Self-Esteem Level and Its Relationship to Academic Performance among Undergraduate Pharmacy Students in a Malaysian Public University

Sharmimi Nabila Ahmat[1], Mohd Rahimi Muda[1], Chin Fen Neoh[1,2]*

[1]Department of Pharmacy Practice, Faculty of Pharmacy, Universiti Teknologi MARA, Puncak Alam Campus, Selangor, MALAYSIA.
[2]Collaborative Drug Discovery Research (CDDR) Group, Pharmaceutical and Life Sciences Community of Research, Universiti Teknologi MARA, Shah Alam Campus, Selangor, MALAYSIA.

ABSTRACT

Objectives: To assess self-esteem level among undergraduate pharmacy students, to determine the demographic variables that could have significantly influenced the self-esteem level and to determine the correlation between the self-esteem level and academic performance. **Methods:** A 10-item Rosenberg Self-Esteem Scale (RSES) together with demographics section (e.g. age, gender, year of study, marital status, residency, highest achieved qualification), was distributed to all year 1 to year 4 pharmacy students at Universiti Teknologi MARA Puncak Alam, Malaysia. In addition, cumulative grade point average (CGPA) was collected. Data were then analysed using SPSS version 22.0. **Results:** A total of 239 undergraduate pharmacy students completed the questionnaire, giving a response rate of 93.4%. The majority were female (199/239, 83.3%) age of 20-25 years old (232/239, 97.00%). Most reported an average self-esteem level; the mean ($\pm$ SD) score of self-esteem was 17.30 $\pm$ 3.88. In contrast to previous findings, there was no significant correlation between the self-esteem level and CGPA (p = 0.87) in the current study. Also, other demographic variables did not contribute to any significant difference in self-esteem level (p > 0.05) among the undergraduate pharmacy students. **Conclusion:** Internal and external factors are the two distinct aspects that can influence personal perception on the self-belief, further influencing the self-esteem level of an individual. The current study findings revealed that there was negative correlation between the self-esteem level and academic performance among the undergraduate pharmacy students. Self-reported data on CPGA could be the limitation.

Key words: Academic Performance, Pharmacy, Self-Esteem, Below:CGPA, Undergraduate.

INTRODUCTION

Self-esteem is defined as both positive and negative attitudes to own personality.[1] It is subjective as it depends on own psychology and emotional status about his or her own worth. Education plays a significant role in forming self-personality and attitude, and this can determine whether a person has a low or high self-esteem value.[2] Previous study revealed that there was a direct relationship between a student's self-esteem and their academic performance.[2] Students who have high confidence level are likely to have high self-esteem and better achievement in academic performance while the other study reported otherwise.[3] Other factors such as gender,[4] stress level and body appearances[5] were found to have a role in determining the level of self-esteem among the students as well. To date, studies have been carried out and involved university students from both non-health-related and health-related programmes. As for health-related programme, studies have been done among health sciences students, nursing students, medical students and as well as psychology and educational sciences students.[6-8] However, no study has evaluated

the self-esteem level among pharmacy students, in particular, the Malaysian setting. Therefore, this study aimed to investigate the self-esteem level of undergraduate pharmacy students and to determine the demographic variables that could have significantly influenced the self-esteem level. Also, this study assessed the relationship between the level of self-esteem and academic performance achieved among the pharmacy students. This study could provide important insights on the level of self-esteem among the pharmacy students and its correlates as existing studies revealed that there was a sensible difference in self-esteem level among the students from different faculties.[6]

MATERIAL AND METHODS

Study design, participants and settings

This cross-sectional study was conducted between March and June 2016 at the Faculty of Pharmacy, Universiti Teknologi MARA (UiTM) Puncak Alam, Malaysia. Ethics approval from UiTM Research Ethics Committee was obtained (Reference no: REC/114/16). All undergraduate pharmacy students, from year 1 to 4, were invited to participate in the study (n=764). Stratified random sampling was used and sample size required was 256 students, with 95% confidence level, and a margin error of 5%; calculated using Raosoft® (Sample Size Calculator; Raosoft inc.).[1] This survey was conducted in lecture halls and a short briefing was given before administering the surveys. All surveys were collected on the same day and completion of the survey implied consent.

Study Instrument

A 17-item survey instrument, which consisted of: demographics items, including gender, age, marital status, residency, highest achieved qualification, year of study, and current CGPA and[2] 10-items, validated Rosenberg Self-Esteem Scale (RSES),[1] was administered to all year 1 to year 4 pharmacy students at University Teknologi MARA Puncak Alam, Malaysia. The RSES (Table 1) is scored from 0 (strongly disagree) to 3 (strongly agree). It is set as unidimensional structure where five questions (i.e. Question 1, 3, 4, 7, and 10) are positively stated and the other five (i.e. Questions 2, 5, 6, 8, 9) are negatively stated. Higher scores indicate higher level of self-esteem. Academic performance for each student was determined based on the cumulative grade point average (CGPA), ranging from 0 (lowest) to 4 (highest). The questionnaire was pilot-tested for face

and content validity as well as for reliability of RSES (Cronbach's alpha value of 0.71).

