SOCIAL PROBLEM-SOLVING SKILLS AND ACADEMIC HARDINESS OF STUDENT TEACHERS IN YANGON UNIVERSITY OF EDUCATION

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Abstract

The primary purpose of this study was to investigate the social problem-solving skills and academic hardiness of student teachers. Quantitative and survey research design was used in this study. A total of 1000 student teachers in Yangon University of Education participated. Social Problem-Solving Inventory–Revised; Short Form (SPSI-R;SF) developed by D'Zurilla et al. (2002) and Revised Academic Hardiness Scale (RAHS) developed by Benishek et al. (2005) were used to measure social problem-solving skills and academic hardiness of student teachers. According to this study, there were statistically significant differences in social problem-solving skills and its subscales by gender. There were statistically significant differences in constructive and overall social problem-solving skills by education level except dysfunctional problem-solving skills. Concerned with academic hardiness, significant differences were found in commitment and challenge by gender. Significant differences were found in commitment, control and total academic hardiness by education level. Results of Pearson product moment correlation indicated that academic hardiness was significantly positively correlated with constructive problem-solving skills and overall social problem-solving skills of student teachers whereas academic hardiness was found to be significantly negatively correlated with dysfunctional problem-solving skills. Regression analysis revealed that approximately 27% of the variance in academic hardiness could be explained by constructive problem-solving skills and dysfunctional problem-solving skills. So, student teachers with high social problem-solving skills may be more likely to perform well socially and academically regardless of situations. This study found that social problem-solving skills of student teachers can affect their academic hardiness to some extent.

Keywords: Social Problem-Solving, Social Problem-Solving Skills, Academic Hardiness

Introduction

The university is considered as one of the most important and influential organizations in the world. The university carries out the conversion of naive and committed individuals to healthy, creative, mature, balanced and developed individuals. Moreover, it supplies the demands of human resources at different levels and in different cultural, social and personal sectors. Especially, universities of education deliver professional and committed individuals to the community. College or university students experience higher stress and problems in each semester. Their stressors have been classified into three categories: academic pressures, social issues and financial problems. Student teachers have faced the highest stressful situation and academic demands compared to other student groups. Student teachers are studying or taking courses to prepare for teaching professional career.

Social problem-solving plays a significant role in psychological adjustment, constituting an important coping strategy that has the potential to reduce or minimize psychological distress (D'Zurilla & Nezu, 1990). When an individual considers a stressful situation caused by social problems, according to D'Zurilla and Chang (1995), having a negative tendency towards the problem is a non-functional and frustrating cognitive sequence which involves pessimism, a lack of confidence in problem solving skills, easily losing one's temper, and worrying. According to Deniz (2004), individuals who have self-confidence in problem solving also have a high degree of self-esteem and more cautiously in making a decision and behave in a less panicked and less evasive manner. If people have the high level of negative problem orientation, they can be

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prepared to increase their level of social self-efficacy by appropriately including applications about effective social problem-solving skills.

Academic hardiness is students' ability to face challenges, carry out commitment and proper control in every academic activity (Fajriani & Marsela, 2021). Academic hardiness helps university students to insulate from the university stressors and may conjecture future well-being and performance. According to Erozkan (2014), academic hardiness possibly provides the courage and motivation to students to cope with exam demands and the possible raised stress in the academic context (Amponsah, 2010; Robotham, 2008). Implementation of academic hardiness is an individual able to have optimistic attitude, physical and mental health, and personality development (Maddi, 2006), effective leadership, (Bartone et al., 2009), well-being, (Eccles, Vida & Barbel, 2004), and achievement of pride (Maddi et al., 2012).

Therefore, social problem-solving skills and academic hardiness are crucial factors in student teachers' life.

Purpose of the Study

The main aim of this study was to investigate the social problem-solving skills and academic hardiness of student teachers in Yangon University of Education.

The specific objectives are as follows:

- To explore the differences of the social problem-solving skills of student teachers by gender and education level
- To explore the differences of the academic hardiness of student teachers by gender and education level
- To find out the relationship between social problem-solving skills and academic hardiness of student teachers
- To investigate the effect of social problem-solving skills on academic hardiness of student teachers

Definitions of Key Terms

Social Problem-Solving. Social problem-solving is a self-directed cognitive- behavioral process by which a person attempts to identify or discover effective or adaptive solutions for specific problems encountered in everyday living (D'Zurilla & Nezu, 2007).

Social Problem-Solving Skills. Social problem-solving skills is a set of skills involving cognitive and behavioral process in which one works to find positive and adaptive ways to handle problematic situations that count arise in the social environment (Ang et al., 2016).

Academic Hardiness. Academic hardiness is a personality characteristic that may differentiate students who avoid challenging academic course work from others who are willing to pursue these types of challenges (Maddi et al., 2009).

Review of Related Literature

Social Problem-Solving Model

Social problem-solving is an important psychological behavior due to a broad range of situations from social adjustment to stress situations. In addition, it relates to different forms of positive psychological adjustment as well as to pathological and psychological non-adjustment (Morera et al., 2006). The social problem-solving model was generated by D'Zurilla and Goldfried in 1971. The model originated within a behavioral modification context with the goal of using problem solving as a basis for therapeutic intervention. Later, the original model was expanded and refined by D'Zurilla and Nezu in 1982 and in 1990.

