

## Social Problem Solving as a Predictor of Well-being in Adolescents and Young Adults

Dr. Andrew M. H. Siu  
Department of Rehabilitation Sciences,  
Hong Kong Polytechnic University

and

Prof. Daniel T. L. Shek  
Department of Applied Social Sciences  
The Hong Kong Polytechnic University

### Authors' Notes:

Address all correspondence to Andrew M. H. Siu, Department of Rehabilitation Sciences,  
Hong Kong Polytechnic University, Hunghom, Hong Kong, P.R. China (email:  
[rsandsiu@inet.polyu.edu.hk](mailto:rsandsiu@inet.polyu.edu.hk)).

Running Head: Social Problem Solving and Well-Being

## Abstract

Social problem solving is the cognitive-affective-behavioral process by which people attempt to resolve real-life problems in a social environment, and is of key importance in the management of emotions and well-being. This paper reviews a series of studies on social problem solving conducted by the authors. First, we developed and validated the Chinese version of the Social Problem-Solving Inventory Revised (C-SPSI-R) which demonstrated very good psychometric properties. Second, we identified the scope of stressful social situations faced by young adults and their self-efficacy in facing such situations ( $N=179$ ). Young adults were generally confident about their basic social skills but found it much more stressful to relate to family members, handle conflicts, handle negative behaviors from others, self-disclose to others, and to express love. Third, in two separate studies, we found that social problem solving was closely linked to measures of depression ( $n = 200$ ), anxiety ( $n = 235$ ), and family well-being ( $N = 1462$ ). Measures of anxiety and depression were found to be significantly related to aspects of social problem solving in expected directions and expected strength. In another study, higher parental social problem solving behavior and lower avoidance behavior were found to be related to indicators of family well-being, including better overall family functioning, and fewer parent-adolescent conflicts.

Keywords: Social Problem Solving, Depression, Anxiety, Family Functioning, Well-Being.

### Social Problem Solving as a Predictor of Well-being in Adolescents and Young Adults

The quality of interpersonal relationships is a key determinant of the well-being of individuals in modern societies (Feeney & Noller, 1996). In everyday life, we need to maintain bonding with our family or friends, to work cooperatively with colleagues or peers, and to handle differences and conflicts among others. Successful coping in social situations and in interpersonal relationships is dependent upon the timely application of a social skills repertoire, including verbal and nonverbal skills, social problem solving abilities, and self-management skills (Corrigan, Schade, & Liberman, 1992).

Social problem solving is the cognitive-affective-behavioral process by which people attempt to resolve problems they experience in real-life social environments (D’Zurilla, Nezu, & Maydeu-Olivares, 1996). The social problem solving model proposed by D’Zurilla and Nezu (1990) is a major update of the traditional information-processing model, which defines problem solving as a series of cognitive skills relating to problem identification, goal setting, finding suitable solutions, and evaluating problem-solving outcomes (Logan, 1989). Effective problem solving is postulated to be dependent not just on the effective application of rational problem-solving skills, but also on a positive orientation towards problem solving (problem orientation) and the management of behavioral styles like impulsiveness and acting-out behavior, or procrastination and avoidance. Social problem solving can be seen as a major intrapersonal and interpersonal process that leads to quality relationships and an enhanced quality of life (Felce & Perry, 1995; Wallander, Schmitt, & Koot, 2001).

Training in social problem solving is commonly used in remedial programs in schools and in the treatment of a wide variety of psychiatric disorders. In child and adolescent research, social problem solving and empathy are both commonly regarded as favorable outcomes of child development (Moore, Brooks, & Roth, 2001). Training in social problem solving is a critical element in programs for promoting the quality of social relationships

(Shure, 1997) and the management of anger and aggressive behavior (Frey et al., 2000) in children and adolescents. More recent programs have combined empathy and training in social problem solving with the aim of promoting social competence and the prevention of aggression (Frey, Hirschstein, & Guzzo, 2000). In psychiatry, training in social problem solving skills has been used in treatment of anxiety disorders (Albano, Marten, Holt, & Heimberg, 1995), depression (Nezu, 1986a), and suicidal tendencies (Clum, Yang, Febraro, & Canfield, 1996).

