

Compensatory patterns of sibling support in emerging adulthood: Variations in loneliness, self-esteem, depression and life satisfaction

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ABSTRACT

This study examines how the compensatory effects of social support received from siblings relate to psychological adjustment in emerging adulthood. Participants completed measures of social support from a variety of sources and several indicators of well-being. Sibling support was associated with lower loneliness and depression and with higher self-esteem and life satisfaction. Also, sibling support compensated for low parental and peer support. Sibling support compensated for low support from mothers for depression and self-esteem. Sibling support compensated for low support from fathers for loneliness, self-esteem, and life satisfaction. Finally, sibling support partially compensated for low support from friends for all of the well-being measures and completely compensated for self-esteem, depression, and life satisfaction. The potential benefits of sibling support warrant a closer examination of the wide-ranging issues involved in sibling relations.

KEY WORDS: adjustment • compensatory effects • compensatory patterns • emerging adulthood • sibling support • well-being

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Several research studies suggest that siblings play a significant role in the lives of individuals throughout the entire lifespan (Cicirelli, 1995). Studies examining the influence of childhood sibling relationships have suggested a positive correlation between close sibling relations and many adaptive socio-emotional outcomes (Dunn & Munn, 1986). Also, several studies have detailed the significant role played by siblings in the lives of older adults (Cicirelli, 1977).

However, the majority of research on sibling relations has focused on the sibling relationships of children or older adults. As Cicirelli (1995) noted, 'the greatest gap in knowledge about the course of sibling relationships across the lifespan is in young adulthood' (p. 218). More specifically, there is an increased interest in examining psychological processes within the emerging adult population. Arnett (2000) suggests that the emerging adult years, defined as the years following secondary school, must be viewed apart from adolescence or adulthood due to the dynamic and unpredictable quality of this age period. The autonomy, exploration, and changing roles of the post secondary-school years entail many unique characteristics that must be examined in all aspects of scientific inquiry. Levinson (1978) termed the ages of 17–33 as the 'novice phase' of development and highlighted many unique aspects of this stage that distinguish it from other stages. Hence, empirical investigations on sibling relations should parallel the emphasis given to the emerging adult population in other areas of socio-emotional study.

Sibling relationships of emerging adults

The limited work on sibling relationships in emerging adulthood focuses predominantly on the various characteristics of the relationship (Riggio, 2000; Stocker, Lanthier, & Furman, 1997) and on the factors influencing sibling relationship quality (Milevsky, 2004; Pulakos, 1990; Riggio, 2001).

However, the largest void in research on sibling relations in emerging adulthood is on the outcomes associated with sibling support. Studies on children and adolescents provide several theoretical propositions for the relationship between social support and adjustment. Sandler, Miller, Short, and Wolchik (1989) propose several mechanisms by which support affects adjustment directly, by increasing self-esteem, and as a moderator of negative events due to stress on self-esteem. Furthermore, when support is in fact afforded, high self-esteem may amplify the perception of support (van Aken & Asendorpf, 1997).

The benefits across the lifespan of sibling support have been documented in many studies (Cicirelli, 1995; Milevsky, 2003). However, as with many aspects of sibling research in adulthood, studies on the outcomes associated with sibling support focus primarily on older adult populations (Cicirelli, 1977). In one of the only studies on sibling relations and well-being in emerging adulthood, Stocker et al. (1997) found that sibling conflict was negatively correlated with psychological functioning, as measured by the Brief Symptom Inventory (Derogatis & Melisaratos, 1983). However, these associations may depend upon other mediating variables, such as the

intensity of the conflict, which may influence the relationship between the predictor and outcome variables.

A secondary interest within social relations research has focused on the possibility of compensatory patterns of support in the absence of close relationships with primary support providers. Studies assessing compensatory patterns of support have built upon theoretical work relating to the diverse functions provided by different relationship categories. Based upon social provisions theory (Weiss, 1974), Furman and Buhrmester (1985) identified specific individuals who supply particular types of social needs. However, they argued that all provisions may be obtained from more than one individual. If a specific relationship is not supplying the provisions that are desired from that relationship, the individual may compensate for the void by turning to a different relationship to provide the missing provision.