In the model, two general partially independent components of the social problem solving were (a) problem orientation and (b) problem-solving skills (D' Zurilla et al., 2002). Constructive or effective problem-solving skills are described as a process in which positive problem orientation facilitates rational problem solving. In turn, the deliberate, systematic application of effective problem-solving skills is likely to produce positive outcomes. Dysfunctional or ineffective problem-solving skills is represented as a process in which negative problem orientation contributes to impulsivity- carelessness style or avoidance style, which are both likely to produce negative outcomes.

The individual with constructive problem-solving skills has a tendency to see problems as challenging, believes in himself in successfully resolving the problem. And it is stated that problem solving is time consuming with problems and requires effort and patience considered them in a positive way (Eskin & Aycan, 2009). Even though the initial outcomes are negative or unsatisfactory, the "good" problem solvers are more likely to persist and recycle, or return to the problem-solving process, to find a better solution or to redefine the problem with more realistic goals. A positive attitude towards solving problems will lead to an appreciable level of interest in developing problem-solving skills (Julius, 2022).

The problem solver with high dysfunctional problem-solving skills prefers to avoid problems rather than confront them head on, puts off problem solving as long as possible, waits for problems to resolve themselves, and attempts to shift the responsibility for solving his or her problems to other people (Chang et al., 2004). These problem-solvers behave as delaying, being passive or failing to take action, being addictive, dysfunctional and at the same time deficient. The reason for deficiency is due to addictiveness, inactivity, passiveness and delaying (Eskin & Aycan, 2009; Bayani et al., 2013).

Theorical Framework of Academic Hardiness

Benishek and Lopez in 2001 stated that two cognitively oriented theories, Kobasa's hardiness theory (1979) and Dweck and Legget (1988) theory of academic motivation offered them the perspectives leading towards the academic hardiness. Kobasa's hardiness theory supplied a useful framework for understanding why certain students are more willing to engage in more challenging academic coursework than others (Kobasa, 1979; Ouellette, 1993). High level of hardiness shows authentic life and is not looking for ways of avoid stressful events, but the individual draws strength from the difficulties facing and overcoming obstacles as a challenge (Carr, Kelley, Keaton & Albrecht, 2011).

Dweck and Leggett's model of academic motivation identified two distinct cognitive-affective-behavioral patterns in academic performance and related them to the types of goals that students were apparently pursuing (Dweck, 2002; Dweck & Leggett, 1988). Students who operate from a performance-based orientation attempt to establish the adequacy of their ability and avoid demonstrating their inadequacy. For they perceived ability as being a fixed entity, failure on a given task resulted in feelings of incompetence and a lack of intellectual ability (Dweck, 1986; Elliott & Dweck, 1988; Mueller & Dweck, 1998). When faced with especially challenging tasks or confronted with initial failure experiences, these students demonstrated heightened vulnerability to negative affect and lower task persistence. In contrast, students who followed a learning-based orientation viewed academic challenges as opportunities to acquire new skills and to enhance their competence. They view ability as being an "incremental skill" that can be improved as one acquires knowledge and becomes more competent (Dweck, 1986; Elliott & Dweck, 1988). Failure and errors were perceived to be a normal part of the learning

process. They commented less negative arousal, greater involvement in the task, and more persistence in response to difficult tasks and initial failure.

In keeping with those two theories, Benishek and Lopez in 2001 built up the concept of academic hardiness including the commitment, challenge and control dimensions and its instruments called Academic Hardiness Scale (AHS). Commitment was defined as students' reported willingness to expend consistent effort and to engage in sacrifices in order to achieve academic excellence, irrespective of the content or demands of individual courses, instructors or personal interests (Benishek et al., 2005). High commitment students become deeply involved in their study, seeing this as the best way to turn whatever they are experiencing into something that seems interesting, worthwhile and important (Sheard & Golby, 2007).

Control concerned students' beliefs that they possessed the capacity to achieve desire educational outcomes from personal effort and through effective emotional self-regulation in the face of academic stresses and disappointments (Benishek et al., 2005). High control students are able to manage their studies demonstrating good time management, prioritizing those activities deemed most contributory to academic success and taking responsibility for their own learning and development (Sheard & Golby, 2007).

Challenge was defined as the students' purposeful efforts to seek out difficult academic coursework and experiences and to justify such action as inherently for personal learning (Benishek et al., 2005). High challenge students appraise potentially stressful situations as exciting and stimulating than threatening (Sheard & Golby, 2007) (cited in Spiridon & Evangelia, 2014).

Thus, the quality of students' academic hardiness is influenced by wide range of environmental factors. These three interrelated hardiness attitudes enhance the personal performance (Maddi, Kobasa & Hoover, 1979), moderate to high correlations with negative emotions (Kravetz et al., 1993), provide a significance related to future orientation (Yunita & Monalisa, 2021), an opportunity to grow, prosper and gain new experiences for the future and cannot be as a threat (Haghighatgoo et al., 2011). So, academic hardiness is very important for students, institutions of learning, educationists and curriculum practices (Daneshamooz & Alamolhodaei, 2012).

Method

Sampling

The participants were student teachers from Yangon University of Education during 2022-23 AY. A total of 1000 student teachers (500 males and 500 females) from YUOE were chosen by using random sampling technique. The characteristics of participants were shown in the following Table 3.1.

Table 3.1 The Characteristics of Participants

Education Level	Male	Female	Total
1st Year 2nd Semester	100	100	200
2nd Year 1st Semester	100	100	200
2nd Year 2nd Semester	100	100	200
3rd Year 2nd Semester	100	100	200
4th Year 2nd Semester	100	100	200
Total			**1000**

Research Method

Descriptive survey method and quantitative research design were used to examine social problem-solving skills and academic hardiness of student teachers.

