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# Positive interpersonal relationships mediate the association between social skills and psychological well-being

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## Abstract

This study examined the association between social skills and psychological well-being, operationalized through a variety of positive psychological states. It was hypothesized that positive relations with other people would mediate the association between social skills and psychological well-being. A community based sample of 703 adults, aged 18–87 completed measures of social skills, positive relations with others, and the following indicators of psychological well-being: life satisfaction, environmental mastery, self-efficacy, hope, happiness, and quality of life. Results indicate that social skills were consistently and positively associated with all indicators of psychological well-being. Social skills were also strongly associated with positive relations with others. Positive relations with others proved to mediate the association between social skills and all measures of psychological well-being.

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## 1. Introduction

Social skill is an individual difference that can have profound effects on the nature of interactions with other people as well as people's psychological well-being. Indeed, these two phenomena

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are theoretically related as the nature of social interactions can affect and be affected by a person's state of mind and mental health. In Lewinsohn's behavioral theory of depression, social skill is defined as the ability to enact behaviors that are either positively or negatively reinforced and to not emit behaviors that are punished by others (Libet & Lewinsohn, 1973). Others have defined social skills as "the ability to express both positive and negative feelings in the interpersonal context without suffering loss of social reinforcement" (Hersen & Bellack, 1977, p. 512), and the ability to interact with others in a way that is both appropriate and effective (Segrin, 1992). Implicit in all of these conceptualizations is the concept of positive consequences. According to the behavioral theory, the possession and demonstration of good social skills should bring about positive social consequences, whereas a lack of social skills should be associated with negative social outcomes (Libet & Lewinsohn, 1973). The importance of these social outcomes lies in their obvious connection to a positive or negative state of psychological well-being.

Deficits in social skills have been implicated in a vast range of problems that include schizophrenia (Patterson, Moscona, & McKibbin, 2001), social anxiety and phobia (Wenzel, Graff-Dolezal, Macho, & Brendle, 2005), depression (Segrin, 2000), eating disorders (Mallinckrodt, McCreary, & Robertson, 1995), and loneliness (DiTommaso, Brannen-McNulty, Ross, & Burgess, 2003) to name but a few. In contrast to the enormous attention to the supposed negative consequences of social skills deficits, there has been relatively little attention paid to the presumed benefits of possessing strong social skills. However, what research there is on the topic suggests that social skills may pay a variety of dividends in the realm of psychosocial functioning. For example, social skills have been positively linked to self-esteem (Buhrmester, Furman, Wittenberg, & Reis, 1988; Riggio, Throckmorton, & DePaola, 1990), satisfaction with leisure time spent with a partner (Flora & Segrin, 1998), having greater perceived social support (Riggio & Zimmerman, 1991), and relationship satisfaction (Flora & Segrin, 1999).

Despite decades of research on social skills, there are several features of this literature that can account for at least a partial theoretical underdevelopment of the construct. First, as noted above, research on the consequences and correlates of social skills has been largely focused on the negative effects of social skills deficits. This focus on problems is perhaps understandable in light of the immediate problems and dangers inherent in conditions such as depression, schizophrenia, alcoholism, and eating disorders – all of which have been linked with social skills deficits. However, a theory of social skills must go beyond explaining and demonstrating that a lack of social skill has deleterious psychological consequences. The possession of adequate social skills must provide some benefits.

A second and related feature of social skills research is methodological. Historically, there has been a strong tendency to study social skills in either clinical populations or students. There still remains a need to examine the functions and correlates of social skills in more diverse populations, particularly among those in differing life circumstances.

Finally, there has been only modest theorizing and testing of proposed explanations for how and why social skills are associated with positive or negative psychological consequences. Although it is unlikely that there is a single mechanism by which social skills promote positive psychological well-being or by which social skills deficits culminate in psychosocial problems, it would be beneficial to identify and test such theoretical mechanisms.

The construct of *positive relations with others* (Ryff & Keyes, 1995; Ryff & Singer, 2000) refers to having satisfying and trusting relationships with other people along with a capacity for empathy and intimacy. We propose that positive relations with others provide a theoretical link between possession of social skills and the experience of positive psychological well-being. In other words, positive relations with others are predicted to mediate the relationship between social skills and psychological well-being. According to Ryff and Singer (2000), “interpersonal flourishing is a core feature of quality living” (p. 30). As inherently social creatures, human beings are strongly predisposed to be affected by the quality and nature of their interpersonal relationships. Empirically, there is a strong connection between relationship quality and both physiological and psychological aspects of health and well-being (e.g., Ryff, Singer, Wing, & Love, 2001; Segrin, 2001). If social skills are associated with positive social outcomes such as immediate elicitation of rewarding responses from other people, these outcomes ultimately may become the building blocks of positive relationships more generally with other people. Because positive relationships with other people are conceptually and empirically linked with psychological well-being, they are one potential theoretical mechanism that explains the association between social skills and psychological well-being, thus mediating that relationship.

