

Systematic Review: A Study of College Adjustment Among First-Year Undergraduates

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Abstract. College adjustment is an important factor that influences academic success. First-year undergraduates must deal with a transition period from high school to college, during which time they encounter many challenges which can result in high dropout rates and low academic outcomes. This transition period requires adaptability. A systematic review was conducted to gain an overview of college adjustment and its influence. Using five online research platforms, namely EBSCOhost, PsycNet, Science Direct, Scopus, and Taylor & Francis Online, 18 articles were obtained. As a result, college adjustment can be characterized by indicators such as academic achievement, stress, anxiety, depression, and well-being. The Attachment Theory and Self-determination Theory were applied in more than one study. Individual and environmental characteristics can influence college adjustment, both positively as well as negatively. Recommendations for research on the topic of college adjustment are being discussed.

Keywords: attachment theory; college adjustment; first-year undergraduates; systematic review; transition period

Introduction

The global phenomenon shows that difficulties experienced during college can result in failure to complete one's education. In general, worldwide dropout rates are high in the first year. In Australia, 22% or 1 in 5 university students in Queensland did not reapply the following year (Morton et al., 2013). In 2010, The American College Testing Service stated that 50% of students did not successfully complete their college education (Stoklosa, 2015). In the Netherlands, 33% of first-year undergraduates did not continue into their second year (van Rooij et al., 2017). In South Africa, the dropout rate for first-year undergraduates averaged 50% (Daniels et al., 2018). Whereas in Spain, more than 50% of university students failed to finish their education and most (26%) left during their first year (Fernández et al., 2017; Rodriguez et al., 2017). Indonesia has shown the same phenomenon. The statistical data in 2020 indicated a high dropout rate among university students, reaching 7% of 8.483.217 students enrolled in 2020 (Ministry of Education and Culture, 2020).

Based on a prospective cohort study, it was found that the first year of college is a critical period for new students (Cliniciu, 2013). First-year undergraduates must deal with a transition period from high school to college, during which time they meet plenty of challenges, such as establishing new relationships, changes within existing relationships with parents and family, increasing costs,

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developing learning habits in new and challenging environments while handling developmental tasks as independent adults (Fernández et al., 2017; Morton et al., 2013). First-year undergraduates are generally between 18-25 years old. According to Arnett (2000), the stage of individual development at this time is called the emerging adulthood phase, a transitional period in which individuals are no longer considered adolescents but still, do not belong to the young adult group either. The distinctive features of the emerging adult phase include personal autonomy, relative independence from social roles, self-exploration, and new experiences. This period of life consists of several psychosocial transitions between adolescence and adulthood, between the dependence on living under parental authority and autonomy, or committing to a stable romantic relationship, as well as between study and a stable job (Macmillan, 2006; Schwartz et al., 2015). During this period, first-year undergraduates deal with many stressful experiences (Parker et al., 2006), resulting in feelings of insecurity and anxiety about the future (Cote & Levine, 2014). These changes sometimes feel unpleasant and can cause instability in their lives. If this instability is not taken care of well, it may affect their mental health (Nelson, 2020). A smooth transition period in the first year is a good indicator for their college journey in the following years (Daniels et al., 2018). The challenges experienced during the transition period, combined with the change in a student's needs have brought attention to the importance of studies regarding the adjustment of first-year undergraduates. High dropout rates, low academic results, and excessive amounts of time needed for study are common problems in college adjustment.

College adjustment comes from adjustment theory in general. Lazarus (1999) stated that adjustment is a response from individuals in handling the demands and pressures in their lives. Eshun (2006) explained that adjustment is a response of individuals in dealing with pressures and demands as a result of environmental changes. According to Weiten (2015), self-adjustment is a psychological process of managing or handling the demands and challenges of daily life. The psychological process is to establish a harmonious relationship within one's environment, this is due to the changes and new demands in collegiate life.

College adjustment is an adaptation process that needs to be done by students in dealing with the transition to collegiate life (Baker & Siryk, 1984). College adjustment is a psychosocial process that involves certain types and levels of demand and requires various responses to manage these demands (Baker & Siryk, 1984). College adjustment is a complex and multifaceted construction, meaning that individuals who are successful in college adjustment are not only measured from one aspect such as academic adjustment, but also include social, personal, and emotional adjustment as well as adjustment to the institution itself. The researchers selected the college adjustment theory developed by Baker and Siryk (1984) because the college adjustment theory is multifaceted, covers various aspects of adjustment more comprehensively, and produces an index not only for overall adjustment, but also for various aspects or dimensions specifically, namely academic adjustment, social adjustment, personal-emotional adjustment, and institutional attachment.

According to Credé and Niehorster (2011), Baker and Siryk based their taxonomy on a review of student adjustment in college literature. Their review classified previous research on college adjustment into four broad categories: academic adjustment, social adjustment, personal-emotional

adjustment, and institutional attachment. The first aspect, academic adjustment, refers to the ability to meet the various academic demands, which is a characteristic of higher education, as well as achieving a satisfactory level of academic achievement. This dimension measures students' attitudes toward academic targets and tasks, the efforts associated with academic activities, to satisfaction with their results. According to Baker and Siryk (1984), there are four aspects of academic adjustment, namely, learning motivation and having clear academic goals, engaging in academic tasks, exerting efforts to meet academic demands, and feeling satisfied with the academic environment. Previous literature has consistently presented the important role of academic adjustment in predicting achievement and persistence (Bailey & Phillips, 2015). Given the importance of academic adjustment as a correlated factor with first-year success, some experts believe that this aspect is considered a key indicator of the overall adjustment process.

