

Antecedents and Consequences of Social Adjustment of Undergraduate Students in Thailand: A Meta-Analysis Study

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Abstract

Social adjustment of undergraduate students is an issue that every educational institution worldwide regards as essential; this also includes educational institutions in Thailand. The systematic study, collection, and synthesis of antecedent factors affecting student's social adjustment are, therefore, necessary as the data obtained from the abundance of research available can lead to new findings which can be used to design, strategize and promote students' social adjustment, effectively addressing the social adjustment issues of students which have long been problematic. Therefore, this research's objective is to synthesize available knowledge in the dimension of antecedent factors and consequences regarding to undergraduate students' social adjustment in Thailand through the examination of various research publications available in the past 10 years (from year A.D. 2009-2019) through meta-analysis. Research that was used to synthesize 50 studies. Research results found that the individual's internal factors affected student social adjustment the most. The variable of self-control has the largest average effect size. The variables of self-reliance and abstraction have negative consequences and large average effect sizes. Among the factors in the category of individuals' external factors, the variable of participation in student activities had the largest average effect size, followed by interpersonal relationships, and participation in religious activities, respectively. In addition, under demographic factors, the variable of student age had the largest average effect size, followed by academic achievement, gender, source of funding received, and religion, respectively. These findings can be helpful in furthering strategic planning to ameliorate the social adjustment of students in higher education.

Keywords: Social adjustment, Undergraduate students, Meta-analysis

Introduction

In this day and age, the new generation of Thais have evolved in many respects resulting in a difference from their predecessors; for example, the new generation currently has greater access to technology, news and data, and social discourse, and issues (Sengphairogh, 2012),

resulting in the need to adapt to live and evolve to the changing circumstance presented in life. Positive adjustment results in good mental health, which allows one to prosper in society. In the same manner, maladjustment to evolving circumstances can result in psychological and social issues that are barriers to self-development for adolescents, particularly, as this is a period in life in which they experience a myriad of physical, mental and social changes. The period of adolescence overlaps childhood and adulthood; it is, therefore, a significant period in life when people may experience the greatest difficulties in adjustment or problematic issues. This is due to the adolescents' learning and social behaviors that affect their thoughts, attitudes, values, and personalities through adulthood. Adolescent social adjustment is, therefore, important, and all societies strive to achieve it, as it is the ability to respond to tangible realities, situations, and social relationships effectively and rationally, with self-confidence, interpersonal skills, along with the ability to forge relationships with those who differ fundamentally in thought, religious belief or culture (Schneiders, 1964).

Adolescence's adaptation depends on several factors, including psychosocial factors. Roy's theory of adaptation (Roy & Andrews, 1999) explains that human adaptation consists of four main components: 1) inputs arising from interactions between the individual and the environment, resulting in input into the adaptive system of the person, called the Stimuli, which stems from the individual's internal environment factors and external environmental factors. Changes in the environment stimulate a person to have an adaptive reaction 2) focal stimuli are what the person has to face and pay the most attention to at any given moment, resulting in changes and directly affecting the individual's need to adjust. 3) Contextual Stimuli are other stimuli that appear in the event or environment that the person is facing. It may have the effect of directly enhancing the effect of the stimuli. There may be positive or negative effects on adaptation and 4) residual Stimuli are stimuli resulting from past experiences. Is a characteristic of a person and is a factor that may influence the adaptation, if a person is experiencing, but it is unclear. It also involves social adaptation that emphasizes the roles and functions associated with other individuals, which must adjust according to their roles and duties society expects appropriately; this is divided into 3 levels; namely, primary role (Primary Role) is a role according to age, gender, and developmental level. These roles determine the appropriate behavior of a person at a particular stage of life, such as the role of children, adolescents, adults and the elderly, etc. Secondary roles are roles that influence behavior in different situations. The roles related to work according to developmental levels including family roles such as children, siblings, parents, occupational roles such as students, Etc., and tertiary roles are temporary roles that a person receives, such as the role of a club member. This is consistent with the theory of stress and coping by Lazarus and Folkman (1984), which explains that personal adaptation is caused by demands or pressures, both internal and external, which affect coping and adjustment. The intrinsic factors that support or promote the social adaptation of adolescents include self-control, emotional stability, group conformity learning expectations, Etc., as for external factors, social situations, environments, and stimuli affects adolescents' social adjustment, including parenting. Entering the higher education system is an adaptive challenge for adolescents as they face various altered conditions, such as a shift in educational

methodologies, environmental conditions, and a new social environment that leads to stress. Poor or slow adjustment can lead to academic failures, such as low grades, resignation from the educational institution, dismissal from the educational establishment, or encountering other problematic severe issues such as drug dependence and suicide. (D'Silva & Aminabhavi, 2013). From those mentioned above, it can be observed that when a person is stimulated, they respond by expressing adaptation. Whether a person can adapt depends on the severity of the stimulus, and the level of a person's ability to adjust to changing situations. The adaptation of a person as an open system within is constantly changing. There are constant interactions with both internal and external environments.

