

## Problem-Solving Skills and Mental Health of Social Work Students in Greece

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### Abstract

Social work is a problem-solving scientific and professional discipline and the problem-solving ability of social work students is of the utmost importance for their education. The aim of this study was to investigate the social work students' problem-solving skills in relation to demographics, year of studies and mental health. The sample included 370 students from the bachelor's degree programme of the Department of Social Work of the University of Western Attica in Athens, Greece. The Problem-Solving Inventory (PSI) and the Symptom Checklist-90 (SCL-90) were completed by the students along with a questionnaire investigating demographics. A significant negative correlation was found between all SCL-90 dimensions and PSI scores. All SCL-90 dimensions were predictive for all PSI scales. Additionally, it was found that unmarried students had lower Problem-Solving Confidence, Approach-Avoidance Style and Total PSI score as compared with the married ones. Furthermore, students coming from urban areas had greater scores on Personal Control and Total PSI score, while greater scores on Problem-Solving Confidence were found in those attended the 3rd or 4th year of studies as compared to those of the 1st and 2nd year of studies. Implications for additional research and the curriculum of social work studies are discussed.

**Keywords:** Social work students; Social workers; Social work education; Problem-solving; Mental health.



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### 1. Introduction

The process of problem-solving is inherent in every counseling and therapeutic relationship (D'Zurilla and Nezu, 2010). Therefore, it also concerns social work as it constitutes both an applied scientific field of problem-solving (Zastrow, 2009) and a highly demanding profession (Ghazinour and Richter, 2014). Social workers are called to think and act in difficult situations on a daily basis. They are invited to intervene in circumstances where there are neither clear answers nor specific procedures and where rival forces often turn problem-solving decision-making into a complex process. The high risk characteristics of social work include stress, poor sources of support, high leakage of workers (Collins, 2007), uncertainty among professionals about their professional identity (Ehrle *et al.*, 2004), confusion of the general population in understanding the role of social workers (Davidson and King, 2005), anxiety resulting from the context of social organizations (Morrison, 2007), high level of psychosocial and work stress factors (Ghazinour and Richter, 2014), and burnout (Bride and Figley, 2007). All the above require from social workers to possess proficient personal problem-solving skills. Consequently, the acquisition of problem-solving skills is an indispensable part of the educational curriculum of social work.

Problem-solving is a self-directed cognitive behavioral process by which an individual tries to discover effective or adaptive solutions to specific problems of everyday life (D'Zurilla and Nezu, 2010; Heppner *et al.*, 2004). It is a complex process which includes the stages of general orientation, problem definition, generation of alternative solutions, decision-making, and evaluation (Heppner and Petersen, 1982). It comprises a set of skills that derive from personal characteristics (biopsychosocial) and environmental factors. It is greatly influenced by the individual's mental and emotional functioning, especially by the management of stress experienced during the resolution process (Heppner *et al.*, 2004; Zeidner and Endler, 1996).

Research has shown a close relationship between mental health, psychopathology, and problem-solving skills. In addition, it has revealed the important role of problem-solving as a predictive factor of mental health and behavioral problems (D'Zurilla and Nezu, 2010; Heppner *et al.*, 2004; Malouff *et al.*, 2007). Individuals who have not developed adequate problem-solving skills can be more easily led to ineffective psychological adjustment due to their inability to overcome the uncertainty that prevails at a personal, professional and social level. Relatively, Heppner *et al.* (2004), after having reviewed 120 empirical studies from a 20-year research period (1982-2002), claim that "the more positive a person's problem-solving appraisal, the more he or she tends to report positive self-concepts, higher levels of self-efficacy/assertiveness/personal agency and lower levels of social uneasiness, worry, depression, anxiety, hopelessness, suicidal ideation and irrational beliefs (p. 394)". Research with both clinical and nonclinical samples has demonstrated that ineffective problem-solving is associated with depression (Cuijpers *et al.*, 2007; Tezel and Gozum, 2006), suicidal ideation (Dixon *et al.*, 1994; Pollock and Williams, 2004; Rudd and Rajab,

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1996), anxiety (Londahl *et al.*, 2005; McMurran and Gary, 2009), alcohol/drug use (Godshall and Elliott, 1997; Jaffee and D'Zurilla, 2009; McGee *et al.*, 2008), eating disorders (Holt and Espelage, 2002; Swanson *et al.*, 2010) and internalizing and externalizing symptoms in general (Bell and D'Zurilla, 2009).

