

CHAPTER 14

SOCIAL SUPPORT, SELF-ESTEEM, SOCIAL CONFORMITY, AND GREGARIOUSNESS DEVELOPMENTAL PATTERNS ACROSS TWELVE YEARS

MICHAEL D. NEWCOMB AND KEUNHO KEEFE

Social support has generally beneficial effects on physical health and emotional well-being (e.g., Cohen & Wills, 1985), although some problem or negative effects have been observed under certain circumstances (e.g., Rook, 1984). Many studies have revealed that people with supportive, close relationships with spouses, family, and friends have better health and lower mortality than those with fewer supportive ties. For example, Newcomb and Bentler (1988b) found that social support during adolescence reduced problems in several areas of functioning in young adulthood. In particular, social support in late adolescence ameliorated problems with drugs, psychosomatic complaints, emotional distress, intimate relations, health, and family 4 years later.

In this chapter, we review theory and research on the relationships between perceived social support and personality. We focus specifically on three personality traits: Self-esteem, gregariousness (extraversion), and social conformity. Based within a developmental framework, we examine empirically how these personal and social-environmental characteristics influence each other over a 12-year period from late adolescence to adulthood at 4-year intervals. Finally, these new results are interpreted

MICHAEL D. NEWCOMB • Division of Counseling Psychology, University of Southern California, Los Angeles, California 90089-0031. KEUNHO KEEFE • Reiss-Davis Child Study Center, Los Angeles, California 90034.

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in light of prior theory and research to characterize more precisely and accurately the interplay between personality and social support at different development stages of life.

THEORETICAL CONSIDERATION OF PERSONALITY AND SOCIAL SUPPORT

Social support is defined here not as a static construct, but as a resource that evolves throughout life. Social support is shaped through reciprocal and transactional processes between characteristics of the individual and those of other people in his or her social environment (Newcomb, 1990a). More specifically, we limit our attention to perceived social support, rather than received or actual support (e.g., Newcomb & Chou, 1989), and to the quality of perceived support rather than assessments of quantity (e.g., Newcomb, 1990c). Finally, we also limit our empirical consideration to perceived quality of support from peers and parents, rather than other possible sources such as professionals or agencies (e.g., Newcomb & Chou, 1989). We define *social support* as "an interwoven network of interpersonal relationships that provide companionship, assistance, attachment, and emotional nourishment to the individual" (Newcomb & Bentler, 1986, p. 521). This definition is largely consistent with that of Sarason, Levine, Basham, and Sarason (1983), that social support is "the existence or availability of people on whom we can rely, people who let us know that they care about, value, and love us" (p. 127).

In prior research, social support has typically been studied as a provision that is given from the external social environment to the individual (e.g., Newcomb, 1990a). Individual characteristics that may contribute to creating and maintaining a social environment have been largely ignored until recently. Sarason, Sarason, and Pierce (1990b) compiled and presented a wealth of theory and research knowledge suggesting that, in fact, social support is closely interrelated with personal aspects of the individual. Personal characteristics help shape and form one's social environment and, particularly, the nature of one's social support system.

In social-cognitive theories, individual differences in patterns of behavior across situations reflect such underlying person variables as the individuals' encoding or construction of their experiences (e.g., Mischel, 1973, 1990). These relatively enduring person variables within the individual interact with situational characteristics to generate stable but discriminative patterns of behavior. Different persons evoke different responses from social and physical environments. The responses from others, in turn, further shape, reinforce, and extend the pattern of personal or individual development.

As one central personal characteristic, personality has been linked both theoretically and empirically to social support. Personality variables such as shyness, introversion, sociability, self-esteem, and assertiveness have been repeatedly correlated with perceived social support (Jones, 1985; Newcomb, 1990a; Procidano & Heller, 1983; Sarason et al., 1983; Vinokur, Schul, & Caplan, 1987). More precisely, personality can reflect numerous and diverse aspects of individual functioning. Certainly, there is no one quality or trait that denotes personality. In fact, substantial controversy exists

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We consider personality as several types or aspects of individual psychological functioning that develop early in life, become more stable with increasing age, are cross-situationally consistent, and reflect the unique characteristics, attitudes, affect, and propensities of an individual. This is a broad construction of personality that subsumes various aspects of personal, nonbehavioral characteristics. To capture several aspects of this multitude of individual differences, we have selected three traits that represent diverse components of individual functioning. Self-esteem was chosen as a critical component of self-evaluative processes that reflect important features of self-concept (e.g., Marsh & Hocevar, 1985). Furthermore, low self-esteem denotes an adverse emotional state often considered as psychological or emotional distress (Scheier & Newcomb, 1993). Gregariousness, or extraversion, was selected to characterize individual propensities, proclivities, or comfort with social interactions and transactions. Finally, social conformity was included to reflect an attitudinal dimension of personality that captures adherence to conventional norms and values. Taken together, these three constructs, reflecting diverse aspects of personality, capture affective, social, and attitudinal components of individual functioning.

We expect personality and social support to have a reciprocal influence on each other throughout one's life through two different processes: evocative and active processes (Scarr & McCartney, 1983). In terms of evocative processes, people with differing personalities elicit different responses from their social and physical environments. For example, an individual who is friendly and outgoing is likely to receive positive interpersonal feedback from others. In contrast, a shy person is likely to evoke fewer and less positive responses from others. These responses from one's environments, in turn, further shape, reinforce, and extend the pattern of personality development. The transactions between individuals and their environments continue throughout their lives. The latter processes, active processes, refer to an individual's selection of environments that are compatible with his or her personality. A person is actively led to find a particular environment that matches his or her personality. This active selection process, in turn, might reinforce and maintain the personality (Scarr & McCartney, 1983). The active kinds of processes become more important with increasing age, as the individual has more freedom to choose or to create his or her own environment.

Based on these theories, we derived the following hypotheses: First, personality constructs and social support will have reciprocal influences on each other; second, the influence of personality constructs on social support will be stronger than that of social support on personality with increasing age.

SELF-ESTEEM AND SOCIAL SUPPORT

Self-esteem correlates positively with perceived adequacy and availability of social support (Brown, Andrews, Harris, Adler, & Bridge, 1986; Dunkel-Schetter, Folkman, & Lazarus, 1987; Hansson, Jones, & Carpenter, 1984; Newcomb, 1990a; Sarason, Sarason, & Shearin, 1986; Sarason et al., 1983, 1990a). For example, those higher in social support described themselves more positively than did those lower in social support

(Sarason, Pierce, Shearin, Sarason, Waltz, & Poppe, 1991). In the same vein, lack of perceived social support was related to such negative affect as feelings of personal inadequacy, anxiety, and social rejection (Sarason et al., 1991). Most of these studies have been cross-sectional.

Close relationships increase the individual's self-worth and assertiveness by rendering the support, understanding, and positive regard of others. Various theorists have emphasized the role of other people in developing a person's sense of self (Cooley, 1902; Mead, 1934; Rosenberg, 1979). For example, Bowlby (1988) postulated that early attachment experiences with a primary caregiver contribute to the formation of self-concept and personality. Symbolic interactionists such as Cooley (1902) and Mead (1934) postulate that the self is basically the internalization of what we perceive others think of us; that is, the individual defines the sense of self based on feedback from significant others in his or her social environment. Consistent with the view of symbolic interactionists, adolescents' perceptions of the attitudes of significant others were shown to highly relate to their self-esteem (Harter, 1986, 1987; Rosenberg, 1979).

Although we have emphasized that high self-esteem results from social support, positive self-regard may in turn help initiate and nourish a supportive network. Those who feel confident in the support and responsiveness of significant others are likely to increase social bonds and solidify existing attachment relationships. Various studies have found that positive affective experiences increase social ties (see Baumeister & Leary, 1995). By contrast, those with low self-esteem may feel inhibited from initiating or maintaining social contacts with others.

Correlational studies cannot establish causal relations between self-esteem and perceived social support (Newcomb, 1990c). As a rare exception, Newcomb (1990a) examined reciprocal relationships between self-esteem and social support in adolescents by using a longitudinal design. Earlier self-esteem improved the quality of peer support 1-year later for both adolescent boys and girls. In addition, self-esteem increased parent and family support for boys, whereas self-esteem increased peer support for girls. Conversely, perceived support from adults improved subsequent self-esteem for both boys and girls. Furthermore, perceived support from family and adults enhanced later self-esteem among boys. These findings suggest that there are dynamic reciprocal relations between social support and self-esteem at least during adolescence. Because Newcomb only dealt with changes during a 1-year period in adolescence, it is uncertain whether reciprocal relations between the two constructs can be generalized to other periods of life.

GREGARIOUSNESS AND SOCIAL SUPPORT

Social support has also been shown to correlate with outgoing, extraverted, or generally gregarious tendencies. Extraverts tend to have larger social networks with more people to whom they feel close than do introverts (Jones, Freeman, & Goswick, 1981; Sarason et al., 1983; Stokes, 1985). On the other hand, introverts are more likely to report fewer friends and lower satisfaction with their social participation, and are more likely to regard their friendships and social networks as less supportive and less satisfying (DePaulo, Dull, Greenberg, & Swaim, 1989; Jones, 1985).