Instrument for Social Problem-Solving Skills

To measure the social problem-solving skills of student teachers, the Social Problem-Solving Inventory-Revised Short Form (SPSI-R: SF) was used in this study. This questionnaire was originally developed by D'Zurilla, Nezu and Maydeu-Olivares (2004) and consisted of 25 items. Each item had a five-point Likert scale (4 = extremely true of me, 3 = very true of me, 2 = moderately true of me, 1 = slightly true of me and 0 = not at all true of me). This questionnaire was composed of two subscales; constructive problem-solving skills and dysfunctional problem-solving skills including 10 items and 15 items respectively. Cronbach's alpha for this questionnaire was 0.79.

Instrument for Academic Hardiness

To measure the academic hardiness of student teachers, Revised Academic Hardiness Scale (RAHS) designed by Benishek, Feldman, Shipon, Mechan and Lopez (2005) was applied in this study. It was a 4-point Likert Scale questionnaire included by "absolutely disagree" as "1", "disagree" as "2", "agree" as "3" and "absolutely agree" as "4". This questionnaire consisted of three subscales that assessed student teachers' commitment, challenge and control. These subscales had 19, 11 and 10 items respectively. Cronbach's alpha for this questionnaire was 0.808.

Data Collection Procedure

First, pilot study was conducted during last week in August, 2023, with a sample of 58 student teachers. The pilot study was done to check whether the wording statement had clarity in Myanmar version and was suitable for student teachers to test the reliability and the validity of the instrument. After that, the reliability test was conducted using SPSS version 22. When the internal consistency for these instruments was considered acceptable, they were selected in this study. Then, for accurate data collection, the researcher requested permission from the Head of Department of Educational Psychology. With the permissions of administrative officers, data collection was made in the selected classes from Yangon University of Education during September, 2023. The participants were explained the purpose and the importance of participation as well as the assurance of confidentiality of their responses to be used only for research purposes. On average, it took participants about 25 minutes to complete all items. Then, all of the participants' responses were gathered.

Data Analysis and Findings

Descriptive Analysis for Social Problem-Solving Skills of Student Teachers

By using the descriptive procedure with the data obtained from the Social Problem-Solving Inventory-Revised Short Form (SPSI-R: SF) Questionnaire, the social problem-solving skills of student teachers in Yangon University of Education can be computed.

Table 1 Means and Standard Deviations of Social Problem-Solving skills and its Subscales of Student Teachers

Variable	*No. of Items*	Mean	*Mean %*	*SD*	*Mini*	*Max*
Constructive Problem-Solving Skills	10	23.66	59.15	5.732	4	40
Dysfunctional Problem-Solving Skills	15	16.74	27.90	9.837	0	49
Social Problem-Solving Skills (Total)	25	40.40	40.40	10.857	15	82

According to Table 1, it was clearly seen that the mean percentage for constructive problem-solving skills was higher than that of dysfunctional problem-solving skills. Therefore, it can be concluded that student teachers' social problem-solving skills was satisfactory. They tend to view a problem as a challenge, believe in their ability to solve problems successfully and apply systematical, rational and effective problem-solving techniques.

Table 2 Means, Standard Deviations, and Results of Independent Samples *t*-test for Social Problem-Solving skills of Student Teachers by Gender

Variable	Gender	*N*	Mean	*SD*	*t*	*df*	*p*
Constructive Problem-Solving Skills	Male	500	24.34	5.786	3.788***	998	.000
	Female	500	22.98	5.601			
Dysfunctional Problem-Solving Skills	Male	500	18.63	10.778	6.192***	998	.000
	Female	500	14.85	8.389			
Social Problem-Solving Skills	Male	500	42.98	11.721	7.711***	998	.000
	Female	500	37.83	9.236			

* * *p < .001.

In Table 2, the mean scores of male student teachers were higher than that of female student teachers in both social problem-solving skills and its subscales by gender.

In order to find out whether there were significant differences between male and female student teachers with regard to the social problem-solving skills, the independent samples *t*-test was computed (see Table 2). The results of independent samples *t*-test indicated that there were significant differences between male and female student teachers for both social problem-solving skills and its subscales at .001 level.

Table 3 Means, Standard Deviations, and ANOVA Results of Student Teachers' Social Problem-Solving Skills by Education Level

Variable	Education Level	*N*	Mean	*SD*	*F*	*p*
Constructive Problem-Solving Skills	1st year 2nd Semester	200	24.07	5.684	7.361***	.000
	2nd year 1st Semester	200	23.58	6.113		
	2nd year 2nd Semester	200	21.83	5.923		
	3rd year 2nd Semester	200	24.51	5.366		
	4th year 2nd Semester	200	24.34	5.161		
Dysfunctional Problem-Solving Skills	1st year 2nd Semester	200	17.25	9.517	.860	.487
	2nd year 1st Semester	200	16.18	9.079		
	2nd year 2nd Semester	200	15.96	9.670		
	3rd year 2nd Semester	200	16.93	10.333		
	4th year 2nd Semester	200	17.40	10.525		

Variable	Education Level	*N*	Mean	*SD*	*F*	*p*
Social Problem-Solving Skills (Total)	1st year 2nd Semester	200	41.32	10.506	4.726**	.001
	2nd year 1st Semester	200	39.75	10.252		
	2nd year 2nd Semester	200	37.78	10.466		
	3rd year 2nd Semester	200	41.44	11.250		
	4th year 2nd Semester	200	41.74	11.361		

***$p < .001$, **$p < .01$.

According to ANOVA results, there was a significant difference in student teachers' overall social problem-solving skills by education level at $p = .01$and $p = .001$ respectively (Table 3).