Due to the above, the development of problem-solving skills is considered one of the primary goals of a high-quality education in social work, so that students become able to successfully respond to future scientific and professional requirements. Furthermore, young adulthood is a particular developmental phase with increased demands in the academic (e.g. goal achievement), social (e.g. socialization, integration into working life) and personal domains (e.g. identity acquirement, autonomous life, renegotiation of relationships) (Bayram and Bilgel, 2008). These requirements may act as stress factors, burdening students' mental health (Vitasari *et al.*, 2010) and therefore affecting their problem-solving skills (Heppner *et al.*, 2004). The impact of these factors on mental health varies according to gender, age, experience, socio-economic status, race, nationality and social attitudes (Kontoangelos *et al.*, 2015). High-risk groups for the development of mental health problems among the student population appear to be women, first-year students, migrants and students with low socio-economic background (Bayram and Bilgel, 2008; Eisenberg *et al.*, 2007; Hunt and Eisenberg, 2010).

Research has shown that students with effective problem-solving skills make better and more frequent use of educational opportunities and support sources, are more satisfied with their education and have better potential for future professional planning and decision-making compared to those with ineffective problem-solving skills (Heppner *et al.*, 2004).

Individual differences regarding students' problem-solving skills are related to various socio-demographic and educational factors, such as gender (Alci and Canca, 2011; Hoxha and Surucu, 2015; Huang and Flores, 2011; Uslu and Girgin, 2010), age (Haught *et al.*, 2000; Wright *et al.*, 2000), educational level (Tumkaya *et al.*, 2009; Uslu and Girgin, 2010; Yumus *et al.*, 2006), and family characteristics (Hoxha & Surucu, 2015). However, these findings are not consistent across studies.

Furthermore, research on student samples has also shown the close relationship between problem-solving skills and mental health problems, particularly depression (Brack *et al.*, 1992; Reid and Dixon, 2000), suicidal ideation (Dixon *et al.*, 1991; Priester and Clum, 1993), anxiety (Davey *et al.*, 1992; Sahin *et al.*, 1993), worry (Davey *et al.*, 1996; Dugas *et al.*, 1995), alcohol use (Slavkin *et al.*, 1992), and academic problems (Blankstein *et al.*, 1992) (Elliot *et al.*, 1990). It seems that inefficient problem-solving skills are predictive of psychological vulnerability.

Social work students experience heightened stress due to a number of reasons: First, the student period poses increased educational demands. Second, as social work is a psychosocial care and problem-solving profession, students have to deal with specific roles, unique to social sciences. Finally, they have to meet the requirements of the practicum placement and to adjust their personal responses to the psychosocial needs of the clients (Wilks, 2008).

To our knowledge, social work students have been studied only regarding their coping strategies and resilience (Wilks and Spivey, 2010). There are no studies focusing specifically on their problem-solving skills, whereas there is limited research on the assessment of their mental health. Consequently, there is no research data on the relationship between them.

Studies have shown significant rates of mental health problems and high levels of psychological distress among social work students. Specifically, Ghazinour and Richter (2014) studied a sample of 121 social work students prior to their internship and found that 34% reported suicidal thoughts at least once during their lifetime and 7% had attempted to commit suicide at least once. Ting (2011) reported that about half of the 215 students he had studied reported symptoms of depression. Collins *et al.* (2010) found that 42% out of 71 students presented psychological distress. Horton *et al.* (2009) found that 34% of 68 senior and graduate social workers reported depressive symptomatology which was believed to make them prone to developing clinical depression. In addition, 37% reported suicidal thoughts. Turner *et al.* (2007) found that 72% of 527 students, 1/3 of whom came from the School of Health and Social Sciences, reported stress, depressed mood or emotional-type problems. Finally, Tobin and Carson (1994) found that 33% of their sample had significantly high levels of psychological distress.

