
Problem solving appraisal and psychological adjustment in a global context

Chair(s): HEPPNER, P. (University of Missouri)

Ever since Dewey's influential publication of 'How We Think' (1933), there has been a strong focus in psychology on how people cope with and solve difficult life problems. In fact, the focus on coping and applied problem solving has been one of the most intensely investigated topics in United States (US) in the last two decades (Skinner, et al, 2004). This symposium focuses on the cultural generalizability of the most frequently used applied problem solving in the US, the Problem Solving Inventory (PSI; Heppner & Pedersen, 1982); the PSI measures a person's appraisal of their problem solving abilities and attitudes (i.e., their self-evaluative capacity to resolve problems). Briefly, the PSI consists of three factors: (a) Problem-Solving Confidence (b) Approach-Avoidance Style, and (c) Personal Control. Over 130 studies (see Heppner, Witty & Dixon, 2004), support the construct, convergent, and discriminant validity of the PSI. The research clearly suggests that people's appraisal of their problem-solving ability is related to a wide range of psychological adjustment and physical health indices, to the approach they use in coping with stressful problems, and to their resolution of educational and vocational issues. For example, generally speaking, people who have a more positive appraisal of their problem-solving skills are more likely to report a positive self-concept, higher levels of self-efficacy, more social support, and lower levels of depression, anxiety, suicidal ideation, social uneasiness, and irrational beliefs. Nonetheless, what we know about problem-solving appraisal is based on primarily White U.S. samples. This symposium significantly extends the literature by examining the external validity or generalizability of the PSI to four countries with quite different cultural contexts: Australia, China, Italy, and Taiwan. Key learning objectives of the symposium are to: (a) acquire current knowledge about the PSI research literature and

its role in psychological, physical, vocational adjustment; (b) learn about the generalizability of the PSI to four other cultural contexts as indicated above; (c) be sensitized to the cultural context in transporting psychological inventories across different cultures, and (d) learn about future research directions as well clinical applications of the PSI.

A literature review of the Problem Solving Inventory: Conclusions, implications, and future directions

HEPPNER, P. (University of Missouri)

The first presentation will provide an historical background of the development of the PSI as well as overview of the PSI research literature from the last 28 years; most importantly, this presentation provides the context for the following four presentations. The research will be summarized in four major categories: psychosocial adjustment, physical adjustment, coping strategies, and career development. For example, over 80 studies have examined relations between the PSI and psychological adjustment; a broad range of studies have suggested that problem-solving appraisal is associated with general psychological and social adjustment, depression, hopelessness and suicide potential, anxiety and worry, alcohol use and abuse, eating disorders, childhood adjustment, and childhood trauma. Over 35 studies have found that a positive problem-solving appraisal is associated with lower levels of depression; a negative appraisal of one's problem solving abilities is strongly predictive of depression for individuals experiencing high levels of stress, but not for those experiencing low levels of stress. A negative problem-solving appraisal is associated with feelings of hopelessness and suicidal ideation. A person's problem-solving confidence, in particular, is a relatively strong predictor of their feelings of hopelessness. Several conclusions from the research literature will be highlighted and discussed. For example, the research clearly suggests that people's appraisal of their problem-solving ability is related to a wide range of psychological adjustment and physical health indices, to the approach they use in coping with stressful problems, and to their resolution

of educational and vocational issues. In essence, how people evaluate their problem-solving capabilities is in general consistent with the implementation of their problem-solving skills across a range of stressful personal problems. However, there are some exceptions. For instance, some people overestimate or underestimate their problem-solving abilities for a variety of reasons (e.g., sociopathic personality styles), resulting in a mismatch between their problem-solving appraisal and performance. Thus, problem-solving appraisal should not always be considered as synonymous with problem-solving skills. Several recommendations will be made for both clinical applications and future research, such as calling for investigations across different cultural contexts to understand the similarities and differences in applied problem solving across cultures.

