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Well-Being And Academic Performance In Immigrant Students: The Role Of Inequality Of Country Of Origin And Resilience

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WELL-BEING AND ACADEMIC PERFORMANCE IN IMMIGRANT STUDENTS:
THE ROLE OF INEQUALITY OF COUNTRY OF ORIGIN AND RESILIENCE

by

YUMIKO YAMAGUCHI

A master’s thesis submitted to the Graduate Faculty in General Psychology in partial fulfillment of
the requirements for the degree of Master of Arts, The City University of New York

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Yumiko Yamaguchi

This manuscript has been read and accepted for the Graduate Faculty in General Psychology in satisfaction of the thesis requirement for the degree of Master of Arts.

______________________________________________
Date Adriana Espinosa, PhD
Thesis Advisor

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Date
Abstract

Well-being and Academic Performance in Immigrant Students: The Role of Inequality of Country of Origin and Resilience

by

Yumiko Yamaguchi

Advisor: Adriana Espinosa, PhD

Research on the psychology of immigrants has primarily focused on their socioeconomic status, but has not factored in macroeconomic indicators. These provide a deeper understanding of the stressors experienced by immigrants through the lens of cultural gaps between home and host countries. This study examined predictors of psychological well-being (PWB) and academic performance among 376 immigrant college students by employing Bronfenbrenner’s bioecological model of development (1994) consisting of four levels of environmental factors: Macrosystem, exosystem, mesosystem and microsystem. The results revealed that higher PWB was predicted by mesosystem variables (lower perceived stress, lower acculturative stress) and microsystem variables (higher resilience, higher ethnic identity, being older), whereas better academic performance was predicted by microsystem variables (being younger, higher resilience) and exosystem variables (higher family economic status). Although macrosystem factors (economic growth, income inequality) alone did not impact the outcomes significantly, an additional moderation analysis revealed a significant interaction effect of income inequality and resilience in predicting PWB. Namely, the positive relation between resilience and PWB was larger in magnitude among immigrants from more egalitarian countries than it was among immigrants from less egalitarian countries. Immigrants from non-egalitarian countries proved to
be more resilient than immigrants from egalitarian countries: Their higher level of resilience seemed to translate into better skills of coping with distress rather than enhancing their PWB or academic performance. Higher levels of ethnic identity were also associated with better PWB, but not with academic performance. The moderating effect found for PWB was not found for academic performance.

*Keywords:* Well-being, Academic Performance, Income Inequality, Resilience, Acculturative Stress, Perceived Stress, Immigrants in the United States
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Well-being and Academic Performance in Immigrant Students: The Role of Inequality in Country of Origin and Resilience

The United States hosts the largest number of international migrants – 49.8 million migrants - 19% of the world’s total, followed by 24.4 million in Saudi Arabia and Germany, 11.7 million in Russia, 8.8 million in the United Kingdom and 8.3 million in the United Arab Emirates (UN, 2017). For these host countries, immigration has been one of the most controversial topics. Beginning with Benjamin Franklin who was concerned that German immigrants were disrupting the British-American culture, other ethnicities - Irish, Poles, Italians, Russian Jewish - have also been considered to be too different to assimilate to American culture (Archdeacon, T.J., 1983). Since then, the ethnic composition in the U.S. has changed drastically. In 1960, the foreign-born residents represented 9.7% of the population in the United States with the largest immigrant groups originating mostly from Europe; Italy (12.9%), Germany (10.2%), Canada (9.8%), the United Kingdom (8.6%), and Poland (7.7%) (MPI, 2018). By 2015, immigrants represented 13.4% of the U.S. population, with the largest groups coming from Latin America and Asia; Primarily, Mexico (26.9%), India (5.5%), China (4.8%), Philippines (4.6%), and El Salvador (3.1%) (MPI, 2018). Accordingly, immigrant workers have become an important source of labor growth in the U.S. economy. In 2017, foreign-born labor comprised 17.1% of the total labor force in the U.S. (BLS, 2018). Given that immigrants are essential for U.S. economic growth, it is important to understand factors that affect their overall well-being.

While much of the literature analyzing the well-being of immigrants focuses on their socioeconomic status, a dearth of research looks at home country-level factors, such as economic growth or inequality. These factors can be critical because as explained by Sue and Sue (2003), an immigrant’s native country is the benchmark used to gauge cultural and economic gaps
between host and home societies; gaps that impact the process of acculturation as well as their well-being. Among many prospects, income inequality is the only one considered in other studies as a predictor of well-being.

Specifically, Hamilton and Kawachi, (2013) conducted the first study that investigated the effects of income inequality in their study of immigrants aged from 25 to 64 \((N = 35,620)\) who lived the U.S. for 6 to 20 years, using data from the March Current Population Survey (CPS) for 1996 to 2006. In addition to the sample’s demographic data, the study used national-level indicators, such as GDP per capita, life expectancy at birth, and the Gini index. The results showed that moving from a less egalitarian country to a more egalitarian country was associated with better self-reported health. In other words, self-reported health was more favorable among immigrants from countries with greater income inequality relative to immigrants from countries with lower income inequality. Furthermore, the results were more distinct after controlling for GDP per capita of the country-of-origin: Self-reported health was better among immigrants from developed countries relative to less developed countries. While the findings were significant, the study did not include additional home country-level indicators or individual factors, such as stress or resilience, which have been documented as important in determining well-being. In this article, I employ a multilevel statistical model based on the bioecological model of development established by Urie Bronfenbrenner (1994), to predict two markers of general well-being, psychological well-being and academic performance, as a function of country-level indicators, interpersonal indicators and demographic variables.

**Psychological Well-being**

Psychological well-being is defined as how individuals evaluate their lives, and these evaluations may either be in the form of cognitions or affect (Diener & Suh, 1997). Empirical
research on psychological well-being of immigrants in the U.S. was launched in the 1960s owing to an interest in depicting the quality of life in America (Campbell, 1976). Since that time, the scientific study of well-being has proliferated (Diener et al., 1999), with distinctions increasingly drawn between “hedonic” and “eudaimonic” aspects of well-being (Waterman, 1993; Kahneman et al., 1999; Keyes et al., 2002; Ryan & Deci, 2001). In psychology, Diener’s (1984) tripartite model of subjective well-being is the most used conceptualization of happiness, it includes both hedonia, which includes life satisfaction, and eudaimonia, which emphasizes meaning-making, self-realization, and growth, quality, connections to others, self-knowledge, meaning life and marching to one’s drummer (Ryff, 2014). The eudaimonic approach intrigues several psychologists. A positive psychology founder, Seligman (2011) explains well-being by using the acronym of the five necessary elements PERMA: Positive Emotions, Engagement, Relationships, Meaning and Purpose, and Accomplishments. Another theorist, Keyes (2002), constructed a model that describes mental well-being as having three components, subjective well-being (hedonic well-being), psychological well-being, and social well-being (together, called eudaimonic well-being). Some personality traits, such as optimism, extroversion, and self-esteem have a strong association with well-being, though personality is influenced by life circumstances long-term levels (Costa & McCrae, 1980; Diener et al., 2003).

The current study focused on “psychological well-being” because immigration experiences should produce more than life satisfaction. Countless experiences between two or more different cultures may bring them meaningfulness throughout their lives through overcoming adversities to become more resilient, happier and leading better lives.
Academic Performance

Academic performance is one of the most important components of students’ well-being as it is a predictor of future success. While there are various internal and external factors influencing academic performance, the most reliable predictor has historically been attributed to intelligence (Busato, 2000). However, Kappe (2012) reported a modest relationship between intelligence and academic performance with correlations ranging between .13 and .60. The results suggest academic success can be determined by other factors. Other researchers have explained that the individual difference in academic performance is a combination of intelligence and personality traits (Alexander, 1935; Poropat, 2009; Webb, 1915). Students with higher cognitive ability and conscientiousness are more likely to perform better. Von Stumm and colleagues (2011) advocate the importance of adding intellectual curiosity as a third significant predictor, because when students are mentally stimulated and nurtured, their academic performance may further be enhanced.