Statistical Analysis

Statistical Package for Social Sciences Program (SPSS) version 22.0 was used to analyse the data collected for this study. Descriptive statistics (i.e. mean, median, standard deviation and average) were employed. The normality of the distribution for each continuous variable was tested prior to conducting any inferential statistics. All the distributions were normal, parametric tests (e.g. Pearson correlation, independent t-test, one-way ANOVA test) were used to analyse the data. The significance level was set at $p < 0.05$.

RESULTS

A total of 256 questionnaires were distributed among the UiTM undergraduate pharmacy students at Faculty of Pharmacy and only 239 students responded to this survey. This gave a response rate of 93.4%. The demographic data of the participants are summarised in Table 2. Most were female (n=199, 83.3%), and the remainders were male. The age of students was ranging from 19 to 26, with a median of 22 years old. Almost all were single (n=235, 98.3%). Of the 239 respondents, 26.4% were from Year 1, 25.9% from Year 2, 20.9% from Year 3 and 26.8% from Year 4. The students formerly were from foundation (n=98, 41.0%), matriculation (n=70, 29.3%) and diploma (n=71, 29.7%). The mean (±SD) self-reported CGPA was 3.23 ± 0.31.

The mean score of self-esteem was 17.30 ± 3.88. The lowest score was 5 out of 30 and the highest was 29. No significant difference was observed between the self-esteem level and all the demographic variables (Table 2). While Year 2 and Year 4 pharmacy students reported a higher self-esteem score compared to Year 1 and Year 3 pharmacy students, the differences in self-esteem score were not significant ($p = 0.08$). As for the relationship between self-esteem level and academic performance (i.e. CGPA), there was a weak, negative correlation between both variables ($r^2 = -0.10$, $p = 0.87$).

DISCUSSION

The findings from this study showed that undergraduate pharmacy students reported an average self-esteem level. Whilst several studies have been conducted in various health-related programmes (e.g. nursing, health sciences, medicine), this study was the first to investigate the self-esteem level among the pharmacy students. A study was conducted among the undergraduate nursing students from University of Medical Sciences in Tehran;

---

1 Raosoft, I. *Sample Size Calculator*, <http://www.raosoft.com/samplesize.html> (2004)

Table 1: Rosenberg Self-Esteem Scale (RSES) (1)					
Instructions: Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, circle **SA**. If you agree with the statement, circle **A**. If you disagree, circle **D**. If you strongly disagree, circle **SD**.					
1.	On the whole, I am satisfied with myself.	SA	A	D	SD
2.*	At times, I think I am no good at all.	SA	A	D	SD
3.	I feel that I have a number of good qualities.	SA	A	D	SD
4.	I am able to do things as well as most other people.	SA	A	D	SD
5.*	I feel I do not have much to be proud of.	SA	A	D	SD
6.*	I certainly feel useless at times.	SA	A	D	SD
7.	I feel that I'm a person of worth, at least on an equal plane with others.	SA	A	D	SD
8.*	I wish I could have more respect for myself.	SA	A	D	SD
9.*	All in all, I am inclined to feel that I am a failure.	SA	A	D	SD
10.	I take a positive attitude toward myself.	SA	A	D	SD

Table 2: Demographic variables and their relationship to self-esteem level					
Demographic variables		N (%)	Mean score	Std. Deviation (SD)	Sig.(p)
Age	<20	3 (1.3)	17.00	4.36	0.09
	20-25	232 (97.0)	17.03	3.54	
	>25	4 (1.7)	15.75	4.27	
Gender	Male	40 (16.7)	16.95	5.15	0.53
	Female	199 (83.3)	17.37	3.59	
Marital status	Single	235 (98.3)	17.32	3.90	0.54
	Married	3 (1.2)	17.33	2.08	
	Divorced	1 (0.4)	13.00	.	
Residency	College	108 (45.2)	16.81	3.94	0.32
	Rent house	120 (50.2)	17.72	3.73	
	Parent's house	10 (4.2)	17.30	4.86	
	Relative's house	1 (0.4)	20.00	.	
Year of study	Year 1	63 (26.4)	16.27	3.27	0.08
	Year 2	62 (25.9)	17.84	4.11	
	Year 3	50 (20.9)	17.28	4.05	
	Year 4	64 (26.8)	17.81	3.88	
Highest qualification attained	Foundation	98 (41.0)	17.27	3.91	0.99
	Matriculation	70 (29.3)	17.33	3.51	
	Diploma	71 (29.7)	17.30	3.89	
Latest CGPA	<2.50	1 (0.4)	14.00	-	0.91
	2.50-3.00	74 (30.9)	17.61		
	3.01-3.50	117 (48.9)	17.42		
	>3.50	47 (19.6)	17.27		

