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### Post-Divorce Adjustment and Social Relationships:

A Meta-Analytic Review

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#### Abstract

A meta-analysis was conducted on the role of social relationships in adults' post-divorce adjustment. Twenty-one studies were coded. Rich information was gained by comparing "specific relationships" (one-on-one contact with a specific person, such as a friend) to "network relationships" (being part of a group, such as a support group or church community) and by taking into account positive adjustment versus maladjustment, as well as other components of post-divorce adjustment (well-being, affect, psychopathology, and physiological symptoms). The findings indicated that social relationships during the post-divorce period are associated with higher levels of positive adjustment and lower levels of maladjustment. In particular, *network relationships* are important in promoting positive adjustment, while *specific relationships* are important for buffering against maladjustment. This has specific implications for therapists' work with divorcing clients and for the conducting of future research.

Key Words: divorce, adjustment, coping, relationships, social support.

Post-Divorce Adjustment and Social Relationships: A Meta-Analytic Review

Due to the increasing frequency of divorce in American society, social scientists have explored various factors that may buffer psychological distress following divorce. Social support has been identified as one such factor.

However, coherent conclusions from the research on this topic remain to be firmly established. This meta-analysis was aimed at synthesizing the available empirical information regarding whether social relationships in the post-divorce period impact the quality of individuals' adjustment, and, if so, to what extent. This analysis fills gaps in previous research by addressing how distinct types of social relationships impact adjustment differently, as well as which specific components of adjustment are impacted by social relationships. By offering more conclusive information on the role of social relationships in post-divorce adjustment, the current analysis highlights one of the pieces in the puzzle of promoting well-being among the great number of individuals who experience divorce.

Prevalence and Consequences of Divorce

Divorce is a common occurrence in our society. A recent census report by the National Center for Health Statistics indicated that 43 percent of first marriages end in separation or divorce within 15 years (Bramlett & Mosher, 2001). Much research has focused on the negative consequences of divorce. Various studies have indicated that divorced individuals experience lower levels of well-being than those who are married (e.g. Forste, & Heaton, 2004; Blumenthal, 1967; Briscoe & Smith, 1974; Pearling and Johnson, 1977; Jenks & Christiansen, 2002). Divorce has been identified as one of the most significant life stresses an individual may encounter (Homes and Rahe, 1967; Booth & Amato, 1991). It is a disruptive and emotionally draining process (Bursik, 1991) that involves problematic social, economic, physical, mental, psychological, and emotional changes (Walters-Chapman, Price, & Serovich, 1995). A number of studies have documented that adjusting to these changes can result in increased incidence of emotional, psychological and physical health problems (Bloom, Asher, & White, 1978; Chiriboga, Roberts, & Stein, 1978; Hetherington, Cox, and Cox, 1978; Weiss, 1975; Bruce and Kim, 1992; Caldwell & Bloom, 1982; Kitson & Raschke, 1981; Pearlin & Johnson, 1977; Pledge, 1992). Thus, the prevalence of divorce and its potentially deleterious impact justify focusing on post-divorce adjustment and the factors that may promote well-being during that process.

#### Post-Divorce Adjustment

The divorce literature indicates that individuals vary greatly in their reactions to divorce (Hetherington, 2003; Bursik, 1991; Amato, 2000; Wilcox, 1986). A review of the consequences of divorce indicated that divorce

benefits some individuals, causes temporary decline in well-being for others, and forces some on a "downward trajectory" from which they never recover (Amato's, 2000). Due to these varied responses to divorce, the research literature defines post-divorce adjustment along both positive and negative lines. It is most common to assess post-divorce adjustment through indicators of psychological maladjustment, such as depression, emotional distress, mental illness, anxiety, loneliness, a sense of personal failure, rejection, or identity crises (Kitson & Morgan, 1990; Birnbaum, Orr, Mikulincer & Florian, 1997). However, it is also possible to focus on positive adjustment to divorce. Positive adjustment involves being relatively free of signs and symptoms of physical or mental illness; being able to function adequately in the daily role responsibilities of home, family, work, and leisure; and having developed an independent identity that is not tied to marital status or the ex-spouse (Kitson and Morgan, 1990). Furthermore, positive adjustment is not confined to a lack of negative symptoms but may also involve positive change, which can be assessed with indicators such as psychological well-being, positive affect, overall happiness, life satisfaction, and coping.