In this investigation, psychological well-being is operationalized with a diverse set of measures that include: life satisfaction, environmental mastery, self-efficacy, hope, happiness, and quality of life. Many of these variables have significant positive associations with various aspects of social skills (e.g., Argyle & Lu, 1990; Bustru, Bosma, & Jackson, 1994; Riggio & Watring, 1993). At the same time, the majority of these constructs are not inherently tied to successful social interactions, which would otherwise amount to near-tautological associations.

The purpose of the present investigation is to explore the role of social skills in positive psychological states in a diverse community based sample. We begin by examining whether social skills are indeed associated with psychological well-being. We then test a theoretical explanation for why social skills might be associated with positive psychological states. Namely, it is predicted that positive relations with others will mediate the association between social skills and positive psychological states.

## 2. Method

### 2.1. Participants

Participants in this study were 703 adults (318 male, 385 female) who volunteered to complete a questionnaire while waiting to be called for jury duty in Pima County, AZ, USA. Participants' age was normally distributed and ranged from 18 to 87 years ( $M = 45.18$ ,  $SD = 15.03$ ). Participants' occupational status included 3% who were unemployed, 12% employed part-time, 66% employed full-time, 12% retired, and 7% who were either homemakers or full-time students. In terms of marital status, 62% of the sample was presently married, but 35% of the total sample had been divorced and 4% had been widowed. Approximately 20% of the participants had never been married. The ethnicity of the sample included 2% American Indian, 2% Asian/Pacific Islander, 2% Black, 19% Hispanic, 73% White, and 2% other/unknown.

## 2.2. Procedure

Participants volunteered to complete a questionnaire with measures described below while waiting to be called for jury duty. The self-paced questionnaires were completed in a room that typically had 100–200 people in it. Participants generally completed the questionnaire in 15–20 min.

## 2.3. Measures

*Social skills* were assessed with the brief version of the Social Skills Inventory (Riggio, 1986; Riggio & Canary, 2003). This 30-item instrument contains statements that assess elements of social skills such as social expressivity (e.g., “I usually take the initiative to introduce myself to strangers”), emotional expressivity (e.g., “I rarely show my feelings or emotions” [reverse scored]), social sensitivity (e.g., “I am generally concerned about the impression I’m making on others”), emotional sensitivity (e.g., “I am often told that I am a sensitive and understanding person”), social control (e.g., “I can easily adjust to being in just about any social situation”), and emotional control (e.g., “I am very good at maintaining a calm exterior even if I am upset”). The social skills inventory is based on a 6-factor model of social skills developed by Riggio (1986). Because three of the subscales on the brief instrument had  $\alpha$  reliabilities below 0.70, the combined, or total, version of the inventory was used which had an  $\alpha = 0.81$ .

*Positive relations with others* were measured with the Positive Relations With Others scale (Ryff, 1989; Ryff & Keyes, 1995). This 14-item instrument is composed of seven statements that reflect positive interactions with other people (e.g., “I feel I get a lot out of my friendships”) and seven that indicate negatively toned interactions with others (e.g., “I don’t have many people who want to listen when I need to talk”). These latter seven items are reverse scored and added to the positively valenced items for a single scale for which higher scores reflect more positive relations with others. The internal consistency of this scale was  $\alpha = 0.89$ .

*Psychological well-being* was assessed with a group of six instruments that all reflect an amalgamation of positively toned cognitions and affect.

*Life satisfaction* was measured with the 5-item Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). This instrument contains items that assess global and subjective satisfaction with life (e.g., “In most ways my life is close to my ideal” and “I am satisfied with life”). This scale had an internal consistency of  $\alpha = 0.87$ .

*Environmental mastery* was measured with the 14-item Environmental Mastery Scale (Ryff & Keyes, 1995). This inventory contains items that reflect a sense of being in control of one’s environment and having the ability to manage challenges posed by the environment. Sample items include “I am quite good at managing the many responsibilities of my daily life” and “My efforts to find the kinds of activities and relationships that I need have been quite successful.” The internal consistency of this instrument was  $\alpha = 0.88$ .