Several empirical investigations have examined the compensatory effects of sibling support in children and adolescents. East and Rook (1992) concluded that, although peer-isolated children may turn to siblings for support, which may provide some positive outcomes, sibling support may not fully guard against the negative consequences of low school friend support. In a study on adolescents' sibling relationships in the context of parental and friend relationships, Seginer (1998) found only one significant interaction between adolescent peer acceptance and sibling warmth, suggesting a negligible compensatory effect. Van Aken and Asendorpf (1997) failed to find any compensatory effects of sibling support in relation to self-esteem when examining support from parents, classmates and friends in a sample of grade 6 students. Thus, there is little evidence suggesting that sibling support may compensate for the lack of support from other members of the social network in childhood and adolescence. Compensatory studies in adulthood have focused on the compensatory effect of neighbor support in the absence of family support (Coe, Wolinsky, Miller, & Prendergast, 1984; O'Bryant, 1985) and the compensatory effects of support from a college roommate in the absence of friend support (Lepore, 1992). Sibling compensatory processes have yet to be examined in the emerging adult population.

The current study

Hence, the first goal of the current study was to assess the psychological outcomes associated with sibling support in emerging adulthood. It is hypothesized that sibling support will be associated with variations in self-esteem, depression, loneliness, and life satisfaction. This prediction is based on extensive research on children, adolescents, and older adults documenting the well-being outcomes associated with sibling support (Gold, 1989; Milevsky, 2003; Sandler, 1980). However, because of structural and functional differences, research on the outcomes associated with sibling support in childhood and older adulthood may not provide sufficient insight into the outcomes associated with sibling support in emerging adults.

The second goal of this study was to investigate the outcomes associated with compensatory patterns of sibling support. In other words, are the

positive psychological outcomes associated with parent and friend support still evident when siblings are substituting for the missing support?

It is hypothesized that sibling support will compensate for the lack of parental and friend support. Although previous studies failed to find strong evidence of sibling compensatory effects in childhood and adolescence, the salience of friendships in these age groups (Youniss & Smollar, 1985) may minimize the ability of siblings to compensate for the lack of friend support. However, the diminishing importance of friends during the transition into adulthood (Furman & Buhrmester, 1992) may contribute to the ability of siblings to compensate for the lack of friend support. Also, older siblings may be better providers of support, due to their maturity level, which may contribute to compensatory patterns of sibling support. Owing to the lack of research on the compensatory effects of sibling support under conditions of low parental support, predictions relating to sibling–parent compensations are necessarily speculative.

As suggested by van Aken and Asendorpf (1997), compensatory support may lead to partial compensation or complete compensation. Partial compensation is achieved when an individual receiving compensatory support is better adjusted than someone who is not receiving the needed compensatory support. However, complete compensation is achieved when an individual receiving compensatory support is as adjusted as someone who is receiving the needed support from his or her primary providers and is not relying on compensatory support. Using the sibling–parent dyad as an example, partial compensation is achieved when an individual under low parent–high sibling support conditions is better adjusted than an individual under low parent–low sibling support conditions. Alternatively, complete compensation is achieved when an individual under low parent–high sibling support conditions is *not* found to differ in adjustment compared with an individual under high parent–high sibling support conditions. In accordance with this differentiation, this study examines both the partial and complete compensatory effects of sibling support.

Method

Sample

Data were collected using two procedures, 247 participants were recruited from undergraduate and graduate psychology and education classes in a northeastern rural state university and 58 noncollege students were recruited through a snowball sampling technique; that is, researchers asked people they knew to fill out the survey, who in turn asked people they knew, thus creating a snowball effect. The participants in the total sample were 305 emerging adults (116 men and 189 women) between the ages of 19 and 33 ($M = 22.41$, $SD = 3.25$). The sample consisted of 269 European Americans, 19 African Americans, 5 Hispanic Americans, 3 Asian Americans, 8 coded as ‘other’, and 1 with no ethnicity data.

Procedures

The college sample participants were administered questionnaires in small groups and received extra credit for taking part in the study. The noncollege sample participants received the questionnaire directly from the researchers and returned the completed questionnaire in a sealed envelope. Informed consent was obtained from all participants in the study.

Measures

Measures included indices of sibling closeness, communication, social support from mothers, fathers, friends and siblings, as well as indices of psychological well-being and life satisfaction. The following specific measures were analyzed.

Sibling closeness. Overall sibling closeness was measured by asking the participants to indicate, in reference to each of their siblings, 'How close do you feel to this sibling? (1) *Extremely close*, (2) *close*, (3) *somewhat close*, (4) *not close*, or (5) *not at all close*?' The total sibling closeness score was obtained by averaging the scores of all siblings.

Sibling communication. Overall sibling communication was measured by asking the participants to indicate, in reference to each of their siblings, 'How often do you communicate with this sibling in person, by phone, or e-mail? (1) *Every day*, (2) *once a week*, (3) *once a month*, (4) *a few times a year*, or (5) *once a year or less*?' The total sibling communication score was obtained by averaging the scores of all siblings.