The second aspect, social adjustment, refers to the ability to adapt to the social and interpersonal demands of campus life. This dimension provides an overview of how students participate in social activities, establish interpersonal relationships, and explain the acceptance process related to their social environment. First-year undergraduates encounter interpersonal challenges such as the need to build relationships with the people within their environment (Mudhovozi, 2012), such as actively participating in campus activities, being able to build relationships with new people, mingling with those from different backgrounds, developing relationships with lecturers, and sharing college problems with friends.

The third aspect, personal-emotional adjustment, refers to the ability to adapt to emotional and physical obstacles experienced by new students. The personal-emotional adjustment reflects the degree to which students experience stress, anxiety, and/or physical reactions (such as insomnia) to the demands of collegiate life (Credé & Niehorster, 2011). The fourth aspect, institutional attachment, refers to the extent to which students are committed to the goals of educational institutions, establish an emotional attachment to the campus community, and the quality of relationships with educational institutions (Credé & Niehorster, 2011). This aspect represents an individual's satisfaction with the institution where he/she studies.

Considering there are several factors that influence college adjustment, many theorists agree that achieve a better understanding of individual development and adjustment, numerous factors should be examined (Katz & Somers, 2015). Furthermore, many college adjustment researchers emphasized the importance of analyzing individual and environmental factors, or different factors (Mounts, 2004; Ratelle et al., 2005). Urie Bronfenbrenner's Bioecological Systems Theory suggests that there are interactions between individuals, families, and their communities, and social factors that drive and direct development (Bronfenbrenner, 1977; Bronfenbrenner & Morris, 2006; Katz & Somers, 2015). Examining individual factors in various contexts has helped to better understand development. The layers of the environment include microsystem (factors that are directly related to individuals such as family and friends), mesosystem (combinations of personal microsystem factors), exosystem (outside factors, which can affect the individual but are not part of their direct environment), and macrosystem (global factors, etc). From each of these layers, individuals receive information

about identity, developmental challenges, and resources or support to overcome those challenges. These layers must be acknowledged in order to understand the college adjustment comprehensively (Katz & Somers, 2015). Credé and Niehorster (2011) suggested that demographic characteristics influence college adjustments, such as gender, ethnicity, disability, and citizenship. In addition, age, socioeconomic status, being a first-generation college student, and the divorce status of the family, are also factors that influence college adjustment. The next factor is the previous achievement, cognitive skills reflect an individual's ability to process information and acquire new skills quickly. Students who perform well in high school tend to adjust to academic demands smoothly and are more adaptable (Credé & Niehorster, 2011). Another factor is personality, personality has been widely analyzed and shown to facilitate college adjustment. On the other hand, social support is also one of the factors that can influence college adjustment. Social support will benefit students during the transition period, it may come from various sources including parents, extended family, friends, faculty, and staff. Support from faculty and staff has a major impact on academic adjustment, while social support from family and friends has a greater impact on social and personal-emotional adjustment (Credé & Niehorster, 2011).

Additionally, Credé and Niehorster (2011) in their meta-analysis recommended that student adjustment is crucial to the ability to perform well academically, earn a degree, and view college experiences as a positive thing. In line with this, Rodriguez et al. (2017) emphasized the importance of college adjustment because it is positively correlated with first-year success. Better adjustment is positively associated with academic success, especially in first-year undergraduates (Pascarella & Terenzini, 1980; Petersen et al., 2009). Students who successfully adapt during college are more likely to have high academic achievement and good social development. The success of new students in passing through the transition period during the emerging adulthood phase and the ability to socialize with the campus community are important factors in determining future success (Kuh et al., 2008). The research of Gray et al. (2013) added that individuals who make good progress in the adjustment process and build good relationships with the institution tend to be more successful during college. Also, adjustment is an important process at the beginning of college in order to prevent various problems that could potentially emerge and be able to focus on achieving their goals (Al-khatib et al., 2012). Thus, it is necessary to understand college adjustment among first-year undergraduates. This study is systematic literature that discusses college adjustment in different countries and the factors behind it. Therefore, the research questions in this study are: 1) What is the research overview of college adjustment among first-year undergraduates?; 2) What are the predictors of college adjustment among first-year undergraduates?.

Method

Inclusion and Exclusion Criteria

The present study's review examined the latest empirical studies with inclusion criteria: first, the articles must discuss college adjustment. Second, the definition of college adjustment in this study

refers to the psychological adjustment process in dealing with demands and challenges in collegiate life (Baker & Siryk, 1984). Third, studies had to be published in international peer-reviewed journals, with full text, and published in English from 2011 to 2021. Fourth, only empirical studies with applied quantitative design. Fifth, studies had to be conducted on first-year undergraduates.

For the exclusion criteria: first, studies that discuss adjustment processes in general or psychometric studies of the college adjustment scale. Second, studies that applied qualitative designs or mixed methods. Third, non-English articles, non-international peer-reviewed journals, and anything published before 2011. Fourth, studies are published only as abstracts or when full text is not available. Fifth, studies with participants other than first-year undergraduates.