Quinn and Duckworth (2007) provides empirical evidence that students who reported higher well-being were more likely to achieve better grades. In like manner, students with higher grades tended to experience higher well-being, even after controlling for IQ, age, and GPA and well-being from previous year. The findings suggest that the relation between well-being and academic performance may be reciprocal (Quinn, 2007; El Ansari & Stock, 2010). Expectedly, academic failure is correlated with mental issues such as depression, anxiety, and stress (Ahmed & Julius, 2015). Academic performance of immigrant students may be related to the adaptation style they embraced in their youth. Such students have to face not only developmental tasks (age salient tasks), they also have to manage acculturative tasks (e.g., language acquisition). The positive adaptation of earlier stage developmental tasks increases the probability of subsequent
successful adaptation. Additionally, better academic performance can be predicted by levels of educational support (OECD, 2010), positive peer relations (McCormick, Kuo, & Masten, 2011), as well as the societal level of influence, such as tolerance for diversity (Motti-Stefanidi, 2015). These protective factors are also sources to increase resilience and overall psychological well-being.

**The Bioecological Model of Development**

As mentioned above, in this article I employ, Bronfenbrenner's bioecological model of development (1994), as conceptualized by Jensen (2007), to predict markers of well-being among immigrants. The theoretical model incorporates the role of the environment, critical properties, proximal processes, the individual, environmental context, and time into different levels (from proximal to distal) to understand reciprocal causations in a whole society. Central to the model is a microsystem in which individuals have their direct interactions, such as in school, home or work. Secondly, the mesosystem is the realm of environment where two or more microsystem settings interact, such as when work-related stress carries over at home. Thirdly, the exosystem includes environments where interactions do not occur on a regular basis, but are influential, such as within extended family, or members of the community. The most distal element in the model is the macrosystem that includes more extensive social institutions, such as economic or social norms. While the macrosystem influences individuals through the exosystem, the macrosystem consists of combining patterns of micro-, meso- and exosystems and are particular to a given culture, subculture, or other broader context (Bronfenbrenner, 1989). The chronosystem refers to changes that occur over time. Time interacts with each level of the environment simultaneously to influence development. Significantly, Bronfenbrenner and Morris (2006) added that effective proximal processes are not unidirectional; they must influence in
both directions. Moreover, proximal processes are not limited to interactions with people; they also can involve interaction with objects and symbols in the immediate environment that invite attention, exploration, manipulation, elaboration, and imagination in order for reciprocal interaction to occur. Bronfenbrenner (2006) notes that the model includes theoretical inquiries into cultural psychology (Cole, 1995; Shweder & Haidt, 2000) and life span psychology (Baltes, Lindenberger, & Staudinger, 1998) which can be considered as the best model to measure changes of immigrants’ worldviews.

Jensen (2007) conceptualized Bronfenbrenner’s theoretical model to explain the acculturation process among U.S. immigrants. In Jensen’s work, the microsystem consisted of individual factors such as age, gender, motivation, resilience, temperament, as well as direct interactions with immediate surroundings such as family, school, or work. The second layer, the mesosystem included an individual’s acculturation and its stress stemmed from conflict of microsystems. Factors at the mesosystem level include practice, value, language, and culture. The third layer, the exosystem included the family’s acculturation and its stress; lack of social support, economic pressure, and local legislation. The outermost layer, the macrosystem included cultural aspects of a new society, such as belief systems, lifestyles, opportunity structures, discrimination and prejudice. These four levels interact closely in complex ways to construct an environment that shapes developmental pathways. Importantly, arrival times in the U.S. is critical. Chronosystem describes the pattern of environmental events and transitions over the lifetime. For immigrants, timings interact with each environmental level to influence development differently. Since a minor change affects the dynamics of proximal processes as a whole, the quality and continuity of proximal processes within the home, school or work can be critical to keep self-identity firm.
However, Jensen’s conceptual model has not been empirically tested. To the best of my knowledge, this study is the first to do so. Consistent with Jensen’s conceptualization of Bronfenbrenner's bioecological model of development (1994), this study uses the following levels: Macrosystem, exosystem, mesosystem, and microsystem. Figure 1 depicts these levels as well as the variables that define them, and which I explain below.

**Literature Review**

**Macrosystem**

The macrosystem represents social construct such as belief systems, lifestyles, and opportunity structures. The well-being of immigrants can be affected directly or indirectly by the factors on this level. To understand the changes in societal influence, economic growth and income inequality were selected. Economic growth shows the level of development of a country, and this (level of economic development) directly affects the income of citizens, as well help create a platform for perceiving the change of monetary value. Income inequality shows the distribution of the population - based on income level - from the wealthy to the poor. Both factors affect living standards, which includes access to quality healthcare and education.

**Economic growth.** Economic growth of a country is typically measured by Gross Domestic Product (GDP), the monetary value of all finished goods and services produced in a period that reflects a country’s economic performance and is used to make international comparisons (Schiller & Gebhardt, 2013). In recent decades, the global decrease in the middle-class worldwide suggests replacing GDP with “per capita GDP” for economic research. “The Easterlin paradox (1974)” explains that there is no link between the economic development of a country and the overall happiness of its citizens. Wealthy people are happier than those with low incomes because of their financial security, better standard of living that includes quality of
education, however, increases in income do not proportionally increase happiness. More recently, the paradox has been re-assessed by researchers who raised questions, such as, “is the data (14 rather wealthy countries) inadequate to generalize? Is the relation between wealth and the psychological well-being of people and countries linear and universal? Or is the relation one-way (money brings happiness) (Kahneman & Deaton, 2010) or two-way (happiness also brings money)? “(Czapiński, 2012, p. 52). Many have tried to answer these questions, which led to new questions and controversy (Czapiński, 2012). Later research that included developing countries showed a significant increase in well-being (Deaton, 2008). A small difference in GDP indicates a large variation in the level of well-being in low income nations, whereas in wealthy nations, the slope of the regression line of welfare and income is close to zero (Inglehart, 1990; Deaton, 2008, Czapiński, 2012). Hagerty and Veenhoven (2003) explained that happiness is paradoxically determined by absolute income in addition to relative income. In other words, money brings happiness but only to the poor, because it satisfies their basic needs. Once these basic needs have been met, further growth in affluence ceases to act on psychological well-being.

In agreement, recent research (Proto & Rustichini, 2014) has found the relation between GDP per capita and well-being to be to have an inverted U-shape, so that among low income countries increases in GDP relate to higher well-being, but the opposite relation holds among high income countries, whose well-being decreases with GDP. Additionally, collectivist countries, especially wealthier ones, are less happy than the individualist countries like the U.S. (Ahuvia, 2002; Veenhoven, 1998). In comparison with poorer nations, there is a higher level of suicide, environmental pollution, divorce, affective disorders and pathologies such substance addiction in advanced countries (Myers, 2000). These risk and consequence from affluence are often called “the dark side of the American dream” (Kasser & Ryan, 1993). As explained above,
higher GDP per capita does not immediately translate to higher well-being, although it is correlated with the factors that might affect well-being. Some researchers advocate that the allocation and distribution of the income, economic inequality, are even more important for individual well-being.

**Economic inequality.** Economic inequality refers to the gap between the wealthy and everyone else within a country, and is commonly measured by way of the Gini index (1912), which ranges between 0 (i.e., perfect equality) and 1 (i.e., maximal inequality). Income inequality negatively affects mental health and overall well-being (Lynch et al., 1998; Pickett & Wilkinson 2010; Pickett & Wilkinson, 2015). Greater inequality harms everyone, not just the poor members of society (Kawachi, 2000). Kawachi notes that income inequality has a contextual effect on population health. He explains the effect of two separate mechanisms that are both related to negative externalities (a cost that is damaged suffered by a third party as a consequence of an economic transaction) and the spillover effects of living in a society with unequal income distribution. From the perspective of the wealthy, living in an unequal society increases exposure to the “pathologies of poverty:” crime, violence, and certain infectious diseases. Theoretically, wealthy individuals should be able to segregate themselves from unwanted contact with those worse off by retreating to gated communities, although they may not be able to escape the pathologies of poverty entirely. From the perspective of people at the bottom half of income distribution, living in the presence of the wealthy exposes them to financial spillover effects. For example, when the wealthy move into communities they often drive up real estate prices, compete for space in classrooms, and eventually spur a rise in property taxes, making the area unaffordable to those with more modest means (Kawachi, 2000). A different negative externality is caused by the apparent consumption habits of the super-
affluent, which produces invidious social comparisons and lead to positional competition that is both stressful and socially wasteful (Frank, 1999; Kawachi & Kennedy, 2006). A society with higher income inequality tends to have more poor people than a more egalitarian society, and poverty causes poor health outcomes (Kawachi, Adler, & Dow, 2010). Consequently, societies with greater income inequality exhibit lower health status on average than societies with more egalitarian income distribution (Hamilton & Kawachi, 2013). Income inequality can be described as a social construct, as it is correlated positively with crime, especially homicide and violence (Pickett and Wilkinson, 2010), religiosity (Elgin, Elgin, Goksel, Gurdal, & Orman, 2013; Norris & Inglehart, 2014; Rees, 2009) and negatively with social cohesion (Uslaner & Brown, 2005). When income equality is increased by .05 in the Gini coefficient, risks in all causes of mortality can be raised by 7% (Kondo et al., 2009). Mortality includes incidences of suicide, which is more common in egalitarian societies, while depression is more common in inequitable societies (Daly, Oswald, Wilson, & Wu, 2011; Messias, Eaton & Grooms, 2011).

