
<td>Multiple baseline design; 7-month follow-up.</td>
<td>Behavioral ratings&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Target behavior frequency increased to socially validated criterion levels; generalized to unfamiliar, nonpsychiatric partners. Effects maintained at follow-up.</td>
</tr>
<tr>
<td>Linehan, Goldfried, and Goldfried (1979) — 79 women low on assertion (16 in three treatment groups and discussion only, 15 in control)</td>
<td>12 sessions. Assertion training involved either (1) behavioral rehearsal, (2) systematic rational restructuring (emphasizing assertive beliefs), or (3) both.</td>
<td>Randomized, alternate treatments, control group design; 2-month follow-up.</td>
<td>Assertion Difficulty Inventory,&lt;sup&gt;a&lt;/sup&gt; Assertiveness Inventory (Rathus, 1973), behavioral ratings&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Combination therapy showed significantly greater change on self-reports of assertion, anxiety, and hostility. All treatments equal on behavioral ratings of response ability. Behavioral rehearsal treatments better at improving assertive responses. Effects sustained at follow-up.</td>
</tr>
</tbody>
</table>

<sup>a</sup> No psychometric information provided.
Overall, results of these investigations are promising in generally unassertive populations and in samples with specific diagnoses. Hansell et al. (1998) examined the effect of a social support ‘boosting’ intervention on stress, coping, and social support in caregivers of children with HIV/AIDS. Seronegative caregivers who received the intervention had significantly higher levels of social support at posttreatment than the control participants and the treated seropositive caregivers. However, no differences in stress or coping were observed for any of the participants. Interestingly, support levels for the seropositive caregivers that received treatment decreased (although not significantly) over treatment. Why was the intervention not successful for seropositive caregivers? Hansell et al. posit that seropositive caregivers face multiple, and more complex, problems than seronegative caregivers and that the intervention tested in this study was simply not sufficient for this population. For the seronegative participants, changes in social support were observed. However, because the intervention included both skills training and support provision, the unique contributions of these two components are not clear. Furthermore, the intervention and increase in social support were not associated with stress or coping changes.

Hersen et al. (1984) compared four treatment approaches for unipolar depressed women: (1) social skills training plus pill placebo, (2) social skills training plus amitriptyline, (3) amitriptyline, and (4) psychotherapy plus pill placebo. Each treatment resulted in significant reductions in depressive symptoms at the end of 9 months, but no differential treatment effectiveness was observed. Social skills training performed was as a pharmacological as well as other psychological treatment.

The remaining four studies all provide similar forms of social skills training to psychiatric patients (Cole et al., 1982; Finch & Wallace, 1977; Goldsmith & McFall, 1975; Holmes et al., 1984). Each of these studies reported very encouraging results, with patients receiving social skills training showing improvements on both self-report and behavioral observation ratings. Treatment effects were reported to generalize (Holmes et al., 1984). However, no follow-ups were reported.

4.2.5. Comparison of different types of individual support treatment structures

Only one study compared different forms of individual support. Pistrang and Barker (1998) examined the effects of emotional support provided by a partner vs. a fellow patient on women with breast cancer. The participants engaged in a semistructured communication task that required the discussion of the personal problems of the women. Trained observers rated the conversations with a fellow patient to be more helpful, empathetic, and supportive, less critical, and involving more self-disclosure than the conversations with partners. The women, however, did not differentiate between the two conversations. This study did not examine outcome of the supportive conversations and did not include a validated measure of social support.