For the current meta-analysis, post-divorce adjustment was defined as, "the process of adapting to the life-changes that result from divorce and achieving psychological and emotional well-being following the divorce." This definition was inclusive of indicators of both positive adjustment and maladjustment. The goal of the current analysis was to explore how one specific factor – social relationships – influences both positive and negative adjustment during the post-divorce period.

## Social Relationships

In general, the literature on stressful life events has singled out social support as a protective factor (Ginsberg, 1986; Camara, 1986). Social support may play a role in the alleviation of stress (Jacques et al., 1988) and mediate the impact of stress on the immune system (Geiser, 1989). Therefore, it is to be expected that social relationships may play a crucial role during the post-divorce period. Indeed, research has indicated that a variety of important relationships can impact post-divorce adjustment, including those with the family of origin, former spouse, in-laws, friends, and new partner (e.g. Bursik, 1991; Camara, 1986; Straus, 1988).

The research literature does not contain a clear consensus regarding the strength and nature of the association between social relationships and post-divorce adjustment. Studies have shown that the quality of close personal relationships can both promote and undermine psychological and physical health following divorce (Hetherington, 2003; Preece & DeLongis, 2005; Berman and Turk, 1981). This is likely due, in part, to the complex

nature of the interaction between social relationships and post-divorce adjustment. However, the ambiguity is also in large part sustained by differences that exist across studies, such as varying perspectives on the mechanisms contributing to the association and differences in the assessment of social relationships and post-divorce adjustment. Therefore, a meta-analysis is essential in order to draw clearer conclusions about the role of social relationships in post-divorce adjustment.

For the current analysis, the social-relationship construct was defined as self-sought, re-occuring interpersonal involvement with another individual or group of people on a personal level. A distinction was drawn between two forms of social relationships - *specific* relationships and *network* relationships. Specific relationships refer to interpersonal relationships with a specific person, such as a friend or family member. Network relationships refer to being a part of a larger group, such as a support group, church community, or circle of friends.

Critical Features of Social Relationships following Divorce: Past Research and Current Goals

Past literature reviews. Saunders (1983), Hughes (1988), and McKenry and Price (1991) have each reviewed existing literature on the way in which relationships change as the result of divorce and the way in which new relationships develop in the post-divorce period. This has offered valuable information on changes that occur in the structure and function of social networks, such as the family of origin, the former spouse, friends, acquaintances, dating relationships, and support groups.

These reviewers have highlighted key theoretical features of social relationships during the post-divorce period, including the ways in which social relationships can impact the adjustment period in positive and negative ways. On a positive note, those who divorce often maintain relationships with close friends and family. Calling upon such individuals during the divorce transition can serve to strengthen these relationships. Furthermore, it is common that those who experience divorce form new relationships with people who have undergone similar experiences. This allows for the development of strong bonds that serve as sources of support for positive adjustment. The research has shown that divorced individuals are generally able to establish new and satisfying relationships after divorce, including getting remarried.

On the other hand, social relationships can also have ill effects on the adjustment to divorce. In general, individuals often lose a number of important relationships after divorce. For example, they often lose contact with in-laws. This often entails the loss of a source of support, friendship, and familiarity, which makes adjustment to divorce more difficult. In addition, continuing relationships with family and friends can complicate post-divorce

adjustment because these individuals often lack norms for dealing with divorce. This can result in ambiguous reactions and inconsistent support from loved ones. In addition, the development of new intimate relationships after divorce can be hampered by factors such as low self-esteem, fear of rejection, or lack of opportunity to meet appropriate dating partners.

While Saunders (1983), Hughes (1988), and McKenry and Price (1991) have highlighted these positive and negative features of social relationships related to post-divorce adjustment, systematic empirical evidence has yet to be consolidated to support their conclusions. Meta-analytic techniques offer a powerful means by which to demonstrate conclusively if scholars' impressions of available literature are scientifically defensible.

