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Predictors of life skills level of students in Zahedan University of Medical Sciences in Southeast of Iran

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Original article

ABSTRACT

Background and aims: Life skills involve a big class of socio-psychological and interpersonal skills which help a person to take conscious decisions, communicate effectively and improve self-management skills. Preparing a plan for all the above mentioned programs, need awareness about life skills level of different groups such as students in universities. Present study was aimed to reveal the predictors of life skills level of Students in Zahedan University of Medical Sciences in southeast of Iran.

Methods: This cross-sectional study carried out on 380 medical students of Zahedan in 2015. The subjects were selected using stratified random sampling method. The data were collected using reliable Life Skill Dimensions Score questionnaire. The data were analyzed in Stata software using ANOVA, Independent t-test and multiple linear regression with Hosmer-Lemshow method.

Results: The mean of total score regarding life skills score was 280.8±45.8. The linear regression analysis indicated that gender (β=11.15, 95% CI: 5.03-17.27), socioeconomic status (β=6.78, 95% CI: 1.76-11.8) and average grades (β=15.3, 95% CI: 9.11-21.49) were associated with life skills score. However, the life skills score was not associated with the age, semester, residential area, smoking, marital status and school of education (P>0.05).

Conclusion: The level of life skills scores of medical students in southeast of Iran is low in all dimensions especially in communication skills. Thus, promoting life skills in university students is too important. However, the life skills training programs should be implemented with respect to socioeconomic status, gender and average grade and male students with low socioeconomic status and average have priority.

Keywords: Life skills, Medical students, Zahedan.

INTRODUCTION

Life skills (LS) are abilities needed to provide the basis for effective stress management and representation of positive behaviors.[1] These skills can lead to higher acceptability in individuals regarding their social role responsibilities and to face others' demands and expectations. On the other hand, the persons with higher level of

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LS can manage daily interpersonal problems effectively without hurting himself or others.[1,2]

The previous studies showed that the higher level of LS can affect some behaviors in all people especially students in university. For example LS is effective in promotion of drug abuse preventive behaviors.[3] The previous study on the students of Cambodia university showed that LS may enhance the overall mental health of young people and indirectly influence suicide, particularly among boys with high-risk behavior.[4] On the other hand, LS may increase the necessary skills and decrease the school and educational problems as well as decreasing in subjective well-Being of students.[5,6] Therefore, it seems that the study in this area to more expedition especially among university students is too important and the results could help authorities and psychologists to plan good programs regarding increase in preventive behaviors skills, mental health promotion and decline in educational problems of the students. It might worth mentioning that having plan for all the above mentioned programs needs awareness about LS Level of different groups such as students in universities.

The LS level of students has been reported various from different regions in Iranian students and around the world. In a study in Thailand, only 20.6% of the students had high level of LS in different items and perspectives.[7] As the results of the previous study in Tehran University, capital of Iran, the LS level of 47.5% and 43.2% of the students were moderate and good, respectively.[8] On the other hand, in a study in north of Iran, the level of LS among students has reported overall in moderate level.[9] Sistan and Baluchistan province is a deprived region that is located in the southeast of Iran. As we know, there is no comprehensive study about LS level of

university students in southeast of Iran. On the other hand, the medical students will give services to patients in health system and level of LS may influence their duty in the future. Therefore, study about LS level of students and its predictors are so important. The results of our study can provide useful insights regarding predictors of LS level of university students that can be used by relevant authorities to identify high-risk groups and have plan to effective educational programs for prevention of decreasing LS level in medical university students. This study was conducted to estimate the LS level and some related factors among students of Zahedan University of Medical Sciences (ZUMS) in southeastern Iran to encourage and inform interventions and the future research agenda regarding medical students. Due to the lack of data in Sistan and Baluchistan province, the results of this study (as we know this is the first study in this region) can also provide the basis for comparison in future epidemiological studies.