A number of studies have shown that social problem solving ability, either by itself, or together with social support, can reduce or minimize the impact of life stress on individuals (Dubow & Tisak, 1989; Dubow, Tisak, Causey, & Hryshko, 1991; D'Zurilla & Sheedy, 1991; Goodman, Gravitt, & Kaslow, 1995). Social problem solving abilities are found to moderate the relationship between negative life stress and measures of distress such as hopelessness (Bonner & Rich, 1988), anxiety (Nezu, 1986a), depressive symptoms (Nezu, 1986b), and behavioral and academic adjustment (Kang & Lee, 1992).

To put the assessment and management of social problem solving deficits in context, it is necessary for therapists to ask the client to review their problem solving experience on personal issues, difficulties in interpersonal relationship, or problematic social situations (as in the instructions of Social Problem Solving Inventory Revised). However, the scope of problematic social situations is wide, and clients often find it hard to conceptualize what these social situations would include. It would therefore be of interest to understand the scope of stressful social situations and the self-efficacy in handling these social situations, so that we could provide a context for assessment and management of social problem solving deficits.

It would also be interesting to establish how social problem solving as a form of personal competence and personal quality of life is related to the quality of family life. In

family research, training in problem-solving skills has long been identified as an effective intervention for managing parent-child relationship and conflicts (Guevremont & Foster, 1993; Robin & Foster, 1984). Social problem solving can be employed as an important individual resource in the renegotiation of family resources, and of parent-child interpersonal boundaries and mutual expectations. Unfortunately, despite the potential contribution of social problem solving (i.e. individual quality of life) to parenting and family functioning (i.e. family quality of life), only a few studies have closely examined the relationship between individual social problem solving and indicators of family quality of life such as family functioning and parent-child relational qualities (Kennedy et al., 1988). Some initial evidence has shown that aggression in adolescents is related to differences in social problem-solving strategies between parents and adolescents (Jaffe & D’Zurilla, 2003), and that social problem solving is an important resource for families experiencing the stress of caring for a disabled child (Goldberg, 1998).

Although problem-solving training is widely recognized in the literature as an important intervention in parent-adolescent conflicts, there are very few studies of the role of social problem solving in the family dynamics of Chinese populations. In the existing literature, there are very few studies on the relationship between social problem solving skills and family well-being or functioning in Chinese populations. In the previous studies, we proposed that the social problem solving abilities of parent and child may be a valuable resource in resolving family harmony problems and parent-adolescent conflicts in Chinese families. There are several reasons for this. First, Chinese people often try to uphold the Confucian ideal of maintaining interpersonal harmony but tend to neglect the importance of interpersonal communication and problem solving that can lead to harmonious outcomes (Shek & Chan, 1998). Second, Chinese people emphasize the importance of emotional control, maintenance of politeness, and avoidance of aggressive persuasion techniques in

conflict negotiation (Shenkar & Ronen, 1987). As a result, Chinese people are much more likely to use avoidance, compromise, and tolerance when handling conflicts, rather than applying the problem-solving strategies of conflict management (Allison, 1997; Kirkbride et al., 1991). Third, the hierarchical nature of Chinese families can be a major barrier to the application of problem-solving skills in family relationships. Chinese children are often expected to respect and listen to their parents' advice (and not to talk back) rather than solve problems together with their parents (Graber et al., 1996). Having conflicts with one's parents is socially unacceptable, as it allegedly makes the parents "lose face" (*mianzi*) (Ting-Toomey, 1988). Due to these social norms and attitudes, individual social problem solving abilities are not strongly encouraged in Chinese culture. On the other hand, the application of social problem solving skills in families is hypothesized to have a positive impact on family well-being and to contribute to the resolution of parent-adolescent conflicts.

This paper critically reviews a series of studies on social problem solving conducted by the authors. The major objective of this paper is to examine how far social problem solving is related to indicators of mental health and well-being. First, we review the evidence on the psychometric properties of two instruments, the Chinese Social Problem-Solving Inventory Revised (C-SPSI-R). Second, we perceive a need to define the scope of stressful situations which requires social problem solving for clinical practice. We present a recent study on the scope of stressful social situations faced by young adults and their self-efficacy in facing such situations ( $N = 179$ ). Third, we review two studies which aim to examine the relationship between social problem solving and depression ( $n = 200$ ), anxiety ( $n = 235$ ), and family well-being ( $N = 1462$ ). Lastly, this paper reviews the links between social problem solving and well-being and suggests directions for further research.