Table 4 Results of Tukey HSD Multiple Comparison for Student Teachers' Social Problem-Solving Skills by Education Level

Categories	(I) Education Level	(J) Education Level	Mean Difference(I-J)	*p*
Constructive Problem-Solving Skills	2nd year 2nd Semester	1st year 2nd Semester	-2.240**	.001
		2nd year 1st Semester	-1.750*	.017
		3rd year 2nd Semester	-2.685***	.000
		4th year 2nd Semester	-2.510***	.000
Social Problem-Solving Skills	2nd year 2nd Semester	1st year 2nd Semester	-3.535**	.009
		3rd year 2nd Semester	-3.655**	.006
		4th year 2nd Semester	-3.955**	.002

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

According to Table 4, there were significant differences in constructive social problem-solving skills and overall social problem-solving skills by education level. Thus, it could be assumed that student teachers who attending at 2nd year 2nd Semester had deficient social problem-solving skills.

Descriptive Analysis for Academic Hardiness of Student Teachers

By using the descriptive procedure with the data obtained from the Revised Academic Hardiness Scale (RAHS) Questionnaire, academic hardiness of student teachers in Yangon University of Education can be computed.

Table 5 Means and Standard Deviations for Academic Hardiness and its Subscales of Student Teachers

Variable	*No. of Items*	Mean	*Mean %*	*SD*	*Mini*	*Max*
Commitment	19	55.02	72.39	5.433	29	73
Challenge	11	25.79	58.61	3.048	16	36
Control	10	30.65	76.63	3.699	15	34
Academic Hardiness (Total)	40	111.46	69.66	8.081	76	146

According to descriptive statistics (Table 5), the mean percentage of control was the highest, commitment was moderate and challenge was the lowest among student teachers. It found that student teachers' academic hardiness was satisfactory. Therefore, it could reasonably

be concluded that student teachers may possess high effective emotional self-regulation in the face of academic stressors and disappointments. They may perceive their academic activities as interesting and exciting things and want to show personal sacrifice to obtain the academic excellence. Moreover, they become deeply involved in their study and feel a moderate sense of responsibility towards performance. But they may avoid the difficult and challenging academic courses with the risk of failure.

Comparison for Student Teachers' Academic Hardiness by Gender

To find out whether there was difference in academic hardiness and its subscales among student teachers in YUOE by gender, descriptive statistics and independent samples *t*-test were conducted. The mean scores of female student teachers were higher in commitment and total academic hardiness while male student teachers' mean scores were higher than females in challenge.

Table 6 Means, Standard Deviations, and Results of Independent Samples *t*-test of Student Teachers' Academic Hardiness by Gender

Variable	Gender	*N*	Mean	*SD*	*t*	*df*	*p*
Commitment	Male	500	54.23	4.927	-4.628***	998	.000
	Female	500	55.80	4.405			
Challenge	Male	500	29.22	2.859	2.407*	998	.016
	Female	500	28.76	2.628			
Control	Male	500	27.92	3.104	0.612	998	.540
	Female	500	27.65	2.662			
Academic Hardiness	Male	500	111.37	8.363	1.845	998	.065
	Female	500	112.22	7.076			

***$p < .001$, *$p < .05$.

The results of independent samples *t*-test indicated that there were significant differences between male and female student teachers for the commitment at .001 level and for challenge at .05 level. It could be concluded that generally male student teachers usually hang out with their friends and female student teachers have sense shame so that they emphasize on studying.

Table 7 Means, Standard Deviations, and ANOVA Results of Student Teachers' Academic Hardiness by Education Level

Variable	Education Level	*N*	Mean	*SD*	*F*	*p*
Commitment	1st year 2nd Semester	200	52.84	4.713	3.978**	.003
	2nd year 1st Semester	200	51.19	4.308		
	2nd year 2nd Semester	200	51.37	4.499		
	3rd year 2nd Semester	200	51.53	4.737		
	4th year 2nd Semester	200	51.53	4.951		
Challenge	1st year 2nd Semester	200	28.47	2.771	0.616	.651
	2nd year 1st Semester	200	28.52	2.785		
	2nd year 2nd Semester	200	28.50	2.679		
	3rd year 2nd Semester	200	28.72	2.887		
	4th year 2nd Semester	200	28.82	2.645		

Variable	Education Level	*N*	Mean	*SD*	*F*	*p*
Control	1st year 2nd Semester	200	27.54	3.267	2.934*	.020
	2nd year 1st Semester	200	26.95	2.882		
	2nd year 2nd Semester	200	26.57	2.702		
	3rd year 2nd Semester	200	26.99	2.919		
	4th year 2nd Semester	200	26.95	2.579		
Academic Hardiness	1st year 2nd Semester	200	108.85	7.993	2.985*	.018
	2nd year 1st Semester	200	106.65	7.598		
	2nd year 2nd Semester	200	106.44	7.349		
	3rd year 2nd Semester	200	107.23	8.139		
	4th year 2nd Semester	200	107.29	7.517		

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

According to descriptive statistics, mean scores of 1st year 2nd Semester student teachers (52.84) was the highest in commitment, control and overall academic hardiness. There were significant differences in student teachers' academic hardiness by the education level.