METHODS

This cross-sectional study carried out on 380 medical students of ZUMS in southeast of Iran, 2015. The subjects were selected using two-stage random sampling method. Firstly, the students were selected through stratified proportional sampling method based on level and school. Then in each stratum, the students were selected by random sampling method based on the sample frame. Statistical population consisted of all the students in ZUMS including 2351 females and 1376 males. This study was approved in Ethics Committee of ZUMS and also informed consent was taken from the students before collecting the data. To enhance the validity of student's self-reports, they were assured strict confidentiality of their responses and

they could not be recognized by their answers. Also they were informed about the voluntary nature of their participation in the study. The data were collected using a structured questionnaire. The first section of the questionnaire contained demographic variables such as age, sex, average annually score, semester order, school of education, residential area, socioeconomic status (SES), marital status and cigarette or other tobacco smoking. The socioeconomic status variable was constructed using family income, educational level and occupation of the parents by principal component analysis (PCA). The students were categorized into low, intermediate and high socioeconomic status using 25% and 75% percentiles.

The second section was the reliable and standard Life Skill Dimensions Score (LSDS) questionnaire. The LSDS measures 10 essential life skills according to the WHO. The following 10 life skill dimensions are the ability to have effective communication (11 items), the ability for effective interpersonal relationship (12 items), decision making ability (8 items), problem solving ability (6 items), creative thinking ability (6 items), critically thinking ability (14 items), the ability of being aware of the self (11 items), the ability of having sympathy with others (7 items), the ability to deal with emotions such as failure, anxiety, depression (7 items) and the ability to deal with stress (6 items). It is a self-administered questionnaire, scored on a Likert-type scale ranging from 1 to 5. So, this test produced a potential range of 20 to 100, which higher scores indicate better life skills, as the statements relate to negative attributes. The reliability and validity of the LSDS have been established by previous studies.[10] However, the validity of questionnaire was approved with at least 0.89 Content Validity Index (CVI) for every question by 10 expert persons and the reliability was approved by r= 0.79 using test–retest correlation (Pearson correlation coefficient) in 30 medical students with 2-week interval.

The normality of LSDS variable was checked and approved by Shapiro-wilks test. Therefore, the independent sample t-test and ANOVA with LSD post hoc tests were used to examine unadjusted association between related risk factors and LSDS in the bivariate analysis. The assumptions of the linear regression are the normality of dependent variable and independency of data; as the normality of LSDS was approved and the data were independent. So, the multiple linear regressions with Hosmer and Lemeshow method was used to investigate the effect of predicting factors on LSDS among medical students by controlling potential confounders. The data were analyzed in Stata 12 software. Significance level was defined as $P<0.05$.

RESULTS

A total of 380 students participated in our study. The average age of the students in the sample was 21.7±1.9 (Min. 18 and Max. 27). Of all the subjects, 238 (62.7%) were females and 142 (37.3%) were males. The mean average grade of the students was 16.4±8.3 (Median: 16). In this study 74.2% (N= 282) of the students lived in dormitory. About 31.3%, 11.6%, 16.3%, 14.5%, 10% and 16.3% of the students were from medical, dental, paramedical, health, rehabilitation and nursing faculty, respectively. On the other hand, 5.2%, 9.2%, 11.4%, 13%, 15.2%, 11.8%, 12.1% and 9.9% of the students were in the first to eighth semester, respectively and the others were in higher terms. About 87% of the students were single and the prevalence of smoking was 6.3% and about 43% of the students had experienced cigarette or other tobacco smoking during their life.

In order to study the association between SES and LSDS, SES was

determined through PCA. Using this method, five dependent variables including mother educational level (ME), father educational level (FE), mother occupation (MO), father occupation (FO), and family income (FI) were summarized in one main component presented below:

Principal Component= 0.77 ME + 0.69 FE + 0.64 MO + 0.49 FO + 0.81 FI. This component explained 77.0% of the variance.

Table 1 shows some central and dispersion indices of the LSDS in various dimensions. The mean of total score regarding LSDS was 280.8±45.8. Based on the maximum score that they can be acquired, the mean of LS scores of students in all dimensions is partly low. Because the mean score of the dimensions "ability to have effective communication" and "ability for effective interpersonal relationship" are only 54% and 57.7% of the maximum score, respectively, thus, it seems that the students have more problems regarding these mentioned dimensions.