### Study 1: The Measurement of Social Problem Solving

The lack of standardized instruments in Chinese was one of the barriers to the study of social problem solving in Chinese populations. The C-SPSI-R was translated from the Social Problem-Solving Inventory Revised (SPSI-R; D’Zurilla, 1986), which is one of the popular self-report measures of social problem solving. The current version of the SPSI-R has 52 items (Maydeu-Olivares and D’Zurilla, 1995; Maydeu-Olivares and D’Zurilla, 1996), and has five subscales which measure Positive Problem Orientation (PPO), Negative Problem Orientation (NPO), Rational Problem Solving (RPS), Avoidance Style (AS), and Impulsiveness/Carelessness Style (ICS).

The PPO subscale represents the constructive orientation toward problem solving, such as the optimism that problems can be solved, self-efficacy in solving problems successfully, and a willingness to commit to solving problems. The NPO subscale assesses motivational factors that inhibit problem solving, such as pessimism about ability to solve problems, and the tendency to easily become frustrated and upset when confronted with problems. The RPS subscale assesses the degree to which a person systematically uses rational problem-solving principles and strategies. The ICS subscale evaluates a deficient problem-solving pattern that is narrow, impulsive, careless, hurried, and incomplete. The final subscale, the AS subscale, assesses another defective problem-solving pattern characterized by procrastination, inaction, or dependency.

Siu (2003) translated the SPSI-R into Chinese and conducted studies on the psychometric properties of the full and short forms of the C-SPSI. Using a sample of 352 adolescents and young adults, Siu and Shek (2005) reported that both the full and short forms of the C-SPSI had a five-factor structure that was largely consistent with the structure of the original English SPSI-R. The C-SPSI-R subscales were found to be internally consistent and

had a good test-retest reliability. Based on the expert panel review of content validity and exploratory factor analysis, a 25-item short form of the C-SPSI-R was developed.

Confirmatory factor analyses of the short form were performed to compare how far the data fitted three models, including a five-factor model obtained from a pilot study ( $N = 352$ ) of the C-SPSI-R short form (Siu & Shek, 2005), the groupings of items in the SPSI-R, and an alternative five-factor hierarchical model (i.e., one secondary factor and five primary factors). The results showed that the five-factor model from the pilot study ( $GFI = .93$ ,  $AGFI = .92$ ,  $RMSEA = .05$  and  $CFI = .90$ ) had a much better fit with the data than the other two. The C-SPSI-R subscales also demonstrated good internal consistency, with  $\alpha$  ranging from .65 to .80 ( $\alpha = .81$  for AS, .73 for NPO, .69 for RPS, .65 for ICS, and .68 for PPO). The correlations among the five subscales were largely consistent with expectation. There were significant positive correlations ( $r = .47$ ) among the positive subscales (PPO and RPS), and among the negative subscales ( $r$  among NPO, ICS, and AS ranges from .52 to .71). There were significant negative correlations between negative and positive subscales ( $r$  ranges from -.08 to -.19).

#### Study 2: Efficacy of Young Adults in Handling Stressful Social Situations

This study investigated the self-efficacy of Hong Kong young adults (aged 18 to 30) in handling stressful social situations. Stage 1 of the study used an open-ended questionnaire to collect social situations perceived as stressful by the young adult respondents. A total of 238 situations were collected from 54 young adults. Content analysis was conducted on the situations collected, and the 238 situations were reduced to 36 stressful social situations and categorized into the three logical factors of social skills (11 items), interpersonal relationships (IR: 18 items), and social situations (SS: 7 items). Factor analysis of the 11 questions on social skills comprised two factors, which were labeled basic social skills (BS) and advanced



social skills (AS). The two factors accounted for 55.65% of the variance, and the factor loadings were significant (ranging from .44 to .93) (Table 1). For the sections on interpersonal relationships and social situations, both sections were found to be unidimensional, and the single factor in each analysis accounted for 59.31% and 42.34% of the variances respectively. In addition, all the factor loadings were significant and ranged from .44 to .82. The internal consistency of items under the four factors ranged from very good to excellent (Cronbach's  $\alpha$  ranged from .83 to .93). On the whole, the results of factor and reliability analysis showed that the 36-item questionnaire had four stable factors (BS, AS, IR, SS) that could be used in subsequent analysis. These 36 situations were used as the items in the online survey questionnaire in Stage 2.