4.3. Social support interventions that combine group and individual therapy

In this section, interventions that combine group settings with one-on-one support are described. In many cases, these interventions involve both professional leadership and support provided by family members, friends, or volunteers. Five such studies are outlined in Table 10.
Four of these studies report the use of ‘combination’ therapies. Mittelman et al. (1995) found that a combination of individual and family counseling with a social support emphasis led to reductions in depression and improved support for spouse caregivers of AD patients. Hawkins et al. (1986) found that a social support skills training group followed by a “buddy” program was effective at reducing drug use, coping with relapse, and improving social interactions, interpersonal problem solving, and stress coping in a sample of drug users residing in therapeutic communities. The other two studies evaluated smoking cessation programs. Murray et al. (1995) examined a 12-week group program (participants encouraged to bring a support person) and an individual intervention. At the end of the 12-week program and after 1 year, men (but not women) who were supported in quitting were more likely abstinent than controls. Additionally, participants supported by an ex-smoker were very likely to be not smoking at the end of 1 year, while participants supported by a smoker had only moderate rates of abstinence after 1 year. Digiusto and Bird (1995) also found evidence of moderating factors. Smokers were randomly assigned to social support or self-control treatment. The support condition required the participants to attend group meetings that involved structured and interactive discussions and the teaching of support strategies for avoiding smoking. Participants were also encouraged to ask a friend to be a “helper.” The support intervention was more effective for participants with high baseline self-control orientation and high self-efficacy scores. A multicomponent support intervention designed for elderly persons of low socioeconomic status (Baumgarten et al., 1988) did not show positive results. Individual services (matching participants with peer volunteers) and leisure group activities were provided to elderly residents of a government-subsidized apartment building. Residents in a similar building served as controls. No significant differences were observed between groups in number of social ties, support satisfaction, or depression.

4.4. Group vs. individual interventions

Group and individual interventions were compared in three different studies. In the first study, Linehan, Walker, Bronheim, Haynes, and Yevzeroff (1979) compared the relative effectiveness of group and individual assertion training for a sample of 16 nonassertive women. In both cases, treatment involved behavioral rehearsal, modeling, and coaching and focused on such behaviors as voice quality, frequency of responses, assertion, and eye contact. No differences emerged between the two treatment versions on measures of assertiveness, anxiety, or hostility at posttreatment or 3-month follow-up.