In Greece there is no similar study that explores problem-solving skills of social work students and their correlation with mental health and psychopathology. The investigation of problem-solving capacity of both social workers and social work students is of particular importance for Greece, especially during this period of time. Due to the economic crisis, the country is experiencing social destabilization with a host of accompanying economic barriers with serious psychosocial impact on the population, resulting in anxiety aggravation, increased insecurity, professional burnout and general malfunctioning within social and family relationships (Economou *et al.*, 2012; Giotakos *et al.*, 2011; Skapinakis *et al.*, 2013). Efthimiou *et al.* (2013) Due to this fact, the psychosocial problems that social workers are called upon to resolve manifest as more complex and difficult in a particularly burdensome environment with fewer sources of support. Consequently, social workers need to be resilient and have proficient problem-solving skills in order to be effective in their practice. This fact also applies to social work students -as they are future professionals- and concerns social work education.

## 2. Materials and Methods

### 2.1. Aim and Research Hypotheses

The aim of this study was to investigate the problem-solving skills of social work students in relation to their mental health, their demographics and their year of studies. The following hypotheses were examined:

1. There is a negative correlation between problem-solving skills and mental health of social work students.
2. Demographic variables influence the development of problem-solving skills of social work students.
3. There is a positive correlation between problem-solving skills and year of studies of social work students.

## 2.2. Sample

The research sample (N) included 370 students out of the 560 registered undergraduate students of the 4-year bachelor's degree programme of the Department of Social Work, University of Western Attica in Athens. The specific Department is one of the four Social Work Departments in Greece.

## 2.3. Measurement Instruments

The students completed three questionnaires. In particular:

- A. Demographic data questionnaire. The demographic questionnaire gathered information on year of studies, sex, age, ethnicity, place of birth, socio-economic status, marital status and parental educational level.
- B. The Problem-Solving Inventory (PSI) (Heppner and Petersen, 1982). The PSI assesses an individual's awareness and evaluation of their problem-solving abilities or styles. The PSI is a self-report measure, and thus assesses perceptions of problem solving as opposed to actual problem-solving skills. The PSI consists of 32 six-point Likert items, which constitute 3 factors: (a) Problem-Solving Confidence is defined as self-assurance while engaging in a wide range of problem-solving activities. This factor is a general measure of belief in one's ability to cope with problems. (b) The Approach Avoidance Style is defined as a general tendency to avoid or approach different problem-solving activities. Higher scores on this factor are associated with avoiding problems. (c) The Personal Control factor is defined as a person's belief that he or she is in control of his or her emotions while problem solving and it reflects emotional over-reactivity and behavioral control. All items are rated on a 6-point Likert scale, where 1 corresponds to *totally agree* and 6 to *totally disagree*. The overall score ranges from 32 to 192. In general, low scores are considered to be more functional.
- C. The Symptom Checklist- (SCL90). This is a multi-dimensional self-report inventory, consisting of 90 items covering 9 dimensions of psychological distress and general psychopathology (Derogatis, 1983): depression, phobic anxiety, somatization, obsessive-compulsivity, interpersonal sensitivity, anxiety, hostility, paranoid ideation, and psychoticism. Seven additional items relate to various physical causes (sleep disturbances, food intake, etc). All items are rated from 0 to 4, giving a maximum sum up to 360. Three global measures are derived from the scale: a) the Global Severity Index, b) the Positive Symptom Distress Index, and c) the Positive Symptom Total. Overall, the SCL-90-R is considered a valid measurement of general psychological distress, with high internal consistency and test-retest reliability in both clinical and nonclinical populations, and is often used as a screening instrument. A standardized Greek version is available (Donias *et al.*, 1991).