Unsurprisingly, income inequality also affects inequality in educational attainment and school selection, because access to elite institutions is stratified sharply by social group. For example, the majority of the students (64%) of students in Tier 1 private universities in the U.S., come from families earning in the top 10% (Soares, 2007). Consequently, the vast majority of low-income high achievers do not even apply to any selective college due to the high cost of tuitions (Hoxby & Avery, 2012). Socioeconomic status (SES) can also predict the level of academic performance. Students in lower SES group reported lower and slower academic achievement as compared with students in higher SES group (Morgan, Farkas, Hillemeier, & Maczuga, 2009). They are less likely to get encouraged to obtain the development of fundamental skills, such as reading acquisition, vocabulary, and oral language (Buckingham,
Wheldall, & Beaman-Wheldall, 2013). Not only their own ability, but teachers’ prejudice might also affect academic performance of lower SES students by preventing students from having an equal opportunity (Gollnick & Chinn, 2013). Consequently, the perception of family financial constraints can affect emotional distress in students and their academic performance (Mistry, Benner, Tan, & Kim, 2009).

Empirical studies investigating the association between income inequality and well-being have reported mixed results. Pickett and Wilkinson (2010) describe a strong relationship ($r = .73, p < .01$) between income inequality and mental illness, explaining that a much higher percentage of the population have mental illness in more unequal countries. Additionally, the study reveals that income inequality is also linked to levels of trust, social capital, violence, drug misuse, physical morbidity and mortality, low social mobility and poor educational achievement, bullying in schools, and rates of imprisonment, teenage births and the status of women in society (OECD, 2009; Messias, Eaton, & Grooms, 2011; Pickett & Wilkinson, 2010) that involve the psychosocial stress. As inequality grows, social distance and distinctions increase, along with the potential for the pain of low social status, stigma, and shame, which explains how inequality creates adverse outcomes through the psycho-social stresses caused by interactions in an unequal society. However, the study collected the data from only 12 developed countries and measured psychological disturbance, not psychological well-being. Similarly, a recent meta-analysis (Ribeiro et al., 2017) with 27 studies (from among 113 eligible studies), nine studies resulted in a positive association between income inequality and the prevalence or incidence of mental health problems; ten studies resulted in mixed results, and eight studies resulted in no association. The authors used nine studies for quantitative synthesis to indicate that income inequality negatively affects mental health. However, the effect sizes were small (.06 and .12, respectively) and there
is marked heterogeneity among studies. Nevertheless, the study added insights regarding the link between income inequality and mental health problems. In the material pathways mechanism, the association between income inequality and mental health problems can be explained by neighborhood deprivation (Fone et al., 2013), area income (Ahern & Galea, 2006), and country-level human development index (Cifuentes et al., 2008). In the psychosocial pathway mechanism, status anxiety and social capital may mediate the association (Layte, 2012). Additionally, Ahern and Galea (2006) noted that higher income inequality was associated with lower resilience against developing the depressive disorder in New York City residents in the aftermath of the 2001 terrorist attacks.

Another meta-analysis examined the relationship between income inequality and “subjective well-being” with 24 studies (Ngamaba, Panagioti, & Armitage, 2017). The authors performed a subgroup analysis to examine difference between developed and developing countries. Based on World Bank’s estimate in July 2015, the Gross National Income (GNI) per capita of 12,736 USD per year divided into the two groups; developed and developing. Likewise, the association between income inequality and well-being also shows mixed findings. Ngamaba et al. (2017) suggests the inconsistency stemmed from other moderating factors. For example, subjective well-being (SWB) may be too broad: happiness and life satisfaction are not interchangeable, as they might relate differently to income inequality (Kahneman & Deaton, 2010). Similarly, level of economic development, geography, and operational issue to measure income inequality can be other factors. The association between income inequality and SWB was moderated by the country economic development. The difference was explained by the Modernization Evolutionary theory (Inglehart, 1997), proposing the different level of tolerance exist due to economic shifts from developing to developed countries. In other words, people in
developing countries might perceive income inequality as an economic opportunity, innovate and develop new technologies. Therefore, the negative elements can be core determinant of their well-being. Furthermore, the tunnel effect theory suggests that increases in income inequality signal future mobility and an increase of SWB (Hirschman, 1973). As such, people in developing countries can tolerate income inequality by observing other people’s rapid progression, causing them to believe that their time will come (Hirschman, 1973). In contrast, income inequality may be perceived as a threat rather than a challenge due to advanced technology and economic growth that was previously achieved (Inglehart, 1997; Inaba, 2009). Ngamaba et al. (2017) concluded that the association between income inequality and SWB is complex and highly dependent on methodological variations across studies.

Kelley and Evans (2017) added types of societies: poor developing nations, rich advanced nations, and former Communist societies to the demographic factors. The results show that income inequality has no noteworthy impact on subjective well-being in normal times and in affluent nations which is consistent with other studies (Esping-Andersen & Nedoluzhko, 2017; Kelley & Evans, 2016; Kenworthy, 2017; Nielsen, 2016). The result for developing nations, inequality slightly increases well-being in normal times or possibly has no effect. Extraordinary circumstances (equilibrium ruptures, the fall of Communism, the Great Recession), may or may not be affected.

**Exosystem**

The exosystem characterizes factors on the community level such as social support, local legislation or economic pressure, which result from the macrosystem. Immigration status and family economic status were selected for this study. Both factors can determine immigrants’ social position.
**Immigrant status.** The “Immigrant Paradox” (Garcia-Coll & Marks, 2011) refers to the outperformance of first-generation immigrants’ over that of subsequent generations despite them confronting stress inducing linguistic and cultural barriers. It is generally applied to Latino, Asian and other racial and ethnic populations who settle in the United States. Many studies report a health advantage among foreign-born immigrants over second-generation immigrants, because first-generation immigrants are less likely to use nicotine or alcohol, and have lowers of chronic illnesses, and risk of mortality (Abraido-Lanza, Chao, & Florez, 2005; Akresh, 2007; Bui, 2013).

However, some studies deny the paradox effect, stating that immigrants overall are at risk for conduct problems, phobic fears, and early substance use (Breslau et al., 2011) or well-being is not explained by legal status or years of residency (Cuellar, Bastida, & Braccio, 2004), but predicted by income, age, gender and acculturation (González, 2008). Teruya (2013) explained the inconsistent and equivocal results were caused by methodological issues adopted, such as sample selections. For example, many studies incline to use only selectively healthy groups (Bostean, 2013), and did not consider health insurance and legal residency status, ethnicity, age or nativity (Crimmins, Kim, Alley, Karlamangla, & Seeman, 2007; Nalini-Junko, 2011). Consequently, many Hispanic males (Teruya, 2009) or the undocumented with no health insurance (Urrutia-Rojas, Marshall, Trevino, Lurie, & Minguia-Bayona, 2006) are deterred or discouraged from accessing services. A meta-analysis of 46 references concluded that the paradox protection appears uneven and ungeneralizable across ethnicities, age groups and genders. Rather than immigrant generations, predictors for any beneficial effects are something else; low acculturation and related stress, healthy behaviors and diet, legal and insured status, age of arrival in the United States and length of stay (Teruya, 2013). Therefore, the immigrant
paradox may not be representative of the wider target population (Nalini-Junko, 2011; Palloni & Morenoff, 2001).