Past meta-analyses. To date, two meta-analyses have been conducted on social support during the postdivorce period. However, neither of these meta-analyses directly assessed the general impact of social relationships on post-divorce adjustment. Additionally, both analyses were specific to gender. Burell (2002) reviewed 15 published articles exploring the relationship between gender and the type of social support that is received after divorce. She found that women received more social support from their families and friends, while men received more support from their lovers and social networks. In another meta-analysis, Smerglia, Miller, and Kort-Butler (1999) quantified 15 published articles to draw conclusions on various factors that may impact the relationship between social support and post-divorce adjustment for women. They found that four specific factors did not influence the relationship between social support and adjustment for women. These factors were: (1) whether their social support was merely available or actually enacted by others, (2) whether the research was longitudinal or cross-sectional, (3) the sample size of the study, and (4) the type of adjustment measure used. In contrast to this, one factor was found to significantly impact the relationship between social support and women's adjustment to divorce: the type of social support that was measured. Socio-emotional support involving companionship and listening was significantly more likely to positively impact women's adjustment to divorce than instrumental support, involving services, information, or material support. Therefore, this specific type of categorization of type of social support indicated that not all forms of social support function equally following divorce. This calls for further research into the ways in which various different types of social relationships may impact post-divorce adjustment differently.

Smerglia, Miller, and Kort-Butler (1999) were also able to offer some valuable information regarding the overall significance of the relationship between social support and post-divorce adjustment for women. Their dataset included 98 relationship assessments between a measure of social support and a measure of adjustment. Of all of

these relationships, 25% were significant, while 75% were not significant. This indicates that social support was found to significantly impact post-divorce adjustment for women one-out-of-four times that it was assessed. However, this finding does not offer insight into the types of social relationships that impact adjustment, nor does it make distinctions between positive and negative adjustment.

Rationale for Current Meta-Analysis. While the prior two meta-analyses highlight important gender differences in the type of social support received following divorce, as well as a key factor that impacts the role of social support for divorced women, more pressing questions still remain. In particular, there is the need for a more intricate understanding of the construct of post-divorce adjustment and what, specifically, is impacted by social relationships. What needs to be resolved is the mechanism by which social relationships impact adjustment. For example, do social relationships impact individual's affect or specific coping mechanisms? Do they impact levels of psychological disorders such as depression or anxiety? Do they have an effect on physical symptoms, etc.? To offer a richer insight into the way that social relationships impact individuals following divorce, it is necessary to consider the research findings of specific groupings of adjustment outcome measures.

Further, there is also a need to resolve the degree to which social relationships promote both positive adjustment and maladjustment following divorce. Past research has indicated that social relationships can promote—as well as hinder—well-being during the post-divorce period. However, research has been unsystematic in the use of positive and negative outcome measures, resulting in ambiguity regarding the role of social relationships in protecting from maladaptive outcomes versus promoting adaptive functioning. Therefore, a meta-analysis is required in order to quantify the positive and negative association between social relationships and post-divorce adjustment. There has been a longstanding interest in psychology in understanding how poor divorce adjustment can lead to clinical levels of psychopathology. This meta-analysis will highlight the links between the characteristics of an individual's social relationships and negative forms of adjustment following divorce. This will provide useful information for the prevention and treatment of psychopathology among divorced individuals. In addition, the positive psychology movement has emphasized the way in which stress can lead to growth. This has led to an increased interest in understanding how constructive divorce adjustment can lead to positive changes in mental health. This meta-analysis will, therefore, also highlight the links between the characteristics of an individual's social relationships and positive forms of adjustment following divorce. This will provide useful information for the promotion of growth and well-being among divorced individuals. What must urgently be addressed is the degree to

which social relationships are related to both maladjustment and positive change for both men and women following divorce.

In addition, an urgent issue that must be addressed is how different types of social relationships impact post-divorce adjustment in varying ways. Stress literature has suggested that neither all sources nor all types of social support are equally effective in reducing stress (Thoits, 1982). Following divorce, social support can take on many different patterns, depending on factors such as culture (Froma & Simons, 1995), education, occupation, and socioeconomic status (Hughes, 1988). Because most studies addressing the role of social relationships in post-divorce adjustment use only one or two measures of social support, differentiations between sources or types of social support are often not illuminated. Past research has hinted that not all forms of social relationships are equally effective in promoting well-being among divorced individuals (Ginsberg, 1986; Smerglia, Miller, & Kort-Butler, 1999). Therefore, it would be helpful to assess, for example, whether there are differences in the impact of a social relationship with one individual (e.g. a friend) versus a social relationship with a network or group of people (e.g. a support group).