Search Procedure

The procedure involved computer-based searches where articles were collected through the database of EBSCOhost, Scopus, Science Direct, APA PsycNet, and Taylor & Francis Online. Only articles published from January 2011 to October 2021 were explored, limited to English full text, scholarly peer-reviewed, and references available. The search process used a combination of the following keywords: college adjustment AND/OR college adaptation AND/OR adjustment AND /OR adaptation AND First Year Student AND/OR Freshman.

Data Extraction

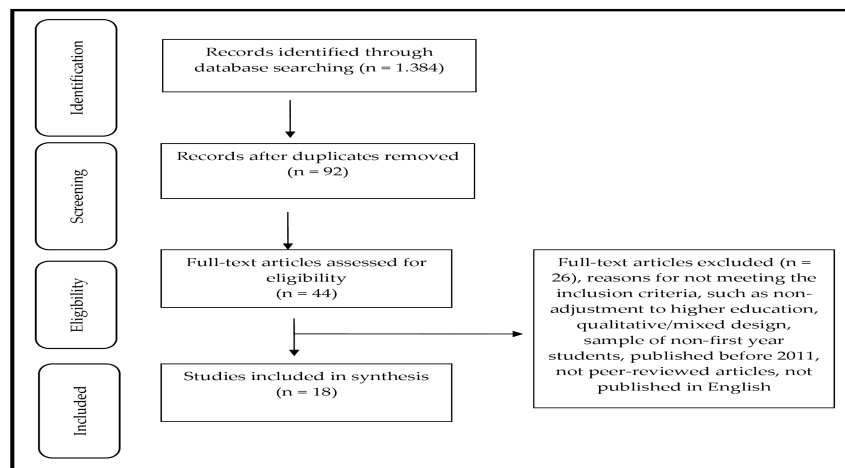
Two reviewers (H.P and F.K screened titles and abstracts) to identify articles for further review. H.P. and F.K assessed and fully reviewed the full text of the selected articles to select the final articles for inclusion in the systematic review. We developed a data extraction form to collect key indicators from each study, including country of origin, study design, methods, assessment tools, and study findings.

Based on the results of the systematic search from the five online research platforms, only articles that were relevant to the topic of college adjustment among first-year undergraduates were selected. Irrelevant studies, such as college adjustment scale analysis, students in general, and international class students were not included. The search on all five online research platforms yielded 1.384 articles, identified from combined screening. After the deletion of duplicates, titles, and abstracts, there were 92 studies for review. 44 qualified full-text articles were obtained and 18 of those were selected for further analysis. The research results on each platform are presented in Table 1. The report is in accordance with the Preferred Items for Systematic Review and Meta-analysis (PRISMA) reporting guidelines (Moher et al., 2009). The PRISMA flowchart (Figure 1) describes the article's selection process. The data analysis process was based on the general characteristics of the study and the college adjustment variables.

Table 1
Search Result on Five Database

Database	Total Articles Identified	Total Articles That Do Not Meet The Criteria	Total Articles That Meet The Criteria	Article
EBSCOhost	218	214	4	Heffer and Willoughby (2017); Holt (2014); Nguyen et al. (2019); Rahat and İlhan (2016)
APA PsycNet	249	248	1	Ranney and Troop-Gordon (2012)
Science Direct	671	670	1	Chevrier et al. (2020)
Scopus	131	119	12	Bishop et al. (2019); Daniels et al. (2018); Fernández et al. (2017); Katz and Somers (2015); Lau et al. (2018); Lindell et al. (2020); Meng et al. (2014); Morton et al. (2013); Nightingale et al. (2013); Park et al. (2011); Rodriguez et al. (2017); van Rooij et al. (2017).
Taylor & Francis Online	115	115	-	

Figure 1
Flow Diagram of Study Selection Process



Result

Characteristics of Participants

Based on the selection process, 18 articles were relevant to the topic, and participants involved in the studies to be analyzed were first-year undergraduates. The participants' ages ranged from 16 to 25 years old. Participants involved in the studies were from The United States, England, Turkey, Australia, France, South Africa, Spain, and China. The total participants of the 18 studies were 5.939 undergraduates, and the average number of participants from 18 studies was 330 (with a range of 84 - 1.132 participants).

A quantitative approach was used in the 18 studies, applying survey methods with various types of college adjustment measurement instruments for first-year undergraduates, such as The Student Adaptation to College Questionnaire (Baker & Siryk, 1984; Fernández et al., 2017; Holt, 2014; Katz & Somers, 2015; Rodriguez et al., 2017; van Rooij et al., 2017), College Adaptation Questionnaire (Crombag, 1968), Beck Depression Inventory (Bourque & Beaudette, 1982), Center for Epidemiologic Studies Depression Scale (Radloff, 1977), Depression Anxiety Stress Scales (DASS-21); (Lovibond & Lovibond, 1995), University Life Scale (ULS), Suicide Behaviors Questionnaire-Revised (SBQR), Rosenberg Self-Esteem Scale, Difficulties in Emotion Regulation (DERS), and The Daily Hassles Scale, Revised Children's Manifest Anxiety Scale (RCMAS); (Reynolds & Richmond, 1978).