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intensify close ties. Having success in forming and maintaining close relationships may, in turn, reinforce individuals' tendencies to be sociable and gregarious by increasing their self-competence in the social domain. Conversely, a shy person tends to avoid and withdraw from social interactions out of fear of social rejection or embarrassment (see Baumeister & Leary, 1995). As a consequence, shy individuals reduce their chances of creating and nourishing supportive ties. Thus, these individuals miss out on an opportunity to develop social skills and to gain relational experiences. This lack of social experiences, along with deficits in social skills will in turn reinforce and maintain shyness in the person. Consistent with this hypothesis, shyness in late childhood has been shown to predict delay in marriage and in fatherhood (Caspi, Elder, & Bem, 1988). Those who were shy as children had interactional difficulties, and had trouble making transitions to marriage and parenthood in later years. Although there are no longitudinal data on the relationship between extraversion and social support, such a dynamic developmental process seems likely.

SOCIAL CONFORMITY AND SOCIAL SUPPORT

Social conformity has been shown to be negatively related to problems with interpersonal relationships and to drug use among adolescents and young adults (Newcomb, 1988; Newcomb & Bentler, 1988a, 1988b, 1988c), as well as a central attitudinal or personality dimension of general deviance (McGee & Newcomb, 1992) and risky behavior relative to AIDS (Stein, Newcomb, & Bentler, 1994). Newcomb and Bentler (1988a, 1988b) also found that social conformity was positively correlated with perceived social support during adolescence and young adulthood.

Socially conforming attitudes and lack of deviant orientations can facilitate amiable relations with other people. Deviant individuals may be rejected as potential relationship partners. Conversely, it is also possible that the presence of supportive social networks may reduce deviant attitudes and values. According to Durkheim's (1897/1951) theory of social integration, social relationships contribute to maintaining social order by inhibiting deviant or maladaptive behavior. Thus, close relationships may serve as a source of social norms that regulate people's behaviors. These social norms may then be internalized in the form of personality traits or attitudinal predispositions. As a result, supportive relationships may help people maintain more stable functioning and reduce the probability of problematic, deviant, or maladaptive behaviors.

Consistent with social integration theory (Durkheim, 1897/1951), Newcomb and Bentler (1988b) showed with longitudinal design that social support during adolescence reduced problems with drug use in young adulthood. However, Newcomb and Bentler did not directly examine whether adolescent social support increased adult social conformity. There is little direct evidence on the relations between social support and social conformity over time.

DEVELOPMENTAL PATTERNS

Developmental aspects of how personality and social support might mutually influence each other can be understood in regard to two components. First are the

demand characteristics of various developmental transitions. We focus on the periods from adolescence into young adulthood, and also from young adulthood into adulthood. Second are the stability effects that transcend developmental transitions that reflect state dependency or continuity of development. Finally, transactions and reciprocal influences between social support and personality may be more apparent or salient at certain developmental periods than other periods.

TRANSITION FROM ADOLESCENCE TO ADULTHOOD

Transition from adolescence to adulthood can be divided into two periods: from adolescence to young adulthood, and from young adulthood to adulthood. Between adolescence and young adulthood, a major developmental task is to achieve independence and autonomy from parents, teachers, and other authority figures. During this period, many individuals complete their formal education and embark on their first full-time jobs. Entering an occupation signals the beginning of new roles. Meeting the expectations of a career and adjusting to a new role are crucial for the individual at this time. It is also a time when an individual tries out many different roles, explores alternative career goals, and considers various relationships and lifestyles. During the transition from young adulthood to adulthood, an individual shifts away from tentative choices concerning many important issues in life to more or less permanent ones. The individual who enters adulthood has made decisions about a career, values and goals, family and relationships, and lifestyle. During this period, many individuals get married, become parents, and settle down in their careers.

The two developmental transitional periods involve a number of important role changes and shifts in life experiences (Mortimer, Finch, & Kumka, 1982; Pearlin, 1985). These are the periods in which the abandonment of old roles and the achievement of new ones take place at a fairly rapid pace (Pearlin, 1985). As an individual progresses through these developmental transitions, his or her social support can contract, expand, or be substituted. Because most of the past studies on social support are cross-sectional, the dynamic nature of social support through the life course has not been well understood.

DEVELOPMENTAL STABILITY

Recent research on close relationships and social cognition has suggested that people develop an internal representation of relationships based on their early interpersonal experiences (see Baldwin, 1992; Baumeister & Leary, 1995). The internalized relationships function as a stable and systematic belief system or expectations about the extent and quality of the person's relationships. These beliefs or expectations are likely to lead to biased interpretation of social interactions and to affect the formation and maintenance of social ties; that is, individuals are likely to interpret ambiguous social information according to their belief system, or seek out relational experiences that are congruent with their belief system or relational expectations.

Various studies have suggested that through such expectations or belief systems, one's perceived social support may remain relatively stable across situations and over time. Early attachment style has been shown to relate to peer relationships during

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preschool years and to romantic relationships in adulthood (Hazan & Shaver, 1987; see Rutter & Garmezy, 1983). Similarly, Sarason et al. (1986) found that perceived social support showed considerable stability during radical changes in social environment. Sarason et al. assessed college students' perceived availability of, and satisfaction with, their social support on four occasions over a 3-year period: during the first 2 weeks of the first quarter, at 2 months, at 5 months into the freshman year, and after 36 months. The stability of perceived social support during this period is noteworthy, because transition from high school to college often involves major changes in one's interpersonal networks, accompanied by changes in living situations.

Parent-child relationships are also highly stable throughout childhood and adolescence (Hunt & Eichorn, 1972). Network size and frequency of contacts with close relatives are shown to remain stable across the life span (see Schulz & Rau, 1985). Stueve and Gerson (1977), for example, showed that the number of kin in one's social network remains stable from ages 21 to 64. Stueve and Gerson also found that although there was a considerable change of best friends during early adult years, best friendships remained stable in later years among their male samples.

Personality stability increases with age well into adulthood. Stein, Newcomb, and Bentler (1986a) showed in their 8-year longitudinal study that personality stability was greater between late adolescence and young adulthood than it was between early and late adolescence. Between late adolescence and adulthood, personality traits appear to be firmly established (Conley, 1984a, 1984b; Moss & Susman, 1980; Nesselroad & Baltes, 1974; Stein et al., 1986a). For example, Conley (1984a) showed a substantial continuity in personality traits over a 40-year span of adulthood. Block (1971) also found that the average stability correlation of personality traits was .55 between senior high school and adulthood. In the same vein, Bachman, O'Malley, and Johnston (1978) showed more stability than change in personality among males during an 8-year period from 10th grade to young adulthood. The results of these longitudinal studies indicate that personality and other individual characteristics increase in stability over time and thereby become more recalcitrant to change with age. The stability of self-esteem, however, seems to depend on the stability of environmental demands, performance expectations, and social comparison groups. When there are changes in these factors, such as during transition to junior high school, changes in one's self-esteem follow (Harter, 1983).

Only a few longitudinal studies have followed individuals from late adolescence into adulthood (Moritmer et al., 1982). This time period often involves major transitions and role changes. It is thus important to examine how social support and personality traits influence each other during this developmental period.

CRITICAL STAGES

The record of research across the life span indicates that different stages of development may be more vulnerable to changes among personality and social interactions than other stages. At a global level, it seems that with advancing age, the likelihood of either personal or social-environmental changes diminishes. For instance, although the particular pattern and participants of social support for an individual may shift from one stage in life to another (Newcomb, 1990b), as well as underlying

individual propensities (Newcomb, 1997), many of the socialpsychological developmental trajectories established early in life may simply become more entrenched and specific with advancing age. Thus, the period between late adolescence and adulthood may not be the "critical period" for the energetic reciprocal influences between personality and social support. However, major normative life changes may make these trajectories more malleable and open to reciprocal influence.

A PROSPECTIVE EMPIRICAL CONSIDERATION OF PERSONALITY AND SOCIAL SUPPORT

As an empirical test of the prospective relations between social support and various aspects of personality, we focus on a 12-year period from late adolescence into adulthood. This life period includes numerous normative developmental changes that are stressful and entail profound shifts in environment, living arrangements, and role responsibilities (Newcomb, 1996).

The research evidence we have reviewed suggests that there may be reciprocal relationships between social support and some of the personality constructs. An individual's early social environment influences his or her personality. One's personality, in turn, may contribute to the further course of development of his or her social environment. In cross-sectional research, it is impossible to draw a conclusion on the dynamic and reciprocal relationship between these two domains of variables. A longitudinal study is an effective method for uncovering causal relations between personality and social support.

We examine the relationships between three personality traits and social support by using a long-term longitudinal design. Cross-lagged latent-variable structural models are used to determine the impact of personality on perceived social support and the impact of perceived social support on personality over time. A cross-lagged longitudinal analysis is a powerful method for determining causal relationships in real-world data (Newcomb, 1990c). The methodology controls for contemporaneous associations, incorporates the stability of the constructs over time, and controls for initial levels of all constructs (Newcomb, 1994a; Stein, Newcomb, & Bentler, 1986b). Several different measures are used to reflect latent personality traits of Self-Esteem, Gregariousness, and Social Conformity. Perceived support from parents and peers is used to reflect a latent factor of Social Support. Although social support can be obtained from many diverse individuals and institutions, parents and peers/friends are for most people the most prominent and critical agents of support, and are also highly related to other forms or sources of social support (e.g., Newcomb, 1990c; Newcomb & Chou, 1989).