In Stage 2, a convenient sample of 179 Hong Kong young adults completed the 36-item questionnaire online that was used to carry out the survey. The self-efficacy in handling different social skills and social situations is listed in Table 2 in order of rank. Among the interpersonal relationship items, young adults had a higher self-efficacy in handling relationships with friends but had the lowest efficacy in relating to family members. As far as the social skills (BS and AS) items were concerned, young adults were found to be generally most confident of their basic social skills. This was followed by their confidence in giving assertive responses, but they were less confident when handling conflicts and the negative behaviors of others. The two most difficult situations among the social situations (SS) items were to “reveal one’s personal life to others” and to “express love to the one you admire.”

Results of the Friedman tests showed that there were significant differences in rank between the four groups of items (basic social skills, advanced social skills, interpersonal relationships, social situations) ( $\chi^2 = 11.08, p = .011$ ). Further pairwise comparisons between combinations of the four groups of items were conducted using the Wilcoxon Signed Ranks Test (with Bonferroni corrections). The groups of items in the BS domains ( $Z = 2.84, p$

= .004) and the IR domains ( $Z = 2.96, p = .004$ ) occupied significantly higher ranks than the SS items. This meant that the participants were generally more confident in basic social skills and handling interpersonal relationships than in handling some specific social situations.

The female participants ( $M = 6.37, SD = 1.14$ ) had a self-efficacy in handling interpersonal relationships that was significantly higher than that of their male counterparts ( $M = 5.93, SD = 1.55$ ) ( $t = 2.16, p = 0.03$ ), but this better performance was not reflected in the other sections of the questionnaire. Results of independent  $t$  tests showed that the female participants had a higher self-efficacy than male participants when answering question 21 ( $t = -2.32, p = 0.02$ ), question 24 ( $t = -3.35, p < 0.001$ ), and question 27 ( $t = -2.31, p = 0.02$ ), which are related to building or maintaining friendships. This higher self-efficacy was also demonstrated when answering question 22 ( $t = -2.01, p = 0.05$ ) and question 28 ( $t = -3.35, p < 0.001$ ) both of which are related to participating in social activities and when answering question 29 ( $t = -2.11, p = 0.04$ ), which is related to handling peers at work.

On the whole, there were no significant differences in self-efficacy in handling stressful social situations or in the frequency of facing them between the participants who were students and those who were employed. Neither did age significantly correlate with self-efficacy in handling stressful social situations. Education had a low but significant positive correlation with self-efficacy in handling interpersonal relationships ( $r = 0.15, p = 0.04$ ).

### Study 3: The Relationship between Social Problem Solving and Depression or Anxiety

A convenient sample ( $n = 235$ ) was recruited from the Secondary 1 to Secondary 3 (Grades 7 to 9) classes of three secondary schools in different geographical districts of Hong Kong. The age of the participants ranged from 11 to 15, with a mean of 13.18 ( $SD = 1.15$ ). There were slightly more females (55.7%) than males (44.3%) in the sample. There were no significant differences in age among the schools.

The first part of the study explored the relationship between social problem solving and depression (Siu & Shek, 2005), and 200 participants completed the C-BDI and the C-SPSI-R concurrently. The results of correlational analysis (with Bonferroni corrections) showed that the C-BDI scores were significantly related to four subscales of the C-SPSI-R (see Table 3). While the negative subscales of ICS, AS, and NPO showed a significant positive correlation with depression, the PPO subscale produced a significant negative correlation with depression. On the other hand, there was no significant relationship between the RPS subscale and depression. These findings replicated those reported by D'Zurilla, Nezu, and Maydeu-Olivares (1996). This implies that depression is related to the motivational and behavioral aspects of problem solving, rather than to skills competence in rational problem solving (Chang & D'Zurilla, 1996).

In the second part of the study ( $n = 235$ ), the participants completed both the State-Trait Anxiety Inventory (STAI) and the C-SPSI-R. The STAI scales (state and trait scales) had significant correlations with all the C-SPSI-R subscales, except the ICS subscale. In general, the trait scale of the STAI had higher correlations ( $r =$  ranges from  $|.14|$  to  $|.49|$ ) with the C-SPSI-R subscales than the state scale ( $r$  ranges from  $|.16|$  to  $|.29|$ ). The results also indicated that the impulsiveness/carelessness style of problem solving was not related to anxiety. However, there is a moderate to strong relationship between anxiety and problem orientation and avoidance style, while the relationship between anxiety and rational problem solving is relatively weaker. Again, these relationships replicated overseas findings on relationships between anxiety and social problem solving (Nezu, 1986a).