**Family socioeconomic status.** People of lower socioeconomic (SES) status are at increased risk of diverse health problem (Adler & Ostrove, 1999; Marmot, 2005). Pearlin (1989) explains two hypotheses regarding disparity in the impact of stressful life events. First, the differential exposure hypothesis theorizes that the higher prevalence of health problem in lower SES groups is associated with a greater exposure to psychological stressors. Second, the differential vulnerability hypothesis suggests that low SES individuals are less well equipped to cope with stressors because they have fewer material and social resources. Studies have shown relative deprivation to be significantly correlated to perceived stress, while relative gratification was not (Holland, 2011). The markers of hopelessness are evident in income, education attainment, and employment status, in differences in mortality, marriage, and incarceration rates, and in other signs of societal fragmentation (Graham, 2017). However, trends in hope and well-being are not the same across all low SES cohorts. A research (Graham, 2017) found remarkable levels of optimism among lower SES Blacks, followed by lower SES Hispanics, in contrast to deep desperation among lower SES Whites. The study also explains that the lower SES groups in the U.S. are significantly less likely to believe that the hard work to benefits their future relative to the lower SES in Latin America. In contrast, the higher SES in the U.S. are more likely to answer this question about their prediction about the hard work positively than the higher SES in Latin America. Additionally, the lower SES in the U.S. perceived stress the previous day than the lower SES in Latin America, and smiled less the previous day as well. The gaps between the scores of the high and low SES are also much greater than the gaps between the high and low
SES in Latin America. Graham (2017) explains the high costs of being poor in the U.S. It is more evident in stress, insecurity, and hopelessness than in material deprivation.

Socioeconomic status (SES) has also a significant role in the overall academic achievement of the students (Farooq, Chaudhry, Shafiq, & Berhanu, 2011). The students with high SES experience more parental involvement (Barnard, 2004; Shumox & Lomax, 2001), such as better communication and assistance on their academic work from educated parents (Fantuzzo, Tighe, & Child, 2000; Trusty, 1999). Students with effective study habits and motivation from family achieve better grades (Arora & Singh, 2017; Farooq et al., 2011). In contrast, the students from low SES tend to exhibit low academic performance (Eamon, 2005). Singh et al. (2016) explains that teachers are the most critical factor for better performance, because their effectiveness is of equal importance to a student's study habits, distraction factors, or family environment to influence academic performance (Arora & Singh, 2017). As stated in earlier, school selection is also less robust among lower SES groups. Consequently, parents in higher SES group more likely to provide their children with the tools needed for school than do parents in lower SES group.

**Mesosystem**

The mesosystem represents acculturation and its stress as stemmed from conflict of individual factors or in combination with environmental factors. Two types of stress were examined on this level: perceived stress and acculturative stress.

**Perceived stress.** Stress is any uncomfortable emotional experience accompanied by predictable biochemical, physiological and behavioral changes (Baum, 1990). Perceived stress can be measured by the degree to which everyday life events are unpredictable or uncontrollable (Cohen & Williamson, 1988). Every stressor significantly affects mood, well-being, behavior,
and health. While stress response may be beneficial in the short term, high levels of chronic stress can affect hypothalamic-pituitary-adrenal axis regulation (Pruessner, Hellhammer, & Kirschbaum, 1999). High cortisol secretion may increase the risk for diseases such as blood pressure and vascular hypertrophy (Henry, Stephens, & Santisteban, 1975), and the gradual loss of immune function (Ferguson, Wikby, Maxson, Olsson, & Johansson, 1995). Burns et al. (2002) explains that high perceived stress is associated with low antibodies that can decrease psychological well-being and increase anxiety, insomnia, and social dysfunction. Individuals experience different patterns of stress responses, some exhibit active coping, while others exhibit responses related to aversive vigilance (Kasprowicz, Manuck, Malkoff, & Krantz, 1990).

Kendler et al. (2003) find some evidence that the relationship between personality and environmental adversity may be bi-directional. For example, levels of neuroticism, emotionality, and reactivity are associated with poor interpersonal relationships. In contrast, individuals with higher self-esteem had lower cortisol responses after natural disasters (Madakasira & O’Brien, 1987). Additionally, health stress has also been shown to affect various cognitive functions like attention, concentration, learning, and memory. Individuals who experience daily stress often lose the capacity to plan, since being absorbed with daily struggles lowers the ability to focus on getting through day by day (Mullainaithan & Shafir, 2013). Hence, stress can be a critical risk not only for psychological well-being, but also for academic achievement.

Among college students, stress is one of the top five threats to academic performance along with sleep disturbance, anxiety, and depression, which are all related to stress (ACHA-NCHA, 2011). Poor time management behaviors have been found as sources of stress and poor academic performance (Gall, 1988; Longman & Atkinson, 1988; Walter & Siebert, 1981). Students with higher perceived stress are more likely to cope with stress by abusing substances
such as tobacco (Brooks, Gaier, Kishore, & Frank, 2008), and/or alcohol (Park, Armeli, & Tennen, 2004). Similarly, students with higher Perceived Stress tend to consume larger amount energy drinks with excessive caffeine, resulting in lower academic performance than those with lower Perceived stress who consumed fewer energy drinks (Pettit & DeBarr, 2011). Students who procrastinate are triggered to consume more caffeine when preparing for stressful events like exams. When perceived stress persists, the performance can be critical. Roeser et al. (1998) found that students with frequent internalized distress, such as sadness, anxiety and depression showed diminished academic functioning, and students with external distress, such as anger, fear and frustration displayed school difficulties, learning delays and poor achievement.

**Acculturative stress.** Most immigrants experience acculturative stress, i.e. the stress that is caused from a combination of the acculturation experience, life-changing events during migration, and contact with the dominant group (Berry, 1992). Acculturation is the process of social, psychological, and cultural adaptation between two cultures. Immigrants must negotiate the new culture while simultaneously determining whether to maintain the practices and beliefs of their heritage culture (Berry, 1997). It is a reciprocal, multidimensional process by which the individuals involved are transformed through social interaction (Zea, Asner-Self, Birman, & Buki, 2003). Sources of acculturative stress may vary on the individual, but culture shock is a typical response for most foreign-born residents (Oberg', 1960; Berry, 2006). Subsequently, the greater the difference between the host culture and original culture, the greater the acculturative stress (Berry, Kim, Minde, & Mok, 1987; Leavel, 2001; Yeh & Inose, 2003) that decrease the level of well-being (Hovey, 2000; Kim, Hogge, & Salvisberg, 2014; Ying, 1988; Rogler, Cortes, & Malgady, 1991; Shin, Han, & Kim, 2007). Among ethnic minorities, major sources of acculturative stress are prejudice and discrimination (Al-Issa, 1997). While racial-ethnic
discrimination is pervasive in the United States (Kim & Lewis, 1994; Feagin, 1991; Telles & Murgia, 1990), some subgroups may be less likely to experience discrimination than others. For example, acculturated Hispanic immigrants with greater interaction with outgroup members can perceive discrimination more than recent immigrants with limited English proficiency who do not even consume media that displays negative stereotypes of their ethnic group. As such, a cultural resistance (less acculturation) can be protective of psychological well-being (Cuellar, Bastida, & Braccio, 2014). Political or religious conflicts/events also matter to immigrants in specific groups. For example, after the events of September 11, Muslim Arab American adolescents (N = 88) reported higher acculturative stress from experiencing prejudice and discrimination (Goforth, Pham, Chun, Castro-Olivo, & Yosai, 2016). Various studies reported religious and spiritual coping (Benson, Sun, Hodge, & Androff, 2012) or attitude to seeking help (Li, Wang, Xiao, 2014) could be effective strategies to manage acculturation stress, as well as for better psychological well-being. Nonetheless, other immigrants might cope with their stress in a different way. For example, highly acculturated immigrants are more likely to cope with acculturative stress with substance abuse due to greater exposure to substances and weaker anti-drug norms (Nieri, Kulis, Keith, & Hurdle, 2005; Kulis, Marsiglia, & Hurdle, 2003; Marsiglia & Waller, 2002) or maladapted diet that is associated with overweight and obesity (Daryani, 2005; Gadd, Sundquist, & Johansson, 2005). Not only the level of acculturation (Li et al., 2014) and duration in the U.S. (Finch, Kolody, & Vega, 2004; Antecol & Bedard, 2006), reasons for immigration can also predict the level of stress because immigrants have different degrees of willingness or motivation (Berry, 1997; Cobb, Xie, Meca, & Schwartz, 2016).