Table 1: Central and dispersion indices of the LSDS* in various dimensions among students of ZUMS* in southeast of Iran

LSDS' dimensions	Mean	SD	Median	Mode	Minimum	Maximum
Ability to have effective communication	24.3	7.4	25	33	15	45
Ability for effective interpersonal relationship	31.2	7.1	32	24	16	54
Decision making ability	25.9	4.7	28	23	11	33
Problem solving ability	20.1	3.9	16	18	10	26
Creative thinking ability	18.1	4.1	15	19	8	23
Critically thinking ability	42.3	8.1	37	44	19	63
Ability of being aware of the self	31.4	5.1	28	33	16	41
Ability of having sympathy with others	24.7	4.9	21	26	13	33
Ability to deal with emotions	23.9	4.2	19	21	12	32
Ability to deal with stress	22.2	3.4	19	18	10	31
Total score	280.8	45.8	276	263	126	416

* LSDS: Life Skill Dimensions Score; ZUMS: Zahedan University of Medical Sciences.

The results of bivariate analysis indicated that LS level was statically significantly associated with female gender, lower SES and lower average grades. The total mean scores of LS were higher among males and high grad students compared to females and low grade students. On the other hand, the students with low SES were more likely to low LSDS. Another result was that the LSDS of the students in dental school were more than the other students. Although the LSDS of the students live in dormitory was more than the other students, but this difference was not statistically significant (P=0.074) (Table 2).

Table 2: The mean and standard deviation of the various dimensions of LSDS* by demographic variables among students of ZUMS* in southeast of Iran

Variables		N (%)	Total LSDS*(Mean ± SD)	P
Gender	Male	142 (37.3)	288.8±42.3	
	Female	238 (62.7)	270.4±48.4	0.002
Residential area	Dormitory	282 (74.2)	282.1±43.6	
	Private Home	98 (25.8)	269.8±51.3	0.074
	First and Second	55(14.4)	278.7±33.9	
Semester	Third and Forth	93(24.4)	282.9±43.1	0.1
	Fifth and higher	232(61.2)	287.9±38.3	
	Dental (A)	44(11.6)	307.8±35.1	
	Medical (B)	119(31.3)	279.8±40.8	0.005**
School of Education	Health (C)	55(14.5)	269.9±55.9	
	Nursing(D)	62(16.3)	275.1±50.37	
	Paramedical (E)	62(16.3)	266.8±44.8	
	Rehabilitation (F)	38(10)	266.6±36.5	
Age	≤20	152(40)	278.8±45.3	
	>20	228(60)	286.1±50.5	0.17
	<15(A)	141(37.1)	274.2±45.7	0.3****
Average grades***	15-18(B)	204(53.7)	279.3±44.4	0.003****
	>18(C)	35(9.2)	331.5±42.6	0.003****
	Low(A)	60(15.7)	255.2±39.9	0.022****
SES*	Moderate(B)	185(48.7)	267.1±41.9	0.003****
	High(C)	135(35.6)	305.2±41.6	0.004****
Marital status	Single	330(87)	279.8±44.4	0.23
	Married	50(13)	287.8±53.3	
Smoking (Cigarette of tobacco)	Yes	163(43)	267.8±54.7	0.15
	No	217(57)	280.1±45	

*LSDS: Life Skill Dimensions Score; ZUMS: Zahedan University of Medical Sciences. SES: Socioeconomic Status.**The ANOVA and LSD post hoc tests to compare the groups; the P values for the differences between groups A and B, A and C, A and D, A and E and A and F, respectively. The difference between the other groups were not statistically significant (P>0.05). ***The average of diploma degree was considered for the students in first semester. **** The ANOVA and LSD post hoc tests to compare the groups; the P values for the differences between groups A and B, A and C and B and C, respectively.

The results of linear regression analysis with Hosmer-leme show method indicated that gender (β=11.15, 95% CI: 5.03-17.27), SES (β=6.78, 95% CI: 1.76-11.8) and average grades (β=15.3, 95% CI: 9.11-21.49) were statistically and significantly associated with LSDS and remained in the final model. Although the variable school of

education was not statistically and significantly associated with LSDS, but improved and decreased the residuals of the final model (Table 3).