Table 8 Results of Tukey HSD Multiple Comparison for Academic Hardiness Among Student Teachers by Education Level

Categories	(I) Education Level	(J) Education Level	Mean Difference (I-J)	*p*
Commitment	1st year 2nd Semester	2nd year 1st Semester	1.645**	.004
		2nd year 2nd Semester	1.465*	.014
		3rd year 2nd Semester	1.310*	.039
		4th year 2nd Semester	1.310*	.039
Control	1st year 2nd Semester	2nd year 1st Semester	1.975**	.007
Academic Hardiness	1st year 2nd Semester	2nd year 1st Semester	2.195*	.037
		2nd year 2nd Semester	2.410*	.016

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

Based on the results of Table 8, 1st year 2nd Semester student teachers had higher than the student teachers in the rest of years for commitment. Thus, student teachers attending at 1st year had higher scores in commitment than others. Moreover, 1st year 2nd Semester student teachers got higher scores in control than 2nd year 1st Semester student teachers. In overall academic hardiness, the student teachers attending in 1st year 2nd Semester received higher scores than those attending in 2nd year 1st Semester and 2nd year 2nd Semester.

This finding is consistent with the study of Lwin Lwin San and Myo Ko Aung (2020) conducted first year student teachers are higher than that of second year and there was significant difference in academic hardiness of student teachers by grade. It can be interpreted that first-year students matriculated very soon and they had to work so hard in order to get high marks to study in the Universities they want to attend. This may be reason why they work like a horse.

The Relationship Between Social Problem-Solving Skills and Academic Hardiness of Student Teachers

To determine the relationship between social problem-solving skills and academic hardiness, Pearson product-moment correlations were computed (see Table 9).

Table 9 Correlation Between Social Problem-Solving Skills and Academic Hardiness of Student Teachers

	1.Constructive Problem-Solving Skills	2.Dysfunctional Problem-Solving Skills	3.Social Problem-Solving Skills	4.Academic Hardiness
1.Constructive Problem-Solving Skills	1	-.104**	.434**	.301**
2.Dysfunctional Problem-Solving Skills		1	-.251**	-.187**
3.Social Problem-Solving Skills			1	.329**
4.Academic Hardiness				1

*p < .05, **p < .01.

According to Table 9, academic hardiness was positively correlated with constructive problem-solving skills and social problem-solving skills among student teachers (r =.301, p < .01) and (r =.329, p < .01). However, overall academic hardiness was negatively correlated with dysfunctional problem-solving skills among student teachers (r = -.187, p < .01).

Multiple Regression Analysis for Determining Social Problem-Solving Skills on Academic Hardiness of Student Teachers

In order to investigate the predictive power of social problem-solving skills to academic hardiness of student teachers in detail, multiple regression analysis was conducted (see Table 10).

Table 10 Multiple Regression Analysis for Determining Social Problem-Solving Skills on Academic Hardiness of Student Teachers

Variables	***B***	**β**	***t***	***R***	R^2	*Adj* R^2	***F***
Constant	104.374		100.263***	.519	.269	.268	183.52
Constructive Problem-Solving Skills	.499	.354	13.006***				
Dysfunctional Problem-Solving Skills	-.283	-.344	-12.636***				

***p < .001.

The regression analysis showed that constructive problem-solving skills had a positive effect on student teachers' academic hardiness (β = .354, t = 13.006, p < .001) and dysfunctional problem-solving skills had a negative effect on student teachers' academic hardiness (β = -.344, t = -12.636, p < .001). So, it could be interpreted that the higher constructive problem-solving skills and the lower dysfunctional problem-solving skills, the higher student teachers' academic hardiness. The adjusted R-square value was .268, which indicated that approximately 27% of the variance in academic hardiness could be explained by constructive problem-solving skills and dysfunctional problem-solving skills. The model education for predicting academic hardiness from the subscales of student teachers' social problem-solving skills was as follows:

AH = 104.374 + .499CPS – .283DPS

Note: AH = Academic Hardiness
CPS = Constructive Problem-Solving Skills
DPS = Dysfunctional Problem-Solving Skills

Discussions and Recommendations

In this study, student teachers' constructive problem-solving skills were higher than their dysfunctional problem-solving skills. Thus, it could be concluded that student teachers have moderately good social problem-solving skills and appraise their problems as challenges and solvable ones. They try to use rationally the deliberate, systematic problem-solving ways and identify as many potential solutions as possible in order to produce the best outcomes. There were statistically significant differences in social problem-solving skills and its subscales at .001 level according to gender. To be specific, male student teachers were significantly higher than female student teachers in total social problem-solving skills. This finding was inconsistent with the study of İçen & Öztaşkın (2017). However, it was inconsistent with the studies of Saracaloglu, Yenice and Karasakaloglu (2009) and Bayrak (2015). According to ANOVA results, there were significant differences in student teachers' overall social problem-solving skills and constructive problem-solving skills whereas there was no significant difference in dysfunctional problem-solving skills by education level. Thus, it could be assumed that student teachers who attending at 2nd year 2nd Semester had deficient social problem-solving skills. They are during the early adult transition period and seek independence by separating from family as well as behave recklessly and impulsively It was consistent with Icen and Oztaskin (2017) and Saracaloglu, Yenice and Karasakaloglu (2009) but, was inconsistent with the studies of Katkat and Mizrak (2003). Thus, social problem-solving skills can be taught in a variety of ways. For example, they can be worked into the curriculum (Gootman, 2001), taught using cooperative learning strategies that give students the chance to develop and practice their social and academic skills at the same time (Van Acker, 1993), or taught in a group counseling setting (Nelson et al., 1996). Peer mediation programs also are a popular forum for teaching students' conflict resolution and problem-solving skills (Cangelosi, 2000).