Current goals. Based on these two shortcomings of knowledge, there are two primary goals of the current meta-analysis. The first is to assess the impact of social relationships on specific forms of post-divorce adjustment by analyzing research findings based on the type of adjustment measures used. For this purpose separate analyses were conducted on aggregated groups of measures: (1) global well-being, which included scales of adjustment, coping, and well-being; (2) affect, which included scales of mood state, overall happiness, and life satisfaction; (3) psychopathology, which included scales of depression, anxiety, stress, and psychological distress; and (4) physical health, which included scales of somatization and physical symptom. In a similar fashion, separate analyses were conducted on measures of positive adjustment and measures of maladjustment. Positive adjustment included measures assessing coping, global adjustment, well-being, positive affect, overall happiness, and life satisfaction. Maladjustment included measures assessing depression, negative affect, anxiety, stress, psychological distress, somatization, and physical symptoms.

The second goal is to assess whether varying types of social relationships impact post-divorce adjustment differently. For this purpose separate analyses were conducted regarding the impact of specific relationships versus network relationships on post-divorce adjustment. Research studies were aggregated that assessed the impact of a

relationship with a specific individual on post-divorce adjustment. Similarly, studies were aggregated that assessed the impact of being part of a network or group of people on post-divorce adjustment.

The studies available on the topic of social relationships and divorce adjustment are too numerous for the average reader to intuitively synthesize. For example, a thorough review of the literature in 2004 indicated that 66 empirical studies had been conducted on the topic of social relationships and post-divorce adjustment. The current meta-analysis was designed integrate the available information on the link between social relationships and post-divorce adjustment. This will allow more definitive conclusions to be drawn regarding the association between social relationships and adjustment following divorce.

Identifying whether social relationships enable some individuals to be resilient during the divorce process will increase our understanding of the factors that can lead to effective coping. Likewise, identifying whether social relationships promote maladjustment following divorce will shed light on the factors that hinder effective coping. Such information may prove very valuable for shaping intervention strategies. In addition, further information will be gathered regarding whether specific forms of interpersonal relationships are associated with the quality of post-divorce adjustment. This may lead to a better understanding of how particular relationships can be either minimized or capitalized upon in order to promote effective adjustment among recently divorced individuals. Finally, this information will be useful for directing researchers to consider important areas of future inquiry regarding the role that social relationships can play during the adjustment period following divorce.

#### Method

#### Meta-analysis

Meta-analysis systematically combines the results of multiple studies of the same research question into a general effect size, which allows conclusions to be drawn regarding the common findings of the studies. Combining analyses of many studies on the role of social relationships in post-divorce adjustment provides greater accuracy and statistical power, counteracts publication bias, and resolves apparent conflicts that exist between studies. This process involves four primary components: (1) identifying a complete set of studies on the association between social relationships and post-divorce adjustment, (2) systematically analyzing the theoretical and methodological characteristics of the studies, (3) computing a quantitative estimate of the size and direction of the relationship between social relationships and post-divorce adjustment, and (4) quantitatively analyzing the heterogeneity, potential moderators, and publication bias of the analyses.

#### Operational Definitions

Post-divorce adjustment was defined as, "the process of adapting to the life-changes that result from divorce and achieving psychological and emotional stability following the divorce." This definition is inclusive of studies using a wide variety of measures of both positive adjustment (coping, positive adjustment, well-being, positive affect, overall happiness, and life satisfaction) and maladjustment (depression, negative affect, anxiety, stress, psychological distress, somatization, and physical symptoms). Because it is unclear whether adjustment and maladjustment are precisely inversely related, these constructs were considered to be distinct, rather than opposite sides of a continuum. For this reason, separate analyses were conducted on positive adjustment and maladjustment. In addition, sub-analyses were conducted on 4 aggregated groups of measures: (1) well-being scales (adjustment, coping, and well-being); (2) affect scales (mood state, overall happiness, and life satisfaction); (3) psychopathology scales (depression, anxiety, stress, and psychological distress); and (4) physiological scales (somatization and physical symptom).

Social relationship was defined as self-sought, re-occuring interpersonal involvement with another individual or group of people on a personal level. This definition is inclusive of studies assessing relationships with family members, friends, acquaintances, significant others, the ex-spouse, support groups, church communities, colleagues etc. For the purpose of gaining richer information, separate analyses were conducted for two types of social relationships: specific and network. Specific relationships refer to one-on-one interactions with one person, such as a family member or friend. Network relationships refer to being part of a group, such as a support group or close circle of friends.