The transitional period between late adolescence and adulthood is certainly demanding, since it is a time to establish personal and economic independence, and is often a time of taking on the challenges of a marriage and parenthood (e.g., Newcomb, *in press a*). It is thus important to examine how social support and personality traits influence each other during this time period; therefore, we focus on this age period. Four data-collection points from the UCLA Study of Adolescent Growth and Adult Development longitudinal data are used: Year 5, Year 9, Year 13, and Year 17 (Newcomb, 1997).

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This study was begun in 1976 with a sample of 7th-, 8th-, and 9th-grade students gathered from 11 Los Angeles County schools. Sites were chosen to oversample lower socioeconomic scale (SES) and minority areas. The first years of the project examined and tested many psychosocial predictors of drug initiation (Newcomb, 1997; Newcomb & Bentler, 1988c; Newcomb, Maddahian, & Bentler, 1986). The study has continued into adulthood, with assessments occurring every 4 years after the Year 5 late-adolescent wave of data collection.

Sufficient data on social support and personality to conduct the present study were not included in the assessments until Year 5 of this project. Therefore, the present analyses focus on the last 12 years of the study that spans late adolescence to adulthood, including four assessments points gathered at 4-year intervals (Year 5, Year 9, Year 13, and Year 17).

In Year 17, we received completed questionnaires from 552 subjects. This reflects a 34% retention rate over this 16-year period. Although this figure is lower than some other, shorter prospective studies, it is only 5% less than 4 years ago, and most subject loss occurred in the first 5 years of the study, when the population was oversampled to accrue sufficient numbers of parent, best friend, and subject triads (Newcomb, 1997).

Fewer than five individuals refused to continue in the study by returning their unsigned consent form with the withdrawal box checked. The vast majority of lost subjects was attributable to our inability to obtain a current address for them. In other words, the loss of individuals in this follow-up was primarily the result of our inability to contact them and *not* their voluntary withdrawal from the study.

Descriptive information on the sample from the Year 17 data collection is provided in Table 14.1 for all subjects, and for men and women separately. Ages ranged between 28 and 32 years; 67% of the sample is White and the remaining 33% is roughly spread across Asians, Hispanics, and Blacks. The average education level was about 2 years of college and ranged from the ninth grade to doctoral degree. Most were employed in full-time jobs, and the modal income was over \$50,000, although similar percentages were in the \$10,000–30,000 range, and the \$30,000–50,000 range. The most prevalent living arrangement was living with a spouse, and almost half of the sample were parents.

An extensive series of attrition analyses have been conducted to determine whether, and in what manner, systematic withdrawal from the study may have occurred (Newcomb, 1997). These were conducted in several ways but generally revealed that only a very small percentage of attrition could be accounted for by numerous personality and drug-use variables, and that the remaining sample is quite similar to general population surveys regarding prevalence of drug use.

MEASURES

Eleven identical scales were assessed repeatedly at each of the four data waves. Each scale is composed of four bipolar items, two on each scale reverse-coded to control for acquiescent response style. These 11 scales were selected to reflect four latent constructs and are described in regard to each of these. The social support scales

TABLE 14.1. Description of Sample in Year 17

Variable	Male (N = 106)	Female (N = 284)	Total (N = 390)
Age (years)			
M	29.92	29.88	29.89
Range	29-32	28-32	28-32
Ethnicity (%)			
Black	7	15	13
Hispanic	9	10	10
White	75	65	67
Asian	9	10	10
Education (years)			
Mean	14.86	14.26	14.48
Range	10-18	9-18	9-18
Number of children (%)			
None	54	46	49
One	23	24	24
Two	19	18	18
Three or more	4	12	9
Income for past year (%)			
Under \$10,000	2	10	8
\$10,000 to \$30,000	21	27	25
\$30,000 to \$50,000	33	28	30
Over \$50,000	44	35	37
Living situation (%)			
Alone	6	11	10
Parents	7	9	9
Spouse	71	54	58
Cohabitation	4	9	7
Dormitory	1	0	0
Roommates	11	8	9
Single parent	0	9	6
No regular place	0	1	1
Current life activity (%)			
Unemployed, laid off, fired	2	5	4
Military	4	0	1
College	4	2	3
Childrearing/part-time job	0	9	7
Part-time job	5	7	6
Full-time job	80	63	68
Childrearing/homemaker	0	13	9
None	5	1	2

are discussed more completely elsewhere (e.g., Newcomb & Bentler, 1986, 1988b), as are the personality scales (Stein et al., 1986a).

Social Support

The construct of Social Support was reflected in two scales assessing the perceived supportiveness of particular personal relationships (Newcomb & Bentler, 1986). These scales include good relationship with parents and good relationship with

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peers. These scales were defined as: that of friends

Self-Esteem

This construct was defined as: (Stein et al., 1986b):

Social Conformity

This latent factor was defined as: (Newcomb, 1997) at reflected this construct (Bentler, 1988a): law

Gregariousness

This construct was defined as: interpersonal relationship, ambition, extraversion

Three sets of analyses were conducted to examine the gender differences in the latent factor analyses (CFAs) and latent factor intercorrelations using the three types of pe

Repeated-measures ANOVAs were conducted on each of the three types of pe to test for significance levels for

There were seven significant differences between the men, women reported depression, more law qualities.

There were also significant differences in good relationship with parents, abundance increased, decreased, and leadership

Finally, there were significant differences in 4.1 graphically depicted increased for both men

peers. These scales were selected to capture two critical aspects of the social environment: that of friends and peers, and that of the family as reflected in parents.

Self-Esteem

This construct was reflected in three measured variables or personality scales (Stein et al., 1986b): invulnerability, self-acceptance, and (low) depression.

Social Conformity

This latent factor has been a critical construct throughout this multiyear project (Newcomb, 1997) and reflects attitudes toward conventional norms. Three scales reflected this construct (Castro, Maddahian, Newcomb, & Bentler, 1987; Newcomb & Bentler, 1988a): law abidance, (low) liberalism, and religiosity.

Gregariousness

This construct captures the personality tendency toward outgoing and confident interpersonal relationships. Three scales were chosen to reflect this latent factor: ambition, extraversion, and leadership.

ANALYSIS SUMMARY

Three sets of analyses are used to analyze and describe these data. The first set examines the gender and time effects for each of the 11 scales. Next, confirmatory factor analyses (CFAs) are used to verify the hypothesized factor structure, examine the latent factor intercorrelations, and test for sex differences on factor loadings and intercorrelations using multiple-group models. Finally, structural or path models are constructed to elucidate the significant-across-time effects between social support and the three types of personality reflected in the data.

MEAN DIFFERENCES

Repeated-measures ANOVAs, with gender as a second independent variable, were conducted on each of the 11 social support and personality scales. The means and significance levels for these analyses are presented in Table 14.2.

There were seven significant gender differences from these analyses. Compared to the men, women reported significantly less invulnerability, less self-acceptance, more depression, more law abidance, more religiosity, less ambition, and fewer leadership qualities.

There were also seven significant time effects among the 11 variables. Over time, good relationship with peers decreased, good relationship with parents increased, law abidance increased, liberalism decreased, ambition decreased, extraversion decreased, and leadership increased.

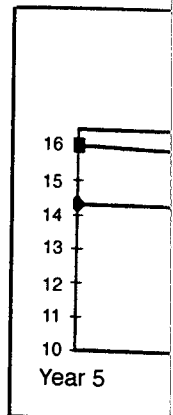
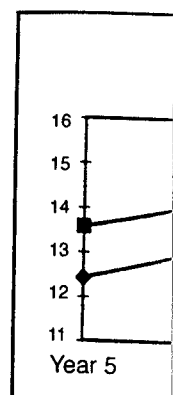
Finally, there were two significant interaction between time and gender. Figure 14.1 graphically depicts these two significant interactions. Although law abidance increased for both men and women, it rose much more sharply for the men, whereas at

TABLE 14.2. Repeated-Measure ANOVAs by Gender for All Manifest Variables

	Means				Significance of F-test		
	Y5	Y9	Y13	Y17	Sex	Time	Sex \times Time
Social support							
Good relationship with peers							
Male	16.53	16.60	16.19	16.11	—	*	—
Female	16.82	16.36	16.39	16.32	—	—	—
Good relationship with parents							
Male	16.02	16.72	16.71	16.92	—	*	—
Female	16.05	16.86	16.90	16.75	—	—	—
Self-esteem							
Invulnerability							
Male	14.68	14.35	14.77	14.76	*	—	—
Female	12.81	12.67	12.68	12.54	—	—	—
Self-acceptance							
Male	16.03	16.46	16.39	16.22	*	—	—
Female	15.77	15.70	16.09	15.65	—	—	—
Depression							
Male	7.39	7.10	7.03	7.18	*	—	—
Female	7.78	7.55	7.25	7.55	—	—	—
Social conformity							
Law abidance							
Male	12.42	13.39	14.98	15.66	*	***	**
Female	13.58	14.38	15.09	15.77	—	—	—
Liberalism							
Male	9.75	9.49	9.21	9.25	—	**	—
Female	10.01	9.37	9.63	9.52	—	—	—
Religiosity							
Male	14.45	14.27	14.21	14.66	***	—	—
Female	15.71	15.89	15.75	15.55	—	—	—
Gregariousness							
Ambition							
Male	16.03	15.82	15.19	14.91	***	***	*
Female	14.33	14.27	13.54	12.43	—	—	—
Extraversion							
Male	13.33	12.90	12.85	12.58	—	***	—
Female	13.15	12.93	12.51	12.86	—	—	—
Leadership							
Male	14.90	14.95	14.99	15.21	**	*	—
Female	13.94	14.12	14.39	14.38	—	—	—