In examining developmental efforts in the area of student social adjustment, it was found that higher educational institutions in Thailand make great efforts to develop and promote student social adjustment in order to enable them to adjust to social transition and acquire the necessary fundamental knowledge required to live in a culturally diverse society. Such efforts are expressed in the form of educational management, student development activities, the creation of public spaces for students to participate in various social bonding activities, and research efforts to promote student social adjustment. Even though higher education institutions spend a significant budget on social adjustment, overall, it was found that students still had problems with social adjustment. This is reflected in statistical data concerning student depression, suicide, academic withdrawal, or substance abuse obtained each year. Statistical data regarding the prevalence of depression among students during the year 2008 found that 11.5 percent of young people aged 15-24 years old are affected with depression with an increasing trend towards suicide. Based on the data, it was found that during the year 2017, among young individuals aged 20-24 years old, the suicide rate was 4.94 per 100,000 of the population. In the year 2018, the number rose to 5.33 per 100,000. This is an important and urgent issue that needs to be addressed as adolescents are valuable resources for nation's future development (Department of Mental Health, 2018). Similarly, in considering the issue of social expression, it was found that nowadays, students are more alert to social movements, be it for the pursuit of rights and liberty, social equality, social processes: all which influence the behavior of students, as can be observed that students, as the new generation of young people, are increasingly interested and aware of political issues. Sometimes, however, the lack of reflection required to examine social phenomena may result in various forms of violent expression.

In recent times issues concerning the social adjustment of youth are prioritized at the international and national level, reflective in policies at both levels to lessen evident and prolonged problematic issues of violence in society. At the international level, these policies include the United Nation's Sustainable Development Goal, SDG sub-target 4.7, which ensures that all students should acquire the knowledge and skills needed to promote sustainable development. This includes education for sustainable development and livelihoods, human rights, gender equality, the promotion of a peaceful and non-violent culture, world citizenship, and appreciation for cultural diversity, and cultural contributions towards sustainable development by the year 2030 (SDG MOVE, 2015). This is also reflected in the national policy

of Thailand in the Twenty Year National Strategic Plan (A.D. 2018-2037) under human resources and capacity development issues of values and cultural modification to enable social institutions to cultivate desirable values and cultural practices. This plan stipulates the cultivation of honesty, discipline, moral ethics in education in educational institutions, the utilization of media, and mass communication to instill societal values and culture, and to promote a public conscience and collective responsibility. Moreover, there are also issues of potential human development throughout one's lifespan, which focus on qualitative human development for all age groups, such as school-age adolescents, stipulating the cultivation of good conduct and the discipline to develop learning skills suited for the 21st century.

However, a review of research findings from A.D. 2009-2019 reveals that there has been considerable research with regards to student social adjustment, most of which are context-specific studies. Therefore, it is imperative to gather and synthesize the body of knowledge gained through all the various research studies about student social adjustment while utilizing a systematic research process; in this way, findings obtained therefrom will consolidate the numerous, existent research data towards the establishment of a new body of knowledge which can then be used to effectively strategize developments for student social adjustment, addressing long standing problematic issues. Therefore, this research synthesized the body of knowledge in the dimensions of antecedents factors and consequences of social adjustment of undergraduate students in Thailand through meta-analysis seeking to determine groups of statistically significant causal factors which influence the social adjustment of undergraduate students in Thailand. The framework to synthesize available knowledge of antecedent factors affecting student's social adjustment has demographic factors, individual's internal factors, and individual's external factors, as well as statistically significant consequential factors in student social adjustment, to obtain beneficial information and in-depth findings on student social adjustment for educational planning and development of student social adjustment appropriate to environmental context and social conditions.

Conceptual framework

Based on the literature review and suggestions of several studies, this study developed a research framework to collect and synthesize available knowledge of antecedent factors and consequences regarding undergraduate students' social adjustment in Thailand. The framework has demographic factors, individual's internal factors, and individual's external factors; affecting students' social adjustment (see Figure 1).