Table 3: Linear regression results for factors predicting LSDS* among students of ZUMS* in southeast of Iran

Variables		β	95 % CI	P
Gender (Male/Female)		11.15	5.03-17.27	0.03
School of Education*	Paramedical	1	-	-
	Rehabilitation	4.04	-1.17-9.25	0.17
	Health	5.15	-0.75-11.05	0.1
	Nursing	5.02	-0.01-10.05	0.08
	Medical	6.13	-1.05-13.31	0.13
	Dental	7.4	-0.68-15.48	0.07
	Higher SES score	6.78	1.76-11.8	0.03
	Higher average grades	15.3	9.11-21.49	0.009

*LSDS: Life Skill Dimensions Score; ZUMS: Zahedan University of Medical; **Has been generated dummy variable for the variable "school of education" and the reference group is paramedical school.*

DISCUSSION

This study showed that the overall mean score for LSDS among students of ZUMS is low and life skills training programs at regular intervals is recommended for the students. Most of the previous studies in Iran and around the world have assessed the effect of life skill training programs on increasing the LS level but there are few studies about the situation of life skills among university students.[3-8] Although the previous work in Iran showed that LS level of university students is acceptable, but the study population, place and time of study could explain this results at present study.

The students have more problems regarding dimensions of "ability to have effective communication" and "ability for effective interpersonal relationship". It seems that the communication skills of students at ZUMS are very low. The previous study has shown that life skills training can positively increase the self-esteem and communication skills.[11]

Another study has revealed that the students with learning disorder have defects in social problem-solving skills and interpersonal relations.[12]

On the other hand, as the relation between low average grade and low LSDS in this study, it could be concluded that most of the students with low Intercommunication Skills (ICS) are amongst students with academic problems and low average. Besides, the people with communication problems are more unsociable and individuals with low ICS are more anxious and consequently have low LS level.[13,14] Thus, life skills training with emphasis on improvement of communication skills may be a best method for increasing LS level of the students at risk. However, these trainings should run regarding the cultural background and environmental structures of the students.

In this study, the LSDS of the males was more than females. This result is similar

to some previous studies conducted in Iran and other studies around the world.[4,15] The boys and girls have different preferences for their life and expectations of them from different subjects may also explain gender difference in internet use.[16] Thus, it is recommended that the students receive necessary educations in this field periodically regarding females priority.

As stated earlier, based on the results of our study, the level of LS among students in low average grade was less than high average grade students. This finding is constant with the result of the previous study that concluded the daily living skills can easily be integrated into the classrooms of students with learning disabilities.[17,18] Again it could be concluded that the low level of LS cause to lower average grade among students.

It is recommended that the students with low average grade be screened regarding LS in every semester by educational affaire authorities in the universities and the life skills training programs implemented at least for the students that have educational failure. It must be mentioned that one study has shown that an integrating problem-based learning and simulation course significantly improve the learner motivation and life skills.[19] Thus, there is a reciprocal relation between learning status and life skills, so that the teachers and schools' authorities can considered this condition as a good opportunity to increasing LS level of students in universities.

This study showed that the students with low SES were more likely to low LSDS and possibly SES could increase adaptive coping skills and decrease maladaptive ones and consequently lead to a more healthy society. This result is in line with the previous study in Iran.[20] On the other hand, there was no relation between semester order and score of LS in students. It seems that the students with high SES have higher

LSDS even in the beginning of the university. Considering the effect of school based universal programs on improvement of the psychological well-being and seeking behavior of the student.[4] Therefore, life skills training programs could be more effective in the beginning of the university at the primary semesters. It should be noted that promoting life skills in schools and universities may enhance the overall mental health.[21] As the students with low SES have more problems and concern regarding different aspects of life, thus implementation of life skills promoting programs and increasing the knowledge of students (especially those who are from low SES families) about LS is so important. In this regard, schools authorities and counselors have an important role to elaborate skills which guide students' life.[5]

There are several limitations to our study. First, although the cross-sectional nature of the study provided evidence of association between predictor variables and LSDS, it could not establish temporality between predictor and level of LS, precluding causal inference. Second, in spite of satisfactory methodology and sampling design method, our findings should not be generalized to all universities in Iran because of our sample derived from a medical sciences university in southeast of Iran that its atmosphere is different from other universities

CONCLUSION

Totally, the level of LS among medical students in ZUMS is pretty different from the other regions and the female students have less LS level than males. Unfortunately, most of the time the students are not aware about the importance of LS and also the authorities do not implement the benefit programs in this field so that, even may never think about it. Hence, the

authorities in the universities should try to have life skills training programs for students. It seems that collaboration between parents, teachers and authorities of universities in warning and changing students' attitude towards their life, especially in the beginning of university, could more effectively address the LS among students.

CONFLICT OF INTEREST

There is no Conflict of interest in this study.

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