According to the descriptive statistics, the mean score for commitment was the highest and the mean score for challenge was the lowest among student teachers in academic hardiness. Therefore, it could reasonably be concluded that student teachers perceive their academic

activities as interesting and exciting things and want to show personal sacrifice to obtain the academic excellence. But they may avoid the difficult and challenging academic courses with the risk of failure. They may possess less effective emotional self-regulation in the face of academic stressors and disappointments. According to gender, the mean scores for the total academic hardiness of female student teachers were higher than that of male student teachers. The results of independent samples *t*-test indicated that there were significant differences between male and female student teachers for the commitment at .001 level and for challenge at .05 level. But significant differences were not found in total academic hardiness and control subscale by gender. This finding was consistent with the study of Lwin Lwin San and Myo Ko Aung (2020), Benishek and Lopez (2001) and Vogt et al., (2008). Results confirmed with previous results of with Daneshamooz and Alamolhodaei (2012). According to ANOVA results, there were significant differences in overall academic hardiness, commitment and control by the education levels. Student teachers attending at 1st year 2nd Semester had higher scores in commitment than others. Moreover, 1st year 2nd Semester student teachers got higher scores in control than 2nd year 1st Semester.In overall academic hardiness, the student teachers attending in 1st year 2nd Semester received higher scores than those attending in 2nd year 1st Semester and 2nd year 2nd Semester. This finding was consistent with the study of Lwin Lwin San and Myo Ko Aung (2020) and contrast with findings of Kamtsios and Karagiannopoulou (2014; 2015). It can be interpreted that first-year students matriculated not very soon and they had to work so hard in order to get high marks to study in the Universities they want to attend.

The result of Pearson product moment correlation indicated that constructive problem-solving skills and overall social problem-solving skills was significantly positive correlated with academic hardiness of student teachers whereas dysfunctional problem-solving skills was found to be significantly negative correlated with academic hardiness. The analysis showed that constructive problem-solving skills had a positive effect on student teachers' academic hardiness and dysfunctional problem-solving skills had a negative effect on student teachers' academic hardiness. So, it can be interpreted that the higher constructive problem-solving skills and the lower dysfunctional problem-solving skills, the higher student teachers' academic hardiness. The adjusted R-square value was .268, which indicated that approximately 27% of the variance in academic hardiness could be explained by constructive problem-solving skills and dysfunctional problem-solving skills. Hence, student teachers who had good social problem-solving skills were more resilient in facing academic challenges, committing to participate in the activities and better controlled difficulties and severe pressure being experienced. Student teachers'low dysfunctional problem-solving skills will increase their level of academic hardiness.

Conclusion

In this study, the results indicated that generally, student teachers possess good constructive problem-solving skills. Therefore, student teachers with high social problem-solving skills tended to view the problems as challenges with a positive outlook and applied the reasonable intentional and systematical techniques to produce the best solutions. Academically hardy attitudes build a person's coping skills and make him able to develop thoughts and behave effectively in overcoming academic demands. This attitude reflects the participant's ability to

alter the pressure situation into an opportunity to develop him (Eschleman et al., 2010; Maddi & Khoshaba, 2005). According to the results, the mean score for commitment was the highest in the academic hardiness' subscales. It was found that the mean score for challenge was the lowest among student teachers. Therefore, it could reasonably be concluded that student teachers perceive their academic activities as interesting and exciting things and want to show personal sacrifice to obtain the academic excellence. But they may avoid the difficult and challenging academic courses with the risk of failure. They may possess less effective emotional self-regulation in the face of academic stressors and disappointments. The finding of this study supports the view that social problem-solving skills correlates positively with academic hardiness. The regression results indicated that approximately 27% of the variance in academic hardiness could be explained by constructive problem-solving skills and dysfunctional problem-solving skills. Therefore, individuals with high social problem-solving skills may be more likely than those with low SPS in order to perform well socially and academically regardless of situations. This study found that social problem-solving skills of student teachers can affect their academic hardiness to some extent.

Limitations and Future Research

A large and more representative sample was not implemented. Due to the time limitation, this study is restricted to participants from Yangon University of Education. It may be limitation to the generalizability for the whole sample. As only using a questionnaire survey method inference related to causality is equivocal. Future research should be explored more deeply and more specifically the effects of student teachers' social problem-solving skills and academic hardiness. Future research should determine the contribution of other factors that may affect social problem-solving skills and academic hardiness such as socioeconomic status, parenting style and so on. This study was carried out in only Yangon University of Education. Similar studies could be carried out in other parts of the country and other education stages to gather adequate information on the subject to be able to generalize. There was a lack of studies that explained the relationship of social problem-solving skills and academic hardiness. Therefore, it highlighted the need to investigate further the relationship between these variables.

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References

Amponsah, S. (2010). *The evolution and implementation strategies of the University of Ghana Bachelor of Arts distance education programme*. [M.Phill thesis. University of Ghana].