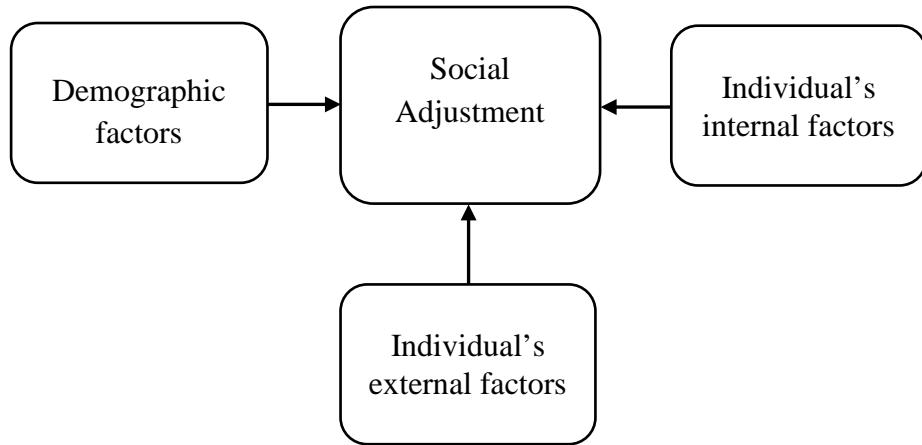


Figure 1 Conceptual framework

Research methodology

Research design

A meta-analysis method was employed in this study to examine the antecedents and consequences of social adjustment of undergraduate students in Thailand. Meta-analysis refers to procedures used to combine the results obtained from individual studies and consists of the following (Figure 2) stages (Cooper, 2010):

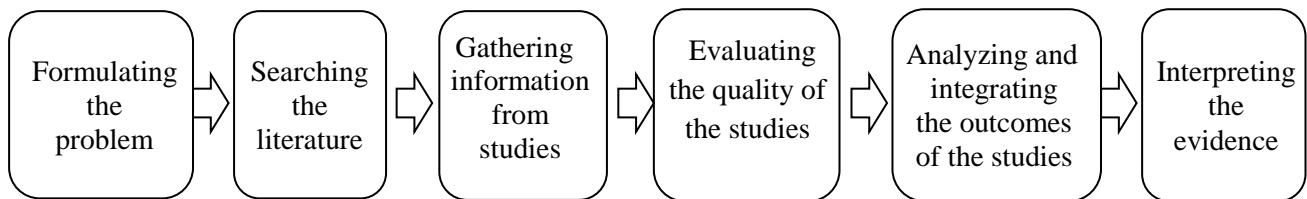


Figure 2 Steps of meta-analysis

Literature search procedure

The studies included in this research were obtained from the Thai Digital Collection (ThaiLis), Thai Journal Online (ThaiJO), Google Academic, PubMed, ScienceDirect, and SCOPUS databases. The database search was conducted between March 2020 and May 2020. While searching, these keywords were entered in both English: “social adjustment”, and “social adaptation.” Relevant literature was scanned through references of the studies obtained. In total, 112 studies about the literature concerning the antecedents and consequences of social adjustment of undergraduate students in Thailand was obtained. After limiting the studies to those published between 2009-2019 and eliminating 43 duplicated studies, 69 remained.

Study inclusion and exclusion criteria

Quantitative studies published between 2009-2019 about the antecedents and consequences of social adjustment of undergraduate students in Thailand were examined in the context of this study. Inclusion criteria were as follows: (i) An article, thesis or assertion carried out in Thailand between 2009-2019 in a practical and relational design. (ii) Must investigate the relationship of causal factors with social adjustment or its effect on social adjustment. (iii) Empirical studies must have a sample size (N), means score (\bar{x}), standard deviation, and degree of freedom, while relational studies must have the sample size and Pearson correlation coefficient. (iv) Studies must employ parametric tests (t-test, F-test, Pearson Correlation Coefficient, etc.).

Out of 69 studies that examine social adaptation among undergraduate students in Thailand published between 2009-2019 under careful examination, 19 studies were inconsistent with social adaptation. Therefore they were eliminated. There are 50 research publications left in this study, with most of them being published research articles accounting at 34 articles in total, which represents 68.00 percent; followed by 8 master's degree thesis, accounting for 16.00 percent; 8 departmental research accounting for 12.00 percent and 2 doctoral degrees thesis accounting for 4.00 percent as shown in Table 1.

Table 1 number and percentage of research synthesized classified by type of research

Type of research	Frequency (N)	Percentage (%)
PhD thesis	2	4.00
Master's thesis	8	16.00
agency research	6	12.00
published research articles	34	68.00
Total	50	100.00

Data analytic strategy

1. Analyzed the research studies through descriptive statistics such as means, standard deviation, kurtosis, and skewness of effect sizes to determine the distribution of effect sizes. The means will be converted to effect sizes for further analysis.