In the second study, the same thematic model was used as a basis for both individual and group interventions for women with gynecologic cancer (Cain, Kohorn, Quinlan, Latimer, & Schwartz, 1986). The thematic model included eight counseling sessions focused on providing informational and emotional support. Women in both treatment conditions were significantly less depressed and less anxious, had more knowledge of their illness, better relationships with caregivers, fewer sexual difficulties, and more participation in leisure activities at posttreatment. No differences were observed between the two treatment styles, indicating that they were equally beneficial. Participation increased knowledge and improved relationships with caregivers (presumably increasing perceived support), but it is not known
<table>
<thead>
<tr>
<th>Authors and sample</th>
<th>Support intervention</th>
<th>Design</th>
<th>Measure of support</th>
<th>Results</th>
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<tbody>
<tr>
<td>Baumgarten, Thomas, de Courval, and Infante-Reivard (1988) — 95 elderly residents of a government-subsidized apartment building (51 in treatment, 44 in control)</td>
<td>Individual services that involved matching elderly persons with peer a government-subsidized group activities</td>
<td>Quasiexperimental design.</td>
<td>Elderly residents compared to a control group of elderly residents of another subsidized apartment building in the neighborhood.</td>
<td>No significant differences observed between groups in number of social ties, social support satisfaction, or level of depression.</td>
</tr>
<tr>
<td>Digiusto and Bird (1995) — 137 female smokers</td>
<td>Structured and interactive discussions and teaching of social support strategies. Encouraged to ask a friend to be a &quot;helper,&quot; who attended the second meeting, administered a postquit abstinence contract, and provided support.</td>
<td>Random assignment to either social support or self-control treatment. Self-control condition emphasized self-management not relying on others. Information presented didactically and cognitively and behavioral strategies taught.</td>
<td>No (this study designed to assess matching smokers to treatment style; support measures were only at baseline)</td>
<td>Support intervention more effective for participants with high baseline self-control scores. No other differences observed.</td>
</tr>
<tr>
<td>Hawkins, Catalano, and Wells (1986) — 130 drug users residing in four therapeutic communities and skills training intervention. Treatment of standard care social network development and social skills training</td>
<td>Random assignment to treatment or standard care.</td>
<td>No Drug abusers who received the social support intervention showed more improvement than controls in avoidance of drug use, coping with drug use, coping with drug withdrawal, interpersonal problem solving, and stress coping.</td>
<td>No differences observed.</td>
<td></td>
</tr>
<tr>
<td>Study Authors</td>
<td>Participants</td>
<td>Intervention Details</td>
<td>Design &amp; Follow-Ups</td>
<td>Results</td>
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<td>Mittelman et al. (1995)</td>
<td>206 spouse caregivers of Alzheimer’s Disease (AD) patients (103 in each condition)</td>
<td>Six sessions of individual and family counseling. Helped caregivers gain control over environment and to seek support from natural support networks. Continued ad hoc consultation with family counselors and an AD caregiver support group (emotional support).</td>
<td>Randomized, standard care control group design; 4-, 8-, and 12-month follow-ups.</td>
<td>Stokes Social Network Scale (Stokes, 1983) After 8 months, caregivers in support intervention were significantly less depressed than controls. Increase in family cohesion and satisfaction with social network predicted decreased depression at follow-ups.</td>
</tr>
<tr>
<td>Murray, Johnston, Dolce, Lee, and O’Hara (1995)</td>
<td>392 smokers</td>
<td>12-week group (encouraged to bring support person) and individual intervention. Group program taught behavioral and social learning principles and provided nicotine replacement therapy. Individual component involved clinic visits (three times a year). Permitted to reenter initial group program and/or individual counseling.</td>
<td>Randomized, standard treatment control group design; 1-year follow-up.</td>
<td>No At posttreatment and follow-up, men (but not women) who were supported in quitting were more likely to be abstinent than controls. Participants supported by an ex-smoker very likely to be not smoking at the end of 1 year. Participants supported by a smoker had moderate rates of abstinence after 1 year.</td>
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</tbody>
</table>

a No psychometric information on modified version reported.
whether participants perceived the therapy as supportive or whether this mediated the observed outcome.

A skills group was compared to peer telephone support for MS patients by Schwartz (1999). Participants randomly assigned to the skills intervention received teaching about approaches to goal setting, strategies to deal with cognitive deficits, and ways of improving communication with caregiver, as well as participating in discussions about their emotional difficulties. Thus, these participants received emotional support and structured skills training aimed at improving coping and naturally occurring social networks. Participants randomly assigned to the peer telephone support condition received nondirective emotional support from volunteers who also had MS who were trained in active listening. Results indicated that the skills training intervention produced gains in psychosocial role performance, coping behavior, and well-being, while the peer support intervention increased external locus of control but did not influence other variables. The peer support intervention was most helpful among participants with affective symptoms. Possible mechanisms behind the success of the skills training group are proposed by Schwartz, including modeling, reframing, increased commitment, and the directive nature of the group. Improved communication with caregivers may have led to increased support, which may have played a role in treatment outcome. Interestingly, compared to the supported patients, the peer telephone supporters reported more change in both positive and negative outcomes and showed improvements on psychological variables (e.g., self-esteem, depression; Schwartz & Sendor, 1999). These findings, in combination with those reported by Scharlach (1988), suggest that systems of mutual support that encourage reciprocity may be especially helpful.

Unfortunately, results of these studies do little to clarify the comparative efficacy of group and individual interventions. As with many other studies, they are limited by their failure to include formal measures of social support. Although the results of Schwartz (1999) favor a coping skills group over telephone support, the findings do not indicate that such a group would outperform a different (e.g., more structured) form of individual support treatment. Overall, results of the literature search indicate that very little work has been done comparing different forms of social support interventions.