Social support. Mother, father, friend and sibling support was assessed using the support questions from the Adolescent version of the Convoy Mapping Procedure (Levitt, Guacci-Franco, & Levitt, 1993). Specifically, participants were asked to indicate to what extent do they agree or disagree with the following statements regarding each of the four relationship categories: 'I confide in him/her about things that are important to me,' 'they reassure me when something bothers me or I am not sure about something,' 'they would make sure I am cared for if I were ill,' 'they like to be with me and do enjoyable things with me,' 'they would give me immediate help if I needed it,' and 'they make me feel special or good about myself.' Responses to each of the support items were scored on a 1 to 5 scale, with 1 being '*strongly disagree*' and 5 being '*strongly agree*.' All responses were reverse scored resulting with higher scores indicative of higher levels of support. Scales of mother, father, friend and sibling support were obtained by averaging the scores of all six support functions provided within each of these four relationship categories. Alpha reliabilities were .89 for mother support, .93 for father support, .89 for friend support, and .92 for sibling support.

Psychological adjustment. Psychological adjustment was assessed with four commonly used self-administered measures. These were measures of loneliness, self-esteem, depression and life satisfaction.

Loneliness. Loneliness was indexed with the UCLA Loneliness Scale developed by Russell (1996). Sample items from the 20-item scale include 'How often do you feel you are in tune with the people around you?' 'How often do you feel there is no one to turn to?' and 'How often do you feel left out?' Responses to

each of the loneliness items were scored on a 1 to 4 scale, with higher scores indicating higher levels of loneliness. The alpha reliability for the sample was .92.

Self-esteem. Self-esteem was assessed with the Rosenberg Self-Esteem Scale (1965). A sample item is 'I am able to do things as well as most other people.' Each of the 10 items is given a score from 1 to 5 and higher scores indicate more positive self-esteem. The alpha reliability for the sample was .90.

Depression. Depression was assessed using the eight-item depression scale developed by Pearline and Johnson (1977). Sample items include 'I have a poor appetite,' and 'I cry easily or feel like crying.' Responses to each of the depression items were scored on a 1 to 5 scale, with higher scores indicating higher levels of depression. The alpha reliability for the sample was .87.

Life satisfaction. Life satisfaction was measured by asking the participants to indicate on a scale from 1 to 7, with 1 being *extremely dissatisfied* and 7 being *extremely satisfied*, how satisfied they are with their life as a whole these days.

Results

Overall sibling relationships were positive with more than 60% of the respondents indicating that they are close or extremely close to their siblings and about 65% of the respondents indicating that they communicate with their siblings at least once a week. In addition, close to 60% of the respondents scored 4 or above on the sibling support scale. No gender or age differences were found in sibling closeness, communication, or support.

Sibling support and well-being

In order to assess the influence of sibling support on well-being, the sample was divided into two groups of high and low sibling support based on a median split of sibling support scores. The effects of sibling support on well-being was assessed using a multivariate analysis of variance (MANOVA) with sibling support group and gender as the independent variables and loneliness, self-esteem, depression and life satisfaction as the dependent variables. There were main effects of sibling support group on loneliness, $F(1,301) = 18.04, p < .01$, self-esteem, $F(1,301) = 10.01, p < .01$, depression, $F(1,301) = 8.00, p < .01$, and life satisfaction, $F(1,301) = 8.74, p < .01$. The means and standard deviations on the well-being measures for sibling support group are reported in Table 1. Those receiving high sibling support scored significantly lower on loneliness

TABLE 1
Means and standard deviations of well-being measures for sibling support

Sibling support	Loneliness		Self-esteem		Depression		Life satisfaction	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
High sibling support	1.85*	.42	4.16*	.64	1.99*	.77	5.29*	1.17
Low sibling support	2.09	.47	3.88	.68	2.27	.76	4.82	1.29

* $p < .01$.

and depression, and higher on self-esteem and life satisfaction, than those under low sibling support conditions. There were no main effects of well-being by gender, and no interactions, indicating that beneficial effects of sibling support were consistent across gender.

Compensatory effects

The sample was divided into four groups based on high versus low support from siblings and high versus low support from mothers (e.g., high mother–high sibling support group, high mother–low sibling support group, low mother–high sibling support group, and low mother–low sibling support group). This process was followed separately for each of the additional relationship categories as well (i.e., fathers and friends). Following the procedure used by van Aken and Asendorpf (1997) partial compensatory effects of sibling support were studied using three series of orthogonal, a priori contrasts within the resulting fourfold classification of support patterns. Using the sibling–mother pattern as the example, a significant partial compensatory effect would be indicated by a significantly more positive well-being score for the low mother–high sibling support group than the low mother–low sibling support group.