#### Study 4: Social Problem Solving and Family Well-being

This study explored the relationship between social problem solving and measures of family well-being in adolescents and their families. A convenient sample of 1,462

participants was recruited from 11 high schools in Hong Kong. The age of the participants ranged from 11 to 17, with a mean of 13.78 ( $SD = 1.13$ ). There were more females (59.5%) than males (40.5%) in the sample. The participants completed three instruments concurrently, including the C-SPSI-R, the Chinese Family Assessment Instrument (C-FAI), and the Conflict Behavior Checklist (CBQ-20 Child version).

The C-FAI is one of the first generic instruments developed to measure family functioning in Chinese populations (Shek, 2002). The 33-item C-FAI has five subscales of mutuality, communication, conflict and harmony, parental concern, and parental control. In a series of validation studies (Shek, 2002; Siu & Shek, 2005), the C-FAI was found to have a high internal consistency ( $\alpha > .90$ ) and high test-retest reliability ( $r > .84$ ), and its scores permitted the differentiation of clinical samples participating in family interventions and non-clinical samples. The CBQ-20 is used to measure the perceived level of conflict and negative communication between participants and their parents (Foster and Robin, 1989). Shek (1997, 1998) showed that the Chinese version of the CBQ-20 had good psychometric properties.

In the study, the social problem solving of adolescents was hypothesized to be related to family functioning. The C-SPSI-R total score had positive correlations with all five subscales of the C-FAI (Table 4). In particular, the AS subscale had significant negative correlations ( $r$  ranges from  $-.22$  to  $-.31$ ) with all five subscales of the C-FAI. This indicated that the use of avoidance strategies is associated with a decrease in family functioning indexed by the different subscales of the C-FAI. The NPO subscale had low negative correlations with all the C-FAI subscales, which indicated that family functioning decreases with an increase in negative problem orientation. The PPO subscale had significant positive correlations ( $r$  ranging from  $.12$  to  $.21$ ) with all five C-FAI subscales, indicating that an increase in positive problem orientation was associated with an increase in the five aspects of family functioning.

The second objective of this paper is to ascertain how far the social problem solving abilities of parents and adolescents contribute to conflicts. It is hypothesized that higher problem-solving abilities of both parties contributes to fewer parent-adolescent conflicts. The perceived social problem solving abilities of parents and the perceived social problem solving abilities of adolescents (in five subscales of the C-SPSI-R) were used to predict the level and intensity of conflict (measured by the CBQ-20). The results of multiple regression analyses showed that the social problem solving abilities of parents and adolescents could predict between 23% and 33% of the variance in the conflict in the four parent-adolescent dyads (Table 5). It was noted that the percentage of variance explained in parent-daughter conflicts (the  $R^2$  are .30 & .33) was much higher than that of parent-son conflicts (the  $R^2$  here are .24 & .23). The social problem solving abilities of the parents were the most important predictor in all four dyads. The second most important predictor was the avoidance style of adolescents, which was a significant predictor for three of the four dyads (the exception being the father-son dyad). It was also interesting to see that the negative problem orientation of daughters and the positive problem orientation of sons were significant predictors of mother-adolescent conflicts.

### Discussion

The development of the C-SPSI-R is a significant step in facilitating research on the social problem solving of Chinese populations. The results of validation studies, including the evaluation of content validity, reliability studies, and exploratory and confirmatory factor analyses, provide strong evidence supporting the psychometric properties of the instrument. The 25-item short form of the C-SPSI-R has a stable five-factor model that is largely consistent with previous findings based on the English version of the SPSI-R (Maydeu-Olivares & D’Zurilla, 1995; Maydeu-Olivares & D’Zurilla, 1996). The consistent factor

structure across cultures and different samples provides support for the social problem-solving theory.

The study of stressful social situations (Study 2) is important in identifying the scope of social problems faced by young adults in daily life. As few studies have examined the scope of stressful social situations in adults and their self-efficacy in handling such situations, this study fills the gap in the literature. It is particularly useful to examine the perceptions of young adults, as many of them are in transition from a student way of life to full-time employment. Good social adjustment in the workplace is crucial to job satisfaction and overall well-being. Young adults are generally confident with their basic social skills in making friends, but find it much more stressful to handle conflict among family members or among friends, to express assertive responses, to handle negative feedback, criticism, or negative behavior from others, and hardest of all to self-disclose to others and to express love.