## 2.4. Procedure and Ethical Issues

The measures were administered to the students who attended the taught modules in December 2015, during the winter semester. Students were informed about the aims of the study. They were also told that their participation was totally voluntary and that their decision would not affect their grades or educational status. Furthermore, they were asked not to provide any personal data revealing their identity, so as to ensure that their anonymity remains intact, and they were assured that their responses would be kept confidential.

The research protocol was submitted, reviewed and approved by the Review Board, according to the procedures provided for by the University.

## 3. Statistical Analyses

Quantitative variables were expressed as mean values (SD), while qualitative variables were expressed as absolute and relative frequencies. Pearson correlations' coefficients were used to explore the association of two continuous variables. Correlation coefficient between 0.1 and 0.3 were considered low, between 0.31 and 0.5 moderate and those over 0.5 were considered high. Multiple linear regression analysis was used with the PSI dimensions as dependent variables. The regression equation included terms for students' demographics and SCL-90 dimensions. Each SCL-90 dimension was examined separately in the linear regression model because model diagnostics with two or more dimensions indicated that the regression estimates were highly collinear. Adjusted regression coefficients (b) with standard errors (SE) were computed from the results of the linear regression analyses. Diagnostics for regression models were performed to check if the conditions for regression had been met with the residuals of each model being normally distributed and their variance being constant. All reported p values are two-tailed. Statistical significance was set at  $p < 0.05$  and analyses were conducted using SPSS statistical software (version 19.0).

## 4. Results

The sample consisted of 370 students (54 men and 316 women) with a mean age of 21.8 years (SD=5.9 years). Sample characteristics are presented in Table 1. Most of them were single (94.3%) and the majority were Greek (95.7%). Thirty per cent of the students attended the first year of studies, 31.1% the second, 16.5% the third and 22.4% the fourth.

**Table-1.** Sample Characteristics

	N (%)
Sex	
Men	54 (14.6)
Women	316 (85.4)
Age, mean (SD)	21.8 (5.9)
Year of studies	
1st	111 (30.0)
2nd	115 (31.1)
3rd	61 (16.5)
4th	83 (22.4)
Family status	
Married/ Divorced	21 (5.7)
Unmarried	347 (94.3)
Nationality	
Greek	353 (95.7)
Other	16 (4.3)
Parental family status	
Unmarried/ Divorced/ Widowed	89 (24.1)
Married	280 (75.9)
Father's educational level	
Elementary/ Middle school	114 (31.2)
High school	108 (29.6)
Technical school/ University	143 (39.2)
Mother's educational level	
Elementary/ Middle school	81 (22.0)
High school	129 (35.0)
Technical school/ University	159 (43.1)
Grown-up in:	
Small city/ Village	109 (29.6)
Athens/ Other big city	259 (70.4)

Descriptive statistics of PSI and SCL-90 dimensions are presented in [Table 2](#).

**Table-2.** Descriptive Statistics for PSI and SCL-90 Dimensions

	Mean	SD
<i>PSI</i>		
Problem Solving Confidence	44.5	7.5
Approach-Avoidance Style	66.5	11.1
Personal Control	18.1	4.7
Total PSI Score	129.3	20.3
<i>SCL-90</i>		
Global Severity Index	0.8	0.5
Somatization	8.6	6.9
Obsessive-compulsivity	11.8	7.2
Interpersonal sensitivity	8.6	6.2
Depression	13.2	9.5
Anxiety	7.4	6.4
Hostility	4.9	4.4
Phobic anxiety	3.0	3.9
Paranoid ideation	5.8	4.3
Psychoticism	6.1	5.5
Positive Symptom Total	38.7	18.4
<i>Positive Symptom Distress Index</i>	1.8	0.5

Correlation coefficients between PSI and SCL-90 dimensions are shown in [Table 3](#). A significant negative correlation was found between all SCL-90 dimensions and PSI scores, with the exception of the correlation between *Positive Symptom Distress Index* and Approach-Avoidance Style that was not significant.