# Sample of Studies

An extensive literature search was conducted to find empirical journal articles on factors that influence adults' post-divorce adjustment, without focusing specifically on social relationships. The following four research databases were searched with combinations of the terms *divorce, marital dissolution, adjustment,* and *coping*: PsychInfo, Medline, Social Science Citation Index, and Social Science Abstracts. This was supplemented with ancestry and descendency searches resulting from references of the articles found in the database search.

Approximately 1,972 publications were produced by this literature search. Based on the abstracts, studies were eliminated that: (1) did not focus specifically on the individual getting divorced (1046 articles), (2) did not examine post-divorce adjustment (26 articles), (3) did not include a mediating variable associated with post-divorce

adjustment (8 articles), (4) focused solely on predictors of divorce or divorce prevention (72 articles), (5) had an unrelated topic (153 articles), (6) were non-empirical (466 articles), or (7) were conducted in a non-western society (44 articles). Abstracts that did not offer certainty regarding the study's relevance were kept for further review. This initial examination resulted in 157 potentially relevant articles on various factors that impact post-divorce adjustment.

A review of these abstracts highlighted that there are a great number of studies with varying findings on the role of social relationships in post-divorce adjustment. Therefore, it was deemed important to focus specifically on social relationships during the post-divorce period, both because they have been highlighted as important in the research literature and because ambiguity exists regarding their role. Thus, the abstracts of the potentially relevant articles were subjected to a second selection process in order to eliminate studies that: (1) did not focus specifically on the link between social relationships and divorce adjustment, (2) under closer examination failed to meet the above-mentioned seven criteria, or (3) were duplicates due to searches in multiple databases. This second selection process resulted in 66 abstracts for final review.

The articles of these 66 abstracts were located and examined with specific inclusion criteria. Studies were eliminated that (1) were not empirical (11 studies), (2) did not meet our operational definition of social relationship (14 studies), (3) did not meet our operational definition of post-divorce adjustment (6 studies), (4) did not directly relate post-divorce adjustment to social relationship (8 studies), and (5) did not include adequate statistics to be used with meta-analytic techniques (6 studies). This final selection process resulted in 21 articles to be included in the meta-analysis. The overall inter-rater reliability for article inclusion/exclusion in the selection process was high (k=.847). Disagreements were resolved by an independent rater.

### Coding of Studies

The current meta-analysis was conducted on 21 studies, published during the years 1978 to 2004, and including a total of 3,189 participants. For each study, the following information was coded: (a) demographic information of the participants, such as age, gender, race, education, income, relationship status, etc.; (b) the psychological adjustment measure(s) used; (c) participants' adjustment scores; (d) the type of social relationship assessed; (e) participants' social-relationship scores; (f) reliability of the measure(s); (g) statistical calculations of the relationship between the social relationship and adjustment scores; (h) other statistical information, such as

whether the tests were one or two-tailed, the degrees of freedom, R-squared, etc. Inter-rater reliability for coding was high (k=.822). Disagreements were resolved through discussion between raters.

\*\*Analysis\*\*

Analyses were performed using *MetaWin: Statistical Software for Meta-Analysis* (Rosenberg, Adams, & Gurevitch, 2000). The analyses included four components: 1) transformation and averaging, 2) heterogeneity testing, 3) subgroup analyses in response to heterogeneity, and 4) assessment of publication bias.

Firstly, within each study, the bi-variate statistic indicating the association between social relationship and post-divorce adjustment was identified. These were transformed into z-scores to achieve a common metric that could be compared across studies with the use of *Fisher's z transformation*, which weights each study's effect sizes according to its sample size to equalize the amount of sampling error.

Secondly, heterogeneity analyses were conducted. Differences in the clinical or methodological qualities of the studies brought together in meta-analyses create variability in the treatment effects, known as statistical heterogeneity. A significant heterogeneity analysis indicates that the observed treatment effects are more different from each other than would be expected due to random error alone (Burrell, 2002). In the case of heterogeneity, the average effect must be interpreted with caution because moderator variables may exist. If the heterogeneity analysis is non-significant, the sampling can be considered homogenous. That means that the average correlation coefficient is the best estimate of the population parameter and that no moderator variables are likely to exist.