* $p < .05$ ** $p < .01$ *** $p < .001$

SUPPORT, SELF-ESTEEM

FIGURE 14.1. Plots of s
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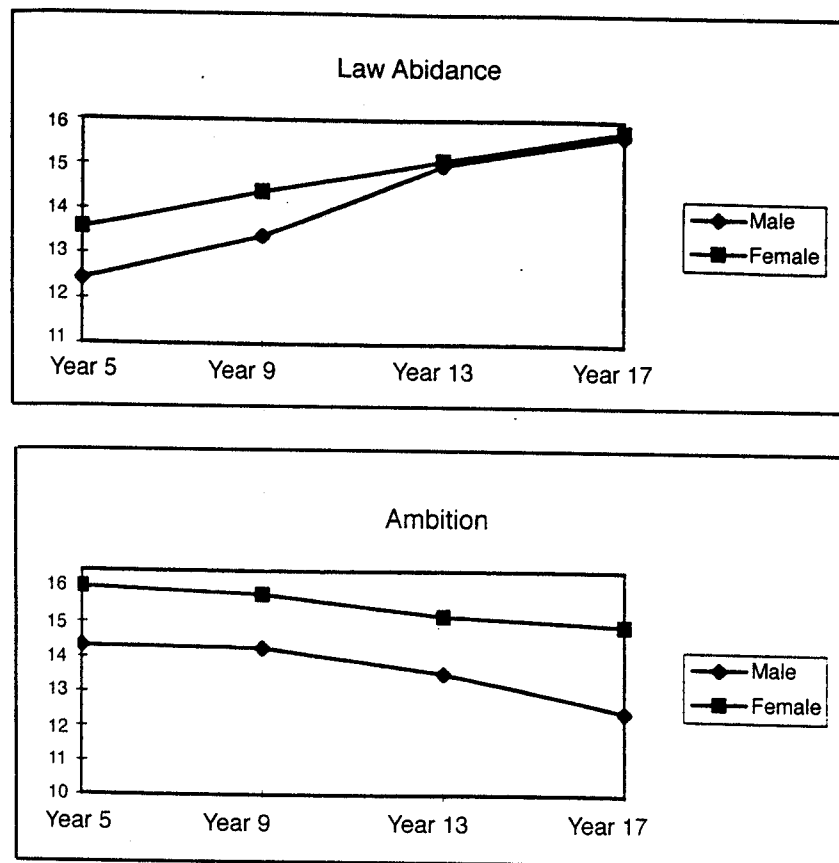


FIGURE 14.1. Plots of significant interactions. Dependent measures are Ambition and Law Abidance. Independent variables are Sex and Year assessed (repeated measure).

Year 13 and Year 17, gender differences were only minimal. Conversely, although ambition declined with age for both genders, it decreased more precipitously for the women and at Year 17, the greatest absolute gender difference was noted.

CONFIRMATORY FACTOR ANALYSES

For analyses of the CFA and path models, latent-variable structural equation modeling was used (structural equation modeling [SEM]: e.g., Bentler, 1980; Newcomb, 1990c, 1994a). Analyses were performed using the EQS structural equations program (Bentler, 1995). All models are run simultaneously, with every variable included at once.

Fit Criteria

Although a nonsignificant *p*-value associated with a chi-square test is a common criteria for not rejecting a SEM, the chi-square statistic is sensitive to the number of

variables and the sample size. Other fit indices have been developed to control for these problems. In this study, models are accepted if the chi-square statistic is less than two times the degrees of freedom and the comparative fit index (CFI; Bentler, 1990) is greater than .90 (Newcomb, 1990c, 1994a). The nonnormed fit index (NNFI) is also presented, since it is correct for degrees of freedom, is commonly used, and is identical to the Tucker-Lewis index (Bentler, 1995).

First-Order Confirmatory Factor Analyses

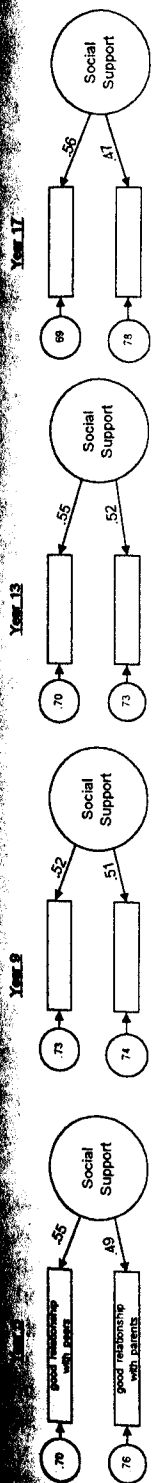
Prior to constructing the across-time path models, CFAs were run to determine whether the measured variables chosen to capture the latent constructs did so in a statistically reliable manner. Correlations among the latent constructs were also presented. In the CFA model, all factor loadings were freed, factor variances were constrained at 1.00 (to identify the constructs), all factors were allowed to correlate freely, and the uniqueness or residual variables of repeated measures were allowed to correlate (i.e., the residual of extraversion Year 5 was allowed to correlate with the residual of extraversion at Year 9). Furthermore, identical factor loadings over time were constrained to equality in order to guarantee that each of the repeatedly assessed latent constructs were constituted in a similar manner over time (e.g., Aiken, Stein, & Bentler, 1994).

The initial CFA model fit the data quite well according to the criteria delineated here, $X^2/df = 1.44$, $p < .001$, CFI = .96, NNFI = .97. All hypothesized factor loadings were substantial and significant in the expected directions. These are graphically depicted in Figure 14.2 in standardized form.

Factor intercorrelations for this CFA model are given in Table 14.3. Social Support was significantly and positively correlated with each of the three personality constructs at each wave of data. The highest correlations within time were between Social Support and Self-Esteem (ranging from .88 to .94). To determine whether Social Support and Self-Esteem were in fact capturing the identical construct, an additional model was run. In this model, the correlations between Self-Esteem and Social Support within each time were forced to 1.00. A nested test revealed that this imposition significantly degraded the model ($p < .001$). This verifies that despite the high correlation between these constructs, they are not identical and must be considered separately.

The three personality constructs were all positively correlated except for Social Conformity and Gregariousness, which were negatively correlated and, at times, significantly so. Finally, stability correlations were quite high between repeatedly assessed constructs. The highest of these 4-year stability correlations was for Social Support (ranging from .79 to .93), followed by Social Conformity (ranging from .80 to .89) and Gregariousness (ranging from .78 to .89), with far lower stability correlations for Self-Esteem (ranging from .49 to .67).

These CFA analyses confirm that the measured-variable indicators hypothesized to reflect the latent constructs were reliable and significant. They also provide important information regarding the degree of association among these latent factors, providing a basis for understanding the path models to follow. Prior to this, however, the mean differences for gender suggest that we must consider whether different factor structures and factor intercorrelations exist for men and women.



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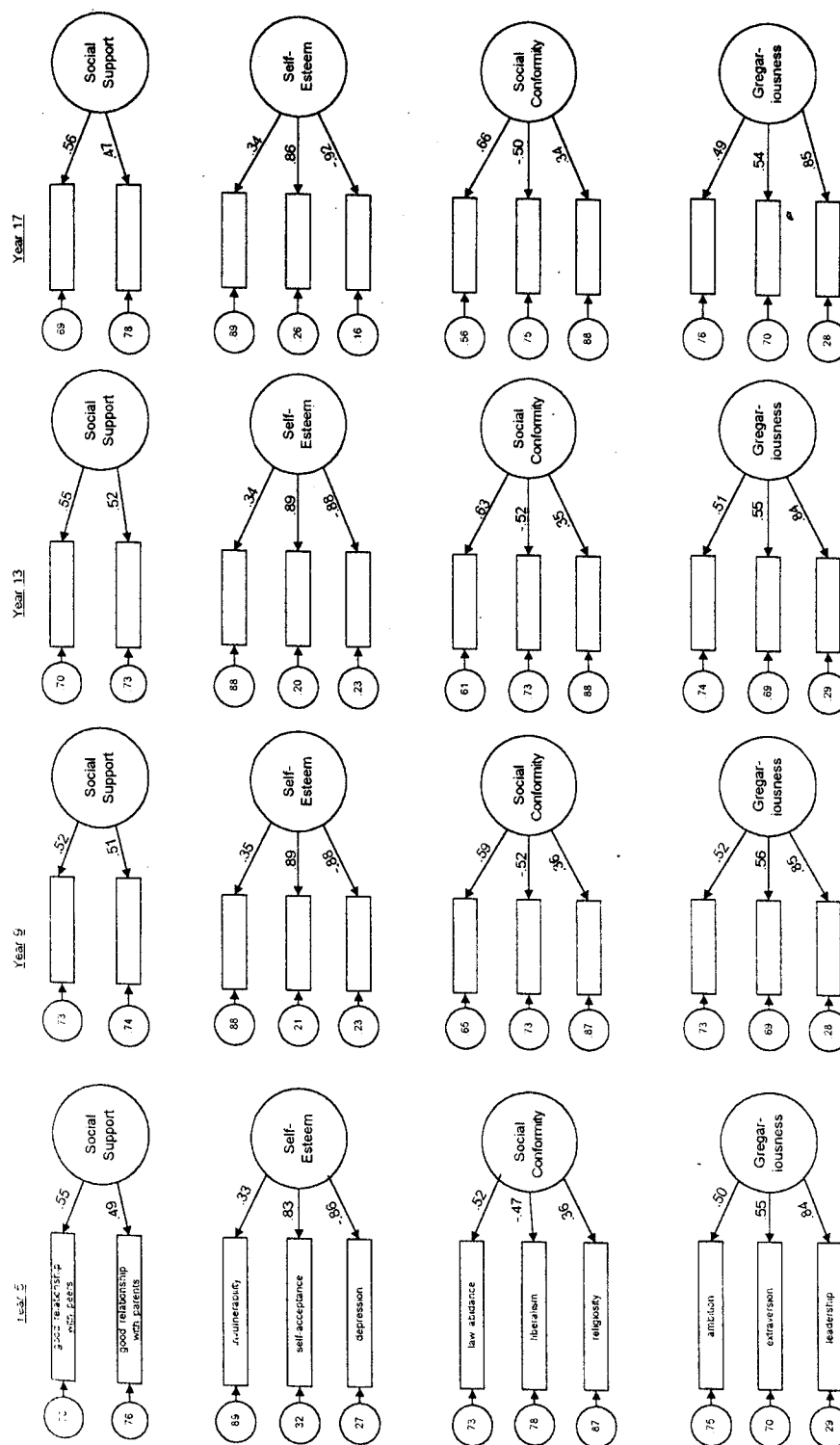