5. Discussion

A coarse summary of the results in a box-score format indicated that support interventions are reasonably successful. Of the 100 studies reviewed, 39 reported that supportive interventions were superior to no-treatment or standard care controls, 12 reported that interventions were superior or equivalent to alternate (also successful) treatments, 22 suggested partial benefits of support interventions, 17 suggested no benefit, and in two studies treated participants got worse. In eight studies, there were no controls that allowed comparison. In sum, 73/92 (or 83%) of studies reported at least some benefits of support interventions relative to either no-treatment or active controls.

Unfortunately, this crude summarization is of limited use because many different types of interventions, delivery formats, and populations get lumped together. Although Chambless...
and Hollon (1998) and the American Psychological Association (APA) Task Force on Promotion and Dissemination of Psychological Procedures (1995) have provided guidelines for the classifications of treatments as efficacious, these minimal criteria were difficult to meet given the diversity of approaches, targets, and patient populations. With regard to specific interventions, not one study reported here had been examined vigorously enough to allow such a conclusion.

On the positive side, the different forms of support interventions generally produced encouraging results. Results of the research reviewed very tentatively suggest that support provided by friends and/or family members and by peers is beneficial and that social support skills training may be especially useful. These findings hold across both individual and group interventions and for peer- and professionally-directed protocols. However, this review also clarified that matching specific forms of support interventions to specific populations may be a particularly useful avenue for further research (this is discussed more explicitly below). Furthermore, it was noted that interventions that emphasized reciprocal support (e.g., both giving and receiving support) demonstrated more encouraging results, suggesting that merely receiving support may not be as potent as mutual exchanges of support.

Conceptual and methodological problems further prevent much confidence in simplistic reporting of results. While reviews of therapy outcome routinely criticize studies for their methodological flaws, the support interventions reflected particularly serious problems. Far and away, the most salient problem is that most of the studies examining efficacy of support interventions failed to include a measure of social support. This is particularly striking because investigators usually posit that improved support is their hypothesized reason for otherwise observed benefits. Hence, underlying models cannot be tested. Others have included very brief, global measures of support designed by the authors themselves, although better validated tools were available at that time. These “home-made” measures have often received superficial or no testing on their psychometrics. A further subgroup of studies utilized modified versions of existing instruments but typically failed to test the validity and reliability of these revised measures.

Unfortunately, the difficulty of measuring social support does not simply end by including just any validated measure in the research protocol. There is a multitude of available measures and a “gold standard” assessment tool does not exist. In the studies reviewed, over 30 different measures of social support with at least some demonstrated psychometric validity and reliability were used, many lacking in definitional specificity (see Antonucci & Johnson, 1994; Krouse, 1990 for reviews of social support measurement problems). Nonetheless, investigators must determine what aspect of social support they regard as important to evaluate in relation to their specific intervention. Is the intervention hypothesized to produce an increase in social contacts or in emotional, informational, or instrumental support? Is enacted support (i.e., the provision of specific supportive behaviors) important, or is the subjective perception of support by the recipient of particular interest? Researchers often failed to consider exactly what aspect of social support was the target of the intervention, how this target could be best reached (matching choice of technique to target), and which measures would be most sensitive.
Extensive problems were encountered with sampling, sample size, and randomization. About 20% had very small sample sizes (i.e., \( n < 15 \) per condition). Absence of power considerations means that these studies were unlikely to find effects even where they did exist. Approximately 25% of the studies reviewed failed to randomly assign participants to conditions. Approximately one-quarter limited their samples to one gender, thus limiting generalizability (studies where including only one gender was appropriate, e.g., breast cancer patients, were not included in this count). In terms of analyses, several studies failed to report inferential statistics and reported only percentages or means (and standard deviations; i.e., Benum et al., 1987; Lovell & Hawkins, 1988). Another problem was exclusive reliance (about 70% of studies) on self-report data. Inclusion of hard outcome measures increases the confidence that can be placed on results (Linden & Wen, 1990) and 80% of studies with hard measures reported positive treatment effects on those variables.