As mentioned in the earlier section, most immigrant students face two different developing tasks: developmental tasks (age salient tasks) and acculturative tasks (e.g., language
acquisition). Continuous acculturation and stress can become obstacles to succeeding in college. However, only few studies have examined the effect of acculturative stress on academic performance among college students, so knowledge on the subject matter is limited. One amongst the few empirical studies found a significant relation between acculturative stress and age at migration, immigration status, SES, social support, and English language proficiency (Luciano, 2012). However, there was no relation between acculturative stress and academic performance among the college students (Chang, 2017; Luciano, 2012). Rather, the acculturative stress predicted the level of academic stress significantly (Chang, 2017).

**Microsystem**

The microsystem signifies individual factors and represents the core of the model. Cultural identity (ethnic identity, American identity), resilience, age, gender and race were selected for the investigation.

**Cultural identity.** Identity formation is an essential aspect of development and psychological well-being (Erikson, 1959/1980; May & Yalom, 2005; Rogers, 1961). The social identity theory (Tajfel & Turner, 1986) and Erik Erikson’s model of ego identity formation (1968) are the primary theories regarding identity. Social identity theory advocates that the sense of belonging to social groups serves an important basis for one’s identity (Tajfel & Turner, 1986), whereas Erik Erikson suggests that identity includes sharing essential characteristics with others. Likewise, immigrants’ cultural identities are formed by both ethnic identity and national identity through cross-cultural contact in the host country. Unlike language and behavioral changes that occur for first-generation immigrants, assimilation may not happen until subsequent generations (Gordon, 1964), especially when minorities experience discrimination (Portes & Zhou, 1993).
**Ethnic identity.** Ethnic identity is the degree to which individuals perceive themselves aligned with an ethnic group via culture, race, language, or kinship (Burlew, 2000). There are four major components of ethnic identity: ethnic awareness or understanding one’s own and other groups; ethnic self-identification; ethnic attitudes about their own and other groups; and ethnic behaviors that indicate specific behavioral patterns for each ethnic group (Phinney, 1992). Ethnic identity may be personal - a consequence of sufficient exploration and experience based on decision-making and self-evaluation to gain confidence - positively correlated with positive attributes, such as coping ability, mastery, self-esteem and optimism (Roberts et al., 1999). For ethnic minorities, their identity can be attributed to discrimination and differentiation (Tajfel & Turner, 1986), or inter-group oppression (Fanon, 1963; Fanon, 1967). When negotiating complex environmental contingencies, ethnic identity can provide a sense of strength, competence, and self-acceptance (Outten, Schmitt, Garcia, & Branscombe, 2009; Ruiz, 1990) that buffer against distress (Ponterotto & Park-Taylor, 2007). At the same time, stronger ethnic identity can make individuals susceptible to distress (Yip, Gee, & Takeuchi, 2008; Yoo & Lee, 2008) resulting from inter-ethnic interactions (Syed & Azmitia, 2010) and the likelihood of discrimination (Sellers & Shelton, 2003), and feeling distressed (McCoy & Major, 2003). In contrast, European Americans in the U.S. have lower ethnic identity than members of immigrant ethno-cultural groups (Phinney, Berry, Vedder, & Liebkind, 2006; Smith & Silva, 2011). In recent history, Caucasians were the dominant group in North America, so they are not often the targets of discrimination. Espinosa and colleagues (2016) document a negative relation between ethnic identity and perceived stress among first and second-generation immigrant college students (11% White). Importantly, ethnic identity functions more as a coping strategy to increase self-esteem (Umaña-Taylor, Gonzales-Backen, & Guimond, 2009) or family connectedness (Huang &
Stormshak, 2011) that influences both worldview and behavior; it is a continuous exploration of the implications of the individual’s ethnicity and affirmation of membership. (Ong, Phinney, & Dennis, 2006).

**American identity.** American identity refers to being a member of the American heterogeneous society. While national identity can be central to the self-determination that becomes social identity (Deaux, 2001), it is also an important indicator for first-generation immigrants to measure their level of assimilation. While a strong feeling of belonging within a powerful nation should contribute to a positive self-concept, the effect varies across ethnic groups (Phinney, Cantu, & Kurtz, 1997) because the individuals perceive their ethnic group within an American context. Unsurprisingly, white Americans experience inclusion, but ethnic minorities experience it less. Yet, American identity can fracture when the nation confronts conflict (Guibernau, 2004) or natural disasters (West & Smith, 1997). Threats to the nation’s prosperity, traditions and culture, international standing or sovereignty reinforce national identity, uniting those who “belong” (Guibernau, 2004). In contrast, perceived discrimination weakens the national identity of immigrants (Fleischmann, Phalet, & Klein, 2011; Heim, Hunter, & Jones, 2011; Verkuyten & Yildiz, 2007), but regardless, national identity mediates the effect of discrimination on satisfaction with migration.

Empirical studies found that immigrants’ cultural orientations (ethnic and national identities) can have different associations with well-being. As mentioned in the earlier section, higher ethnic identity can predict positive psychological well-being. In contrast, higher national identity of immigrants is associated with sociocultural aspects of adjustment in school or work success, as well as effective participation in the host society (Heim et al., 2011; Ouarasse & van de Vijver, 2005), hoping to be viewed as ideal representatives of the nation (Maxwell, 2017).
According to a comparable study (Maxwell, 2017), immigrants in the U.S. reported less ethnocentric stress than in other countries (France or Germany). This means that immigrants in the U.S. have a greater chance of being seen as legitimate members of the nation when they adopt mainstream cultural norms (Alba & Foner, 2015; Maxwell & House, 2016). Unlike Canada’s “mosaic” which encourages its citizen to “belong” (de Zavala & Cichocka, 2012) while retaining individual ethnic identity, America’s concept of the “melting pot” requires immigrants to “blend” into the dominant White culture. In a nutshell, the way a country accepts newcomers is reflective of how they develop national identity.

**Biculturalism.** Although there are various models used in acculturation research, the most frequently used models are “unidimensional” and “bidimensional.” Whereas the unidimensional model is based on heritage and mainstream culture identifications having a strong inverse relation, the bidimensional model posits that the two identifications are independent of each other (Ryder, Alden, & Paulhus, 2000). However, the most recognized taxonomy used in immigration research is Berry’s (1997) bilinear model that categorizes four types of acculturation strategy: Assimilation (individuals become immersed into the new culture) (Sam & Berry, 2010); Integration (individuals maintain their cultural integrity and adopt sociocultural aspects of the new society); Separation (individuals maintain their cultural identity and have little involvement with the wider society); and Marginalization (individuals disassociate from their original culture as well as the new culture). Empirical studies suggest that Berry’s integration strategy choice, also known as “biculturalism” is associated with the most favorable psychosocial outcomes (Chae & Foley, 2010; Chen et al., 2008; Schwartz, Zamboanga, & Jarvis, 2007; Szapocznik, Kurtines, & Fernandez, 1980), especially among young immigrants (Coatsworth, Maldonado-Molina, Pantin, & Szapocznik, 2005; David, Okazaki &
Saw, 2009). A subsequent, more recent study with 5,365 immigrants in 13 countries, including the U.S. also concluded that having a bicultural worldview (integration) can be the most preferred acculturation strategy to predict psychological well-being (Abu-Rayya & Sam, 2017). Individuals who experienced biculturalism reported better adjustment, such as showing higher self-esteem, lower depression, and prosocial behaviors (Chen et. Al., 2008; Schwartz, Zamboanga, & Jarvis, 2007; Szapocznik, Kurtines, & Fernandez, 1980) because they could integrate competing principles from the different cultures during the acculturation process (Benet-Martínez & Haritatos, 2005; Tadmor, Tetlock, & Peng, 2009). Biculturalism can be obtained without losing one’s sense of identity or choosing one culture over the other (LaFromboise, Coleman, & Gerton, 1993). Similarly, the importance of ethnic identity in the educational adaptation of immigrants indicates that a bicultural orientation is advantageous for school performance (Buriel, Perez, Ment, Chavez, & Moran, 1998; Portes & Rumbaut, 2014; Triandis & Gelfand, 2012). Specifically, students who speak multiple foreign languages maintain higher overall GPA’s than students who do not (Martirosyan, Hwang, & Wanjohi, 2015).