Keywords: problem-solving, psychosocial adjustment, physical adjustment, coping strategies, career development

Examining the validity of the Problem Solving Inventory in Australia

BECCARIA, G. (University of Southern Queensland), MACHIN, A. (University of Southern Queensland)

The aim of this study was to: (a) test the structural validity of the PSI using CFA in two samples of students from the University of Southern Queensland (USQ), and (b) examine the relationship between the PSI and its subscales with Positive and Negative Affect, Depression and Anxiety. This study used Confirmatory Factor Analysis (CFA) to test the PSI factor structure, which is a superior method to test the construct validity of the PSI, and none published in Australia. The PSI was administered to 556 undergraduate students enrolled at USQ in 2008 and a further 497 undergraduate students enrolled at USQ in 2009. On both occasions, the PSI was part of a battery of measures; other measures included the Positive and Negative Affect Scale (Watson, Clark, & Tellegen, 1988), the Depression Stress and Anxiety Scales - 21 (Lovibond & Lovibond, 1995). Administration was via a web-based survey and students were given a choice of participation for course credit or are part of a raffle draw. The

results of the CFA replicated the findings of previous research (see Heppner et al. 2004), and represented a sound fit to the model with no alterations to the original structure. Specifically, the 2008 data revealed CMIN/DF = 6.61, GFI = .94, RMSEA = .10; CFI = .96; NFI = .95; RFI = .93; PNFI = .63. The 2009 data yielded similar results, CMIN/DF = 5.6, RMSEA <.10; CFI = .96; NFI = .95; RFI = .91; PNFI = .51. The PSI and its subscales were found to significantly correlate both affect and mental health variables at $p < .01$; with correlation coefficients between $r = .29$ for AA and Negative Affect, and $r = .45$ for PSC and Depression. These findings indicate good predictive validity. This study provides strong structural validity of the PSI in the Australian population; moreover, the study suggests that the PSI is predictive of affect and mental health variables in Australian populations as well. These results suggest continued use of the PSI in Australian populations is warranted at this time. Future research directions will be discussed.

Keywords: validity, problem-solving, Australia

Examining cultural validity of the Problem-Solving Inventory in Italy

NOTA, L. (University of Padova), HEPPNER, P. (University of Missouri), FERRARI, L. (University of Padova)

The aim of this study was two-fold: (a) examining the generalizability of the PSI factor structure, and other psychometric estimates of the PSI, namely differences associated with gender, and associations with intelligence, study motivation, and use of learning strategies, and (b) examining relationships between the PSI and personality characteristics. In study 1, 15,000 Italian adolescents (5,000 from the North, 5,000 from the Center, 5,000 from the South) participated in the study; 50% were male and 50% female. The PSI, along with the Standardized Magellano Università (Soresi, 2000) battery to assess professional interests, types of interests, cultural interests, aptitudes and general intelligence, and learning strategies (e.g., time management, anxiety control, motivation). The students were also asked if they had already made a career decision to study at a university. In study 2, 577 students from the north of Italy,

32.4% male and 67.6% female, completed the PSI and Myers-Briggs Type Indicator, which assesses four personality dimensions (e.g., judging-perceiving). Study 1 found that across all three areas of Italy, the results revealed: (a) a similar but slightly different PSI factor structure (e.g., the third factor was best conceptualized as Emotional Control), (b) sex differences (which have been rarely found in U.S. samples), (c) in contrast to previous studies, the PSI accounted for 6% of the variance in intelligence, (d) a tendency to approach problems was consistently predictive of engaging in a wide range of learning strategies, and (e) significant differences were found between the decided and undecided students on all three PSI factors. Study 2 found that the students with more effective levels of problem solving also presented personality styles with strong scores on both the thinking and judging dimensions. The data set used in this investigation is the largest PSI sample ever collected in a Western European country. In addition to providing useful psychometric information for an Italian PSI, the presenter will discuss the complexities of problem-solving appraisal cross culturally as well as a few methodological caveats regarding the use of the PSI and other U.S. based inventories cross-nationally (e.g., the necessity to examine the cultural validity of assessment instruments utilized in cross-national studies).

Keywords: cultural validity, problem-solving inventory, learning strategies, intelligence, study

Problem-solving appraisal, career indecision, and psychological adjustment in mainland China

HOU, Z. (Beijing Normal University), HEPPNER, P. (University of Missouri)

The aim of two studies conducted in Mainland China was to: (a) examine the generalizability of the factor structure of the Problem Solving Inventory (PSI) through confirmatory factor analysis among Chinese college students; and (b) examine the relationship between the PSI and both career related factors and psychological adjustment. In study 1, 736 undergraduate students from four Mainland Chinese universities were administered the PSI, Career Decision-Making Difficulties