The ranking of the 36 stressful social situations generally aligns with clinical experience in social skills training (Csoti, 1999), such as that it is harder to make an assertive response (in other words, to handle negative behaviors from others) than to acquire basic social skills (like possessing topics to initiate conversations with others). Young adults find that it is easier to relate to friends and peers, than to family members or people at work. They are probably quite hesitant in some behaviors related to building intimate relationships, dating, or couple relationships, which are the key developmental tasks in early adulthood. It takes time for them to gain experience from practicing these skills and to learn to handle these situations effectively. These findings are consistent with the features of the Chinese culture that Chinese people are not trained to be assertive and expressive in emotions.

The study on the relationships between social problem solving and measures of anxiety and depression replicates previous overseas findings. On the whole, it is observed

from these studies that negative problem orientation and avoidance behavior are strongly related to depression and anxiety. While the impulsiveness-carelessness style of problem solving was found to be related to depression, anxiety is not associated with an impulsive-careless style of problem solving.

For the positive C-SPSI-R subscales, high positive problem orientation had is associated with lower depression and anxiety scores. A finding that differs slightly from those of overseas studies is that rational problem-solving skills can be independent of and depression levels in Chinese populations. This means that having good rational problem-solving skills is not adequate for the management of depression. Motivational (problem orientation) and behavioral (e.g., avoidance) factors may greatly limit the success of social problem solving even when a person has adequate rational problem-solving skills. Furthermore, rational problem solving tends to contribute a little to the management of anxiety, as a low but significant correlation was found.

In the last study (Study 4), the findings generally support the hypothesis that social problem solving is related to family well-being, including measures of overall family functioning and of the level of parent-adolescent conflicts. The negative problem-solving subscales of the AS, NPO, and ICS are associated with lower family functioning measured by the CFAI, while the positive subscales of the PPO and RPS are associated with higher family functioning. The C-SPSI-R total scores of adolescents are all significantly related to aspects of family functioning.

When the social problem solving scores of parents and adolescents are used to predict the level of parent-adolescent conflict, the overall social problem solving scores of parents and the avoidance behavior of adolescents are the best predictors of conflict. In mother-adolescent conflicts, a daughter's negative problem orientation and a son's positive problem orientation are additional and significant predictors of conflict. The results imply that the

social problem solving abilities of parents are much more important than those of adolescents. This result may come about because parents are likely to be much more experienced and skilful in solving social problems than adolescents, and they can make a greater impact on relationships and conflict than their children can. Parents still retain a great deal of power within Chinese families, and their positive problem-solving efforts are the key determinant of the quality of the relationship in parent-child relationships. If parents are unwilling to face issues and conflicts rationally or have a positive attitude toward problem solving, it can be very hard for the adolescent to resolve the conflict by their own efforts. The alternative explanation is that adolescents who have more conflicts with their parents tend more to attribute the conflict situation to their parents' social problem solving ability and give them lower rating, that is, a reverse causal relationship. This explanation could be further verified in future studies by replacing the perceived social problem solving of parents by the adolescents with the parents' own self-rating.

On the whole, the results reiterate the popularity of avoidance strategies in coping with conflicts in Chinese families, particularly among adolescents. Lastly, it is important to note that social problem solving is probably only one of the many interpersonal competencies that are important in conflict management in families and that it accounts for around 20% to 30% of the variation in parent-adolescent conflicts. Other abilities like empathy or prosocial reasoning may also be important factors contributing to the quality of family relationships and well-being.

The four studies reviewed in this paper together represent an overview of current developments in social problem solving research on the local scene. The development and validation of the C-SPSI-R is a major step toward establishing a line of research in social problem solving. We also find the scope of "social problems," as defined by D'Zurilla's model of social problem solving, to be rather wide, as it includes aspects like personal issues,



interpersonal issues, and specific life events or social situations. The second study reviewed in this paper focuses on refining the scope of social problems by examining the variety of stressful social situations experienced by young adults. The study adopts an empirical approach, collecting stressful social situations using an open-ended questionnaire. The study also provides important information on the ranking of the difficulties experienced by the young adults in coping with the 36 social situations. These situations can further be used to develop assessments of social problem solving performance or in connection with the planning of the curriculum for social skills training for young adults.