**Table-3.** Correlation Coefficients Between PSI and SCL-90 Dimensions

	<b>Problem Solving Confidence</b>	<b>Approach-Avoidance Style</b>	<b>Personal Control</b>	<b>Total PSI score</b>
Global Severity Index	-0.41***	-0.22***	-0.42***	-0.37***
Somatization	-0.25***	-0.11*	-0.21***	-0.20***
Obsessive-Compulsive	-0.35***	-0.17**	-0.39***	-0.31***
Interpersonal sensitivity	-0.44***	-0.25***	-0.45***	-0.41***
Depression	-0.41***	-0.18**	-0.38***	-0.34***
Anxiety	-0.29***	-0.17**	-0.31***	-0.27***
Hostility	-0.27***	-0.22***	-0.34***	-0.30***
Phobic anxiety	-0.29***	-0.17**	-0.30***	-0.27***
Paranoid ideation	-0.30***	-0.20***	-0.31***	-0.30***
Psychoticism	-0.32***	-0.21***	-0.39***	-0.32***
Positive symptom total	-0.45***	-0.27***	-0.44***	-0.41***
<i>Positive Symptom Distress Index</i>	-0.24***	-0.09	-0.25***	-0.19**

\*p<0.05; p<0.01; p<0.001

Multiple linear regression analyses for PSI scales (Table 4) showed that all SCL-90 dimensions were predictive for all PSI scales, after adjusting for demographics factors. *Positive Symptom Distress Index* was not independently associated with Approach-Avoidance Style. Additionally, unmarried students had lower Problem-Solving Confidence, Approach-Avoidance Style and Total PSI score as compared with the married ones. Furthermore, students that had grown up in Athens or other big cities had greater scores on Personal Control and Total PSI score, while greater scores on Problem-Solving Confidence were found in those that attended the 3<sup>rd</sup> or 4<sup>th</sup> year of studies as compared with those that attended the 1<sup>st</sup> or 2<sup>nd</sup> year of studies.

**Table-4.** Results from Multiple Linear Regression Analyses for Problem Solving Confidence and Approach-Avoidance Style

	<b>Problem Solving Confidence</b>		<b>Approach-Avoidance Style</b>	
	$\beta$ (SE)*	P	$\beta$ (SE)*	P
Gender				
Men	0.00**		0.00**	
Women	-0.77 (1.25)	0.536	-0.15 (1.98)	0.941
Year of studies				
1st/ 2nd	0.00		0.00	
3rd/ 4th	1.86 (0.81)	0.022	0.56 (1.36)	0.684
Family status				
Married/ Divorced	0.00		0.00	
Unmarried	-3.94 (1.9)	0.039	-8.11 (3.01)	0.007
Nationality				
Greek	0.00		0.00	
Other	-1.1 (2.18)	0.616	2.48 (3.45)	0.474
Parental family status				
Unmarried/ Divorced/ Widowed	0.00		0.00	
Married	-0.11 (0.96)	0.911	0.31 (1.53)	0.839
Father's educational level				
Elementary/ Middle school	0.00		0.00	
High school	1.09 (1.18)	0.356	-0.65 (1.87)	0.729
Technical school/ University	0.48 (1.12)	0.670	-1.4 (1.78)	0.432
Mother's educational level				
Elementary/ Middle school	0.00		0.00	
High school	0.14 (1.28)	0.915	0.92 (2.05)	0.654
Technical school/ University	-0.14 (1.26)	0.909	0.17 (2.03)	0.935
Grown-up in:				
Small city/ Village	0.00		0.00	
Athens/ Other big city	1.46 (0.94)	0.121	1.15 (1.49)	0.440
Global Severity Index	-5.49 (0.78)	<0.001	-4.33 (1.25)	0.001
Somatization	-0.27 (0.06)	<0.001	-0.18 (0.09)	0.039
Obsessive-Compulsivity	-0.33 (0.05)	<0.001	-0.21 (0.09)	0.014
Interpersonal sensitivity	-0.49 (0.06)	<0.001	-0.41 (0.1)	<0.001
Depression	-0.31 (0.04)	<0.001	-0.19 (0.06)	0.003
Anxiety	-0.33 (0.06)	<0.001	-0.29 (0.1)	0.002