Types of Studies

Of the 18 studies reviewed, eight of these used a longitudinal design (Fernández et al., 2017; Heffer & Willoughby, 2017; Holt, 2014; Lindell et al., 2020; Meng et al., 2014; Nightingale et al., 2013; Park et al., 2011; Ranney & Troop-Gordon, 2012), and ten studies applied cross-sectional design (Bishop et al., 2019; Chevrier et al., 2020; Daniels et al., 2018; Katz & Somers, 2015; Lau et al., 2018; Morton et al., 2013; Nguyen et al., 2019; Rahat & İlhan, 2016; Rodriguez et al., 2017; van Rooij et al., 2017).

Overview of College Adjustment

The data on general characteristics of the studies, research design, and main findings related to college adjustment are presented in Table 2 (for more information on the Table 2, see Appendix). To date, studies on college adjustment among first-year undergraduates are able to describe the adjustment process during the first year of college. Ten studies applied theoretical frameworks such as Attachment Theory (Bishop et al., 2019; Lindell et al., 2020), Self-determination Theory (Daniels et al., 2018; Nguyen et al., 2019), The transactional theory of coping (Heffer & Willoughby, 2017), Theory of Emerging Adulthood (Lindell et al., 2020); Self-efficacy (Meng et al., 2014), Social Compensation Theories (Ranney & Troop-Gordon, 2012), Tinto's Student Departure Theory (Rodriguez et al., 2017), Tinto's Theory of Student Attrition (van Rooij et al., 2017). While the other eight studies (Fernández et al., 2017; Holt, 2014; Lau et al., 2018; Morton et al., 2013; Nightingale et al., 2013; Park et al., 2011; Rahat & İlhan, 2016; Ranney & Troop-Gordon, 2012) did not explicitly state the application of a particular theoretical framework to their study.

An overview of college adjustment can be seen through the theories applied in the studies and aspects of the adjustment itself. Attachment theory defines that strong parental attachment provides a safe basis to adapt to a new environment, in this case, college, as well as being a safe haven for support and comfort. Bishop et al. (2019) stated that secure parental attachment predicts success in the transition to college. Additionally, a harmonious and stable relationship with parents positively affects emotional adjustment and may reduce symptoms of depression and anxiety in the following 3 years (Lindell et al., 2020). This is in line with Attachment theory (Ainsworth, 1989) which suggested that maintaining close relationships with parents during adolescence will benefit individual development

Table 2
Literature Review Overview Matrix

No	Authors	Theoretical Framework	Dependent Variable (DV)	Independent Variable (IV)	Mediator	Sample Characteristics	Study Design	Measure	Findings	
					Moderator	Country	n	Age		
1	Bishop et al. (2019)	Attachment Theory	College Adjustment	Parental Attachment	Mediator: Coping Avoidant	USA	288	18,69	Cross-sectional- PAQ - Affective Quality of Relationship (AQR) - Parental Fostering of Autonomy (PFA)	Avoidant coping significantly mediated the parental attachment and college adjustment. Self-sufficient coping mechanisms did not mediate the parental attachment and college adjustment.
2	Chevrier et al. (2020)	Self-Esteem and Self Perception Theory	Adjustment	Self-perception	-	France	177	18,4	Cross-Sectional- Self-Perception Profile for College Student (SPPCS) Beck Depression Inventory	Self-perception (global self-worth and self-esteem) were differently associated with positive and negative adjustment
3	Daniels et al. (2018)	Self Determination Theory	Adjustment to university	Family structure & parenting style	-	South Africa	556	18,9	Cross-sectional- Perceived Parental Autonomy Support Scale. - The College Adaptation Questionnaire	Only maternal autonomy-supportive parenting predicted good adjustment for students in two-parent families. Parents and families may play a role in the adjustment of first year students to university.
4	Fernández et al. (2017)	*	Adjustment to University	Gender, SES, Pre-University Achievement	-	Spain	300	18,02	Longitudinal - SACQ	Students' entry characteristics predict adjustment to university. Gender directly affected personal-emotional adjustment and indirectly affected academic adjustment mediated by entry grade
5	Heffer and Willoughby (2017)	The Transactional Theory of Coping	Positive Adjustment	Coping Flexibility	Moderator	USA	1132	19	Longitudinal - The Brief COPE - Suicide Behaviours Questionnaire-Revised (SBQR) - Rosenberg Self-Esteem Scale - Difficulties in Emotion Regulation (DERS) The Daily Hassles Scale.	Positive coping strategies predict adjustment, negative coping strategies predict depression and poorer emotion regulation. More frequent positive coping strategies do not predict better adjustment over time.

Table 2 (Continued)