Thirdly, in order to explore the moderator variables that might underlie heterogeneity, sub-analyses were conducted on the heterogeneous findings to search for homogeneous subgroups within the larger heterogeneous sample. For example, the analyses indicated that the presence of social relationships is associated with positive adjustment following divorce. However, because this finding was heterogeneous, sub-analyses were conducted on two types of social relationships. This indicated that the type of social relationship moderates the overall relationship, with network relationships being homogeneously associated with higher levels of positive adjustment.

Fourthly, publication bias was assessed with Rosenthal's fail-safe number and Begg's test. The parameter estimate of a meta-analysis can be biased if the studies included in the analysis are not a random sample of all of the studies conducted on the topic. This can occur when studies with significant results are more likely to be published than those with non-significant results. Rosenthal's fail-safe number was used to estimate the number of studies with a mean effect size of zero that would be required to nullify an overall effect of the meta-analysis. Therefore, a large

fail-safe number suggests that a finding is resistant to publication bias. In addition, if there is a tendency to only publish studies with significant results, one would expect to find larger effects for small studies, which, due to less precision (i.e. more variation), require a larger effect size to be significant. Begg's test makes use of Kendall's Tau to assess whether there is a correlation between effect size and variance. A significant statistic suggests the presence of publication bias.

Finally, average study effect sizes were calculated for each study (see Table 1). This provides an overview of the average effect when multiple effect sizes were derived from the same study and, therefore, based on the same sample.

#### Results

Social Relationships and Positive Adjustment following Divorce

Twenty articles contained 51 effect sizes of the impact of social relationships on positive post-divorce adjustment. A significant, positive effect size of the overall analysis (z=.14, p<.05) indicated that a higher degree of social relationships is associated with higher levels of positive post-divorce adjustment. That is, individuals who report a greater degree of social relationships during the post-divorce period, score higher on measures of global adjustment, coping, well-being, positive affect, overall happiness, and life satisfaction. Rosenthal's fail-safe number indicated that 3759.4 studies with non-significant results would be required to negate this effect, meaning that this finding is quite resistant to publication bias. In addition, Begg's test ( $\tau=-.319$ , p<.01), indicated a small, significant relationship between effect size and variance.

However, interpretations of this finding must be made cautiously because the effects were found to be heterogeneous ( $\chi^2(50)$ =172.45, p=.01) meaning that the average effect is based on a sample of correlations that may have a moderator variable. To detect potential moderators, sub-analyses were conducted for two types of social relationships (specific versus network) and two subgroups of positive adjustment measures (well-being versus affect). This highlighted the fact that the type of social relationship moderates the impact of social relationships on positive post-divorce adjustment.

Four studies, containing seven effect sizes, offered the homogeneous finding ( $\chi^2(6)$ = 3.90, p=.7) that network relationships are associated with higher levels of well-being after divorce (z = .21, p<.05). That is, being part of a group of people, such as a support group, is associated with higher scores on measures of global

adjustment, coping, and well-being. Rosenthal's method of calculating the fail-safe number revealed that 78.7 unpublished studies would be required to negate this effect.

Similarly, two studies, containing three effect sizes, offered the homogenous finding ( $\chi^2(2) = .22$ , p=.9) that network relationships are also associated with higher levels of positive affect after divorce (z=.36, p<.05). That is, being a part of a group is associated with higher scores on measures of positive affect, overall happiness, and life satisfaction. Rosenthal's method of calculating the fail-safe number revealed that 38.8 unpublished studies would be required to negate this effect.

Social Relationships and Maladjustment following Divorce

Ten studies contained 26 effect sizes of the impact of social relationships on negative post-divorce adjustment. A significant, negative effect size of the overall analysis (z=-.13, p<.05) indicated that that a higher degree of social relationships is associated with lower levels of maladjustment following divorce. That is, individuals who report a greater degree of social relationships during the post-divorce period, score lower on measures of depression, negative affect, anxiety, stress, psychological distress, somatization, and physical symptoms. Rosenthal's fail-safe number revealed that 1389.3 studies with non-significant results would be required to negate this effect. In addition, Begg's test (t=.361, p=.01) indicated a small, significant relationship between effect size and variance.