Hostility	-0.42 (0.09)	<0.001	-0.55 (0.13)	<0.001
Phobic anxiety	-0.51 (0.1)	<0.001	-0.43 (0.15)	0.004
Paranoid ideation	-0.47 (0.09)	<0.001	-0.45 (0.14)	0.002
Psychoticism	-0.38 (0.07)	<0.001	-0.37 (0.11)	0.001
Positive symptom total	-0.17 (0.02)	<0.001	-0.15 (0.04)	<0.001
<i>Positive Symptom Distress Index</i>	-3.63 (0.88)	<0.001	-1.87 (1.37)	0.172

\*regression coefficient (Standard Error); \*\*indicates reference category

## 5. Discussion

The results of this study showed that some demographic factors, in particular students' marital status and origins from either urban or rural areas, are significantly related to their problem-solving skills.

Particularly, married students recorded significantly better scores on the Problem-Solving Confidence and Approach-Avoidance Style factors of the PSI and had a higher overall score in relation to their unmarried fellow students. It appears that the increased demands of married students' lives enhance trust and make people more able to approach their problems and try to solve them rather than avoiding them. Walton (2002) also tends to this conclusion in a study of the prototype coping style of first and fourth year nursing and social work students. The claim that factors related to married life, such as the variety of roles, the requirements arising from them, the limited time and the stable partner may work as a problem-solving enhancer, combined with the absence of mental health problems, needs further investigation.

Another interesting finding of this study was that students from urban areas scored significantly better scores on the PSI Personal Control dimension and on the PSI overall scores than those from rural areas. This may be related to environmental differences between urban and rural areas or to a mediating variable, the departure from the family context and the anxiety it may cause to young people. Specifically, life in an urban environment is more complicated and demanding and requires both increased adaptive abilities and a higher level of control and management skills. On the other hand, it has been found that some subgroups of students are particularly vulnerable to stress associated with separation and attachment issues, such as newcomers (Clara, 1998).

However, it is worth noting that the results did not show any differences in PSI dimension scores in relation to gender. This finding is in line with previous studies that similarly did not support gender as an important factor in differentiating problem-solving skills (Hoxha and Surucu, 2015; Huang and Flores, 2011; Tumkaya *et al.*, 2009). However, it contradicts other studies that showed a significant positive difference in the gender problem-solving assessment (Alci and Canca, 2011; Uslu and Girgin, 2010; Yumus *et al.*, 2006). Therefore, findings are inconsistent in this regard. Furthermore, no differences were found in the PSI dimensional scores in relation to the level of parental education. Other studies have revealed a relationship between family environment and students' problem-solving skills, but these studies assessed the socio-economic and not the educational level of the parents (Hoxha and Surucu, 2015).

An additional finding of the present study was a statistically significant difference in student problem-solving skills according to their level of education in social work. In particular, the 3<sup>rd</sup> and 4<sup>th</sup> year students scored significantly better on the Problem-Solving Confidence factor than the 1<sup>st</sup> and 2<sup>nd</sup> year students. Students' problem-solving skills may be strengthened by two factors, their progress in the curriculum and maturity resulting from growing up. It seems students' experiences and knowledge grow, their perception of problems changes, and their ability in finding different ways of problem-solving is strengthened in the context of social work educational curriculum. Similar findings have been reported by others as well (Hoxha and Surucu, 2015; Tumkaya *et al.*, 2009; Uslu and Girgin, 2010; Yumus *et al.*, 2006). Tumkaya *et al.* (2009), found that the year of studies was significantly correlated with the participants' problem-solving score and that senior students had higher level of problem-solving skills compared to freshmen. Similarly, Yumus *et al.* (2006) recorded significantly better problem-solving skills in 4th-year than in 1st-year students. It seems that Universities are developing students' ability to solve problems during their studies.