Ang, R. P., Tan, J. L., Goh, D. H., Huan, V. S., Ooi, Y.P., Boon, J. S., & Fung, D. S. (2016). A game-based approach to teaching social problem-solving skills. In R. Zheng & M. R. Gardner (Eds.). *Handbook of Research on Serious Games for Educational Applications*. (pp. 168-195). Information Science Reference. U.S.A: IGI Global.

Bartone, P. T., Eid, J., Johnsen, B., Laberg, J., & Snook, S. (2009). Big five personality factors, hardiness, and social judgment as predictors of leader performance. *Leadership and Organization Development Journal. 30*(6), 498-521. DOI:10.1108/01437730910981908

Bayani, A. A, Ganji, G., & Bayani, A. (2013). Psychometric properties of the Farsi version of the social problem-solving inventory-revised (F-SPSI-R): Preliminary evidence. *J. Basic. Appl. Sci. Res. 3*(4):241- 245.

Bayrak, S. (2015). Examining problem solving levels of preschool teacher candidates. *The Journal of Academic Social Science Studies,* 31, 515-521.

Benishek, L., & Lopez, F. (2001). Development and initial validation of academic hardiness scale. *Journal of Career Assessment*, 9, 333-352. http://journals.sagepub.com/doi/pdf/10. 1177/ 106907 2701 009 00402

Benishek, L., Feldman, J., Shipon, W., Mecham, S., & Lopez, F. (2005). Development and evaluation of the revised academic hardiness scale. *Journal of Career Assessment*, 13, 59-76. http://d x.doi .org /10.11 77/ 106 907 2704270274

Cangelosi, J. S. (2000). *Classroom management strategies: Gaining and maintaining students' cooperation* (4th ed.). New York: John Wiley & Sons, Inc.

Carr, J., Kelley, B., Keaton, R., & Albrecht, C. (2011). Getting to grips with stress in the workplace. *Human Resource Management International Digest, 19*(4). 32-38.

Chang, E. C., D'Zurilla, T. J., & Sanna, L. J. (2004). *Social problem-solving Theory, research, and training.* Washington, D.C: American Psychological Association.

Daneshamooz, S., & Alamolhodaei, H. (2012). Cooperative learning and academic hardiness on students' mathematical performance with different levels of mathematics anxiety. *Educational Research, 3*(3), 270-276. https://www.interesjournals.org/educational research.html

Deniz, M. E. (2004). Investigation of the relation between decision making self-esteem, decision making style, and problem-solving skills of university students. *Eurasian Journal of Educational Research*, 15, 23-35.

Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, 41, 1040-1048.

Dweck, C. S. (2002). Messages that motivate: How praise molds students' beliefs, motivation and performance (in surprising ways). In J. Aronson (Ed), *Improving academic achievement* (pp. 37-60). San Diego, CA: Academic Press.

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, 95, 256-273.

D'Zurilla, T. J., & Chang, E. C. (1995). The relations between social problem solving and coping. *Cognitive Therapy and Research*, *19*, 547-562.

D'Zurilla, T. J., & Goldfried, M. R. (1971). Problem solving and behavior modification. *Journal of Abnormal Psychology*, 78, 107-126. https://doi.org/10.1037/h0031360

D'Zurilla, T. J., & Nezu, A. M. (1982). Social problem solving in adults. In P. C. Kendall (Ed.). *Advances in cognitive-behavioral research and therapy* (Vol. 1). New York: Academic Press.

D'Zurilla, T. J., & Nezu, A. M. (1990). Development and preliminary evaluation of the Social Problem-Solving Inventory. Psychological Assessment. *Journal of Consulting and Clinical Psychology, 2*, 156-163. https://doi.org/10.1037/1040-3590.2.2.156

D'Zurilla, T. J., & Nezu, A.M. (2007). *Problem solving therapy: A positive approach to clinical intervention* (3rd ed). New York: Springer.

D'Zurilla, T. J., Nezu, A. M., & Maydeu-Olivares, A. (2002). Social Problem-Solving Inventory-Revised (SPSI-RTM) [Database record]. *APA Psyc Tests.* https://doi .org/10.1037/105068- 000

D'Zurilla, T. J., Nezu, A. M., & Maydeu-Olivares, A. (2004). Social problem-solving: Theory and assessment. In E. C. Chang, T. J. D'Zurilla & L. J. Sanna (Eds.). *Social problem solving: Theory, research, and training* (pp. 11-28). Washington, DC: American Psychological Association.

Eccles, J., Vida, M., & Barber, B. (2004). The relation of early adolescents' college plans and both academic ability and task-value beliefs to subsequent college enrollment. *The Journal of Early Adolescence*, *24*(1), 63-77. Doi:10.1177/0272431603260919

Elliott, E. S., & Dweck, C. S. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology*, 54, 5-12.

Erozkan, A. (2014) Analysis of social problem solving and social self-efficacy in prospective teachers. *Educational Sciences: Theory and Practice. 14*(2), 447-55.

Eschleman, K. J., Bowling, N. A., & Alarcon, G. M. (2010). A meta-analytic examination of hardiness. *International Journal of Stress Management* 17(4)

Eskin, M., & Aycan, Z. (2009). The adaptation of the revised social problem-solving inventory into Turkish (Tr-SPSI-R): A reliability and validity analysis. *Turk. Psychological Articles*, 12, 1-10.

Fajriani, A. B., & Marsela, F. (2021). *The profile of students' academic hardiness: A descriptive study.* In Proceedings of the 2nd International Conference on Science, Technology, and Modern Society (ICSTMS 2020) 495-499. https://doi.org/10.2991/assehr.k.210909.105.