The third and fourth studies provide evidence supporting links between social problem solving and family well-being. The two studies highlight evidence that social problem solving is one of the key interpersonal competences that contributes to the well-being of individuals. Positive problem solving orientation and behavior are significantly linked to lower levels of both anxiety and depression. In the family context, social problem solving scores are significantly related to all aspects of family functioning. In particular, the social problem solving of parents and the avoidance behavior of adolescents are the most important determinants of parent-adolescent conflict. The clarification of these linkages underscores the theoretical importance of the role of social problem solving in individual well-being. Most of the linkages between social problem solving and indicators of individual well-being, like anxiety, depression, family functioning, and parent-adolescent conflicts are in the expected directions and of the expected strength. This confirms the role of social problem solving in individual well-being.

Although the present series of studies clarifies the relationships between social problem solving and different indicators of well-being, there are still many areas for potential research. First, the C-SPSI-R assesses social problem solving tendencies using a self-report format instead of actual social problem solving performance in simulated situations or using

reviews of previous experience. There is a need to further explore the agreement between the C-SPSI-R and measures of social problem solving performance, and to investigate how actual performance may be related to well-being. Second, the evidence from existing research often relates social problem solving to negative emotions like depression or anxiety, or to family conflicts, as social problem solving is theorized to moderate the impact of stress on individuals. While this enables the comparison of these results with overseas studies, there is a need to adopt more indexes of well-being and quality-of-life measures in future studies. Third, most of the existing studies of social problem solving are cross-sectional studies, and such studies can establish an association between social problem solving and well-being indicators. Research data from panel studies that follow up the development of social problem solving over time may provide important evidence for causal links between social problem solving and well-being. As the associations between these variables are confirmed, it is time for researchers to hypothesize and test causal models using methods like structural equation modeling. Lastly, greater effort needs to put in to examining the effectiveness of training in social problem solving and the impact of this training on well-being on the local scene. It would be interesting to investigate how social problem solving in education could prepare students to face problems and self-manage in the course of their academic study, or to investigate how young adults can better prepare themselves for the challenges of interpersonal relationships in the workplace through training in social problem solving.

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Table 1: Rotated Factor Solution of the Self-Efficacy in Social Skills section of the Questionnaire

Items	Factor <sup>a</sup>	
	1	2
q6 Maintain conversation with others	<u>.93</u>	-.05
q5 Have appropriate topics to discuss with others	<u>.85</u>	.05
q7 Start/have conversation with unfamiliar people	<u>.73</u>	-.04
q8 Express own's feeling freely	<u>.68</u>	.06
q9 Reveal own's privacy to others	<u>.54</u>	-.01
q10 Express different opinions	<u>.49</u>	.35
q13 Refusing others' inappropriate requests	-.17	<u>.91</u>
q15 Give appropriate response when people have disrespectful criticism on you	-.02	<u>.78</u>
q12 Make requests to others	.17	<u>.62</u>
q14 Give appropriate response when people show their praise and respect to you	.21	<u>.54</u>
q11 Make complaints on others	.27	<u>.44</u>
	$\alpha =$	<u>.83</u>

Note. Maximum likelihood extraction and oblique rotation was used. The solution accounts for 55.6% of the variance.

<sup>a</sup> The highest factor loading for each item is underlined. Factor 1 = Basic Social Skills (BS); Factor 2 = Advanced Social Skill (AS)



Table 2: Self-efficacy in handling stressful social situations, as perceived by young adults

