A study of self-esteem and academic achievement of undergraduate students with physical or locomotion disability in Chiang Mai University

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ABSTRACT

Background: Self-esteem reflects an individual's judgment concerning worth and accepting or rejecting of self that shows in one's attitude. Low self-esteem is a weakening condition that shields an individual from understanding their full potential and limits their engaging in an occupation.Academic achievement is viewed as a key criterion to judge one's total capabilities and potentialities. There are several studies about the self-esteem and academic achievement of undergraduate students; however, limited studies exist for undergraduate students with physical or locomotion disability.

Objectives: To determine the level of self-esteem in undergraduate students in Chiang Mai University with a physical or locomotion disability and explore the associations between self-esteem level and academic achievement.

Materials and methods: Data collection was performed during the academic year 2017, in a sample of 27 undergraduate students in Chiang Mai University with physical or locomotion disability using Rogers Rubin's Self-Esteem Scale, in order to identify the self-esteem level of the participants. Fisher's exact tests were used to explore the associations between the self-esteem level and the background characteristics of the participants.

Results: Unexpectedly, the undergraduate students with physical or locomotion disability had average or high self-esteem level, although there was no statistically significant association between academic achievement and self-esteem. Gender variable was significantly associated to the participants' self-esteem.

Conclusion: To promote self-esteem among undergraduate students with a physical or locomotion disability, occupational therapists should encourage them to engage in positive occupations that the person has the capability to accomplish and chooses to accomplish to regulate their rhythm of personal and community life.

Introduction

Number of people with a disability has been increasing with population growth and medical advances. In 2018, Thailand reported that 3.08% of the population were people with some disability.[1] There are seven categories of people with disability: hearing or communication disability, physical or locomotion disability, mental or behavioral disability, intellectual disability, learning disability, autism, and multiple disabilities. The majority, approximately 1,000,000 people, has physical impairments and locomotion limitations.[1]

The college years are a developmentally critical period in light of the fact that college students are making the transition from late adolescence to emerging adulthood.[2] During this period, college students are faced with numerous

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challenges and have an extensive variety of necessities.[3] On one side, the progress from secondary school to college is a noteworthy life change for some students. For students who move far from home, the transition to college decreases contact and, likely help, from family and companions. They have to adapt to changes autonomously and deal with their college life to adjust to the new condition.[4] On another side, they are faced with academic adjustment, or how well they manage educational demands, including inspiration to finish academic work, achievement in meeting academic requirements, academic exertion, and fulfillment with the academic condition.[5] Compas *et al.* reported that university life has more stress than students anticipate.[6] Troubles taking care of these stresses may prompt diminished academic performance and increased psychological distress.[7]

Self-esteem is one of the important resources for students undergoing the transition to university. Self-esteem is a personal judgment of his or her self-worth.[8] It is also designated as self-worth, self-respect, self-acceptance, self-regard, self-feeling, and self-evaluation.[9] Self-esteem ranges from extremely positive to extremely negative. An environment of success raises it while an environment of failure lowers it. A few indications of positive self-esteem will be certainty, an awareness of personal strengths, optimism, self-direction, an independent and cooperative attitude, a capacity to confide in others and to feel good with an extensive variety of feelings. Whereas a person who has low self-esteem feels incapable, dependent, unworthy, and incompetent, has a fear of being derided. Low self-esteem is a weakening condition that shields an individual from understanding their full potential.[10]

Academic achievement viewed as a key criterion to judge one's total capability and potential as students with high self-esteem appear to be more successful than those with low self-esteem. There are a few investigations that do not distinguish a significant relationship between self-esteem and academic performance. A few authors contend that low self-esteem does not really demonstrate poor academic performance.[11-14] Nevertheless, a number of other studies have shown a significant positive correlation between high-self-esteem and good academic performance,[15-16] thus, reinforcing the view that self-esteem is associated with academic achievement.