Gootman, M. E. (2001). *The caring teacher's guide to discipline: Helping the young students learn self-control, responsibility, and respect* (2nd ed.). Thousand Oaks, CA: Corwin Press, Inc.

Haghighatgoo, M., Besharatb, M., & Zebardaste. (2011). The relationship between hardiness and time perspective in students. *Social and Behavioral Sciences*. 30, 925-928.

İçen, M., & Öztaşkın, Ö. B. (2017). Social problem-solving levels of pre-service social studies teachers. *Educational Research and Reviews. 12*(4), 220-229, http:// www.academicjoumols.org/ERR

Julius, E. (2022). The relationship between self-concept and problem-solving skills on students' attitude towards solving algebraic problems. *Contemporary Mathematics and Science Education, 3*(2), 22020. https://doi.org/10.30035/conmaths/12509

Kamtsios, S., & Karagiannopoulou, E. (2014). Exploring academic hardiness in Greek students. Links with achievement and year of study. Yearbook of the Department of Early Education Studies. *A Journal of Research in Education and Training*, 6, 250-266.

Kamtsios, S., & Karagiannopoulou, E. (2015) Exploring relationships between academic hardiness, academic stressors and achievement in undergraduates. *Journal of Applied Educational and Policy Research, 1*(1), 53-73.

Katkat, D., & Mızrak, O. (2003). Effectiveness of problem-solving skills of pedagogical training of teacher candidates. *Jurnal Prikolog*, *19*(2), 188-200. http://dhgm. meb.gov.tr/yayimlar/dergiler/MilliEgitim

Kobasa, S. C. (1979). Stressful life events, personality, and health: An inquiry into hardiness. *Journal of Personality and Social Psychology*, 37, 1-11. http://dx.doi.org/10.1037/0022-3514.37.1.1

Lwin Lwin San & Myo Ko Aung (2020). Personality trait and academic hardiness of pre-service teachers in Mandalay Education College. *Journal of Myanmar Academic Arts and Sci*ence, *18*(9b), 605-616.

Maddi, S. R. (2006). Hardiness: The courage to grow from stress. *The Journal of Positive Psychology, 7*(3), 160-168 https://doi.org/10.1080/17439760600619609

Maddi, S., Harvey, R. H., Khoshaba, D. M., Fazel, M., & Resurreccion, N. (2009). The personality construct of hardiness. *Journal of Humanistic Psychology*, 49, 292-305. http://doi:10.1177/0022167809331860.

Maddi, S. R., & Khoshaba, D. M., (2005). *Resilience at Work: How to Succeed no Matter What Life Throws at You.* New York. NY: AMACOM.

Maddi, S. R., Kobasa, S. C., & Hoover, M. (1979). An alienation test. *Journal of Humanistic Psychology*, 19, 73-75.

Maddi, S. R., Matthews, M. D., Kelly, D. R., Villarreal, B. J., & White, M. (2012). The role of hardiness and grit in predicting performance and retention of US-MA Cadets. *Military Psychology, 24*(1), 19-28.

Morera, O. F., Maydeu-Olivares, A., Nygren, T, E., White, R. J., Fernandez, N. P., & Skewes, M. C. (2006). Social problem solving predicts decision making styles among US Hispanics. *Personality and Individual Differences*, 41, 307-317.

Mueller, C. M., & Dweck, C. S. (1998). Intelligence praise can undermine motivation and performance. *Journal of Personality and Social Psychology*, 75, 33-52.

Nelson, R., Dykeman, C., Powell, S., & Petty, D. (1996). The effects of a group counseling intervention on students with behavioral adjustment problems. *Elementary School Guidance and Counseling, 31*(1) 21-33.

Ouellette, S, C. (1993). Inquiries into hardiness. In L. Goldberger & S. Breznitz (Eds.). *Handbook of Stress: Theoretical and Clinical Aspects* (pp. 77-100). New York: Free Press.

Robotham, D. (2008). Stress among higher education students towards a research agenda. *Higher Education*, 56, 735-746. https://doi.org/10.1007/s10734-008-9137-1

Saracaloğlu, A. S., Yenice, N., & Karasakaloğlu, N. (2009). The Relationship between communication and problem-solving skills and reading interest and habits of candidate teachers. *Van Yüzüncü Yıl University Journal of Education*, *6*(2), 187-206.

Sheard, M., & Golby, J. (2007). Hardiness and undergraduate academic study: The moderating role of commitment. *Personality and Individual Differences*, 43, 579-588. http://dx.doi.org/10.1016/j.paid.2007.01.06

Spiridon, K., & Evangelia, K. (2014). Exploring academic hardiness in Greek students. Links with achievement and year of study. *Annals of the Department of Preschool Education University of Ioannina Greece*. 6, 10-12.

Van Acker, R. (1993). Dealing with conflict and aggression in the classroom: What skills do teachers need? *Teacher Education and Special Education, 16*(1), 23-33.

Vogt, D. S., Rizvi, S. L., Shipherd, J. C., & Resick, P. A. (2008). Longitudinal investigation of reciprocal relationship between stress reactions and hardiness. *Personality and Social Psychological Bulletin*, 34, 61-73. http://doi:/10.1177/0146167207309197

Yunita, M. M., & Monalisa. (2021). Relationship of hardiness and academic stress to future orientation in final-level students in Jakarta. *Social and Behavioral Science.* DOI 10.4108/eai.17-11-2021.2318621