No	Authors	Theoretical Framework	Dependent Variable (DV)	Independent Variable (IV)	Mediator	Sample Characteristics	Measure	Findings			
						Country					
					Moderator	n					
						Age					
							Study Design				
6	Holt (2014)	*	College Student Adjustment	Parental Attachment	Mediator: Help Seeking, Social Competence, Self-Compassion	USA	204	18	Longitudinal	IPPA - Texas Behaviour Inventory Form A - Self-Compassion Scale, SACQ	Academic mediated the attachment and social adjustment relation mediated the attachment-social adjustment relation.
7	Katz and Somers (2015)	Bronfenbrenner's Bioecological System Theory	College Adjustment	Social Support, Parental Academic Support, University Environment, Gender, Coping Strategies, & shyness	-	USA	241	-	Cross-Sectional	SACQ - R-COPE - MSPSS - Parental Support Scale The University Environment Scale	Maladaptive coping and perceived university were the most essential to college adjustment. Social support & gender were not essential for college adjustment. The environmental variables proved to be significant partial mediators between the individual variables and college adjustment
8	Lindell et al. (2020)	Attachment Theory & Theory of Emerging Adulthood	Emotional Adjustment	Quality relationships with parents	Mod: financial support	USA	260	18,5	Longitudinal	The Network of Relationship Inventory DERS - RCMAS - Parents' financial support	Financially supportive parents were negatively associated with depression and anxiety.
9	Lau et al. (2018)	*	Adjustment	Social Support	Med: Self-Esteem	China	418	19,94	Cross-Sectional	MSPSS - Self-Esteem Scale Perceived Stress Scale - The Self-Perception Profile for College Students - The Career Aspiration Scale	Social support is a predictor of adjustment and is negatively correlated with stress, positively with academic, social competence. Self-esteem mediates the relationship between social support and adjustment.
10	Meng et al. (2014)	Self-efficacy	College Adjustment	Self-efficacy	Med: Social Support	China	474	18,7	Longitudinal	PSSE Scale - PSSS - Academic and social adjustment inventory - Life Scale	Self-efficacy correlated to social support, adjustment is negatively correlated to depression. Academic adjustment correlated to GPA & well-being, depression negatively correlated to GPA.
11	Morton et al. (2013)	*	Adaptation to University	Optimism, Self-Efficacy, Depression, and Anxiety	-	Australia	84	17-18	Cross-sectional	LOT-R GSE SCAMDA SSI CAQ	Students with high levels of optimism and low levels of depression and anxiety will adapt better when making the transition from high school to university. Students with high levels of self-efficacy and low levels of depression will experience less life stress in their commencement year of university.

Table 2 (Continued)

No	Authors	Theoretical Framework	Dependent Variable (DV)	Independent Variable (IV)	Mediator	Sample Characteristics			Study Design	Measure	Findings
						Country	n	Age			
12	Nightingale et al. (2013)	*	University Adjustment	Emotional Self-efficacy, Emotion Management	-	England	331	20,32	Longitudinal	-CAQ - The Situational Test of Emotion Management -The Emotional Self-Efficacy Scale	Poor and stable adjustment is predicted by low levels of emotion management. Emotional self-efficacy predicts lower academic achievement.
13	Nguyen et al. (2019)	Self Determination Theory	Adjustment to College	Autonomous motivation for spending time alone	-	USA	363	18	Cross-sectional	Shyness Scale, PI - Big-Five-Inventory Self-Regulation Q - SSQ, CES - UCLA Loneliness Scale - The Rosenberg Self-Esteem Scale	Perceiving lower social belonging, approaching solitary time for autonomous reasons was linked to greater self-esteem, and greater sense of relatedness to others and lower loneliness
14	Park et al. (2011)	*	Psychological Adjustment	Self-regulation	-	USA	162	17,9	Longitudinal	Constructive Thinking Inventory - DERS - Personal Mastery Scale Depression - DASS - 21	Increasing self-regulation is associated with better adjustment throughout the year. Changes in self-regulation ability predict adjustment changes during the first year.
15	Rahat and İlhan (2016)	*	Adjustment in University	Coping Styles, Social Support, Relational Self-Construct, and Resilience	-	Turkey	527	19,53	Cross-Sectional	MSPSS - Life Scale - Resiliency Scale - CSS-BF - Relational -Interdependent Self-Construct Scale	Relational self-construct, perceived social support, coping styles, and resilience in college students with certain risk characteristics have a significant predicting role on adjustment to university life.
16	Ranney and Troop-Gordon (2012)	*	College Adjustment	Computer-mediated communication with distant friends	Computer-mediated communication with distant friends	USA	242	18,4	Longitudinal	Friendship Quality Questionnaire - Beck Depression & Anxiety Inventory - Positive Affect and Negative Affect subscales of the College Adjustment Test	Adjustment in college depends on the quality of friendships. Online communication with distant friends predicts lower levels of emotional distress and depression significantly correlated with adjustment to university.
17	Rodriguez et al. (2017)	Tinto's Departure Theory	Academic Achievement	Pre-University Achievement, Academic & Personal-Emotional Adjustment; Parents' Education & Family Support	-	Spain	300	17-20	Cross-sectional	Perceived Acceptance Scale - The Social Support Questionnaire-Short Form SACQ - GPA	Academic Achievement in the first year is the cumulative effect of pre-admission characteristics and process variables.

Table 2 (Continued)

Literature Review Overview Matrix

No	Authors	Theoretical Framework	Dependent Variable (DV)	Independent Variable (IV)	Mediator	Sample Characteristics	Study Design	Measure	Findings
					Moderator	Country n Age			
18	van Rooij et al. (2017)	Tinto's & Astin Theory	Academic Adjustment	Intrinsic motivation, academic self-efficacy, self-regulated study	-	Nether Lands 243 19,3	Cross-Sectional- Design	SACQ - GPA MSLQ - SAI II	Academic adjustment was influenced by intrinsic motivation, self-regulated study & degree programme satisfaction. Motivational and behavioural variables did not influence GPA directly but through academic adjustment.