*Self-efficacy* was measured with the 6-item Self-Efficacy Scale (Scherer et al., 1982). This scale contains items that are specific to self-efficacy for social situations (e.g., “I have acquired my friends through my personal abilities to make friends,” and “I do not handle myself well in social gatherings” [reverse scored]). High scores on this scale reflect a greater sense of ability to create and maintain successful social relationships. The internal consistency of this scale was  $\alpha = 0.76$ .

*Hope* was assessed with 12-item Hope Scale (Snyder et al., 1991). This instrument asks participants to respond to statements that suggest a sense of goal directed determinism and wherewithal for planning ways to meet goals. It contains items such as “There are lots of ways around a problem,” and “I energetically pursue my goals.” The internal consistency of this scale was  $\alpha = 0.80$ .

*Happiness* in life was measured with Lyubomirsky and Lepper’s (1999) Subjective Happiness Scale. This 4-item instrument contains items that tap into subjective feelings of global happiness with one’s life (e.g., “Compared to most of my peers I consider myself”: 1 = less happy, 7 = more happy). The internal consistency of this scale was  $\alpha = 0.85$ .

*Quality of life* was measured with a shortened version of the Quality of Life Inventory (Frisch, Cornell, Villaneuva, & Retzlaff, 1992). This inventory originally had 17 items, but a number were dropped (e.g., community, relationships with children) at the request of the county court to avoid priming some participants on issues that might have been relevant to cases that they would be asked to evaluate. The resultant scale used in this investigation contained the following items: self-regard, work, social services, love relationships, friendships, relationships with relatives, and neighborhood. For each item, a detailed description was provided along with a scale on which participants could rate the importance of the issue and another on which they could rate their satisfaction. The total quality of life score is therefore the sum of the satisfaction items weighted by their respective importance. The internal consistency of this instrument was  $\alpha = 0.74$ .

### 3. Results

A preliminary set of analyses was conducted to determine whether social skills had any substantial association with participants’ demographic characteristics that would necessitate treating demographics as covariates in subsequent analyses. There were no significant differences in social skills as a function of participants’ sex,  $t(701) = 1.86$ , *ns*, marital status (i.e., married vs. unmarried),  $t(691) = 0.03$ , *ns*, or ethnicity,  $F(5, 690) = 0.54$ , *ns*. Additionally, participants’ self-reported social skills were not substantially associated with their age,  $r(698) = -0.07$ ,  $p = 0.05$ . Collectively, these results indicate that social skills do not vary appreciably with any of the demographics tested here, making it appropriate to test associations in the sample as a whole without controlling for variables such as sex and age.

To test the prediction that social skills would be associated with positive relations with other people, the two variables were correlated. Results showed that social skills were strongly and positively associated with positive relations with others,  $r(698) = 0.53$ ,  $p < 0.001$ . Next, associations between social skills and the six indicators of psychological well-being (i.e., life satisfaction, environmental mastery, self-efficacy, hope, happiness, quality of life) were assessed with Pearson correlations. These results appear in the first column of Table 1 and indicate positive and statistically significant associations for all six indicators of psychological well-being. These associations ranged from  $r = 0.23$ – $0.59$ . Finally, positive relations with others was also tested for its association with the measures of psychological well-being. These results that appear in the second column of Table 1 show that all indicators of psychological well-being increase as a function of participants’ social skills. These correlations ranged from  $r = 0.42$ – $0.59$ . What is particularly remarkable about these correlations is the consistency of magnitude. Not only are all of the associations significant, but each is of comparable magnitude and suggestive of a substantial association.

Table 1

Correlations between social skills, positive relations with others, and psychological well-being

	1	2	3	4	5	6	7	8
1 Social skills	–							
2 Pos. relations w/others	0.53	–						
3 Life satisfaction	0.23	0.42	–					
4 Environmental mastery	0.30	0.55	0.67	–				
5 Self-efficacy	0.59	0.59	0.25	0.45	–			
6 Hope	0.40	0.53	0.54	0.70	0.47	–		
7 Happiness	0.38	0.55	0.62	0.65	0.50	0.58	–	
8 Quality of life	0.32	0.58	0.59	0.60	0.41	0.51	0.61	–

All  $r$  coefficients  $p < 0.001$ .

The aforementioned findings clearly indicate a significant association between the predictor variable (social skills) and each of the criterion variables (psychological well-being). The results also support the positive and significant association between the predictor variable and the hypothesized mediating variable (positive relations with others) as well as a significant association between the mediator and each of the criterion variables. What remains to be determined is whether positive relations with others mediate the relationship between social skills and indicators of psychological well-being, as hypothesized.