Questionnaire (Gati et al., 1996), and Career Locus of Control (Millar & Shevlin, 2007). In study 2, 357 students from three Mainland Chinese universities completed the revised Chinese PSI and Symptom Checklist 90 (Derogatis, 1983). Study 1 found that the results indicated a poor fit of the original structure of the PSI in Mainland Chinese college student population (RMSEA= .084, GFI= .81, AGFI= .78, NNFI=0.85, CFI= .86). A slightly revised Chinese PSI (i.e., the second factor consisted of fewer but similar items as the original PSI; but now seemed to best depict Reflective Thinking; the third factor was slightly revised/conceptualized as Emotional Control) revealed a better fit to the data: RMSEA= .061, GFI= .91, NNFI= .92, CFI= .93); the relationship between the Chinese PSI and CDMD revealed more career decision-making difficulties were associated with more negative PSI scores, which is consistent with the pattern of relationships found in the U.S. The CFA results of study 2 revealed a good fit for the Chinese PSI (RMSEA= .061, GFI= .91, NNFI= .92, CFI= .93), and also found a significant relationship with the SCL-90 such that more negative PSI scores were associated with more psychological distress, which replicates findings from the U.S. The two studies suggested a slightly different construct of problem-solving appraisal in Mainland Chinese college students, subsequently labeled the Chinese PSI. The results suggest the different factor structure is stable across groups, as well as related to career related factors and psychological adjustment in expected directions. The complexity of examining the problem-solving appraisal cross-culturally and its implications will be discussed.

Keywords: problem-solving, career indecision, psychological adjustment, China, psychological distress

Applied problem solving, anxiety, and spirituality in Taiwan

HOU, Z. (Beijing Normal University), HEPPNER, P. (University of Missouri)

The aim of the study was to: (1) examine the factor structure of the well-known Problem Solving Inventory in Taiwan, (2) investigate the relations between problem solving, spirituality

and levels of state and trait anxiety among college students, and (3) determine whether the PSI, Trait anxiety, and the Spirituality Beliefs scale predicts State anxiety. Determining the role of problem solving in psychological adjustment in Taiwanese culture can provide future direction for career education programs and counseling services. 667 Taiwanese college students at National Taipei College of Business completed the PSI, State and Trait Anxiety Scale, and the Spirituality Scale. The results of the CFA provided a poor fit for the original three factor model of Heppner and Petersen (1982). Subsequently, a second CFA of the three factor Chinese PSI (Lu et al, 2009) suggested a good fit with the data: $\chi^2 = 367.89$, $p < .001$, $RMSEA = .05$ (90% CI = .046 -.058), $CFI = .93$, and $NFI = .90$. Pearson correlations revealed the PSI total and factors were significantly correlated with both state and trait anxiety, specifically more negative problem solving scores were related to higher levels of anxiety; these findings replicate U.S. findings. In addition, the PSI was significantly correlated with spirituality scores revealing more positive problem solving were related to stronger spirituality beliefs; these are new findings and suggest a potentially critical link between spirituality and problem solving in dealing with important life stressors. Finally, a simultaneous regression revealed that state anxiety was predicted by trait anxiety, two PSI factors (problem solving confidence, reflective thinking) and spirituality. This study provides additional support for the revised three factor Chinese PSI in a Taiwanese population. In addition, the results provide important construct validity estimates through significant associations in theoretically consistent ways with state and trait anxiety, as well as spirituality. These results not only underscore the important role of problems solving in psychological adjustment in Taiwan, but also an important caveat to examine the cultural validity of western based inventories in East Asian cultures. Future research directions as well as clinical applications will be discussed in the presentation.

Keywords: *problem-solving, trait anxiety, spirituality, Taiwan, career education programs*

Process issues in offending behaviour programs: Challenges and changes over time

Chair(s): BIRGDEN, A. (Corrective Services New South Wales)

This symposium presents an overview of the therapeutic alliance and examines the importance of attending to its constituent elements during the course of treatment with forensic clients. The therapeutic alliance describes the process of engagement with clients and comprises the development and achievement of shared change goals, agreement on therapeutic tasks, and the development of a bond and the therapeutic relationship during the course of treatment (Bordin, 1979). These processes have traditionally been posited as central to the change process in general therapeutic contexts, but little empirical work has examined its relevance in correctional settings where clients often present with complex and pervasive difficulties in relatedness. This symposium will provide a unique opportunity to explore recent research on the therapeutic alliance in this context. The key learning objectives are to: explore the relevance of the therapeutic alliance in forensic settings; examine the time course of the therapeutic alliance in offending behaviour treatment from the perspective of client, clinician and observer; examine the nature of ruptures that can occur within correctional environments and responses that clinicians have to these difficulties; and to recommend practices to support clinicians in program delivery and enhance treatment outcomes for correctional clients.

It takes two to tango: Tracking the time course of the therapeutic alliance in a violence prevention program

ROSS, E. (Victoria University of Wellington)

The therapeutic alliance has been described as an "interpersonal dance" between therapist and client, reflecting its dynamic nature over