Obviously, multicomponent interventions did not permit unteasing of the effect(s) of the intervention components. Also, many of the multicomponent interventions seemed quite complicated and/or unusually lengthy (e.g., Friedland & McColl, 1992; Heaney et al., 1995; Ireys et al., 1996), making replications and future treatment implementations difficult and costly. Other interventions were so short (e.g., Houts et al., 1986; Norbeck et al., 1996; Thompson & Meddis, 1990) that treatment potency is a concern. Follow-ups were not included in over 50% of the studies and, if executed, tended to be short.

5.1. Research on social support processes: how can it help to design better social support interventions?

Support interventions are based on the theory that increasing support allows people to better cope, and this enhanced coping will result in fewer psychological or physical symptoms (Cohen & Wills, 1985). This theory predicts that the availability and/or quality of enacted support, or support provided by others, will correspondingly increase subjectively perceived availability and quality of support received. However, as Lakey and Lutz (1996) point out, there are two major flaws with this assumption. First of all, enacted and perceived support are not strongly correlated (Barrera, 1986; Lakey & Heller, 1988; Sarason, Shearin, Pierce, & Sarason, 1987). Secondly, enacted support is unrelated to psychological symptoms (Barrera, 1986) and does not frequently show stress-buffering effects (Cohen & Wills, 1985). On the other hand, perceived support, a trait-type characteristic, has been shown to be closely related to psychological symptoms (Barrera, 1986). Therefore, support interventions perhaps should focus on changing subjective perceptions of support. The question then arises as to what determines a subjective perception of social support. Lakey and Lutz propose that perceived support is a function of a personality characteristic, the social environment, and an interaction between the perceiver and the supporter. Given evidence that perceived support is stable and enduring and is related to measures of self-referent cognitions, social interpretations, and interpretive biases (Lakey & Cassady, 1990; Lakey & Dickinson, 1994; Sarason et al., 1991; Sarason, Sarason, & Shearin, 1986), Lakey and Lutz suggest that perceived support may be, at least in part, a personality construct. The finding that perceived support is associated with cognitive biases may make it a viable candidate for cognitive strategies.
(Brand et al., 1995). However, Lakey and Lutz emphasize that even as a personality process, perceived support is closely linked to the social environment; the characteristics of the supporter also play a role. Thus, improving access to supportive persons may be important. One possibility is to help persons recruit supportive others into their social network. Some studies have attempted to do this by teaching social skills; unfortunately, most of these studies have not investigated the effects of doing so on resulting levels of perceived support. Lakey and Lutz suggest that relationship-building skills should be the focus of such interventions rather than assertiveness or conflict resolution skills. The perceiver–supporter interaction is also important in that certain people prefer particular forms of enacted support (i.e., a ‘match’ is necessary for a subjective perception of support). Lakey and Lutz emphasize that similarity between supporter and perceiver is critical. The perceiver–supporter interaction implies that certain supporters will be better suited to certain types of perceivers. However, determining this kind of match is very complex. Furthermore, interventions that bring together these ‘matches’ would likely be very difficult to design and implement. (See Lakey and Lutz for a more detailed discussion of the construct of perceived support and possible interventions.)

The quality of the relationship between persons, the gender of the supporter, and certain characteristics of the supportee have emerged as potentially important factors influencing social support and their physiological consequences under acute stress (Christenfeld et al., 1997; Glynn, Christenfeld, & Gerin, 1999; Kors, Linden, & Gerin, 1997; Lepore, 1995). Christenfeld et al. showed that presence of friends in a supportive role, as opposed to strangers, led to decreased cardiovascular reactivity to stress. Kors et al. showed that when support is provided by a friend, perceived closeness of the friend is associated with decreased blood pressure reactivity during stress. These findings suggest that support interventions should involve persons from the natural support network. This can be done in two ways: (1) by including the support network in the intervention or (2) by improving the quality of existing relationships or develop new relationships to add to the support network. Including friends and families in the intervention can be done in many ways, and at this point, it is not clear whether just having close family or friends around is enough or whether teaching friends and family how to better interact and provide support is essential. Alternatively, if subjective perception of support is the key element, then training individuals to more accurately interpret available support and to develop more supportive relationships may be essential.