According to the Education for Individuals with Disabilities Act B.E. 2551 (2008), the Thai government sets out a few intentions to amplify instructive open doors for persons with disabilities through the improvement of special education and the promotion of integrated education in regular schools.[17] To respond to the government policy, Chiang Mai University (CMU) started enrolling disabled students from 2012. Most of them are students with physical or locomotion disability. Regardless of the increased number of disabled students attending CMU compared to a few decades ago, little is known about the self-esteem of undergraduate students with physical or locomotion disability. [18]

The World Federation of Occupational Therapists defines the profession as concerned with promoting health and well-being through occupation and identifies the profession's primary goal as enabling people to participate in activities of daily life.[19] A previous study reported that low self-esteem is like a loss of inner certainly and power and has an impact on occupational performance.[20] Therefore, this study aimed to investigate the self-esteem level and explore the associations between self-esteem level and academic achievement of undergraduate students in CMU with physical or locomotion disability. Our results may help occupational therapists supervise disabled students who experience difficulties related to low self-esteem.

Materials and methods

Participants

A cross-sectional study was conducted among the total population of undergraduate students in CMU with physical or locomotion disability, Thailand, in the academic year 2017 (N=27).

Ethical approval for the study was obtained from the ethical review committee for research in humans, Faculty of Associated Medical Sciences, Chiang Mai University (approval number: AMSEC-60EX-052). All participants signed a written informed consent before the commencement of the study.

Measurements

All participants completed a general questionnaire designed to collect demographic data, characteristics of gender, age, faculty of studies, and grade point average (GPA).

Rogers Rubin's Self Esteem Scale is a widely used self-report instrument for evaluating individual self-esteem. Rogers Rubin's Self Esteem Scale was developed by Rosenberg and adapted by Paganan and Noisuwan to Thai. The scale was shown to have good reliability and validity.[21-22] In the current study, the Cronbach alpha coefficient of Rogers Rubin's Self Esteem Scale was 0.77. This scale contains 62 items with 3 components; 30 of the items measure the self-concept, 10 of the items measure the self-esteem scale, and 22 of the items measure self-concept rating. The positive and negative items were presented in random order to reduce the effect of respondent set. Each component had a different rating. Participants rated each self-concept item using a dichotomous scale which is a two-point scale (yes/no). Items 1, 2, 3, 4, 8, 10, 13, 16, 17, 18, 19, 20, 22, 23, 25, 27, 29 were reversed scored. Scale format ranging was categorized as follows: "yes"- 2 point, "no"- 1 point. Participants rated each self-esteem item using a 4-point Likert scale format ranging from strongly agree to strongly disagree. Items 33, 35, 38, 39, 40 were reversed scored. Scale format ranging was categorized as follows: "strongly agree"/ "agree"- 2 point, "disagree"/ "strongly disagree" - 1 point. Participants rated each self-concept rating item using a 5-point Likert scale format ranging from never to most of the time. Items 50, 56, 59 were reversed scored. Scale format ranging was categorized as follows: "never" - 1 point, "rarely"- 2 point, "sometimes"- 3 point, "often" - 4 point, "all of the Time"- 5 point. All of the scoring of items was performed reversely for negative questions and directly for positive questions. Scores ranged from 62 to 190, scores between 159-190, 95-158 and 62-94 were

considered as high, average, and low self-esteem, respectively.

Statistical analysis

Data analysis was performed using the statistical package SPSS version 17. Descriptive statistics such as frequencies, mean, and standard deviations were carried out for the variables of the study. Fisher's exact tests were used to explore the associations between the self-esteem level and the background characteristics of participants. The level of significance was set at $p<0.05$.

Results

A total of 27 students with physical or locomotion disability, from undergraduate study programs participated in the study. Their ages ranged from 19 to 25 years (mean=20.74, SD=1.63), with more female than male participants. The years of study ranged from 1 to 7 years (mean=2.78, SD=1.65). The faculty with the highest number of registered students was the faculty of Education with 25.93% of the research participants. The GPA, which was used as an index of academic achievement, ranged from 0.82 to 3.2 (mean=2.28, SD=0.63). Among students with physical or locomotion disability, 70.37% had a GPA of more than 2.00. Demographic characteristics of participants are presented in Table 1.