However, interpretations must again be made with caution, because the effects were heterogeneous ( $\chi^2(25)$  =281.85, p=.00) indicating that moderator variables may be present. To detect potential moderators, sub-analyses were conducted for two types of social relationships (specific and network) and two subgroups of maladjustment measures (psychopathology versus physical symptoms). This highlighted the fact that the type of social relationship moderates the impact of social relationships on maladjustment following divorce.

Two studies, containing four effect sizes, offered the homogenous finding ( $\chi^2(3) = 3.68$ , p=.3) that having *specific* relationships is associated with lower levels of maladjustment following divorce both in terms of psychopathology and physical symptoms (z=-.13, p<.05). This means that having one-on-one relationships with other individuals, such as a best friend or a family member, is associated with lower levels of depression, negative affect, anxiety, stress, psychological distress, somatization, and physical symptoms. Rosenthal's method of calculating the fail-safe number revealed that 702.2 studies with non-significant results would be required to negate

this finding. In addition, Begg's test (t=-.833, p=.00176) indicated a moderate, significant association between effect size and variance.

#### Discussion

The current meta-analysis was conducted on 21 studies assessing the link between social relationships and post-divorce adjustment. To gain vital information that is missing from prior research, analyses were conducted for distinct subtypes of social relationships and adjustment measures. This offered a perspective of how "specific relationships" (one-on-one contact with a specific person such as a friend) and "network relationships" (being part of a group, such as a close circle of friends) each impact post-divorce adjustment differently. In addition, the sub-analyses offered a perspective on how different aspects of post-divorce adjustment are impacted by social relationships, including positive adjustment versus maladjustment, as well as further subdivisions of global adjustment, affect, psychopathology, and physical health.

A significant, positive effect size indicated that social relationships are associated with higher levels of positive post-divorce adjustment. Therefore, it seems that social relationships allow for faster and more satisfactory adjustment to divorce. However, this finding must be interpreted with caution due to its heterogeneity. Further analyses of subtypes of social relationships (network versus specific) and subtypes of positive adjustment (well-being versus affect) indicated that the type of social relationship is a moderator variable while the type of positive adjustment is not. *Network* relationships, in particular, seem to promote all forms of positive adjustment, including global adjustment, coping, well-being, positive affect, overall happiness, and life satisfaction. Thus, it seems that being part of a network of individuals is particularly important to healthy adjustment following divorce. Being part of a network such as a support group, church community, or circle of friends may help divorcing individuals to mobilize specific strengths that promote personal growth in the face of the divorce. Such a group may provide the divorcee with incentives to put his or her best foot forward, such as offering emotional support, challenging him or her not to give up, reminding him or her that he or she is not alone, and providing for other emotional, psychological, or pragmatic needs.

A significant, negative effect size indicated that social relationships are inversely related to maladjustment following divorce. This suggests that social relationships may serve as a protective factor that buffers individuals from some of the problematic consequences of divorce. However, this finding must be interpreted with caution due to its heterogeneity. Further analyses of subtypes of social relationships (network versus specific) and subtypes of

maladjustment (psychopathology versus physiological symptoms) indicated that the type of social relationship is a moderator variable while the type of maladjustment is not. *Specific* relationships, in particular, seem to buffer against all forms of maladjustment. It seems that one-on-one contact with a particular individual, such as a friend or family member may serve to protect individuals from depression, negative affect, anxiety, stress, psychological distress, somatization, and physical symptoms in the period following divorce. While being cautious due to the possibility of publication bias, one can speculate that having close personal relationships with specific individuals may provide unique support that alleviates symptoms of maladjustment resulting from the divorce process. Specific relationships likely offer an outlet for sharing personal thoughts, feelings, and fears related to all of the changes and challenges involved in divorcing, which may be the mechanism by which such relationships buffer the development of clinical levels of psychopathology such as depression and anxiety. In addition, having an individual to rely on and receive support from may serve to alleviate stress, which may prevent the development of physiological symptoms.