2. Estimated the effect sizes through of Rosenthal (1984), Hedges and Olkin (1985), after which, the test of heterogeneity with Cochrane's Q statistics was conducted. If it was found to be statistically significant, a conclusion that each research study results differed from one another could be drawn; I^2 was the percentage of the variance between research findings which occurred as a result of the differences in these findings rather than by chance, with $I^2 = 0$, meaning there were no differences in research results. A considerable I^2 value indicated a large difference in research findings (Higgins et al., 2003). If there were differences in research

findings, an analysis was made to determine which of the research's attribute variables resulted in the difference through the examination of the effect sizes of the research's attribute variables in order to explain the variance of effect sizes through multiple regression analysis and to compare the effect size differences through the classification by the subgroup of the attribute variables of the research which can explain the variance through One-way ANOVA analysis.

Results

1. Characteristics of the included studies

The results of the study of the characteristics of research which examined the antecedent factors affecting the social adjustment of undergraduate students in Thailand found that of all the 50 studies synthesized, most were published in the year A.D. 2013 (14.50 percent), they were primarily published in the form of research articles (53.60 percent) and most were correlational research studies (39.10 percent). In synthesizing the characteristics of all the percent), multi-stage sampling was utilized (32.00 percent), questionnaires were used in the research (83.00 percent), the quality of the research instruments was checked for reliability (40.70 percent), and descriptive statistics values were reported (32.40 percent).

Results of descriptive statistical analysis of the effect size values revealed 52 effect size values in this research. The mean effect size value was 0.155, and the standard deviation was 0.036 on a 95 percent confidence interval between 0.084-0.226. Examination of data distribution found that data distribution was skewed to the left (skewness = 2.272), indicating that the effect sizes were mainly more extensive than the mean and the distribution of data was higher than a standard curve (Kurtosis = 10.689), with details as shown in Table 2.

Table 2 Descriptive statistics of social adjustment effect size

Statistical value	Mean	SD	95% CI.	Kurtosis	Skewness	Number of effect sizes
Social adjustment	0.155	0.036	0.084-0.226	10.689	2.272	52

2. Antecedent factors and consequences of social adjustment on undergraduate students in Thailand

The study found that causal factors affected student social adjustment at an 0.01 level of statistical significance, with the group of internal factors variables having the largest average effect size, followed by social assertiveness, self-conceptualization, strength, and gentleness, respectively. Moreover, variables that negatively affected student social adjustment and had a large average effect size included self-reliance and abstraction. With regards to groups of external factors beyond the individual, it was found that participation in student activities had the largest average effect size, followed by relationships with others and participation in religious activities, respectively, with the groups of demographic factors, it was found that age had the highest average effect size, followed by marital status as detailed in Table 3.

Table 3 Effect sizes of causal factors with regards to social adjustment of undergraduate students in Thailand

Causal Variable	Effect Size	Weighted Average Effect Size	Cochran's Q (df)	I^2	Test for Overall Effect
Demographic factors	30	0.060 [0.040-0.080]	22.384 (29)	0.00	5.830**
Sex	6	0.065 [0.014-0.117]	3.698 (5)	0.00	2.469*
Domicile	5	0.040 [-0.016-0.095]	0.410 (4)	0.00	1.406
Academic achievement	4	0.067 [0.007-0.126]	6.477 (3)	53.68	2.194*
Marital status	2	0.106 [0.029-0.183]	0.570 (1)	0.00	2.691**
Faculty/academic discipline	2	0.066 [0.028-0.104]	0.049 (1)	0.00	3.396**
Age	2	0.108 [0.012-0.204]	0.637 (1)	0.00	2.204*
Birth order	2	0.023 [-0.073-0.118]	0.008 (1)	0.00	0.463
Family income	2	0.064 [-0.037-0.166]	1.098 (1)	8.90	1.293
Source of funds received	1	0.318 [0.035-0.601]	-	-	-
Type of program enrolled	1	0.001 [-0.124-0.126]	-	-	-
Residential style	1	0.014 [-0.111-0.139]	-	-	-
Parents' occupation	1	0.002 [-0.151-0.155]	-	-	-
Religion	1	0.018 [-0.080-0.116]	-	-	-
Individual's internal factors	10	0.274 [0.044-0.504]	517.619 (9)**	98.26	2.336*
Emotional intelligence	1	0.028 [-0.083-0.139]	-	-	-
Emotional stability	1	0.421 [0.150-0.692]	-	-	-
Strength and gentleness	1	0.549 [0.299-0.799]	-	-	-
Group acceptance	1	0.421 [0.150-0.692]	-	-	-
Sociability	1	0.675 [0.455-0.900]	-	-	-
Self-control	1	0.751 [0.554-0.948]	-	-	-
Abstraction	1	-0.337 [-0.618-(-0.056)]	-	-	-
Self-reliance	1	-0.646 [-0.874-(-0.418)]	-	-	-
Self-concept	1	0.656 [0.625-0.687]	-	-	-
Learning expectation	1	0.183 [0.142-0.224]	-	-	-
Individual's external factors	12	0.068 [0.008-0.128]	76.600 (11)**	85.64	2.235*
Family relationship	4	0.065 [0.029-0.100]	3.023 (3)	0.77	3.588**
Parenting	3	0.081 [0.018-0.144]	1.371 (2)	27.06	2.533*
Participation in student activities	2	0.515 [0.108-0.921]	34.797 (1)**	97.13	2.480*
Relationship with others	2	0.322 [0.025-0.619]	116.852 (1)**	99.14	2.123*
Participation in religious activities	1	0.287 [0.142-0.432]	-	-	-
Total	52	0.155 [0.084-0.226]	1639.572 (53)**	96.77	4.303**