The results revealed that most of the students with physical or locomotion disability had self-esteem in an average level (59.26%) and high level (40.74%). However, none of the students had a low self-esteem level (Table 2).

Bivariate analyses revealed statistically significant differences ($p<0.05$) in levels of self-esteem with regard to gender (Table 3). However, the GPA was not significantly associated with self-esteem level ($p>0.05$). The results are presented in Table 4.

Table 1 Demographic characteristics of the participants (N=27).

Characteristics	Number	Percentage
Gender		
Female	19	70.37
Male	8	29.63
Age (years)		
19	6	22.22
20	8	29.63
21	7	25.93
22	3	11.11
23	1	3.70
24	0	0
25	2	7.41
Year of study		
Year 1	6	22.22
Year 2	8	29.63
Year 3	6	22.22
Year 4	4	14.81
Year 5	1	3.70
Year 6	0	0
Year 7	2	7.41
Faculty of studies		
Faculty of Humanities	4	14.81
Faculty of Fine Arts	3	11.11
Faculty of Science	4	14.81
Faculty of Engineering	1	3.70
Faculty of Education	7	25.93
Faculty of Business Administration	4	14.81
Faculty of Law	2	7.41
Faculty of Political Science and Public Administration	2	7.41
Grade point average (GPA)		
<2.00	8	29.63
2.00-4.00	19	70.37

Data are presented as number and percentage.

Table 2 Distribution of the undergraduate students with physical or locomotion disability on self-esteem.

Levels	Physical or locomotion disabled students	
	Number	Percentage
High self-esteem	11	40.74
Average self-esteem	16	59.26
Low self-esteem	0	0
Total	27	100

Table 3 Association between gender and self-esteem in students with physical or locomotion disability.

Group	Total numbers of students	Self-esteem level		p-value
		High	Average	
Female	19	5 (26.3%)	14 (73.7%)	0.033*
Male	8	6 (75.0%)	2 (25.0%)	
Total	27	11	16	

Significant values p<0.05-Fisher's exact tests.

Table 4 Association between academic achievement and self-esteem in students with physical or locomotion disability.

Group	Total numbers of students	Self-esteem level		p-value
		High	Average	
GPA <2.00	8	2 (25.0%)	6 (75.0%)	0.405
GPA 2.00-4.00	16	9 (47.4%)	10 (52.6%)	
Total	27	11	16	

GPA: Grade point average

Discussion

The study demonstrated that undergraduate students with physical or locomotion disability had an average and a high self-esteem level. Surprisingly, none of the students had a low self-esteem level (Table 2). Previous studies reported that people with disabilities often suffer stigmatization. They often receive negative remarks related to their body, which contributes to the development of the low self-esteem.[23-25] Possible mechanisms through which stigma may decrease self-esteem have been proposed. Self-esteem may be decreased if disabled people incorporate others' stigmatizing reactions into their self-representations.[26-27] Self-esteem is a form of personal appreciation, self-acceptance, and subjective respect of one's own.[28] Self-esteem is to assess the contrast between their ideal self and image of self. We comprehend the self-esteem level of the person by looking at the disparity between how the individual sees oneself and the self they might want to be.[28] The results from this study revealed that 77.8% and 74.07% of disabled students answer "no" in statement "I have a bad shape" and "Now, I want to be different from myself", respectively (data not shown). It is implied that the individual's feelings such as personal appreciation, self-acceptance, and overall acceptance of personality was found in students with physical or locomotion disability. Therefore, self-esteem ascends in the consequence of

self-evaluation of the individual.