FIGURE 14.2. Latent factor structure. Measurement model from the confirmatory factor analysis (CFA). Rectangles are measured variables (repeatedly measured across the 4 years), large circles are latent constructs, and small circles are residual variances. All factor loadings are standardized and significant ($p < .001$). Correlations among all latent constructs from this CFA model are presented in Table 14.3.

TABLE 14.3. Factor Intercorrelations between Social Support and Personality Factors

Factor	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Year 5																
1. Social support	—															
2. Self-esteem	.89***	—														
3. Social conformity	.63***	.44***	—													
4. Gregariousness	.42***	.44***	-.12	—												
Year 9																
5. Social support	.82***	.50***	.50***	.26***	—											
6. Self-esteem	.68***	.49***	.32***	.32***	.94***	—										
7. Social conformity	.33**	.20**	.80***	-1.16*	.38***	.26***	—									
8. Gregariousness	.31***	.33***	-.10	.78***	.30***	.36***	-.22**	—								
Year 13																
9. Social support	.76***	.46***	.50***	.32***	.93***	.72***	.44***	.36***	—							
10. Self-esteem	.46***	.46***	.30***	.25***	.57***	.53***	.25***	.29***	.89***	—						
11. Social conformity	.21*	.24**	.69***	-.17*	.22*	.19**	.89***	-.12	.46***	.40***	—					
12. Gregariousness	.26**	.26***	-.08	.73***	.18*	.23***	-.22**	.84***	.42***	.39***	-.13	—				
Year 17																
13. Social support	.69***	.52***	.42***	.34***	.81***	.66***	.20	.41***	.79***	.60***	.20*	.30***	—			
14. Self-esteem	.49***	.39***	.36***	.24***	.54***	.48***	.24***	.30***	.69***	.67***	.37***	.34***	.88***	—		
15. Social conformity	.15	.11	.72***	-.17*	.16	.07	.80***	-.13	.27**	.23***	.89***	-.14	.21*	.34***	—	
16. Gregariousness	.26**	.29***	-.02	.70***	.17*	.23***	-.15*	.79***	.35***	.31***	-.04	.89***	.40***	.42***	-.05	—

* $p < .05$ ** $p < .01$ *** $p < .001$

SUPPORT, SELF-ESTEEM.

Multiple-Group CFA

Since it is possible that the results might be different for men and women (Newcomb, 1994a). The results of the final CFA model. The results of the factorial invariance tests.

The first multiple-group CFA model was estimated for men and women. This model was examined of the fit of the factor loadings were compared to the relationship with personality on Social Conformity and should not bias results imposed equality of correlations. This model factor-loadings-consistency ($p > .50$).

Based on these results, the difference between the CFA models for men and women were compared.

The latent factor model for the initial structural equation model (disturbance terms) were allowed (only the paths that theory, cannot establish when they are imposed stability paths for relationships).

As described elsewhere, the paths among the variables to testing paths among the variables. The advantage of this approach is that it allows for other possible paths that were directly tested (Newcomb, 1994b). The (stepping) approach in the initial STR model was held at zero to determine if the paths were significant, they are tested using a (or step-down) method. The results included in the initial model.

The totally theoretical model was estimated using or unanticipated results (Newcomb, 1994b). The results of the model (Newcomb, 1994a), the ad-

Multiple-Group CFA Model

Since it is possible that either the factor structure or factor intercorrelations may be different for men and women, a series of multiple-group models were run (Newcomb, 1994a). The two groups were men and women, and the model tested was the final CFA model. Three models were run and difference X^2 tests used to evaluate factorial invariance and factor correlation differences.

The first multiple-group CFA model imposed no constraints between the groups. The second model imposed equality constraints on identical factor loadings for men and women. This model was slightly worse than the first model ($p < .05$). An examination of the Lagrangian Multiplier test (Chou & Bentler, 1990) revealed that two factor loadings were different for men compared to women. These were for good relationship with peers on Social Support (men = .59, women = .48) and law abidance on Social Conformity (men = .81, women = .62). These differences were not substantial and should not bias results based on a combined sample of men and women. Finally, we imposed equality constraints on both the factor loadings and all factor intercorrelations. This more constrained model did not differ significantly from either the factor-loadings-constrained model ($p > .50$) or the totally unconstrained model ($p > .50$).

Based on these findings, it is clear that very few, and minor, differences exist between the CFA models for men and women. Therefore, the samples of men and women were combined for the structural or path analyses to follow.

STRUCTURAL OR PATH MODELS

The latent factor structure confirmed in the CFA model was used as the foundation for the initial structural (STR), or path models. All within-time constructs (or their disturbance terms) were allowed to correlate freely; no within-time directional paths were allowed (only the correlations), since these are purely speculative, based only on theory, cannot establish any true causal order, and can bias or misspecify the model when they are imposed (Newcomb, 1990c, 1994a). In this first path model, only 4-year stability paths for repeated constructs were initially included.

As described elsewhere (Newcomb, 1994a), there are basically three approaches to testing paths among latent constructs. One technique is to test only hypothesized paths. The advantage of this approach is that it is theoretically driven. The disadvantage of this approach is that it capitalizes on hubris of the theory and researcher, since no other possible paths or lack of path (hypothesized no relation) are considered or directly tested (Newcomb, 1994b). A second technique is an additive (or forward-stepping) approach in which only the paths that have been hypothesized are included in the initial STR model. The next step in such an approach is to test all paths that were held at zero to determine if they are significant (Newcomb, 1994b). If any of these are significant, they are then added to the path model. The third approach is a subtractive (or step-down) method. In this approach, all paths (whether hypothesized or not) are included in the initial STR model. Then, all nonsignificant paths are removed.

The totally theory-driven method cannot be used here, since it allows no competing or unanticipated results and cannot be trusted, due to likely spurious conclusions (Newcomb, 1994b). Although the subtractive method has certain advantages (Newcomb, 1994a), the additive approach was chosen for the current analyses. This was due

to the very high associations among most of the latent constructs, which often lead to estimation difficulties, colinearities, and uninterpretable suppression effects.

The initial STR model estimated only included stability paths across time (although within-time correlations were also estimated). These stability paths were the only strongly expected or hypothesized across-time effects. This model fit the data well, $X^2/df = 1.46$, $p < .001$, CFI = .96, NNFI = .96, and is graphically depicted in Figure 14.3. As evident, all 4-year stability effects were positive and significant, ranging from a low for Self-Esteem from Year 5 to Year 9 (.56) to a high for Gregariousness from Year 13 to Year 17 (.89). In general, the magnitude of the stability paths increased with advancing age.

The final STR model was generated by adding paths to the initial stability-only STR model. Modification indices were used to add standard paths between latent constructs over time, as well as specific or nonstandard effects to the model (Chou & Bentler, 1990; Newcomb, 1994a). All significant paths between latent constructs over time were also added.

The specific paths were limited to three types of across-time effects, not strictly between latent variables. These possible paths were restricted to those (1) from earlier measured variables (or their residuals) to later latent constructs; (2) from earlier latent constructs to later measured variables; and (3) from earlier measured variables (or their residuals) to later measured variables (Newcomb, 1994a). Since the focus of this investigation is on the effects between social support and personality, a further limitation was imposed on the inclusion of specific effects. Only those specific paths between social support and its variables, and the personality constructs and their variables were included. No social support-to-social support or personality-to-personality specific effects were added to the model.