The findings of Glynn et al. (1999) indicate that support provided by women may have greater physiological benefits than support provided by men. This raises the question whether or not interventions that attempt to provide support should utilize females (professionals and lay-people) as supporters. Unfortunately, such a suggestion places a considerable burden on women at large. The characteristics of particularly effective female supporters have not been identified. Additionally, although discriminatory use of female supporters may be more beneficial for some, it is not a universal phenomenon and may be perceived as offensive to men who are also capable and willing to serve in supportive roles.

Supportee characteristics have emerged as moderators of the effect of social support on physiological responses. Lepore (1995) found that persons with high cynical hostility levels (characterized by pervasive mistrust of others) did not benefit from support to the same extent as those with low hostility levels. This illuminates the notion that there are existing treatments
that target personality characteristics, such as hostility, and surreptitiously influence perceived social support (Gidron, Davidson, & Bata, 1999).

The downfall of turning to basic social support research for guidance is that many of these studies have taken place in the laboratory setting and have primarily used university student populations, thus limiting generalizability. Furthermore, they have often only examined the impact of social support on short-term physiological responses and have not looked at longer-term psychological outcomes.

5.2. Lack of support vs. negative support: should we redefine the problem?

The basic assumption of this review is that people are, for one reason or another, lacking in social support and that providing support would be beneficial. However, a growing body of research suggests that the presence of “negative support” (support that does not meet the needs of the recipient or behavior that is perceived as harmful, critical, hostile, etc.) can be counterproductive (Ruehlman & Karoly, 1991). In fact, the conflictual aspects of relationships have been found to be more predictive of poor psychological outcomes than the positive aspects of these relationships (i.e., support) (Franks et al., 1992; Pagel, Erdly, & Becker, 1987; Rook, 1984). Rook further notes that positive ties with others were significantly related to well-being only when they involved positive affect and sociability rather than specific provision of support. A related concern is support attempts that fail, which includes minimization (i.e., challenging the seriousness or existence of a problem) and maximization (i.e., catastrophizing the problem or being overly protective; Dakof & Taylor, 1990; Hemphill, 1997; Lehman & Hemphill, 1990). Interestingly, Hemphill noted that some kinds of support, such as tangible and informational assistance, were perceived as especially helpful or unhelpful, depending upon the characteristics of the stressor (i.e., physical incapacitation, controllability, or trajectory). Dakof and Taylor’s findings suggest that interpersonal difficulties vary according to who is involved. Social avoidance was more common with friends, while minimization and criticism were more common with family members. Thus, the kind of support, who provides the support, and contextual issues all play a role in determining whether support is perceived as beneficial.

The possibility that support attempts may fail raises some very critical questions. If negative or inappropriate social interactions are the key problem, then it is plausible that “support” interventions should be working to improve social interactions within the natural social network rather than simply providing acute positive support. Skills training is one possibility, although it might be more effective to draw significant others into therapy in an effort to interrupt the negative social processes. However, Lepore (1992) found that although interpersonal conflict predicted increases in psychological distress over time, this effect was attenuated by high levels of perceived support from friends. Thus, if levels of perceived support can be improved via a support intervention, then perhaps the detrimental effects of negative social interactions can be lessened. Including friends in the interventions might be a particularly fruitful avenue.