Moreover, the results of the study indicated that none of the students with physical or locomotion disability had a low self-esteem level. It might be due to these students having a sense of competence. Previous studies reported that the advancement of competence in the tasks and activities of one's appreciated roles promotes a sense of self-esteem and self-efficacy. Effective interaction with the physical and social environments refers to competence. To be competent means to have the skills that are adequate or sufficient to meet the demands of a task or situation.[29] It does not compare to magnificence, ordinariness, or the capacity to do everything, and it perceives that there are degrees of adequacy and sufficiency in individuals. The education of people with disabilities has been a part of policy development in Thailand for the past few decades. However, the Department of Empowerment of Person with Disabilities reported that only 0.35% of people with disabilities are studying in college. CMU is currently perceived as a complete standout amongst the best colleges in the northern part of Thailand. The Office for National Education Standards and Quality Assessment of Thailand presently ranks it as one of the Top Three Universities in the country with their mission comprised to provide academic service to society and cultural preservation, produce research, and produce graduates. By getting a placement

to study in CMU, the students with a handicap had a higher perceived self-esteem. In addition, providing educational opportunity for students with physical or locomotion disability removed society's barriers that confine life decisions for students with disabilities. At the point when obstructions are removed, incapacitated individuals can be autonomous and break even within the public arena, with decision making and command over their own lives. This independence and equality of disabled students increase their self-esteem.

The current study was conducted for the purpose of investigating if there is any relationship between students' self-esteem and their academic performance. Although several studies showed associations between self-esteem and academic achievement,[15-16] the results of the study showed that there was no statistically significant association between academic achievement and self-esteem (Table 4). According to The Model of Human Occupation (MOHO), volition includes a deep human drive for action, combined with thoughts and feeling about a thing, shaped by previous experience and linked to the future. Volitional thoughts and feelings pertain to (1) how effective one is in acting on the world, (2) what one holds as important and meaningful in doing, and (3) what one finds enjoyable and satisfying to do.[30] These three sets of thoughts and feelings are referred to as personal causation, values, and interests. From these statements, we can explain the reason why there was no association between self-esteem and academic achievement in disabled students. It may be due to the participants have other activities than studying that are valuable to them. For example, a student who is committed to attending a competitive college may anticipate anxiety, put forth substantial effort studying and then react negatively to getting an average grade, whereas another student who plans to enter a skilled trade may be much less concerned with preparing for an examination and be quite pleased with receiving an average grade.

Another finding of the research indicated an association between self-esteem and gender (Table 3). In other studies, the same findings were stated. Termini and Roya Valibeygi (2011) studied the impact of gender, age and academic branch on self-esteem of normal students from Sistan and Baluchestan University using self-esteem scale and revealed that male students showed significantly higher total scores of self-esteem than female students.[31] Studies conducted by McMullin and Cairney (2004) in normal students also emphasize that female students had lower self-esteem than male students.[32] Although there were several studies on the correlation between gender and self-esteem which found that male students had more self-esteem than female students, these studied were conducted with normal students. Therefore, it is recommended to explore the association between self-esteem and gender with disabled students in future studies.

Occupational therapists define occupation in various ways, but all definitions include the idea of activities of everyday life that are meaningful to individuals.[33] "Occupation is everything people do to occupy themselves, including looking after themselves, enjoying life and contributing to the social and economic fabric of their communities".[34]

Personal identity emerges from a harmonious balance of the many meaningful occupations in which a person engages over time.[35] Individuals occupied with occupation characterize their way of life as well as accomplish a feeling of capability and report a feeling of fulfillment and satisfaction.[33] Occupational engagement contributes to the experience of a life worth living[36] even though undergraduate students with physical or locomotion disability had an average and high self-esteem level. Occupational therapists should be encouraging them to engage in positive occupations that the person has the capability to achieve and chooses to achieve in order to manage the rhythm of individual and community life. Such occupations bring out imagination and absorb the attention, promote feelings of fulfillment with achievement, and contribute to a sense of self-efficacy and self-esteem.

There are some limitations of this study. This study included one research university. Further study may include other universities and may compare differences by region, education types, or disability types. Moreover, further studies should look more closely at factors affecting the self-esteem level.

Conclusion

The undergraduate students with physical or locomotion disability had an average and a high self-esteem level. However, no association was found between self-esteem and academic achievement. Students should be encouraged to engage in an activity meaningful to them, in order to improve self-esteem.

Conflicts of Interest

The researchers claimed no conflicts of interest.

Acknowledgements

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