To test the proposed mediation, the rationale outlined by Baron and Kenny (1986) was followed. In short, this entails establishing significant associations between the predictor and criterion variables, the predictor and mediating variable, and the mediating and criterion variables. All of these have been established through results presented previously. Mediation is indicated by a significant decrease in the regression coefficient for the predictor variable (social skills) on its own predicting the criterion variable (psychological well-being), versus the regression coefficient for the predictor variable, controlling for the mediator (positive relations with others), in predicting the criterion variable. Table 2 provides a summary of these two sets of regression coefficients along with the Sobel test of significance. The Sobel test (Sobel, 1982) indicates whether there is a significant decrease in the magnitude of the regression coefficient for the predictor variable upon controlling for the mediator.

Table 2

Tests of positive relations with others as a mediator of the relationship between social skills and psychological well-being

Dependent variable	Social skills	Social skills, controlling for positive relations with others	Sobel test ( $z$ )
Life satisfaction	$\beta = 0.23^{**}$ , $R^2 = 0.05$	$\beta = 0.02$ , $R^2 = 0.00$	8.55**
Environmental mastery	$\beta = 0.39^{**}$ , $R^2 = 0.09$	$\beta = 0.02$ , $R^2 = 0.00$	10.83**
Self-efficacy	$\beta = 0.59^{**}$ , $R^2 = 0.35$	$\beta = 0.38^{**}$ , $R^2 = 0.10$	9.67**
Hope	$\beta = 0.37^{**}$ , $R^2 = 0.16$	$\beta = 0.16^{**}$ , $R^2 = 0.02$	9.73**
Happiness	$\beta = 0.38^{**}$ , $R^2 = 0.15$	$\beta = 0.13^*$ , $R^2 = 0.01$	10.19**
Quality of life	$\beta = 0.32^{**}$ , $R^2 = 0.11$	$\beta = 0.02$ , $R^2 = 0.00$	11.25**

\*  $p < 0.01$ .\*\*  $p < 0.001$ .

Results in Table 2 show that positive relations with others mediated the relationship between social skills and all six indicators of psychological well-being. Controlling for positive relations with others rendered the previously significant relationships between social skills and the psychological well-being indicators near 0 in most cases. One notable exception to this involved a very powerful association between social skills and self-efficacy,  $\beta = 0.59$ ,  $p < 0.001$ ,  $R^2 = 0.35$ . After controlling for positive relations with others, this association was still statistically significant,  $\beta = 0.38$ ,  $p < 0.001$ ,  $R^2 = 0.10$ , although the reduction in the magnitude of this association was itself significant,  $z = 9.67$ ,  $p < 0.001$ .

#### 4. Discussion

The purpose of this investigation was to test how extensively social skills are associated with psychological well-being, as opposed to psychological problems, and to evaluate whether positive relations with other people mediate the social skills – psychological well-being association. Results indicated consistent and positive associations between social skills and all indicators of psychological well-being measured in this investigation. Further, there was equally consistent evidence that positive relations with others mediated the associations between social skills and psychological well-being.

Although it is abundantly evident that problems with social skills are associated with an extensive range of mental health problems (Segrin, 2001), potential positive correlates of social skills have been understudied (but see for example Argyle & Lu, 1990; Bustra et al., 1994; Riggio et al., 1990). Results from this study show that social skills are associated with greater life satisfaction, environmental mastery, self-efficacy in social situations, hope, happiness, and quality of life. Although positive associations between social skills and some of these indicators, such as happiness and life satisfaction have been previously documented in the literature (e.g., Argyle & Lu, 1990), these associations have rarely, if ever, been documented in a community based sample of adults that included an extensive range of the human life span. This suggests a rather consistent association between social skills and positive psychological states over the life span.

In some cases, the significant associations between social skills and psychological well-being are easily understood. For example, it is not difficult to comprehend that social skills are positively correlated with self-efficacy for social tasks ( $r = 0.59$ ) especially given the similarity of some of the items that measure these two constructs. However, other variables with much less obvious connections to social skills such as environmental mastery, hope, and quality of life still exhibited significant associations with social skills. One might hypothesize that some of these positive psychological states reflect a successful and accomplished learning history that would be expected for one with strong social skills. A person with good social skills is able to achieve his or her interpersonal goals and to win the praise and admiration of others. Perhaps these positive experiences instill a sense of hope, satisfaction with life, and feeling of mastery over one's environment. Even though all people are faced with nonsocial tasks and endeavors (e.g., housing, transportation, and certain hobbies), the success at social tasks that is presumably the consequent of good social skills might cause people to generalize from their experiences and become globally hopeful, satisfied with life, and so forth.