Well-being scores for each of the support group categories are presented in Tables 2–5. Low support from mothers was significantly compensated for by support from siblings for depression, $t(298) = 2.16, p < .05$, and self-esteem, $t(298) = -1.96, p = .05$, and approached significance for loneliness $t(298) = 1.82, p = .07$, but was not found to compensate for life satisfaction.

The identical procedure was employed to derive four groups based on high versus low support from siblings and fathers. Low support from fathers was significantly compensated for by support from siblings for loneliness, $t(293) = 3.28, p < .01$, self-esteem, $t(293) = -2.23, p < .05$, and life satisfaction, $t(293) = -2.04, p < .05$, but not for depression. Finally, the procedure was replicated using siblings and friends resulting in a significant compensation for loneliness, $t(301) = 3.01, p < .01$, self-esteem, $t(301) = -2.71, p < .01$, depression, $t(301) = 2.45, p < .05$, and life satisfaction, $t(301) = -2.42, p < .05$.

In order to test the possibility of a complete compensation, three series of orthogonal, a priori contrasts were made between the high mother–high sibling support group and the low mother–high sibling support group; the high

TABLE 2
Loneliness scores for support categories

		Sibling support			
		High		Low	
Other support		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Mother support	High	1.78	.40	2.00	.47
	Low	1.98 ^a	.45	2.11 ^a	.47
Father support	High	1.82	.40	1.94	.38
	Low	1.90 ^b	.44	2.14 ^b	.52
Friend support	High	1.76	.40	1.94	.43
	Low	2.00 ^c	.42	2.22 ^c	.47

^a Significantly different from each other at $p = .07$.

^b ^c Significantly different from each other at $p < .01$.

TABLE 3
Self-esteem scores for support categories

		Sibling support			
		High		Low	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Other support	High	4.22	.62	4.03	.63
	Low	4.04 ^a	.67	3.83 ^a	.67
Father support	High	4.18	.55	4.01	.52
	Low	4.10 ^b	.76	3.86 ^b	.74
Friend support	High	4.18	.65	3.96	.65
	Low	4.12 ^c	.62	3.81 ^c	.69

^a Significantly different from each other at $p = .05$.

^b Significantly different from each other at $p < .05$.

^c Significantly different from each other at $p < .01$.

TABLE 4
Depression scores for support categories

		Sibling support			
		High		Low	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Other support	High	1.99	.80	2.20	.79
	Low	2.00 ^a	.73	2.28 ^a	.74
Father support	High	1.90	.67	2.04	.74
	Low	2.14	.90	2.34	.77
Friend support	High	1.97	.82	2.17	.69
	Low	2.03 ^b	.68	2.35 ^b	.82

^{a,b} Significantly different from each other at $p < .05$.

TABLE 5
Life satisfaction scores for support categories

		Sibling support			
		High		Low	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Other support	High	5.44	1.13	5.20	1.07
	Low	4.98	1.12	4.66	1.35
Father support	High	5.34	1.17	5.06	1.01
	Low	5.14 ^a	1.20	4.73 ^a	1.43
Friend support	High	5.36	1.17	5.00	1.24
	Low	5.17 ^b	1.17	4.66 ^b	1.32

^{a,b} Significantly different from each other at $p < .05$.

father–high sibling support group and the low father–high sibling support group; and the high friend–high sibling support groups and the low friend–high sibling support group. A significant complete compensatory effect was indicated by *no* difference in well-being scores between the groups. The contrasts indicated that low support from mother was completely compensated for by sibling support for self-esteem ($p = .10$) and depression ($p = .91$) but not for loneliness and life satisfaction. Low support by father was completely compensated for by sibling support for loneliness ($p = .29$), self-esteem ($p = .45$), and life satisfaction ($p = .32$) but not for depression. And low support by friends was completely compensated for by sibling support for self-esteem ($p = .52$), depression ($p = .62$), and life satisfaction ($p = .31$) but not for loneliness.

Discussion

The goals of the current study were: (i) to assess whether support from siblings relates to psychological adjustment in emerging adulthood; and (ii) to assess the compensatory effects of sibling support in the absence of mother, father and friend support. Overall, the results of the study are consistent with previous findings on the effects of sibling support on children and older adults (Cicirelli, 1977, 1995; Gold, 1989; Milevsky, 2003; Sandler, 1980). Individuals receiving high sibling support scored significantly lower on loneliness and depression, and significantly higher on self-esteem and life satisfaction, than those under low sibling support conditions. Furthermore, the current findings illustrate that sibling relations and the influence of sibling support on well-being are uniform across gender.