*p< 0.05, **p< 0.01

Table 3 reveals the effect sizes of the analytical results for antecedent factors in the social adjustment of undergraduate students in Thailand. It was found that the variance of 52 causal factors were not homogeneous (heterogeneity) ($I^2 = 96.77\%$, $P = 0.000$). Therefore, a random effect model was used, and it was found that the causal factors affected student social adjustment at a 0.01 level of statistical significance, with an average effect size of 0.155. In examining the factors category, an individual's internal factors affect student social adjustment

the most with an average effect size of 0.274 ($p>0.05$), followed by an individual's external factors, with an average effect size of 0.068 ($p>0.05$) and demographic factors, which is the group factor with the smallest average effect size of 0.060 ($p>0.01$). Examination of each factor group revealed the following details:

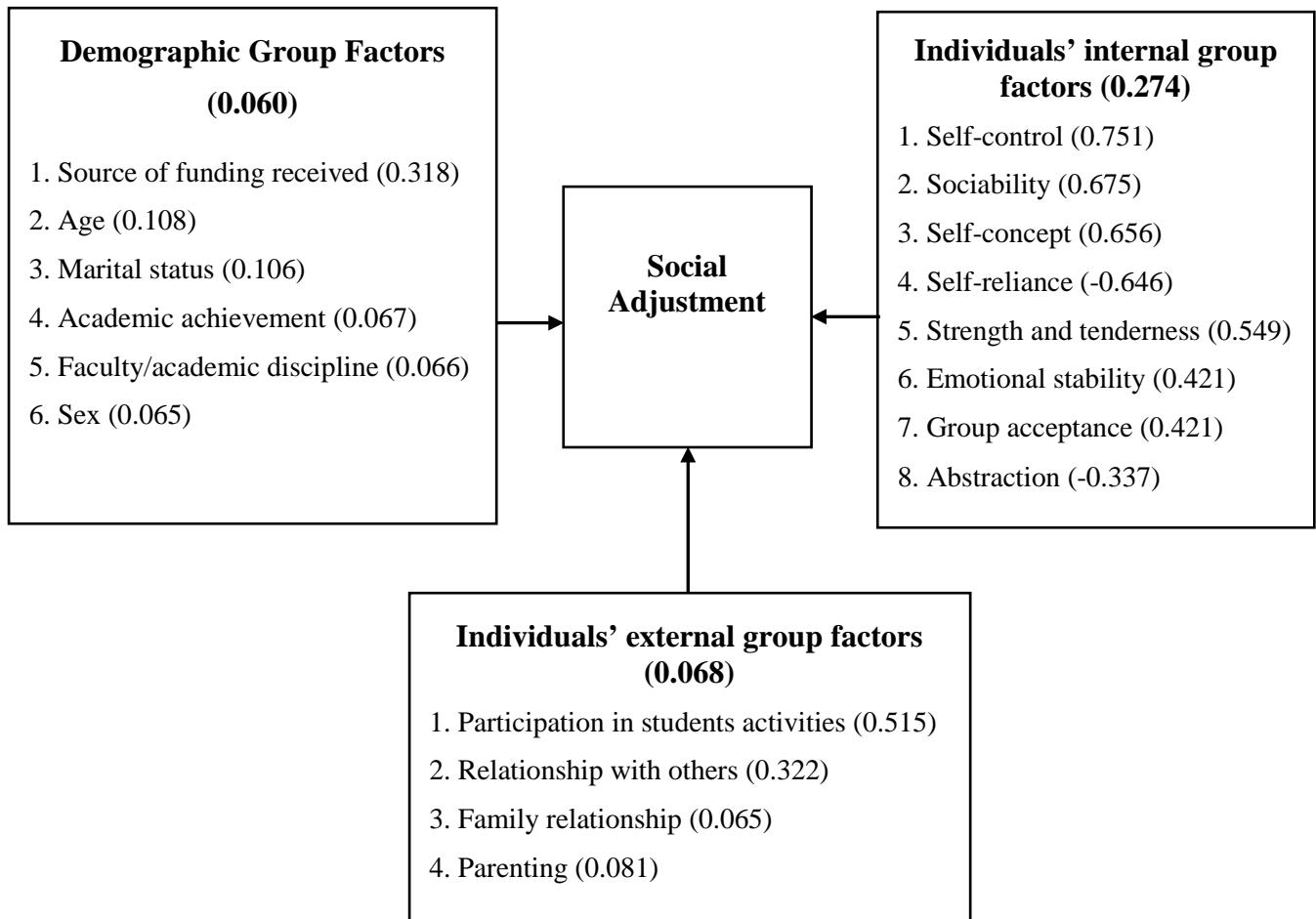
Demographic group factors affecting social adaptation, when arranged from variables with the largest mean size of influence to the smallest mean size and tested for overall effect, statistically significance was found, including the age variable which, had the greatest effect on social adaptation. (the average effect size was 0.108, $p>0.05$), followed by marital status (average effect size was 0.106, $p>0.01$), educational attainment (the average effect size was 0.067, $p>0.05$), faculty/academic discipline (average effect size was 0.066, $p>0.01$) sex (average effect size was 0.065, $p>0.05$). Variables, when tested with the Test for Overall Effect, indicate no statistical significance was family income. (average effect size 0.064), hometown (average effect size 0.040), birth order (average effect size 0.023). Due to certain limitations in gathering research publications, some variables are insufficient for meta-analysis as fewer than 2 studies. It was found that the variable affecting students' social adaptation had a medium influence size (0.30-0.50), including the source of funds received, however; the religion, the nature of the residence, parents' occupation, and the types of programs they attend affected the social adaptation of students. but had a shallow average effect size (<0.10).