Six latent variable-to-latent variable paths and 14 specific effects were added to the model. Then, all nonsignificant parameters were removed, as guided by the Wald Test (Chou & Bentler, 1990). This final STR model fit the data quite well; $X^2/df = 1.32$, $p < .001$, CFI = .97, NNFI = .97. Figure 14.4 depicts the significant paths between the latent factors, and the 14 specific effects are listed in Table 14.4. The information provided in Figure 14.4 and Table 14.4 are taken from the same final STR model and must be considered in conjunction with each other; they are only presented separately for the sake of clarity. The findings presented in Figure 14.4 are strictly factor-to-factor results, whereas those findings reported in Table 14.4 are all specific or nonstandard effects.

In Figure 14.4, it can be seen that Year 5 Gregariousness reduced Year 9 Social Conformity, and Year 5 Social Conformity increased Year 13 Self-Esteem and Year 17 Social Support. The most interesting aspects of this figure are the significant positive paths from earlier Social Support to later Self-Esteem, in conjunction with the deletion of the Self-Esteem stability paths. This pattern was evident for all three time spans. A careful examination of the CFA intercorrelation matrix helps explain these unusual

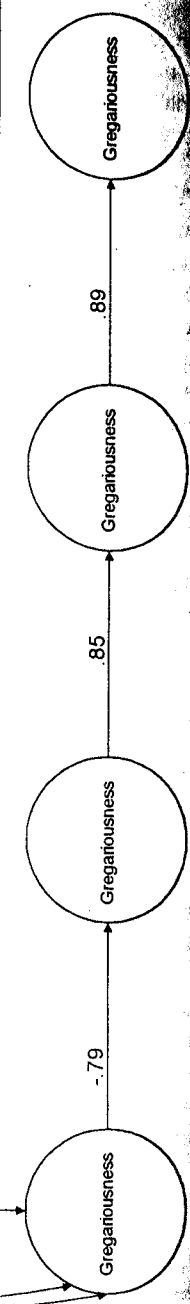


FIGURE 14.3. Initial path or structural model. This model includes only stability paths over time; no cross-lagged effects were initially included. Correlations among the disturbance terms at each assessment were allowed but are not depicted for the sake of clarity (their magnitudes are similar to the correlations among independent constructs included in the figure). Path coefficients are standardized, and all parameter estimates are significant ($p < .001$).

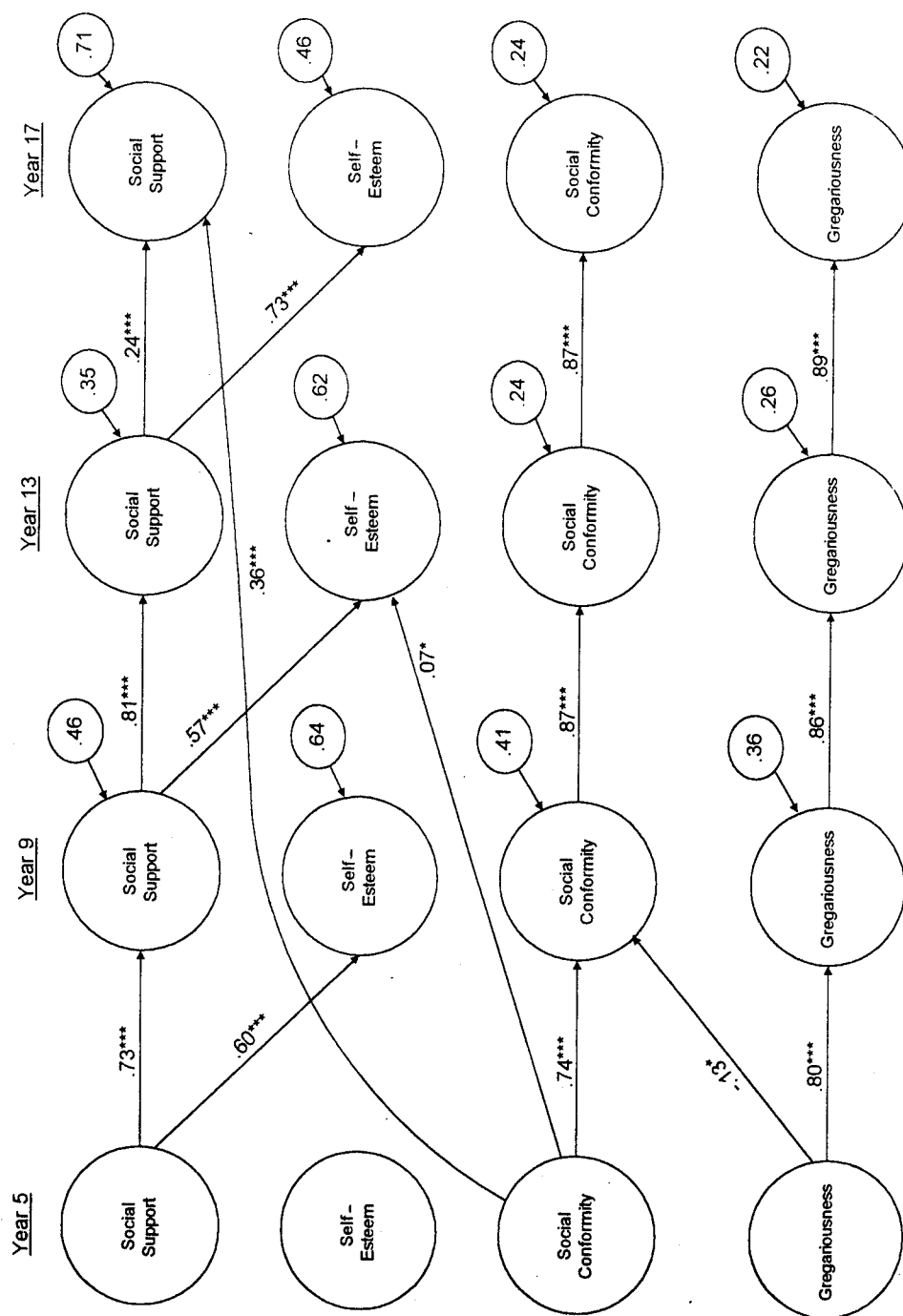


FIGURE 14.4. Final path or structural model. This figure includes only significant across-time effects between latent constructs specific or nonstandard effects from this same final model are presented in Table 14.4. All path coefficients are standardized ($p < .05$, *** $p < .001$).

SUPPORT, SELF-ESTEEM

TABLE

Predictor	
Religiosity 5 (R)	
Ambition 5 (R)	
Depression 5 (R)	
Law abidance 5 (R)	
Religiosity 9 (R)	
Extraversion 5 (R)	
Law Abidance 9 (R)	
Ambition 9 (R)	
Social support 9	
Good relationship	
Self-esteem 9	
Self-esteem 9	
Ambition 13 (R)	

* $p < .05$ ** $p < .01$ *** $p < .001$

and unexpected effects. The more highly correlated variables, in other words, the constructs of Social Support and Self-Esteem were considered. Therefore, when the stability paths for Social Support and Self-Esteem were examined: (1) five from earlier Social Support to later Social Support; and (2) five from earlier Self-Esteem to later Self-Esteem; and (3) five from earlier Social Support to later Self-Esteem; and (4) five from earlier Self-Esteem to later Social Support; and (5) five from earlier Social Support to later Gregariousness; and (6) five from earlier Self-Esteem to later Gregariousness; and (7) five from earlier Social Conformity to later Social Conformity; and (8) five from earlier Social Conformity to later Gregariousness; and (9) five from earlier Gregariousness to later Social Conformity; and (10) five from earlier Gregariousness to later Gregariousness.

IN

These results provide associations and plausible within-time and across-time effects. The three constructs of Social Support, Self-Esteem, and Gregariousness capture individual differences in social support, self-esteem, and conventional behavior. These personal variables each captures unique

TABLE 14.4. Specific Effects for the Final Structural or Path Model

Predictor	Outcome	Standardized parameter estimate
Religiosity 5 (R)	Social Support 9	.10**
Ambition 5 (R)	Good relationship with peers 9	.06*
Depression 5 (R)	Good relationship with peers 13	-.10*
Law abidance 5 (R)	Good relationship with peers 13	.11**
Religiosity 5 (R)	Good relationship with peers 13	.09**
Extraversion 5 (R)	Good relationship with peers 13	.11***
Law Abidance 9 (R)	Good relationship with peers 13	.08*
Ambition 9 (R)	Good relationship with parents 13	.10***
Social support 9	Self-acceptance 13	.06*
Good relationship with parents 5 (R)	Depression 13	-.04*
Good relationship with peers 5 (R)	Extraversion 13	.06*
Self-esteem 9	Good relationship with peers 17	.28***
Self-esteem 9	Good relationship with parents 17	.21***
Ambition 13 (R)	Good relationship with parents 17	.11**

* $p < .05$ ** $p < .01$ *** $p < .001$

and unexpected effects. What is noticed is that at each interval, later Self-Esteem was more highly correlated with earlier Social Support than with earlier Self-Esteem. In other words, the cross-lagged correlations between prior Social Support and later Self-Esteem were consistently stronger than were the stability effects for Self-Esteem. Therefore, when these cross-lagged paths were entered into the STR model, the stability paths for Self-Esteem became nonsignificant.