The assumption that social skills are associated with positive psychological states because of interpersonal success is well supported by the findings from this investigation. First, social skills were significantly associated with positive relations with others ( $r = 0.53$ ). This is consistent with Lewinsohn's behavioral theory of depression which defines social skill as the emission of behavior that yields positive reactions from others. Positive relations with others are a fundamental element of well-being (Ryff & Singer, 2000). It is understandable why people with good social skills would experience positive relations with others. People who are capable of accurately reading other people's emotional states, clearly communicating their ideas and feelings, and effectively managing their own emotional states in social situations will, by and large, leave a positive impression on other people. These positive experiences become the building blocks of successful relationships with other people. Positive relations with others are so essential to virtually any theory of social skills that the social skills construct would be rendered virtually meaningless if it could not be shown that it was associated with these positive interpersonal outcomes. Fortunately, this study and others clearly support the contention that social skills allow for positive interpersonal experiences (e.g., Flora & Segrin, 1999; Riggio & Watring, 1993).

There can be little doubt that positive relationships with other people are strongly connected to psychological well-being. In the present investigation, positive relations with others were generally correlated greater than  $r = 0.50$  with positive psychological indicators. This is further evidence that people derive much satisfaction, as well as much misery (Ryff et al., 2001) from the quality of their relationships with other people. Those who have positive relationships with others, marked by intimacy, trust, openness, concern, and connection, also appear to be happy, satisfied with life in general, hopeful, efficacious, and they evaluate their quality of life and mastery of the environment positively.

It was predicted that positive relations with others would mediate the association between social skills and psychological well-being. The results of this investigation provide strong support for positive relations with others as a mediator of the social skills – psychological well-being associations. It can be said that positive relations with other people explain how social skills come to be associated with positive psychological states. There are several noteworthy aspects of these findings. First, positive relations with others proved to be a significant mediator in analyses of every indicator of psychological well-being included in this investigation. This is remarkable given the range of measures included (e.g., hope, happiness, and environmental mastery). Second, positive relations with others proved to completely, not just partially, mediate the social skills psychological well-being relationship in the majority of cases. Baron and Kenny (1986) argued that “when (the path from the predictor to the criterion variable) is reduced to zero, we have strong evidence for a single, dominant mediator” (p. 1176). When psychological well-being was operationalized as life satisfaction, environmental mastery, quality of life, and perhaps happiness (where  $R^2 = 0.01$ ), the previously significant association between social skills and psychological well-being was reduced to zero, or near zero. In other cases (i.e., hope, self-efficacy) this relationship was dramatically reduced in magnitude.

It is reasonable to assume that as people accrue positive experiences with others, they increase their sense of happiness, hope, self-efficacy, environmental mastery, and so on. The fact that positive relations with others completely mediated many of these associations is a powerful testimony to the eminence of quality interpersonal relationships in influencing positive psychological states. Further evidence of this can be found in the substantial zero-order correlations between positive relations with others and psychological well-being.

For future theorizing on the functions of social skills, the results of this investigation suggest that enabling positive relationships with other people is a pivotal characteristic or provision of social skills. It should be noted that this proposition is conceptually distinct from noting that the lack of social skills is associated with psychological distress. Rather, possession and enactment of social skills goes hand in hand with positive relationships with others, and these positive interpersonal experiences provide a sufficient and fairly thorough account of why social skills are associated with positive psychological states.

Interpretation of these findings is constrained by the fact that all variables were measured by self-report. In addition to problems associated with common method variance, self-reports may yield somewhat incomplete measures of certain constructs, especially social skills which can also be assessed through behavioral assessment and peer ratings. It would be useful for future research to replicate these findings with other methods of social skills assessment.

In conclusion, it can be said that social skills serve obvious functions beyond merely minimizing the occurrence of mental health problems. In addition, social skills are associated with distinctly positive psychological experiences such as hope, self-efficacy, environmental mastery, happiness, and life satisfaction. The reason for this association between social skills and psychological well-being is fairly clear from these data: positive relationships with other people explain how and why social skills are associated with psychological well-being. By their inherently social nature, human beings seek and desire quality interpersonal relationships and experiences. Social skills appear to be an important mechanism for acquiring such relationships, and where they are experienced, obvious signs of positive psychological states are abundantly evident.

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