Rank	Items <sup>a</sup>	Subscale <sup>a</sup>	M	SD
1	Have appropriate topics to discuss with others	BS	6.85	.75
2	Develop friendship with people	IR	6.82	.83
3	Maintain friendship	IR	6.79	.89
4	Adapt to new learning and work environment	IR	6.77	.73
5	Make new friends	IR	6.70	.77
6	Maintain conversation with others	BS	6.61	.66
7	Have good relationship with boss, colleagues, and clients	SS	6.57	.76
8	Make friends with people from different cultures and backgrounds	IR	6.54	.94
9	Give appropriate response when people show their praise and respect to you	AS	6.49	.65
10	Express different opinions	BS	6.48	.72
11	Gain satisfaction/ sense of success from work or studying	SS	6.41	.13
12	Participate in a new social group	IR	6.39	.73
13	Show confidence in social situation	IR	6.37	.96
14	Establish good communication with colleagues and supervisors	IR	6.35	.76
15	Express one's own feelings freely	BS	6.32	.85
16	Maintain an intimate relationship with partner	IR	6.30	.29
17	Build up an intimate relationship with partner	IR	6.29	.26
18	Handle divergent opinions	IR	6.25	.70
19	Refuse inappropriate requests of others	AS	6.15	.97
20	Give appropriate response when people make a disrespectful criticism of you	AS	6.15	.66
21	Prevent emotion from affecting daily life	IR	6.15	.76
22	Strike a good balance when allocating time for family, friends, partner, study, and work	SS	6.11	.03
23	Participate in social activities voluntarily	IR	6.08	.13
24	Show family members that you care about them	IR	6.03	.03
25	Start/have conversation with unfamiliar people or strangers	BS	5.98	.00
26	Handle financial dispute with friends	SS	5.93	.81
27	Make requests of others	BS	5.78	.61
28	Handle financial difficulties arising from payment for tuition	SS	5.72	.89
29	Work with / live with difficult people	SS	5.68	.97
30	Handle being misunderstood	IR	5.67	.81
31	Make complaints about others	AS	5.54	.71
32	Handle conflicts with colleagues and supervisors	IR	5.54	.97
33	Handle family conflicts	IR	5.54	.89
34	Handle isolation by others	SS	5.23	.52
35	Reveal one's own personal life to others when appropriate	BS	5.03	.97
36	Express love to the one you admire	IR	4.94	.52

<sup>a</sup> The items were in Chinese, and this is a translated and abridged version of the original items. BS = Basic Social Skills; AS = Advanced Social Skills; IR = Interpersonal Relationship; SS = Social Situations.

Table 3. Correlations between C-SPSI-R and measures of depression and anxiety

C-SPSI-R Subscales	C-BDI (N = 200)	STAI: State (N = 235)	STAI: Trait (N = 235)
Positive Problem Orientation	-.31**	-.20**	-.31**
Negative Problem Orientation	.66**	.29**	.49**
Impulsiveness/Carelessness Style	.23**	.00	.09
Avoidance Style	.67**	.23**	.42**
Rational Problem Solving	-.05	-.16*	-.14*

Note. C-BDI = Chinese Beck's Depression Inventory I; STAI = Chinese State-Trait Anxiety Inventory.

\*  $p < .05$ , \*\*  $p < .01$

Table 4. Correlation coefficients between the five subscales of the C-SPSI-R short form and measures of family functioning (CFAI)

C-FAI Subscales	C-SPSI-R Short Form					
	AS	NPO	RPS	ICS	PPO	C-SPSI-R Total
Mutuality	-.28**	-.18**	.11**	-.09**	.19**	.29**
Communication	-.26**	-.19**	.12**	-.07**	.21**	.29**
Conflict and Harmony	-.31**	-.16**	.04	-.14**	.16**	.28**
Parental Concern	-.27**	-.12**	.07**	-.16**	.15**	.26**
Parental Control	-.22**	-.16**	.03	-.15**	.12**	.24**

Note. AS = Avoidance Style, RPS = Rational Problem Solving, NPO = Negative Problem Orientation, ICS = Impulsiveness/Carelessness Style, and PPO = Positive Problem Orientation.

\*  $p < .05$ , \*\*  $p < .01$

Table 5: Comparison of the Important Predictors of Parent-Adolescent Conflicts across the Four Dyads

Predictor Variables	Conflicts between Dyads <sup>a</sup>			
	Mother-Son	Mother-Daughter	Father-Son	Father-Daughter
<u>Adolescents</u>				
Avoidance Style	.22***	.18***	.09	.17***
Negative Problem Orientation	-.07	.08*	-.00	.04
Rational Problem Solving	.08	-.01	.01	.05
Impulsiveness/Careless Style	-.02	.03	.06	.02
Positive Problem Orientation	-.10*	-.02	-.05	-.03
<u>Parents</u>				
Social Problem Solving	-.41***	-.44***	-.42***	.49***
R <sup>2</sup>	.24	.30	.23	<u>.33</u>

<sup>a</sup> Standardized regression coefficients ( $\beta$ ) were reported, and regression coefficients that were significant were indicated by: \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Andrew M. H. Siu  
Assistant Professor  
Department of Rehabilitation Sciences  
Hong Kong Polytechnic University

and

Daniel T. L. Shek  
Chair Professor of Applied Social Sciences  
Department of Applied Social Sciences  
The Hong Kong Polytechnic University