Thus, the overall findings from this meta-analysis indicate that social relationships in the period following a divorce promote higher levels of positive adjustment and protect from higher levels of maladjustment. Specifically, it seems that *network* relationships are particularly important in promoting positive post-divorce adjustment, while *specific* relationships are particularly important in protecting individuals from maladjustment following a divorce. *Implications* 

Social relationships were shown to be a significant factor in the quality of individuals' post-divorce adjustment. This has implications for both clinical practice and future research. Therapists working with divorcing or recently divorced clients should be aware of the importance of social relationships and the risks involved for clients with little or no social relationships during the post-divorce period. Therapists should assess clients' specific and network relationships. Intervention strategies may include identifying ways to increase the quantity and/or quality of the client's social relationships. For example, network relationships were shown to be particularly important to promoting positive adjustment. Therefore, if a client is not part of a reliable group, he or she should be encouraged to seek out a support group, church community, or social club. In addition, it was found that *specific* relationships can buffer against maladjustment. Therefore, clients who do not have close, one-on-one relationships, and clients who have lost such relationships in the divorce process should be encouraged to pursue ways of developing and replenishing such relationships. In sum, therapists should be attentive to the nature of their clients' social relationships and therapy should empower clients to strengthen and broaden their social relationships.

Further implications exist for future research. The literature review highlighted the fact that past research does not contain a unified operational definition of post-divorce adjustment. Furthermore, specific indicators of post-divorce adjustment, when used alone, do not appear to capture a complete picture of adjustment and can therefore not fully reveal the relationship between social relationships and post-divorce adjustment. This may be due to the fact that different aspects of psychological adjustment may be differentially affected by different components of social relationships (Wilcox, 1986). The implication for future research is that there is a need for the use of more comprehensive measures and/or multiple measures to examine post-divorce adjustment in relation to social relationships.

#### Limitations

Certain limitations are inherent to meta-analyses (Hogarty, 1989). For example, the process of qualifying phenomena so intricate as psychological adjustment and social relationships may make comparisons less meaningful. In addition, the statistical procedures used in a meta-analysis are not capable of correcting for poor research studies (O'Brien & McGrath, 2003). Because research of varying methodological quality is given an equal share of the results, it should be noted that some of the studies included in this meta-analysis had operationalizations of social support that were global or vaguely defined. In addition, measures of social relationships and adjustment were predominantly based on self-report data and were mostly retrospective in character. Further, some studies had low statistical power or did not control for variables that could influence the course and outcome of post-divorce adjustment. Finally, many studies did not differentiate components of the construct to allow for finer analyses, such as the differential impact of quantity versus quality of social relationships. For all of these reasons, the results of this meta-analysis must be interpreted with caution. Nonetheless, this analysis offers a comprehensive view of the current literature on the role of social relationships in post-divorce adjustment. It is our intention that this meta-analysis has, to a degree, enhanced objectivity and increased understanding concerning the role of social relationships during post-divorce adjustment.

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Table 1. Average study effect sizes

Positive Adjustment and soc	cial relationship		
Study	Effect size	Variance	Sample Size
Berman & Turk, 1981	0.25	0.01	106
Daniels-Mohring & Berger, 1984	0.26	0.03	42
Goodman, 1993	0.48	0.04	31
Hughes, Good & Candell, 1993	0.63	0.04	29
McKelvey & McKenry, 2000	0.07	0.00	235/662
Øygard, 2004	0.19	0.02	160/45
Pett, 1982	0.21	0.00	206
Plummer & Koch-Hattern, 1986	0.32	0.01	90
Rettig, Leichtenritt & Stanton, 1999	0.38	0.00	212
Saul & Scherman, 1984	0.01	0.01	114
Thiriot & Buckner, 1992	0.15	0.01	204
Tschann, Johnston, & Wallerstein, 1989	0.15	0.01	144/146
Waggener & Galassi, 1993	0.11	0.01	90
Wang & Amato, 2000	0.10	0.01	208
White & Bloom, 1981	0.37	0.03	40
Spanier & Casto, 1979	0.44	0.02	50
Maladjustment and Social Re	elationship		
Study	Effect Size	Variance	Sample Size
DeGarmo & Forgatch, 1997	-0.03	0.01	138
Goodman, 1993	-0.41	0.04	31
McKelvey & McKenry, 2000	-0.05	0.01	235/662
Nelson, 1981	-0.20	0.01	106
Kitson & Raschke, 1978	-0.40	0.00	277
Stone, 2001	0.10	0.01	94
Waggener & Galassi, 1993	-0.49	0.01	90
Stewart & Clarke, 1995	-0.11	0.01	116