*Note. *studies did not explicitly state the application of a particular theoretical framework.*

An overview of college adjustment can be seen through the theories applied in the studies and aspects of the adjustment itself. Attachment theory defines that strong parental attachment provides a safe basis to adapt to a new environment, in this case, college, as well as being a safe haven for support and comfort. Bishop et al. (2019) stated that secure parental attachment predicts success in the transition to college. Additionally, a harmonious and stable relationship with parents positively affects emotional adjustment and may reduce symptoms of depression and anxiety in the following 3 years (Lindell et al., 2020). This is in line with Attachment theory (Ainsworth, 1989) which suggested that maintaining close relationships with parents during adolescence will benefit individual development. College adjustment studies conducted in The United States, Spain, France, South Africa, and China showed cultural influences in parenting styles that impact college adjustment. Studies in The United States revealed differences in the effect of close parental relationships on both male and female students (Lindell et al., 2020). Women in Western society are often conditioned to be relationship-oriented, so having a high-quality relationship with their parents may be very important for their emotional well-being, whereas men in Western society are required to be more independent, thus, men who receive financial support and maintain good relationships with their parents may actually develop anxiety. They feel immature which can lead to anxiety and adjustment problems (Lindell et al., 2020).

Studies in South Africa illustrated that parenting that supports autonomy (especially from mothers) can predict college adjustment (Daniels et al., 2018). According to Roman (2011), in South Africa, where many children are raised in single-parent households under socioeconomic pressures, it may strongly influence parenting style. Based on the Self-determination Theory, when the social environment increases basic psychological needs such as autonomy, competency, and relatedness, students are more internally motivated and able to handle challenging developmental tasks, including college adjustment (Katz & Somers, 2015). Next, in China, according to Lau et al. (2018), the transition period during the first year of college requires social support. In Chinese collectivist culture, college adjustment is successful when family and friends provide support to boost their self-esteem. A different aspect of Chinese culture is its emphasis on family ties, a harmonious kinship in a collectivist culture has a great impact on their children's education (Huang et al., 2012). On the other hand, although Chinese society adheres to high social conformity and collectivism, the Western concept of self-efficacy was found to help undergraduates in their first-year transition, resulting in better adjustment (Meng et al., 2014).

Studies conducted by Fernández et al. (2017) and Rodriguez et al. (2017) on students in Spain showed that cultural factors influence college adjustment among first-year undergraduates. In Spanish culture, students are more socially dependent compared to other cultures, they are still financially reliant on their parents or other relatives, and begin to establish self-identity within the family group, before developing personal autonomy. In addition, Spanish society is more family-oriented and student autonomy is not a high priority (Arias & Hernández, 2007). Students in France are also dependent on their families (Chevrier et al., 2020), they still live at home with their parents, are less independent, and their relationship with their parents has not changed. For these reasons, both male and female students need to be socially involved on campus, build personal relationships, and develop institutional attachment, which will ultimately influence the adjustment process.

Predictors of College Adjustment

The second objective of this study was to identify the predictors that contributed to the differences in college adjustment among first-year undergraduates. Positively correlated predictors in college adjustment consist of individual variables such as positive self-perception (Bishop et al., 2019),

positive coping strategies (Heffer & Willoughby, 2017), high school achievements (Fernández et al., 2017), self-efficacy (Meng et al., 2014; Morton et al., 2013; Nightingale et al., 2013), perceptions of the college environment (Katz & Somers, 2015), emotion management (Nightingale et al., 2013), self-construction, coping styles, and resilience (Rahat & İlhan, 2016), intrinsic motivation and college program satisfaction (van Rooij et al., 2017), and self-regulation (Park et al., 2011; van Rooij et al., 2017). While negatively correlated predictors in college adjustment included depression, anxiety (Morton et al., 2013), avoidance coping (Bishop et al., 2019), and acute shyness (Katz & Somers, 2015). Furthermore, predictors from environmental factors included attachment to parents (Bishop et al., 2019), parenting that supports autonomy (Daniels et al., 2018), quality of relationship with parents (especially in terms of financial support) (Lindell et al., 2020), quality of friendships (Ranney & Troop-Gordon, 2012), and background (education & parents' professions) (Rodríguez et al., 2017). From the analysis results, inconsistent variables in predicting college adjustment were identified, including those related to individual factors (such as gender, optimism, anxiety, and self-efficacy) (Katz & Somers, 2015; Meng et al., 2014; Morton et al., 2013; Nightingale et al., 2013; van Rooij et al., 2017). A study by Katz and Somers (2015) revealed that gender is not correlated with global, academic, or social adjustment. Likewise, environmental factors (such as social support) are only weakly related to global, academic, and personal-emotional adjustment. This was in contrast with the studies of Lau et al. (2018); Meng et al. (2014); Rahat and İlhan (2016) which confirmed that social support is positively correlated with college adjustment.

Discussion

The present study collected 18 studies regarding college adjustment, published from 2011 to 2021 to provide an overview of first-year undergraduates' adjustment. As mentioned earlier, Baker and Siryk (1984) suggested that college adjustment is multifaceted, which means that the construct can be examined from various aspects of adjustment. Some researchers applied various indicators or theories related to adjustment in order to describe adjustment more comprehensively. Indicators that can represent college adjustment include academic achievements, stress, anxiety, depression, and well-being (Chevrier et al., 2020; Heffer & Willoughby, 2017; Lau et al., 2018; Park et al., 2011). Park et al. (2011) said that it is necessary to understand college adjustment by examining three aspects namely stress, anxiety, and depression, these three are substantially interrelated.