Fluency in multiple languages and cultures can be a good indicator of intercultural and international interest or experience that may correlate with greater intercultural flexibility (Cleveland, Erdogan, Arik, & Poyraz, 2011). Nonetheless, the Berry (1997)’s “one size fits all” model approach can be criticized (Rudmin, 2003) due to lack of individual differences, cultural differences or validity of the four strategy groups.

The attitude of the host culture is critical for immigrants’ psychological adaptation and well-being (Khawaja, Moisuc, & Ramirez, 2014). The new environment can be a barometer to measure a level of receptiveness of host society and ease of interaction between the newcomer and locals. The American traditional "melting pot" describes an expectation for immigrants to
assimilate. However, another vision of American pluralism, “salad bowl” arose in 1960’s (Thornton, 2013). This identity-conscious ideology incorporates multiculturalism which involves acknowledging individual differences and the need to remain distinct (Plaut, Thomas, Tran, & Bazemore, 2014). Nevertheless, the society’s attitude may vary across time or states in response to the immigration policy. Still, immigrants’ well-being should be supported by the multiculturalism ideology, which empirical study proved (Leslie, 2016) is associated with reduced prejudice, stereotyping, and is unrelated to discrimination.

**Resilience.** Resilience is defined as an individual's ability to successfully adapt to life tasks in the face of social disadvantage or highly adverse conditions (Pecillo, 2016). It is an inferential and contextual construct that requires two major kinds of judgments (Masten, 1999; 2012; Masten & Coats-worth, 1998). To measure recognizable resilience, firstly, individuals must be exposed to risk and distress, then create the quality of adaptation or developmental outcome. Resilience is not only being able to recover from an adverse experience, but also facilitates development of internal assets and external resources to deal with the stress effectively.

An empirical study with a sample of 309 college students revealed resilience as the most significant predictor for psychological well-being (Malkoc & Yalçin, 2015). The study also found the effective mediation effect of the social support (from family, friends, and significant others) and coping skills (self-confident, optimistic, and seeking social support) in the relation between resilience and psychological well-being. By adopting effective coping strategies, individuals can solve problems (Lazarus & Folkman, 1985), then reduce distress (Begun, 1993), subsequently their well-being is likely to be increased. Through social support and networking,
individuals increase feelings of self-worth, positive experiences, as well as a sense of overall well-being (Cohen & Wills, 1985).

Resilience is also positively associated with academic success (Wagnild & Collins, 2009). A longitudinal study with middle and high school students (Scales, Roehlkepartain, Neal, Kielsmeier, & Benson, 2006) showed that higher levels of resiliency traits are strongly correlated with higher grade point averages (GPA). Three years later, the students who reported higher resilience early in the study had maintained higher GPAs, compared to students with less resilience. Solberg et al. (1998) explains six key skills as the foundation of educational resiliency; building confidence, making connections, setting goals, managing stress increasing well-being, and understanding motivation. When students cultivated these skills by practice, their school performance improved significantly (Scales, et al., 2006). Similarly, Denver Public Schools (2009) implemented a two-week long the Success Highways program for developing resiliency skills among 200 students in comparison to a control group of 700 students. After completing the program, the experimental group of 200 students outperformed the control group in reading and writing test scores, as well as overall G.P.A. Additionally, the experimental group had resulted in higher attendance and lower tardiness, and fewer suspensions, expulsions, and dropouts, regardless to the level of risk or SES, development of these skills can enable students to experience success in school as well as in their later lives.

**Age.** Levels of well-being change over time and depend on age (Inglehart, 2002; Stevenson & Wolfers, 2009). In advanced English-speaking countries, the age distribution of well-being is U-shaped, explaining that younger and older adults perceive higher well-being compared to middle-aged adults (45-54) who scored the lowest (Argyle, 1999). However, this pattern is not universal. For example, individuals from the former Soviet Union and Eastern
Europe show a large progressive decline in well-being with age; Latin Americans also exhibit falling well-being rates with age, while well-being in sub-Saharan Africa shows little change with age (Deaton, 2008).

Ryff and Keyes (1995) suggests that the effects on psychological well-being cannot be generalized because age effect has different dimensions for different age profiles. The results from the cross-sectional research on Midlife in the United States (MIDUS) with 1,108 participants aged 25 and older were complex. Aging was associated with a decline in "purpose in life" and "personal growth," with increasing scores for "environmental mastery" and "autonomy." There was no age difference for "self-acceptance" and "positive relation with others." A replication study (Springer, Pudrovska, & Hauser, 2011) examined the change in psychological well-being using two large longitudinal surveys on aging over approximately ten years - the same MIDUS study and the Wisconsin Longitudinal Study (WLS). The results showed that "environmental mastery" consistently increased for all groups. Other dimensions such as "personal growth," and "purpose in life" declined with age in nearly all age groups. It is noteworthy that some dimensions are indistinguishable even after correcting measurement errors (Springer & Hauser, 2006; Abbott et al., 2006). Furthermore, the confounding effects of heterogeneity among individual items in subscales, as well as the small variance explained by the model (1-4%) determined no firm conclusions. The authors suggest that the change in psychological well-being was the consequence of maturation-based age-related changes.

Past research reported mixed results in the relation between age and academic performance. Specifically, older students typically outperform their younger mates until early adolescence, (Bedard & Dhuey 2006; Crawford, Dearden, & Meghir, 2007), but early school entry is associated with better long-term outcomes (Black, Devereux, & Salvanes, 2009;
Goodman & Sianesi, 2005) or an inverted -U shape with the turning point (in the profile of cognitive development) between age 20 and 25 years (Salthouse, Schroeder, & Ferrer, 2004; Jones, 2010). Contrary to the findings of earlier studies, an empirical study with a sample of college students (N = 6,237) resulted in better academic performance among the younger students (Pellizzari & Billari, 2012). The reasons were explained by differences in social activities, such as better quality of early education at private pre-school for younger students, as well as lower levels of social activity of young students that made them devote more time to college study. A recent study (Imlach et al., 2017) examined cognitive, psychosocial, and genetic factors that affect academic performance among 329 college students aged 50 to 79, revealing that mature students had attained better academic results than their younger peers. The significant predictors of GPA were engagement in non-specific cognitive activities in midlife; cognitive performance (episodic memory and language processing domains); and prior education. Age itself was not associated with academic performance, and neither were the genetic polymorphisms associated with the aging-related cognitive decline or brain plasticity. Although these predictors were not static across the lifespan, the study showed that aging did not impede effective learning.

**Gender.** Gender has also been reported as an important predictor for individuals’ psychological well-being. While levels of well-being are similar in male and female (Inglehart, 2002; Stevenson & Wolfers, 2009), empirical studies employing Ryff’s psychological well-being scales reported inconsistent findings. Pinquart and Sorensen’s (2001) meta-analysis concluded that there are no significant gender differences in psychological well-being across age groups; adolescents, adults, and the elderly. Yet, men and women are dissimilar; Ruini et al. (2003) reports that females show lower levels of psychological well-being than the males sampled in
most of Ryff’s inventory among Italian sample. In contrast, Kaplan et al (2008) showed that women scored significantly higher on personal growth than men. In Ryff and Keyes’s (1995) American sample, women reported higher scores in “positive relations with others,” but no other significant differences. Maroof and Khan (2016) interpreted the inconsistency of the results as stemming from the location of the studies; in developed countries, gender inequality is less obvious. A study they conducted in Pakistan with 400 college students ($M = 26.095; SD = 8.59$) showed that men have higher well-being than women across four dimensions, "environmental mastery,” ”personal growth,” “autonomy,” and "purpose in life,” as well as overall psychological well-being. The difference was insignificant in two dimensions, "positive relations with others," and "self-acceptance.” The findings explain the difference in socialization in different degrees of development on a national level. In the immigrant study, the level of acculturation may include a change in the perceived gender. These factors are closely intertwined in predicting well-being.