Contrary to previous work on children and adolescents, the current study found that sibling support compensates for low levels of support from other relationships. Sibling support partially and completely compensated for low support from mothers for depression and self-esteem. Low support from fathers was partially and completely compensated for by support from siblings for loneliness, self-esteem, and life satisfaction. And low support from friends was partially compensated for by support from siblings for all of the well-being measures and was completely compensated for by sibling support for self-esteem, depression, and life satisfaction.

Of particular interest is that sibling support compensated for low friend support to a larger degree than for low mother or father support. Several theoretical models may provide some insight into this finding. The distinction between the role of parents and peers, proposed by Piaget (1965) Sullivan (1953) and Youniss (1980), may suggest similarities between the peer and sibling relationship providing the ability of siblings to compensate for the lack of friend support. Furthermore, when these similarities are considered in the context of the social convoy model (R. L. Kahn & Antonucci, 1980), which represents the social network as a series of concentric circles with more intimate members occupying inner circles and less important members occupying outer circles, it may be speculated that compensatory processes may emerge only for similar relationships, or individuals in the same circle, but may not develop for relationships in different circles.

Although previous studies failed to find strong evidence of sibling compensatory effects in childhood and adolescence, the salience of friendships in childhood and adolescence (Youniss & Smollar, 1985) may minimize the ability of siblings to compensate for a lack of friend support, whereas the diminishing importance of friends during the transition into adulthood (Furman & Buhrmester, 1992) may contribute to the ability of siblings to compensate for a lack of friend support. Also, changes in parental relationships during this transition may influence patterns of sibling compensation. In general, it is evident that the interconnections between support providers and the outcomes associated with these interactions is a complex one that appears to be dependent upon many variables and that may function differently at differing developmental stages. This interconnection between parental, friend, and sibling relationships is further evidence for the need to examine specific relationships in the context of the entire social network system. The dynamic nature of social relationships, and the importance of assessing these integrated processes, has been the focus of several recent theoretical and empirical investigations (Levitt et al., 1993; Levitt, Guacci-Franco, & Levitt, 1994; Magnusson & Stattin, 1998). As Magnusson (1998) acknowledged, 'the developmental processes of an individual cannot be understood by studying single variables in isolation from other, simultaneously operating variables' (p. 38).

Limitations of the current study and directions for future research

There are some limitations to the current study. First, the study does not solve the direction-of-effects problem. It is possible that individual differences in sibling support lead to differences in adjustment; however, it is also possible that individual differences in adjustment lead to differences in sibling support. Emerging adults who are less well adjusted may have a more difficult time eliciting support from siblings. Second, in order to capture the true nature of sibling relationships it would be more appropriate to study both partners of the sibling dyad in addition to using more than self-report data. Relying on the responses of only one member of the dyad does not supply information about the interdependence of the sibling relationship (Riggio, 2001). Although the current study used a relatively large sample of participants, the results may not generalize beyond the homogeneous sample included in the study. Previous studies have reported ethnic differences in sibling relationships (Avioli, 1989; Hays & Mindel, 1973). Furthermore, the entire concept of 'compensatory' support presupposes a hierarchy of roles that may vary by culture. Additional work is needed using a sample drawn from a more urban, multiethnic community, to assess the generality of the influence of sibling support on adjustment. Finally, the study assessed sibling support as a whole without looking at differences in sibling relationship quality within the family. Future studies should consider these variations in examining the possible compensatory patterns of sibling support.

Conclusion

The current findings highlight the significance of siblings as providers of social support for emerging adults. The ability of sibling support to compensate for low parent or friend support should be taken into account in applied settings. Clinicians should consider the role of siblings when working with clients who have atypical support networks. Furthermore, when attempting to engage in systems-driven therapy, therapists should contemplate incorporating siblings into the therapeutic process. There are numerous studies detailing the significance of siblings in psychotherapy, particularly in family therapy (Cicirelli, 1991; M. D. Kahn & Bank, 1981).

In sum, our results indicate that sibling support is related to adjustment in emerging adulthood. Support from siblings appears to compensate for low support from other members of the social network such as parents and friends. Finally, when the current findings are viewed within the context of previous results on sibling relations, there is some indication that contradictory views expressed in the literature on sibling relationships may be associated with developmental changes in these relationships across the lifespan (McGuire, Manke, Eftekhari, & Dunn, 2000; Vandell, Minnett, & Santrock, 1987). These developmental issues must be addressed in future research assessing all aspects of sibling relations.

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