high self-esteem level, especially the fourth-year students, was reported, with a mean score of 37.6 ± 7.3, using Coopersmith Self-esteem Inventory.[9] Similarly, in the study by Karagozoglu *et al.*, nursing students had the highest self-esteem score in comparison to the students from other health-related programmes (e.g. midwifery, social sciences) in a Turkish university.[11] It is difficult to compare the self-esteem score from previous studies with this current study given the different self-esteem inventories were used.

The findings from this study showed no significant correlation between self-esteem level and CGPA. This differs from the study conducted by Aryana and El-Anzi in which a significant positive relationship between self-esteem and academic achievement was noted.[12,13] Also, the findings from the current study was inconsistent with the previous studies whereby significant differences in self-esteem level was noted between male and female students.[7-14] Male undergraduate education and business students were reported to have higher self-esteem level as compared to females.[7-14] Heatherton *et al.* believed that self-esteem is more related to body dissatisfaction when refer to gender difference.[15] In contrast, in the study by Karagozoglu *et al.* reported

that the female nursing students have higher self-esteem level than male nursing students.[11] This belief improves the confidence level in women as they are participating in higher educational level on a par with men. Finding from this study concurs to the study by Rosli *et al*. whereby no significant difference was found in self-esteem level between the male and female students from Faculty of Health Sciences and Medicine, National University of Malaysia.[2] The insignificant findings could be due to the fact that the majority of the respondents in the current study were female.

The self-esteem level was not significantly impacted by the different year of study, consistent with the findings by Sasat *et al*.[16] that involved nursing students in Thailand and the United Kingdom. However, the current study finding differ from studies by Ghezelbash *et al*. and Lo.[8,9] While nursing students who were in senior years reported a greater self-esteem level in the study by Ghezelbash *et al*.,[9] Cowin *et al*.[17] on the other hand, found that the self-esteem level was decreasing with the increasing academic year in the nursing programme. Diseth *et al*.[18] also found that decreasing self-esteem level throughout the academic years occurred only in females, although the difference was not significant. These inconsistencies in findings could be due to the differences in study cohorts and also the measures of self-esteem used in these studies.

In the current study, other demographic factors such as age, marital status, residency and highest achieved qualification did not contribute to any significant difference in the self-esteem level among the undergraduate pharmacy students. In contrast, in the study by Serinkan *et al*.[7] self-esteem level was noted to decrease with age among the undergraduate education and business students; the highest self-esteem level was found among the students whom aged between 21 to 23 years old.[7] Shavelson *et al*.[17] stated that as more experience gained with increasing age, the self-esteem level might be varied accordingly.

There were several limitations in the current study. Firstly, the CGPA was self-reported by the respondents and subject to bias. Second, the current study did not attempt to explore the possible relationship between self-esteem level and other demographic variable such as family background, economic status, body satisfaction, parent educational level, stress level, and social activity. The study findings may not be able to generalizable to other pharmacy schools in Malaysia as it involved only a single institution.

CONCLUSION

Self-esteem and academic achievement are two correlating variables that support each other. It is undeniable that low self-esteem level could have contributed to low academic achievement, but more in-depth research must be done in this area. The findings from the current study, however, revealed that the negative correlation between the self-esteem level and academic performance among the undergraduate pharmacy students. Internal and external factors are the two different aspects that can influence personal perception on the self-belief, further influencing the self-esteem level of an individual. Determining the main aspects that highly affect self-esteem and academic achievement would be useful and warrants for future investigations.

ACKNOWLEDGEMENT

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

ABBREVIATION USED

UiTM: Universiti Teknologi MARA; **RSES:** Rosenberg Self-Esteem Scale; **CGPA:** Cumulative grade point average; Statistical Package for Social Sciences Program.