Finally, the results of this study demonstrated a positive correlation between problem-solving skills and mental health of social work students. In particular, they showed a significant negative correlation between all SCL-90 dimensions and PSI scores. Therefore, it appears that psychopathological symptoms are predictive factors of all three problem-solving factors (confidence, approach-avoidance, personal control) as described by Heppner and Petersen (1982) and that the problem-solving skills of social work students are related to their mental health condition. This finding is consistent with previous studies carried out in clinical and nonclinical samples (Bell and D'Zurilla, 2009; Cuijpers *et al.*, 2007; Holt and Espelage, 2002; Londahl *et al.*, 2005; McMurrin and Gary, 2009; Swanson *et al.*, 2010; Tezel and Gozum, 2006), as well as in student samples (Brack *et al.*, 1992; Davey *et al.*, 1992; Dixon *et al.*, 1991; Priestler and Clum, 1993; Reid and Dixon, 2000; Sahin *et al.*, 1993), which indicated that ineffective problem-solving is associated with depression, suicidal ideation, anxiety, alcohol use, eating disorders, and internalizing and externalizing symptoms.

This study is the first to be conducted in Greece in relation to problem-solving and mental health issues of social work students and provides important information. Nevertheless, it is characterized by a series of limitations. Firstly, it took place only in one of the four social work Departments that exist in the country, a fact that limits the generalization of the results to the general population of Greek social work students. Secondly, due to its correlational design, no causal relationships can be inferred. Thirdly, the SCL-90 captures some general difficulties in psychological adaptation and does not constitute a diagnostic tool of specific mental disorders. For this reason, the

nature of the relationship between clinical symptoms and the students' problem-solving skills needs to be further investigated with proper methodology.

Despite its methodological limitations, the present study constitutes a first step in capturing the problem-solving skills of social work students in Greece and their relationship with mental health and psychopathology. Its results are useful for implementing curricular changes and strengthening the support functions of the educational framework. A wide range of interventions has been proposed not only to enhance problem-solving skills, but also to reduce academic stress and prevent mental health problems of students in higher educational settings. Some of them are teaching strategies of collaborative work, project-based and problem-based learning (Yumus *et al.*, 2006), training in reflexivity (Kinman and Grant, 2011), training in problem-solving with case scenarios (Baumberger-Henry, 2005), liaison between students, instructors and counselors (Chun and Poole, 2009), stress management training (Dziegielewski *et al.*, 2004), enhancement of students' self-awareness and self-care (Ting, 2011), peer support networks and stress-free peer zones (Wilks and Spivey, 2010), and information of the educational institution welfare and support services (Robotham and Julian, 2006).

All the above mentioned proposals are of particular interest. In combination, they could be an effective and useful tool for promoting problem-solving and resilience of students. Based on the findings of this study, such interventions should focus primarily on the initial years of social work curriculum. This need requires a curriculum that enhances development of problem-solving skills, use of appropriate techniques (case studies, role playing, etc), experiences of solving problems in the real world of social work, critical approach, collaborative and experiential learning, self-knowledge and reflection, combined with mental health promotion and mental resilience interventions, so that students may develop appropriate and effective problem-solving skills.

## 6. Conclusion

Problem-solving skills seem to be positively correlated to mental health of social work students. Senior and married students seem to possess higher problem-solving skills compared to freshmen and unmarried fellows. Gender and parental educational status do not seem to affect students' problem-solving skills. These findings support the idea that problem-solving skills should be an inherent part of social work educational curriculum from the first year of studies in order to prepare social work students to be effective future practitioners.

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