There is a gender gap that favors academic success for girls across OECD countries (PISA, 2012) particularly in high-income countries like the U.S. Young women are increasingly more likely to pursue secondary education than young men globally (OECD, 2012). Most of the previous studies reported that female students on average outperform male students (Sheard, 2009; Farooq et al., 2011; Arora & Singh, 2017). However, meaningful differences between the sexes are not always detected (Clifton, Perry, Roberts, & Peter, 2008). Gender differences can be tracked across cognitive abilities beginning in late elementary school. Females outperform males on verbal skills tasks, such as reasoning, fluency, comprehension, and understanding logical relations (Hedges & Nowell, 1995), whereas males outperform females on spatial skills, such as mental rotation, spatial perception, and spatial visualization (Voyer, Voyer, & Bryden, 1995). Further, empirical research has examined the existence of different attribution patterns in male
and female students. Gender is one of the individual factors associated with differences in motivational functioning and in self-regulated learning; females tend to emphasize effort when explaining their performance (Lightbody, Siann, Stocks, & Walsh, 1996; Georgiou, 1999), while males focus on ability or luck to explain academic achievement (Burgner & Hewstone, 1993). However, there were no gender differences in academic self-concept (Gabelko, 1997). According to the social cognitive theory for learning, there is triadic reciprocal causation between the environment, the learner, and his/her self-regulation of behavior (Bandura, 1986); self-regulated learning can be split into two categories: motivation and learning strategies (Pintrich, Smith, Garcia, & McKeachie, 1991; Ruohotie, 2002). All components are related to the level of self-regulation for learning. Recent research (Ghazvini & Khajehpoura, 2011) with 363 students aged 15 to 18 ($M = 16.4, SD = .42$) shows that there are differences in the cognitive-motivational functioning across genders in academic settings, with females having a more adaptive approach to learning tasks and taking greater responsibility for academic failures. Within migrant contexts, there are three primary reasons for female outperformance: parental expectations after migration, socialization at home, and relationships at school. However, academic perseverance among the females was not necessarily translated to their higher well-being or their advantageous process of acculturation (Bakhshaei & Henderson, 2016).

**Race.** The relationship between race and well-being is complex across groups. Despite a persistent health disparity among Blacks (Cummings & Jackson 2008; Hayward, Miles, Crimmins & Yang, 2000), the higher level of resilience within the Black population was observed (Keyes, 2009) that predicted higher psychological well-being than Whites after adjusting for age, gender, educational attainment (Ryff, Keyes, & Hughes, 2003). Among Hispanics, “epidemiologic paradox” explains their similar or better well-being despite a lower
SES than Whites (Markides & Coreil, 1986). However, there is a difference in the healthy immigrant effect across the subgroups (Cho, Frisbie, Hummer, & Rogers 2004; Hummer, Rogers, Nam, & LeClere 1999). For example, Puerto Ricans display more similarity to Black Americans than other Latino groups in their SES and well-being (Cho et al., 2004; Waters & Eschbach 1995). Cubans and Central and South Americans have health outcomes much more similar to White Americans (Cho et al., 2004) correlated to the length of time in the U.S. Likewise, Asians show consistent declines in well-being with longer duration in the U.S. SES and health varies across the Asian ethnicities; while overall East Asians, as well as Indian and Filipino immigrants with higher SES report better well-being compared to White Americans, lower SES groups from Southeast Asian nations generally report poorer health (Frisbie, Cho, & Hummer 2001). Most cases can be explained by either SES or level of perceived discrimination, as well as resilience. Hence, other individual factors may be more reliable than solely racial differences. The moderating effects of ethnic identity, ethnic values, and race-related stress must be examined together to understand the relationship between ethnicity and well-being.

As mentioned in the section on family economic status, social class matters for academic performance. According to Rothstein (2004), lower performance of African-American students was caused by lower quality schools. Aside from in-school factors, home and community factors affect academic achievement that creates the gap across race. In contrast, Reardon (2011) explains the gap in academic achievement as caused by social class rather than race. In 1970, the race gap in academic achievement was more than one and a half times higher than the social class gap. However, a recent study reported a change, describing that the gap between low-income students and high-income students is now nearly two times higher than between Black and White students. The parental factor may account for this. While single parent families are
more common among Black Americans than White Americans, less educated white parents also tend to be low income (Edin & Kefalas, 2005). As the social contrast may vary widely from state to state, the achievement gap in certain states is more substantial than in others (Stanford CEPA, 2015). In fact, over the past 40 years, White-Black and White-Hispanic achievement gaps have been declined, though unsteadily (Reardon, 2015). “Stereotype threat” (Steele & Aronson, 1995) can account for minority students' lower grades when students are at risk of conforming to negative stereotypes that negatively affect their performance, but also students exhibit self-handicapping tendencies (Zuckerman, Kieffer, & Knee, 1998). Similarly, “micro-aggression” in the form of stereotyping as inferior in academics can affect performance.

The Current Study

As mentioned earlier, immigrants’ well-being is affected by various factors. Although macroeconomic indicators are essential for immigrant research, they are often ignored in the current literature. Therefore, this study takes a different approach to examine environmental and interpersonal characteristics independently, then investigate how these factors together reflect well-being by using the bioecological model of development (Bronfenbrenner, 1994) (refer to Figure 1).

Hypotheses. The hypotheses of this study are as follows:

H1: Immigrants from countries characterized by high economic inequality exhibit higher levels of resilience than do immigrants from countries characterized by low economic inequality.

H2: Variables on the four levels (macro, exo, meso, micro system) will relate a) psychological well-being and b) academic performance.
H3: Immigrants from countries characterized by high economic inequality and higher levels of resilience will have better psychological well-being when controlling for all other covariates, than immigrants from countries from low economic inequality and lower levels of resilience.

**Method**

**Participants**

Participants were undergraduate and graduate students 18 or older, and with parents born outside the U.S. Recruitment was conducted using an online subject pool system operated by the Department of Psychology at The City College of New York. A total of 376 college students participated in the study. The sample consisted of 104 males (28.3%), 263 females (71.7%). Ages ranged from 18 to 42 years ($M = 21.02$, $SD = 3.97$). One hundred four participants identified as first-generation immigrants (44.7%), 129 as second-generation immigrants (35.1%), and 74 as other (20.2%). Twenty-six participants identified as White (7.1%), 58 as Black (15.8%), 134 as Hispanic (36.5%), 110 as Asian (30.0%), 22 as Middle Eastern (6.0%) and 17 as other (4.6%) Average years stayed in the United States for first-generation immigrants was 12.35 years ($SD = .54$) and 5.46 ($SD = .80$) for others. All demographics appear on Table 1. The countries of origin for all participants are depicted in Figure 2. As shown, the majority came from Latin America and the British West Indies, as well as Asia (especially South Asian countries). Gini index represents a measurement of income inequality of a country. The highest income inequality among the participants’ native countries (also world highest) was 63.40 for South Africa, whereas the lowest was 26.70 for Kosovo. The United States Gini of 41.00 positioned in the middle range in the world, although the number was one of the highest among the advanced countries.
Analytical Methodology

A cross-sectional research design was used for this study. Internal consistency of psychological measures was assessed using Cronbach’s alpha estimates. Pearson correlations were used to examine bivariate relations between all continuous variables. To test H₁, a Pearson correlation analysis was conducted between Gini and resilience, then a one-way AVOVA was used to assess the difference between income inequality (high, medium, and low groups) within the whole sample, followed by an independent t-test among only first-generation immigrants. To test H₂, hierarchical regressions were used to examine the associations between macro-, exo-, memo-, and micro-system variables on psychological well-being and academic performance. To test H₃, two separate moderation analyses was conducted to investigate the interaction between Gini and resilience in predicting psychological well-being. First, the interaction variable (Gini x resilience) was entered in the fifth stage of the hierarchical regression (Hypothesis 2-a). The SPSS version 23 was used for all statistical analyses.

Measures

Bronfenbrenner’s bioecological model of development (1994) consisting of four levels of environmental factors, macrosystem, exosystem, meso system and microsystem. The variables selected for each level are shown in Figure 1.

Macrosystem variables.