By combining the results from Figure 14.4 with the 14 significant specific or nonstandard effects from Table 14.4 and focusing on cross-lagged effects between social support and personality, the following six possible types of relationships can be examined: (1) five from earlier Social Support to later Self-Esteem variables; (2) none from earlier Social Support to later Social Conformity variables; (3) one from earlier Social Support to later Gregariousness measures; (4) three from earlier Self-Esteem to later Social Support variables; (5) five from earlier Social Conformity to later Social Support variables; and (6) four from earlier Gregariousness to later Social Support variables.

INTEGRATION OF FINDINGS AND THEORY

These results present some intriguing, informative, and theoretically meaningful associations and plausible causal relationships between social support and personality, both within-time and over time. Each of these are reviewed.

The three constructs were selected to reflect different domains of personality and individual differences, including affect and self-evaluation (Self-Esteem), attitudes toward conventionality (Social Conformity), and interpersonal adeptness (Gregariousness). These personality constructs were modestly to moderately correlated, verifying that each captures unique aspects of intrapersonal functioning.

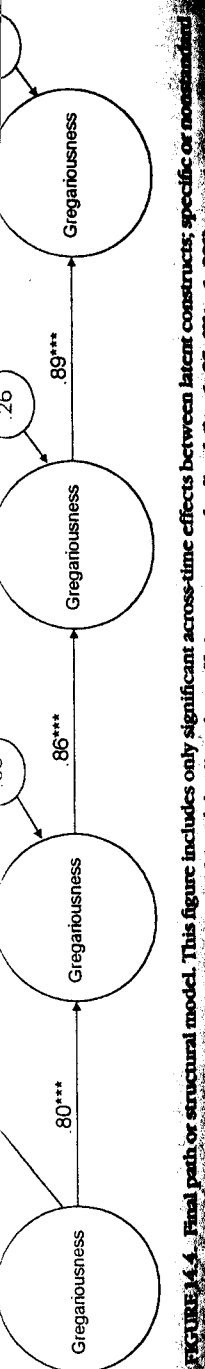


FIGURE 14.4. Final path or structural model. This figure includes only significant cross-time effects between latent constructs; specific or nonstandard effects are indicated by asterisks. All path coefficients are standardized ($p < .05$; *** $p < .001$).

The most surprising finding was the very few, significant cross-lagged paths between the latent construct of Social Support and the three personality constructs. Based on theory and prior research, we had expected more significant effects between these constructs over time. Social Support and the three personality factors were significantly correlated within each time but had few reciprocal effects across time. Nevertheless, there were several intriguing specific or nonstandard prospective effects between indicators of these constructs. Numerous explanations may account for these results.

These new findings are discussed in regard to several themes that include stability effects, associations among personality and social support constructs, reciprocal effects between these two domains, theoretical implications, developmental period, and time lags. Each of these topics are considered in turn.

STABILITY EFFECTS

All across-time stability effects were highly significant for both personality and social support latent variables, indicating a high degree of continuity in personality and perceived adequacy of social support over a 12-year period. Self-Esteem appeared to be less stable over time than the other two personality traits, Social Conformity and Gregariousness, which is consistent with past results (Stein et al., 1986a; Conley, 1984b). Social Conformity reflects one's attitudes toward society and traditional values, whereas Gregariousness is one's interactional style toward other people and the world. On the other hand, Self-Esteem partly reflects affect or self-feelings that perceived judgement of others invokes in the self. Because of this affective component, one's self-theory, or Self-Esteem, seems to be less stable across time compared to Social Conformity or Gregariousness. In other words, the affective components of Self-Esteem make it relatively more state-like than trait-like, particularly in comparison to the other two personality constructs (e.g., Hertzog & Nesselrode, 1987). However, the operative word here is *relatively*, since, clearly, even Self-Esteem has substantial stability over these 12 years, and therefore is certainly a personality trait within a more global perspective. Nevertheless, this does suggest that the personality construct of Self-Esteem has more room for change (due to its lower stability paths) compared to Social Conformity and Gregariousness, where the stability effects are so high that there is little variance left to be influenced by other factors.

ASSOCIATIONS BETWEEN PERSONALITY AND SOCIAL SUPPORT

There were significant and positive intercorrelations between Social Support and the three personality latent constructs at each period of measurement. These reflect cross-sectional associations and cannot establish any causal priority.

As previous research has demonstrated, Social Support was closely linked to Self-Esteem, Social Conformity, and Gregariousness. Especially, the relation of Social Support to Self-Esteem was considerably high, indicating a substantial degree of association between perceived inadequacy of social support and self-evaluations (Newcomb, 1990a). Although lower in magnitude in regard to correlations, Social Support was also associated with greater Social Conformity and more Gregariousness.

SUPPORT, SELF-ESTEEM

The strong association is due in part to the affective aspects of interpersonal contact influenced by reactions. Similarly, others may be and self-assured.

Since Gregariousness is somewhat surprising, it is somewhat surprising. However, the perception captured in the context of an invasive, intrusive, and related the association dealing with others, as more gregarious peers.

Finally, Social Support. In other words, those from important other socialization processes. Individuals attract gregarious, reliable, and in harm occur, whereby individuals supportiveness of others.

Each of these paths between Social Support and several of these were intercorrelated with. The major goal of between three aspects which major life changes, personal relations exist, the adolescence and

Most interesting is consistently predicted when this occurs. As discussed, earlier Self-Esteem was earlier Self-Esteem on shaping the calling self-esteem.

The strong association between Social Support and Self-Esteem may perhaps be due in part to the more affective component of Self-Esteem, which may parallel the affective aspects of Social Support that result from the satisfaction and quality of such interpersonal contact. It is possible that self-evaluations (i.e., self-esteem) are partly influenced by reactions of others to the person (as reflected in social support). Similarly, others may be more supportive when they perceive a person as confident and self-assured.

Since Gregariousness also implies the manner in which one interacts with others, it is somewhat surprising that it was only moderately correlated with Social Support. However, the perceived valence (positive or negative) of this Gregariousness was not captured in the construct, and certainly ambition and leadership can be expressed in invasive, intrusive, and obnoxious ways. Therefore, this ambiguity may have attenuated the association between these constructs, despite their apparent similarity in dealing with others. Nevertheless, it remains clear that those who perceive themselves as more gregarious also perceive a more supportive social network of parents and peers.

Finally, Social Support was also moderately related to greater Social Conformity. In other words, those who conform to traditional values also perceive greater support from important others. This is not surprising and may reflect either a selection process, socialization process, or both. A selection process might occur, whereby conforming individuals attract greater support from others, since they are more predictable, reliable, and in harmony with traditional social norms. A socialization process may occur, whereby individuals may become more social conforming in response to the supportiveness of others, in order to fit in and be even more accepted.

RECIPROCAL EFFECTS

Each of these positions suggest that reciprocal effects should have been found between Social Support and the three personality constructs over time. Although several of these were found, the larger conclusions are that these constructs are highly intercorrelated within time and highly stable across time.

The major goal of this chapter is to consider the reciprocal and potential relations between three aspects of personality and social support during a 12-year period in which major life changes take place. Our findings reveal some support that bidirectional relations exist between these domains of psychosocial functioning between late adolescence and adulthood.

SELF-ESTEEM AND SOCIAL SUPPORT

Most interesting and rather surprising, the latent construct of Social Support consistently predicted later Self-Esteem at each of the developmental spans. However, when this occurred, the stability paths for Self-Esteem were reduced to nonsignificance. As discussed, earlier Social Support was a better predictor of later Self-Esteem than was earlier Self-Esteem. This clearly demonstrates the vital role of the social environment on shaping an individual's affective, self-appraisal form of personality we are calling self-esteem.

These findings are consistent with the "looking-glass" theory (Cooley, 1902; Mead 1934). Social interactions with significant others in various settings provide important evaluative feedback for an individual. By internalizing these evaluative judgments of others, individuals define themselves in terms of responses they arouse in others. Affect or self-feelings that the judgment of others invoke in the self also become an important part of the self-concept (see Harter, 1983). Even during late adolescence and early adulthood, the degree to which one felt accepted and supported by one's parents and friends led to positive feelings about, and evaluations of, the self.

In fact, external stressors create instability and fluctuations in self-esteem (Harter 1983). The life transitions from adolescence to young adulthood, and young adulthood to adulthood, are fraught with external changes and new life demands in terms of occupation and interpersonal roles (e.g., Newcomb, 1996). Therefore, these critical stages may be particularly sensitive to changes and influences on self-esteem due to the new external demands and changes. The perceived quality of social relationships with peers and parents clearly affects self-feelings and evaluations during these developmental stages.

Conversely, the construct of Self-Esteem did not significantly influence Social Support at any interval. However, several specific effects lent some support for a reverse pathway from Self-Esteem to some of the indicators of Social Support, which is consistent with the findings of Newcomb (1990a). For instance, earlier depression reduced the quality of later peer relationships. Similarly, earlier Self-Esteem increased later support from both peers and parents. The hypothesis that Self-Esteem and Social Support influence each other in a bidirectional manner was thus confirmed (not with the paths between the latent constructs but with the specific or nonstandard paths).