A second issue is the nature of the support provided in existing support interventions (or future interventions based on similar premises): How can psychologists or other therapists be
assured that the support provided in the context of these therapies is not ‘negative’ in nature? Avoiding critical or unpleasant social interactions within the therapeutic context is essential. Assuring that unhelpful support attempts, such as minimization and maximization, do not occur is also important. Unfortunately, the nature of the interventions may present some concerns, especially with group formats. Coates and Winston (1983) reported that peer support groups have the potential to damage self-esteem by reinforcing identity as a member of a deviant or stigmatized group. Other research has suggested that social comparison can lead to negative affect (Buunk, Collins, Taylor, VanYperen, & Dakof, 1990); social comparison is likely to occur in group support interventions. However, group interventions also have many potential benefits, including the instillation of hope, acceptance, belonging, and altruism, and are intrinsically appealing as a means of improving support.

Revenson (1990) proposed several mechanisms that underlie negative supportive interactions that may be of use in support intervention design. For example, she suggests that support may be beneficial only at times when the person needs aid and is receptive to it. In the case of support interventions targeting medical populations, contextual issues of the illness may help define the appropriateness of a support interventions at a particular time. The importance of reciprocity should also be considered (discussed previously). Revenson expands on this by suggesting that in order for support to have beneficial effects, it must be reciprocal. This becomes especially important in cases where patients are unable to reciprocate the support received (e.g., patients with severe illness or disability). This social relationship inequality may threaten self-esteem. In any case, fostering reciprocity in support interventions is likely important to avoid negative effects. Finally, Revenson emphasizes that spouses maintain a pivotal position in the support network (Coyne & Delongis, 1986). Other research has indicated that the presence of a friend, as opposed to a stranger, is important in moderating traumatic losses or cardiovascular responses to stress (Edens, Larkin, & Abel, 1992; Lowenthal & Haven, 1968). These studies suggest that support from significant others (i.e., friends or family members) may be of more use than support from so-called strangers in organized support groups. A further possibility is that who provides the support may interact with the timing of the support, making the decision of how to most appropriately “improve social support” even more complicated. In sum, the issue of negative support has not been addressed in the social support intervention literature and could have far-reaching implications in terms of both future intervention designs and potential problems with current treatments.

5.3. Support interventions: the potential to harm?

It is the therapist’s and the researcher’s worst nightmare: an intervention hypothesized to have positive outcomes proves to actually induce harm. Helgeson et al. (2000) reported that women in peer discussion groups who initiated treatment with high support levels experienced decreases in physical functioning over the course of the group. It was noted that negative interactions increased in the peer discussion group and this may have altered perceptions of network relationships. The fact that treatment served to harm this subgroup of patients is unsettling and implies that women with breast cancer who are satisfied with
existing sources of support may be better off not attending peer support groups. Helgeson et al. are not alone in their findings; Frasure-Smith et al. (1997) also found that women were disadvantaged by a support intervention. Studies such as these clearly demonstrate the importance of careful evaluation of support interventions before widespread implementation.

5.4. Matching intervention to need: why people do not have social support in the first place

There is discussion in the literature about matching interventions to patient characteristics. One approach to is to ask why people with low social support do not have social support to begin with, but there was little mention of it in the literature (with exception of the recent study by Davison et al., 2000). Discussion among the authors led to the compilation of a list of potential reasons for low levels of support; these reasons appear to fit into three different dichotomies: (1) persons low in social support may differ in whether they possess social skills or do not possess such skills, (2) they may differ in whether their lack of social support is transient or enduring, and (3) they may differ in whether their low level of social support is involuntary (and thus associated with a desire to increase social support) or voluntary (not associated with a desire to increase social support). Each category is discussed in more detail below.

Some people lack social skills that would enable them to either (a) foster relationships that could provide them with the support they need, (b) ask for support when needed, or (c) perceive existing enacted support as available and helpful, comforting, etc. While some persons may be bereft of assertiveness or conflict resolution skills, others may have trouble initiating and developing new relationships or nurturing existing ones, possibly due to cognitive biases (like cynicism) that prevent them from perceiving support as available or useful. There are many interventions designed to target each of these skill deficit areas (for example, CBT for depression or social anxiety). Identifying the specific skill deficit and then targeting that deficit in skills training may lead to favorable outcomes.