The theories adopted in more than one study were Attachment Theory (Bishop et al., 2019; Lindell et al., 2020), and Self-determination Theory (Daniels et al., 2018; Nguyen et al., 2019). The Attachment Theory explains the mechanism of the college adjustment process. In dealing with stressful situations and the transition to college, parental attachment serves as a source of safety and comfort. The idea that their parents will always be supportive and helpful will benefit students in dealing with demands and adjustment to their new environment (Bishop et al., 2019). The study of Lindell et al. (2020) proved that high-quality parent-child relationships can predict emotional adjustment (especially in female students). However, in some cases maintaining a close bond (especially regarding financial dependence), may be problematic for male students.

The second theory adopted to detail the college adjustment mechanism was the Self-determination Theory (Daniels et al., 2018; Nguyen et al., 2019). Parenting (especially by mothers) that supports autonomy is often associated with improved well-being and high internal motivation, which can support better adjustment during the transition period (Daniels et al., 2018). In line with this,

Nguyen et al. (2019) also stated that children who develop independence and autonomous motivation are likely to have been raised by parents who support autonomy, these qualities positively contribute to college adjustment.

In addition to the Attachment Theory and the Self-Determination Theory, other theories such as the Transactional Theory of Coping (Heffer & Willoughby, 2017), Self-efficacy (Meng et al., 2014), Social Compensation Theories (Ranney & Troop-Gordon, 2012), Tinto's Student Departure Theory (Rodriguez et al., 2017), as well as Tinto's Theory of Student Attrition (van Rooij et al., 2017) were integrated to test college adjustment in order to obtain predictor variables.

Through the Transactional Theory of Coping, Heffer and Willoughby (2017) concluded that positive coping strategies can predict positive adjustment and minimize suicidal ideation, while negative coping strategies predict depressive symptoms and poor emotion regulation. Positive coping strategies are less able to predict better positive adjustment over time. Coping refers to emotional resources used to deal with stressful situations (Lazarus & Folkman, 1984). Therefore, by implementing the coping strategies theory, we understand why individuals deal with stressors in different ways, the ability to use positive methods related to problem-solving, such as seeking social support or doing recreational activities, as well as non-adaptive strategies such as avoiding stressful situations. By understanding these coping strategies, we can explain the college adjustment process.

Research by Ranney and Troop-Gordon (2012) through the Social Compensation Theory, explained that the success of college adjustment is influenced by the quality of friendship. Online communication with long-distance friends can fulfill relational needs during social and academic transitions. Tinto's Student Departure Theory was widely cited in various college adjustment studies, as it describes the first longitudinal model development that determines the factors that influence, at different times, social and academic integrations, and supportive institutional systems. Research by Rodriguez et al. (2017) stated that college transition is a multifactorial process involving multiple factor interactions, developing before and during college, where first-year academic achievements are the cumulative effect of pre-college characteristics and process variables such as social support, educational background, and parents' professions.

From some theories mentioned above, the researchers observed that they were used to identify specific variables in the context of higher education, which leads to a broader understanding of which aspects are related to college adjustment. It is very essential for researchers to continuously develop theories and frameworks that can convey college adjustment over time. Analyzing integration into higher education, Tinto's Student Departure Theory (1975, 1993) (Pascarella & Terenzini, 1983) is a construction of social and academic integration which involves an interactional perspective on integration and considers both individual and institutional environments. The student departure model (Tinto, 1975, 1993) (Pascarella & Terenzini, 1983) included characteristics related to individuals such as family background, academic ability, gender, and previous school. However, as the main sociological approach, this approach pays little attention to the psychological process (Schaeper, 2019). Tinto analyzed the role of institutional factors in dropouts and evaluated classroom experiences, especially in cooperative learning. Still, institutional characteristics and contextual attributes were not addressed systematically (Georg, 2009; Kuh et al., 2008). In the researchers' judgment, it is the flaw of the theoretical approach.

Furthermore, the researchers recommend considering how developmental theories and frameworks (such as Bronfenbrenner's ecological model) can contribute to a more comprehensive understanding of both individual and environmental factors that influence development and adjustment during the college transition period. According to the researchers, Bronfenbrenner's

Ecological Theory on human development is the best theoretical framework to use, because it specifically examines proximal and distal influences on the environment and interactions which will impact individual learning and development. Applying sociocultural theory enables us to understand human development that can be directly observed and measured; thus, holistic consideration of individual development and psychosocial adjustment can be made.

Regarding the predictors, there are variables related to individual characteristics and environmental factors which may influence college adjustment. Based on the variables mentioned above, the researchers concluded that individual factors could influence college adjustment both positively and negatively.

Some empirical studies reviewed revealed different results. The analysis results found inconsistent predictors in college adjustment, including those related to individual factors such as gender (Fernández et al., 2017; Katz & Somers, 2015), and self-efficacy (Meng et al., 2014; Morton et al., 2013; Nightingale et al., 2013; van Rooij et al., 2017), as well as environmental factors such as social support (Katz & Somers, 2015; Meng et al., 2014; Rahat & İlhan, 2016).

Individual factors such as gender were widely studied, and most studies examining the role of gender in college adjustment agreed that first-year female students experience more challenges compared to first-year male students (Alfeld-Liro & Sigelman, 1998; Lopez et al., 2002). In addition, it appears that first-year female students adjust better academically than male students, although they struggle with emotional and social adjustments (Duchesne et al., 2007; Mattanah et al., 2004). First-year female students who are socially integrated with the institutions are likely to stay, similarly, first-year male students who achieve academic success tend to stay (Kenny & Rice, 1995; Pascarella & Terenzini, 1980). However, Katz and Somers (2015) argued that gender is only associated with personal/emotional adjustment in college, but not with global, academic, or social adjustment. In contrast with research by Fernández et al. (2017) which concluded that gender plays a role in social and personal/emotional adjustment during the transition period.