Internal group factors affecting student's social adjustment with a high average effect size (>0.50) included self-control (average effect size of 0.751), social assertiveness (average effect size of 0.675), autoconcept (average effect size of 0.656), and strength and tenderness (average effect size of 0.549). The variables with moderate effect size (0.30-0.50) were emotional stability (average effect size of 0.421) and group agreeableness (average effect size of 0.421). Variables with small average effect sizes (0.10-0.30) include academic expectations (average effect size of 0.183). Emotional intelligence affected students' social adaptation, but the average effect size was very low (<0.10). Moreover, it was found that variables that negatively affect social adaptation in students have a high average effect sizes (>0.50), includes self-reliance (average effect size of -0.646) and abstraction (average effect size of -0.337).

External group factors affecting social adaptation when arranging the variables according to the largest average effect size to the smallest average effect size and applying the Test for Overall Effect were found to be statistically significant, including students' participation which had the highest effect on social adjustment (average effect size of 0.515, $p>0.05$), followed by a relationship with others (average effect size of 0.322, $p>0.05$), parenting (average effect size was 0.081, $p>0.05$) and family relationships (average effect size was 0.065, $p>0.01$) due to the limitations during research integration, some variables were insufficient for meta-analysis as there were less than 2 research studies, it was found that the variables affecting students' adjustment had a small average effect size which included participation in religious activities. (average effect size of 0.287).

From the above results, variables with more than one study were selected, and the Test for Overall Effect was applied, and it was found to be statistically significant, or

variables that had a medium effect size value could be summarized in the diagram as shown in Figure 3.



Note: The numeric value in the parentheses refer to the weighted effect size

Figure 3 The effect of causal factors in social adjustment among undergraduate students

Table 4 Effect size of consequential factors in social adjustment of undergraduate students in Thailand