GREGARIOUSNESS AND SOCIAL SUPPORT

All possible pathways between the Gregariousness and Social Support latent variables across time were nonsignificant over all intervals. However, several significant effects emerged between indicators of these two constructs. There were more specific effects from the indicators of Gregariousness to the indicators of Social Support, rather than the reverse effect from the latter to the former. Extraversion is one of the personality traits that are highly stable over time and are fairly well established in early childhood (Emmerich, 1964). Extraversion was also shown to change little between early adolescence and young adulthood (Stein et al., 1986b). Thus, the relatively strong effects of Gregariousness on Social Support seem to be consistent with Scarr and McCartney's (1983) active genotype-environment effect hypothesis. According to this view, a gregarious individual actively seeks out a niche that is compatible with his or her disposition. For example, an outgoing person may find a job in which considerable social skills are required. Obtaining this job may further help the person to build up and maintain social networks with rewarding ties.

SOCIAL CONFORMITY AND SOCIAL SUPPORT

The paths between the Social Conformity and Social Support latent variables showed that the former in Year 5 significantly influenced the latter in Year 17. But the reverse pathway from Social Support to Social Conformity was not significant at any

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interval. The effects were apparent but only at the 10% level. Lacking attitudes seem to be a problem. Lack of social support and other problems in precocious sexual intercourse (1988a). By the 1980s these youths increased their deviant behavior (McCartney, 1983). In contrast to traditional social support, Durkheim's (1897/1984) theory of social support is

The lack of significant support to the development of the self has emphasized the importance of parenting style, and Maccoby & Martin (1983) have shown to correlate with deviant or socially unacceptable behavior.

Modest support, and between Gregariousness and Social Support latent constructs, but the transactions between these two constructs, for example, a gregarious person who is popular with other people. These relationships from her or his social network reinforces the person's self-esteem.

More generally, the present evidence supports the constructs. Self-Esteem is a function of affect and self-evaluation to the extent that they are evaluative components of family establishment.

Based on these findings, Gregariousness and Social Support (and not Social Conformity) which in turn contribute to additional personality development, support, which then

interval. The effect of social conformity in late adolescence was not immediately apparent but only appeared after more than a decade had passed. The socially conforming attitudes seem to have accumulating effects on the trajectory of an individual over time. Lack of social conformity is likely to lead adolescents to get involved in drug use and other problem behaviors such as school dropout, delinquent behaviors, and precocious sexual involvement (e.g., McGee & Newcomb, 1992; Newcomb & Bentler, 1988a). By the progressive accumulation of the consequences of deviant behaviors, these youths increasingly select themselves into life circumstances that further reinforce their deviant tendencies (Caspi, Elder, & Bem, 1988; Kaplan, 1980, 1986; Scarr & McCartney, 1983). Deviant orientations and behavior are likely to alienate an individual from traditional social institutions such as family. There was, however, no evidence that social support increases social conformity over time, which is inconsistent with Durkheim's (1897/1951) social integration theory.

The lack of significant paths from Social Support to Social Conformity may be due to the developmental periods on which we focused in the present study. Past research has emphasized the importance of quality of the early parent-child relationship, parenting style, and family environment for a child's readiness to be socialized (see Maccoby & Martin, 1983). Family disruptions and maternal drug use, for example, have been shown to contribute to early adolescents' deviant or nontraditional attitudes (Newcomb & Bentler, 1988c). It is plausible that by late adolescence, an individual's deviant or socially nonconforming attitudes are already well established and are unlikely to be influenced by social support.

THEORETICAL IMPLICATIONS

Modest support for bidirectional relations between Self-Esteem and Social Support, and between Gregariousness and Social Support (not with the paths between the latent constructs, but with the nonstandard paths) provides evidence for reciprocal transactions between the person and the environment (Mischel, 1973, 1990). For example, a gregarious and outgoing person is likely to be friendly and sociable toward other people. These behaviors, in turn, may evoke positive and accepting responses from her or his social environment. This positive feedback further maintains and reinforces the person's gregarious or extraverted tendencies.

More generally, however, a tentative theoretical model can be proposed based on the present evidence. Analyses clearly demonstrate a distinction among the personality constructs. Self-Esteem appears to be more unstable and includes a substantial degree of affect and self-evaluation. Gregariousness and Social Conformity are different to the extent that they are more enduring and stable across time, lack an affective or self-evaluative component, are more attitudinal and interpersonally oriented, and may be more family established earlier in life than Self-Esteem.

Based on these distinctions and the results of the present study, it appears that gregariousness and social conformity precede and help shape and establish social support (and not the reverse). Sequentially, social support influences self-esteem, which in turn contributes to construction of a social support network. In other words, traditional personality traits of social conformity and gregariousness lead to social support, which then contributes to self-esteem, which in a feedback loop, also helps

mold one's social environment in terms of social support. This may be an interesting model that should be explored in future developmental research.

DEVELOPMENTAL PERIOD

As suggested earlier, there may be critical periods for the optimal and salient mutual influence of social psychological factors on each other over time. Based on theory and empirical evidence (e.g., Mischel, 1973; Newcomb, 1990a), and abundant anecdotal evidence going back to Freud and even earlier, we know that the social environment shapes individuals, and that individuals help select and modify their social milieu. In this particular instance of social support and personality, it appears that much of this cross-fertilization occurs prior to late adolescence, and that reciprocal effects subsequent to adolescence are few.

The energetic and volatile cross-influence between personality and social support apparently occur at earlier stages in life, either in childhood or young adolescence. The current approach of using SEMs should be an appropriate technique to elucidate such processes with appropriate samples and data (e.g., Connell, 1987). In other words, we remain convinced that social support and personality do influence and shape each other much more than revealed in the present analyses. However, we expect these effects to occur at younger ages or more sensitive or critical periods when these characteristics are more malleable and less entrenched. Therefore, our focus should shift to earlier developmental periods to establish more precisely whether reciprocal processes help develop both personality and social support.

The evidence for this conclusion is based on two prominent features of the current analyses. The first piece of evidence is the substantial correlations between social support and the personality traits even during late adolescence, demonstrating that they are highly related. This suggests that they may have been mutually influential at a younger age, or that a third or spurious influence generated them both (Newcomb, 1990c). Without additional data, it is impossible to confirm or disconfirm either of these possibilities. The second piece of evidence is the high stability effects of all constructs. As discussed earlier, this high degree of state dependence, or stability, reduces the potential influence any other variable may have on them. However, since stability tends to increase with age (e.g., Stein et al., 1986a), it is likely that these psychosocial constructs may have been more malleable and amenable to change at younger ages.

Finally, the concerns raised by Hertzog and Nesselroade (1987) are not really applicable here, since all of the constructs under study conform to trait rather than state definitions. Although some may be considered relatively more state-like than others (i.e., Self-Esteem), they are all traits in the traditional sense, which is confirmed by their high degrees of across-time stability.

TIME LAGS

When trying to establish causal inferences in nonexperimental, naturally occurring data, the time lag between the cause and effect becomes critical. Not all causal processes occur within similar temporal frames. Some processes occur almost simultaneously, whereas others may take years and decades to emerge. Unfortunately, most

SUPPORT, SELF-ESTEEM.

research designs fail
Gollob & Reichardt

In the present study, subjects matured, it is the relatively moderate we know, stability derived from a minimum of appropriate.

However, if the much shorter and narrower have missed them. The trait characteristics of constructs. Furthermore, same constructs at 1

Our findings clearly tap different aspects. Although the effects and reciprocal relationships. Support. The consistency intervals provide further effects in people.

Although several structural differences, there were two clear higher Self-Esteem, and all constructs were consistent to adulthood.

The study of the personality is a very psychosocial construct late adolescence to adulthood and mutually influential.

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research designs fail to take these variations in the causal process into consideration (Gollob & Reichardt, 1987).

In the present study, we incorporated 4-year time lags. We anticipated that as our subjects matured, it would take longer for causal effects and processes to occur. Given the relatively moderate to high stability paths, this assumption seems well founded. As we know, stability decreases with increasing time. Given that we considered effects from a minimum of a 4-year to a 12-year time lag, the present design appears appropriate.

However, if the causal effects between social support and personality occur at much shorter and nearly instantaneous intervals (Gollob & Reichardt, 1987), we clearly have missed them. These processes are probably more relevant for state rather than trait characteristics (Hertzog & Nesselroade, 1987), which is not relevant to the present constructs. Furthermore, shorter time intervals seem appropriate when studying these same constructs at much younger ages and should be examined in future research.

CONCLUSIONS

Our findings clearly show that Self-Esteem, Gregariousness, and Social Conformity tap different aspects of personality, which are differentially related to Social Support. Although the effects were few and weak, there was some support for a bidirectional and reciprocal relation between both Self-Esteem and Gregariousness, and Social Support. The consistent effects of Social Support on Self-Esteem across the three time-intervals provide further understanding of how social support produces beneficial effects in people.

Although several mean differences were noted for gender and time, very few structural differences were found for men compared to women. In the paths models, there were two clear conclusions: (1) that Social Support was highly correlated with higher Self-Esteem, greater Gregariousness, and more Social Conformity; and (2) that all constructs were quite stable over the 12-year period under study from late adolescence to adulthood.

The study of the interactional and causal processes between social support and personality is a very fertile area of inquiry. In this chapter, we have found that these psychosocial constructs are highly related, have some modest reciprocal effects from late adolescence to adulthood, are quite stable, and are probably more fluidly related and mutually influential during childhood and early adolescence.

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