REFERENCES

1. Rosenberg M. Society and the adolescent self-image. 1965; Available from: http://psycnet.apa.org/journals/ort/36/3/560.pdf%26productCode=pa

2. Rosli Y, Othman H, Ishak I, Lubis SH, Saat NZM, Omar B. Self-esteem and Academic Performance Relationship Amongst the Second Year Undergraduate Students of Universiti Kebangsaan Malaysia, Kuala Lumpur Campus. Procedia - Soc Behav Sci [Internet]. 2012;60:582–9. Available from: http://www.sciencedirect.com/science/article/pii/S1877042812038815

3. Naderi H, Abdullah R, Aizan HT, Sharir J, Kumar V. Self-esteem, gender and academic achievement of undergraduate students. Am J Sci Res [Internet]. 2009;3:26–37. Available from: http://www.researchgate.net/profile/Habibollah_Naderi/publication/254896618_Self_Esteem_Gender_and_Academic_Achievement_of_Undergraduate_Students/links/0c96053b78e7c29fbc000000.pdf

4. Jenaabadi H. Studying the Relation Between Emotional Intelligence and Self Esteem with Academic Achievement. Procedia - Soc Behav Sci [Internet]. 2014;114:203–6. Available from: http://www.sciencedirect.com/science/article/pii/S187704281305324X

5. Pope AW, McHale SM, Craighead WE. Self-esteem enhancement with children and adolescents. [Internet]. Pergamon Press; 1988. Available from: http://psycnet.apa.org/psycinfo/1988-98067-000

6. Saadat M, Ghasemzadeh A, Soleimani M. Self-esteem in Iranian university students and its relationship with academic achievement. Procedia - Soc

Behav Sci [Internet]. 2012;31:10–4. Available from: http://www.sciencedirect.com/science/article/pii/S1877042811029363

7. Serınkan C, Avcık C, Kaymakçı K, Alacaoğlu D. Determination of Students Self-esteem Levels at Pamukkale University. Procedia - Soc Behav Sci [Internet]. 2014;116:4155–8. Available from: http://www.sciencedirect.com/science/article/pii/S1877042814009252

8. Lo R. A longitudinal study of perceived level of stress, coping and self-esteem of undergraduate nursing students: an Australian case study. J Adv Nurs [Internet]. 2002;39(2):119–26. Available from: http://onlinelibrary.wiley.com/doi/10.1046/j.1365-2648.2000.02251.x/full

9. Ghezelbash S, Rahmani F, Peyrovi H, Inanloo M, Shekarchian S. Comparison of Self-Esteem Among First to Fourth Year Nursing Students From Universities of Medical Sciences in Tehran. Thrita [Internet]. 2015;4(1). Available from: http://www.thritajournal.com/?page=article&article_id=24336

10. Suliman WA, Halabi J. Critical thinking, self-esteem, and state anxiety of nursing students. Nurse Educ Today [Internet]. 2007;27(2):162–8. Available from: http://www.nurseeducationtoday.com/article/S0260691706000608/abstract

11. Karagözoğlu Ş, Kahve E, Koç Ö, Adamişoğlu D. Self esteem and assertiveness of final year Turkish university students. Nurse Educ Today [Internet]. 2008;28(5):641–9. Available from: http://www.sciencedirect.com/science/article/pii/S0260691707001402

12. Aryana M. Relationship Between Self-esteem and Academic Achievement Amongst Pre-University Students. J Appl Sci [Internet]. 2010;10(20):2474–7. Available from: http://www.scialert.net/abstract/?doi=jas.2010.2474.2477

13. El-Anzi FO. Academic achievement and its relationship with anxiety, self-esteem, optimism, and pessimism in Kuwaiti students. Soc Behav Personal an Int J [Internet]. 2005;33(1):95–104. Available from: http://www.ingentaconnect.com/content/sbp/sbp/2005/00000033/00000001/art00010

14. Joshi S, Srivastava R. Self-esteem and academic achievement of adolescents. J Indian Acad Appl Psychol [Internet]. 2009;35:33–9. Available from: http://medind.nic.in/jak/t09/s1/jakt09s1p33.pdf

15. Heatherton TF, Wyland CL, Lopez SJ. Assessing self-esteem. Posit Psychol Assess A Handb Model Meas [Internet]. 2003;219–33. Available from: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.455.9468&rep=rep1&type=pdf

16. Sasat S, Burnard P, Edwards D, Naiyapatana W, Hebden U, Boonrod W, et al. Self-esteem and student nurses: A cross-cultural study of nursing students in Thailand and the UK. Nurs Health Sci [Internet]. 2002;4(1–2):9–14. Available from: http://onlinelibrary.wiley.com/doi/10.1046/j.1442-2018.2002.00095.x/full

17. Cowin LS, Craven RG, Johnson M, Marsh HW. A longitudinal study of student and experienced nurses' self-concept. Collegian [Internet]. 2006;13(3):25–31. Available from: http://www.sciencedirect.com/science/article/pii/S1322276960 8605296

18. Diseth Å, Meland E, Breidablik HJ. Self-beliefs among students: Grade level and gender differences in self-esteem, self-efficacy and implicit theories of intelligence. Learn Individ Differ [Internet]. 2014;35:1–8. Available from: http://www.sciencedirect.com/science/article/pii/S1041608014001204