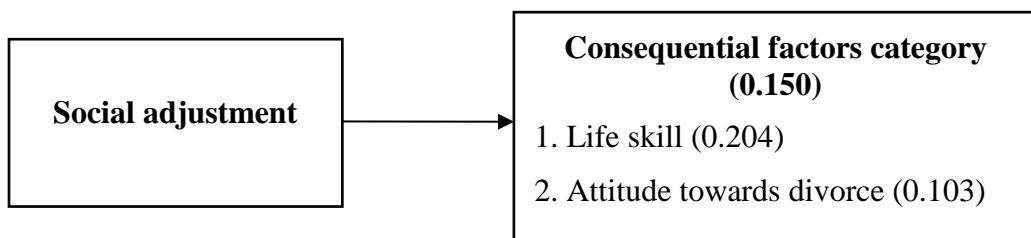
Consequential variables	Number of effect sizes	Weighted average effect size	Cochran's Q (df)	I^2	Test for Overall Effect
Attitude towards divorce	1	0.103 [0.014-0.192]	-	-	-
Life skills	1	0.204 [0.109-0.299]	-	-	-
Total	2	0.150 [-0.435-0.742]	2.304 (1)	56.60	4.530**

*p<0.05, **p<0.01

In table 4, the analytical results of the effect sizes of the consequential factors in Thai undergraduate student social adjustment revealed that the variance of both consequential

factors is homogeneous ($I^2 = 56.60\%$, $P = 0.129$); therefore, the Fixed-effect Model was implemented to determine that the social adjustment factors affected the students' consequential factors at .01 level of statistical significance with an average effect size of 0.150 (95% CI = -0.435-0.742). Due to limitations in research integration, some variables are insufficient for meta-analysis as fewer than 2 studies exist. It was found that social adjustment affected various students' variables with a small average effect size (0.10-0.30), namely, life skills and attitudes towards divorce.

The results of the above study can be summarized in a diagram, as shown in Figure 4.



Note: The numeric values in the parentheses refer to the effect sizes.

Figure 4 Effect of consequential factors in undergraduate students' social adjustment

Discussion and conclusion

This study illustrates the factors which cause and affect undergraduate students' social adaptation during a period of 10 years (A.D. Year 2009-2019), including various causal factors in categories of an individual's internal factors, an individual's external factors, and demographic factors which in some dimensions may require urgent adjustment, correction or development due to the psychological and social effect it has on students. The study found that an individual's internal factors had the most significant effect on student social adjustment, with self-control having the largest effect size, followed by sociability, self-concept, strength and gentleness, emotional stability, group acceptance, academic expectation, and emotional intelligence, respectively. Therefore, should there be adequate intervention to assist students to adjust, modify or develop any of the above variables, they will have an increased ability to socially adapt amid societal change, leading to a better quality of life. The reason why self-control has a significant influence on student social adjustment may be due to self-control being an adaptive process that involves self-monitoring by evaluating perceptual appraisal or feedback to determine one's behavior, believing that the meaning of an experience for each individual varies; each person, therefore, judges what matters most to them. How one deals with a situation and how satisfied one is with the outcome; involves 2 aspects of adjustment in the regulation of functional responses and emotional responses. The objective of regulating emotional response is to achievement a happy and comfortable feeling which is an emotional condition In contrast, the goal of regulating one's functional response is to reduce the complexities of carrying out one's daily operations. These results are essential to achieving higher goals such as a good quality of life. The two processes of adjustment take place in a parallel and independent manner. Although individuals may use both of these adjustment processes in dealing with various events,

individuals may choose to focus on one of these methods of adjustment at any given time and may switch back and forth between these two adjustment methods. Reverse input between these 2 methods of adjustment could affect the process of self-regulation as well. Therefore, self-regulation is a process in dealing with stress dynamics, which contributes directly to an individual's social adjustment (Reynolds & Alonzo, 2000). Moreover, the results of this study found that self-reliance and abstraction had a negative influence on student social adjustment, which is consistent with theories of adjustment by Roy, (Roy & Andrews, 1999), which expound that adjustment in the Interdependence Model is the adjustment which emphasizes interpersonal relationships involving the giving and receiving of love, respect, and appreciation; in this way, individuals involved will exhibit adjustment behavior as deceptive behavior and contributive behavior in order to meet their basic needs of receiving love, respect and appreciation, maintaining their relationship with others who are important in their lives as well as those involved in the system of support.

Moreover, when considering the individual's external factors category, it became apparent that student participation had the largest average effect size, followed by a relationship with others, participation in religious activities, parenting, and relationships within the family, respectively. Establishing good relations with others is an adjustment process that allows them to participate in activities and live in society without feeling isolated. To the same effect, regarding the issue of participation in religious activities, the result of this study is in part consistent with the results of overseas studies that examined the utilization of religion and spirituality in stress and anxiety management for students who faced adjustment issues in changing circumstances. The study established that individuals will seek social support for emotional causes, which consist of a yearning for love, compassion, support, comforting words, and understanding from others, as well as seek social support for practical reasons such as the need to gain information or guidance from those who are knowledgeable or those who have had similar experiences. It also includes turning to religion, expressly, the utilization of religion as a psychological resource to alleviate and handle stress; examples include the observation of Islamic prayers to implore blessings, the recitation of religious scriptures, and so on (Radzi et al., 2014). Moreover, studies done by Aflakseir (2012), correspond to the results of this research in that religious belief coupled with social group support is more effective than other methods in handling crises. Adherence to religious principles is, therefore, a strategy that can be utilized for psychological healing to achieve psychological balance. In addition, this study also found that parenting and relationships within the family affected student social adaptation. This finding is consistent with the results of the synthesis of various research studies relating to parent and child bonding conducted between the years A.D. 1987-2009, which found that the bond between parents and their children influenced the adjustment and development of their children's individualism in both male and female subjects without cultural distinction.