Other persons may suffer from low social support because they have personality disorders, some of which are associated with very limited or almost nonexistent social networks (e.g., avoidant personality disorder and schizoid personality disorder), while others experience very volatile interactions with their family members or friends (e.g., borderline personality disorder). These persons likely suffer from skills deficits, perceptual biases, and low levels of enacted support from their social networks. Skills training may be of some use to this population, but it is likely that the personality disorder itself must be addressed before meaningful and lasting changes in social support can occur. Progress has been made in the treatment of personality disorders over recent years (e.g., Linehan, Tutek, Heard, & Armstrong, 1994), but it remains to be seen whether such treatment may surreptitiously influence perceived levels of social support.

There is a subgroup of persons who have low support levels because they have lost their primary source of social support. This may be because of death of a spouse, a move, or after an event that has caused alienation from loved ones (i.e., disease and teenage pregnancy). There are several possible ways to improve support with this population. Support groups, either with peers or led by professionals, may allow these persons to receive support and
develop new friendship with those in a similar situation. These persons may also need help learning, or relearning, skills to help them initiate and develop new relationships. If these persons are suffering from depressive or anxiety symptoms, they may be prone to making interpretive errors and consequently have difficulties perceiving support as available and genuine. Thus, perceived support may need to be addressed with this population.

There are also those who under normal circumstances have adequate levels of support but, in a time of crisis or increased stress, need an increase in support or a different kind of support. For someone needing ongoing support, bringing family and friends into treatment may be helpful so that they (and the client) can be educated as to how they can work together to improve support. Support groups may be helpful for this latter population, especially if they incorporate teaching coping skills or are not time-limited.

Yet another group of persons may have low support because their relationships lack reciprocity (i.e., they have a desire to receive social support but fail to provide social support to others; this imbalance leads to others withdrawing). As this lack of reciprocity is related to a skill deficit, skills training that addresses the importance of bidirectional support in the development and maintenance of relationships may be useful. Group support interventions may be especially useful for this population because they provide a safe practice context for both providing and receiving support.

Finally, there are persons who genuinely do not want support from others. Some of these persons may experience personality disorders, such as Schizoid Personality Disorders, but others may be very introverted and/or highly independent. Because these persons presumably do not experience distress over their low levels of support or express any desire to change, intervention would be inappropriate.

5.5. Where do we go from here? A research agenda

After several decades of research on social support interventions, a plethora of questions still remains unanswered. First and foremost, it is still unclear whether support interventions are consistently effective modes of treatment for any sort of problem. More randomized, controlled trials are necessary. Other issues, such as use of reliable, valid measures of social support, statistical power problems, and proper follow-ups, must be attended to. There is enormous research potential in this area, given the numerous types of support interventions, promise for overall good outcome (as this review suggests), and a vast array of target populations. Of particular interest may be interventions that target skill training and those that emphasize reciprocal support. Matching patients to treatment may be especially effective if it can be determined that certain patient subgroups are more likely to benefit from specific support interventions. As discussed previously, examining why patients lack support may provide important clues as to how their support needs are best met, and information can be integrated into screening protocols and/or pretreatment assessments.

A timely question is that of the usefulness of on-line support but no research was located that evaluated the efficacy of “computer” support. However, the Internet, by providing access to on-line support groups and chat rooms, may provide a potentially
very useful form of social support (Davison et al., 2000). Interestingly, in their investigation of who pursued on-line support, Davison et al. found that sufferers of debilitating diseases that present physical barriers to attending support groups (e.g., MS and chronic fatigue syndrome) showed the highest rate of on-line support group participation. Such groups provide an opportunity for persons whose disability impairs mobility, for rural and other isolated populations, as well as for those who desire anonymity. As Jerome et al. (2000) point out, the Internet can also be used to provide referral links and informational support.

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References


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* Indicates that the paper was included in the review.