Other individual factors such as self-efficacy are generally correlated with college adjustment, but a study by van Rooij et al. (2017) stated that self-efficacy does not affect academic adjustment. van Rooij et al. (2017) then explained that the reason for this was possibly the application of the global self-efficacy scale in the research, this scale was not a good predictor. For example, compared to domain-specific self-efficacy, in the context of transition periods such as learning experiences during the first year of college, self-efficacy in specific subjects and self-efficacy beliefs are not good predictors for achievements and college adjustment (van Rooij et al., 2017).

Environmental predictors such as social support, in fact, still showed an inconsistency relating to predicting college adjustment. Environmental factors are useful when conducting a study on the topic. Previous researchers have discovered that social support contributes to positive adjustment and personal development, and diminishes the impact of stress (Freeman et al., 2007; Johnson, 2007; Perera & DiGiacomo, 2015; Taylor et al., 2013). However, the results of a study by Katz and Somers (2015) surprisingly revealed that social support is only weakly related to global, academic, and personal-emotional adjustment. Meantime, other studies implied that social support benefits college adjustment (Lau et al., 2018; Meng et al., 2014; Rahat & İlhan, 2016). These inconsistencies need to be investigated in future research.

The researchers reviewed college adjustment studies from other countries. Research in The United States and South Africa revealed cultural influences on parenting style affect adjustment (Daniels et al., 2018; Nguyen et al., 2019). Based on the Self-determination Theory, a parenting style that supports autonomy is associated with excellent adjustment. In the United States' individualistic

culture, how individuals live is determined by parenting style, parents in Western countries raise children to be independent and encourage them to explore and find their own interests (Nguyen et al., 2019). Parents make children sleep in their own room at an early age (Valentin, 2005), allow them to go to school on their own, motivate them to find part-time jobs to generate their own income, and ultimately encourage them to move out and live independently. The encouragement to be independent (Silk et al., 2003) is associated with helping in the development of a stable sense of self when adjusting to college.

Daniels et al. (2018) who conducted a study with a sample of first-year undergraduates in South Africa, suggested that family structure plays a role in college adjustment. Affection and understanding expressed by parents who support autonomy can improve self-confidence which contributes to better college adjustment. When parents are confident with their child's abilities and entrust them to handle their own developmental tasks as well as give them personal space to figure out solutions to their own problems, they support autonomy. In addition to the positive outcomes of autonomy-supportive parenting, children have better psychological well-being and improved internal motivation.

Furthermore, Daniels et al. (2018) also stated that psychologically controlling parenting hinders success in adjustment. Parents can become controlling when they feel insecure about their child's abilities in handling their own developmental tasks and this can cause a delay in competence development (Joussemet et al., 2008). Students must demonstrate independence and make decisions without parental intervention (Alt, 2014). Previous research has proven that controlling parenting can cause psychological harm, which may lead to suicidal ideation and anti-social behavior (Madu & Matla, 2003), and undoubtedly add more pressure to collegiate life. As students are exposed to a new environment, in this case, college, they form different identities. The perceived parenting style can trigger negative outcomes such as missing classes or not completing assignments during their adjustment process (McClelland & McKinney, 2015).

Conclusion

Based on the information above, the researchers conclude that college adjustment among first-year undergraduates can be represented through various theories such as Attachment Theory, Self-Determination Theory, the Transactional Theory of Coping, Theory of Emerging Adulthood, Self-efficacy, Social Compensation Theories, Tinto's Student Departure Theory, and Tinto's Theory of Student Attrition. Predictors of successful college adjustment consist of individual factors such as positive self-perception, high school achievements, self-efficacy, acute shyness, perception of the college environment, emotional management, self-construction, coping style, resilience, intrinsic motivation, college programs satisfaction, self-regulation, depression, and anxiety. The next factor is environmental factors which include parental attachment, autonomy-supportive parenting, quality of relationships with parents, quality of friendships, and background (education and parents' professions). Inconsistent predictors in college adjustment include gender, optimism, anxiety, self-efficacy, and social support.

Recommendation

Based on this review several important points could be for future research, such as comparing the role of gender in college adjustment in Indonesia. Future research may combine the possibility of variable interactions (mesosystem) that contribute to college adjustment. Additional features of environmental variables as mediators between individual variables and college adjustment are also

necessary. The ecological approach can be adopted in future research on the topic. Studies conducted in different countries including The United States, Spain, South Africa, and China suggested that cultural influences on parenting styles can affect college adjustment. Future research may compare college adjustment among first-year undergraduates who migrate or are away from their parents with students who are still living with their parents. In addition, in line with its multifaceted nature, it is important to review research literature that adopted interview and observation methods to gain a more comprehensive insight into college adjustment.

Declarations

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The authors have contributed equally in the process of writing this article. Conceptualization : HP, FK, TR; Methodology : HP and FK; Supervision : TR and FK; Writing original draft preparation : HP; Writing, review, and editing : HP and TR.

Conflict of Interest

The authors declare no conflict of interest.

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