With regards to demographic factors, it was found that the age of the students had the largest average effect size. This is followed by academic achievement, gender, source of funding received, religion, type of residence, and parents' occupations, respectively. These results partly reflect Roy's conceptual notion (Roy & Andrews, 1999), which expound that the

adjustment to one's role and function (Role Function Mode) is a reactive response of the individual to a stimulus in order to achieve "Social Integrity". This is a mechanism of social adjustment that emphasize the roles and positions of individuals concerning other individuals, whereby individuals must adjust appropriately to their roles as expected of them by society and outwardly expressed this in terms of Instrument Behavior, which is the behavior -individuals indicate in the performance of their duties which are determined by society, as well as the Expressive Behavior which is the behavior individuals express according to their feelings or attitudes, their likes or dislikes with regards to the role they have been given. These roles are divided thematically into three levels: the Primary Role is a role assigned by age, gender, and level of development. The role may determine the appropriate behavior for individuals at a certain age, such as children, adolescents, adults and seniors. Secondary Roles are roles that influence behaviors in various situations related to occupation and Primary Roles. Examples include family roles such as father, mother, husband, wife; professional roles such as teacher and nurse. In addition, there are Tertiary Roles which are temporary roles that one acquires; examples include membership in associations, clubs, or organizations, or being a patient, for instance. Also, in the area of forming healthy interpersonal relationships with others, they enjoy teamwork more than male students, which may result from current social norms in parenting practices that differ from prior norms in allowing women greater freedom in various regards. Moreover, current norms allow women equal rights to men in many respects resulting in female students having greater confidence as they are freed from pressures and frustrations with others around them. Furthermore, women by nature can equally be great leaders as well as followers, as they are more capable of adjusting to people and circumstances as compared to men who prefer to be leaders.

Recommendation

During the 10 years (from A.D. 2009-2019), there have been numerous research publications to determine causal factors affecting undergraduate student social adjustment in Thailand. These causal factors could be divided into 3 categorical groups, namely, an individual's internal factors category such as self-control, sociability, self-concept; individual's external factors category such as participation in student activities, interpersonal relationships, participation in religious activities; parenting and demographic factors such as student's age, academic achievement, sex, source of funding received and religion. This is reflective in the importance researchers give towards elucidating the antecedent of student social adjustment. Therefore, relevant agencies could apply the research results for the following:

1. Universities/educational institutions, as entities responsible for the output of quality graduates who excel academically, morally, and professionally, participating in social development as Thais and world citizens, may apply these research findings towards -planning and implementing, or promoting a system for student development taking into account the comprehensiveness of the services provided (One-stop Service Center) with a focus on catering to students' academic, psychological and social needs. The system should operate with well-defined work processes as well as the center/system's structure. A database to collect causes

and results of student adjustment and a database to store information regarding student developmental guidelines and standards should also be developed. In addition, cooperation between universities in the same region should be considered in order to establish a system of care and student development as a standard of work under the network of universities/educational institutions in the same region through creating a common practice guideline which can lead to equity in terms of student capacity development.

2. For agencies under the Department of Mental Health in areas such as psychiatric hospitals, hospital counseling centers should be involved in promoting students' social adaptation and monitor issues which may be done in the manner of educating them on proper coping methods with challenges, strengthening their skills related to adaptation for adaptive coexistence, provide counseling services to students in various forms, especially students from upcountry who live in dormitories

Further research recommendation

The study results found that self-control has the largest influence on students' social adaptation. Therefore, research and development programs should be conducted on the promotion of students' self-control abilities, or design activities/projects to promote students' social adaptation, which includes various issues pertinent to antecedent causes about students' adjustment research which should be conducted on the strengths and weaknesses of the student's developmental care system with regards to issues related to adaptation for adaptive coexistence which is ongoing, in order to provide students with the necessary support in development which is consistent with the context of the internal and external environment of the university, including the context of Thai society and the world.

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