Income inequality. A macrosystem variable. The Gini index was retrieved from World Bank data (2018). Larger values indicate higher levels of income inequality. For first-generation immigrants, the Gini index of birth country was applied. For the second-generation immigrants, the Gini index for the U.S. was applied. For others, the Gini for the birth country was applied. If they were born in the U.S., the Gini for the U.S. was used. The Gini index for the U.S. was 41.00
Economic growth. GDP per capita (nominal) was retrieved from World Bank data (2018). GDP per capita (nominal) for the U.S. was $57,638.20, whereas the world average was $10,189.60. The U.S. showed the highest amount among participants’ native countries. The same method was used for comparison of the Gini index among participants’ native countries.

Exosystem variables.

Immigration status. Self-reported status; first-generation immigrant, second-generation immigrant or other were retrieved from the demographic questionnaire. First-generation were those born outside the U.S; second-generation were born to at least one foreign-born parent; other includes international students or individuals who reported themselves as a non-immigrant, but were born in the U.S. Second-generation and other were used as dummy variables with the comparison group of First-generation (first = 0, second = 1, other = 1).

Family economic status. An exosystem variable. A composite indicator was created to measure participants’ Household Economic Status. A reported household income was divided by applicable “Median household income per family type in New York State” (Census, 2016). Higher values than 1.0 (median) imply better family financial status, whereas lower values indicate lower living standard. Answer of “Unknown” was treated as missing data.

Mesosystem Variables.

Perceived stress. The total score of Perceived Stress Scale (PSS-IO; Cohen & Williamson, 1988) was used. The PSS-10 measures the degree to which one perceives aspects of one's life as uncontrollable, unpredictable, and overloading. Participants were asked to respond to each question ranging from 0 (never) to 4 (very often), indicating how often they have felt or thought a certain way within the past month. Sample items include, “In the last month, how often
have you felt nervous and stressed?”, or “In the last month, how often have you been able to control irritations in your life?” Higher composite scores indicate greater perceived stress. The Cronbach’s alpha value was the alpha of .87. Another study with a sample of 501 workers in France reported the alpha of .83 (Lesage, Berjot, & Deschamps, 2012), or other study (Roberti, Harrington, Storch, & 2006) with 285 college students in the U.S. reported the alpha of .89.

**Acculturative stress.** The total score of Acculturative Stress among International Students (ASSIS) (Sandhu & Asrabadi, 1994) was used. The 36-item scale in Likert format was designed to assess acculturative stress of international students. The scale consists of seven subscales: perceived discrimination, homesickness, fear, guilt, perceived hatred, and stress due to change/cultural shock and miscellaneous. The response format ranged from 1 (strongly disagree) to 5 (strongly agree) with 3 (not sure). Sample items include, “I am treated differently in social situations” (perceived discrimination), “I feel overwhelmed that multiple pressures are placed upon me after my migration to this society” (stress due to change/culture shock), or “I generally keep a low profile due to fear from other ethnic groups” (fear). Higher scores on each item imply higher acculturative stress. The Cronbach’s alpha value was .95, whereas other study (Yu et al., 2014) with a sample of 569 international students in China reported the alpha of .93.

**Microsystem variables.**

**Ethnic Identity, American identity.** A subset of cultural identity was retrieved from Abbreviated Multidimensional Acculturation Scale (AMAS–ZABB) (Zea et al, 2003). The AMAS–ZABB is a bilinear and multidimensional scale that consists of a 42 self-report items. Participants were asked to indicate the extent to which they agreed with each statement from 1 (strongly disagree) to 4 (strongly agree). The scale consists of three separate factors: Cultural identity, language competence, and cultural competence. This study used only the cultural
identity subset (i.e. ethnic identity and American identity), because the identities are reflective of the level of language proficiency, as well as cultural knowledge. Sample items are, “I feel good about being (a member of my culture of origin)” (ethnic identity) and “Being U.S. American plays an important part in my life” (American identity). The original study, conducted with a sample of 154 Latino/ Latina college students in the U.S. reported a good Cronbach’s alpha: .96 for the ethnic identity subscale, and also .96 for the American identity subscale. In the current study, the Cronbach’s alpha value was similarly good; Ethnic identity for 6 items was the alpha of .92, and American identity for 6 items was the alpha of .94.

**Resilience.** The total score of Brief Resilience Scale (BRS) (Smith et al., 2008) was used. The BRS consists of six items that can assess the ability to bounce back or recover from stress. To complete the scale, the participants were asked to indicate the extent to which they agreed with each of the six items according to a 5-point rating scale 1 (strongly disagree) to 5 (strongly agree). Sample items are, “I tend to bounce back quickly after hard times”, or “I usually come through difficult times with little trouble”. The Cronbach’s alpha value was .81, which was slightly lower than other study with a sample of 120 international students in Malaysia reported the alpha of .93 (Amat, Subhan, Jaafar, Mahmud, & Johari, 2014).

**Age.** Participants self-reported their age in years as part of the demographic questionnaire.

**Gender.** Participants reported their gender as Male or Female in the demographic questionnaire. Gender was coded as male = 1 and female = 0.

**Race.** Options given to the participants were White, Black, Hispanic, Asian, Middle-Eastern, or Other. Self-reported answer was retrieved from the demographic questionnaire. For hierarchical regression analysis, the race was coded as white = 1 and non-white = 0.
Outcome Variables.

Psychological well-being. The total score of the Ryff Scales of Psychological Well-being (Ryff & Keyes, 1995) was used. The Ryff inventory consists of 54 questions, and a series of statements reflecting the six subsets of psychological well-being: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Participants rated statements on a scale of 1 (strongly disagree) to 6 (strongly agree). Sample items include, “I am an active person in carrying out the plans I set for myself” (purpose in life), or “People would describe me as a giving person, willing to share my time with others” (positive relations with others). The scale demonstrated good internal consistency in the current sample with a Cronbach’s alpha value of .93, which was higher than other studies. Van Dierendonck (2004) with a sample of Dutch 233 college students and Dutch 420 professionals reported the alpha of .73 or Jibeen and Khalid (2012) with a sample of 308 adult Pakistani immigrants reported the alpha of .84.

Academic performance. The self-reported Grade Point Average (GPA) was the demographic questionnaire. Twenty participants answered zero because this was their first semester to attend: They were treated as missing data.

Data Collection Procedure

Study participants answered a 40-50-minute survey. A consent was clearly outlined which stated that participation was voluntary. The study and all the outlined procedures were approved by the University’s Institutional Review Board, with Code#2017-1026. All participants signed online consent forms prior to carrying out the study after they passed the eligibility screenings for participation in the study. Data were collected between October 2017 and February 2018.
Results

Descriptive Statistics

The country-of-origin of the participants and its income equality are shown in Figure 2. The average Gini index among the sample \((n = 375)\) was 40.70 \((SD = 4.72, Min. = 27.80, Max. = 63.40)\). This was slightly lower than the U.S. Gini index of 41.00, which turned out as the median for the sample. The average Gini index among 64 native countries of the sample (Gini unavailable for 2 countries) was 39.46 \((SD = 7.48)\), which was slightly higher than the world average (158 counties) of 38.73 \((SD = 8.07)\). The average GDP per capita among the sample was USD 29,683.10 \((SD = 26,241.35, Min. = 505.20, Max. = 57,638.20)\). The average GDP per capita among the 64 countries was USD 4,529.10, which was much lower than world average (194 countries) of USD 14,352.61. Sample Demographics are shown in Table 1. The average of Family Economic Status was .80 \((SD = .62)\) in comparison, which was lower than the median per family size (1.00) across all immigrant generations. On average the Psychological Well-being score was 223.35 \((SD = 33.27)\), Acculturative Stress Score was 88.83 \((SD = 24.59)\), the Perceived Stress Score was 19.82 \((SD = 6.35)\), Brief Resilience score was 19.58 \((SD = 4.34)\), the Ethnic identity was 20.46 \((SD = 3.89)\), the American identity was 18.41 \((SD = 4.45)\), Grade Point Average was 3.13 \((SD = .49)\). Individual differences are shown per the relatively large Standard Deviations.

A One-way Analysis of variances (ANOVA) did not show any difference in the mean of Psychological Well-being across gender, immigrant generation, and racial group categories. However, there were significant gender differences in Resilience \((t(363) = 4.74, p = .03)\) and Perceived Stress, \((t(1, 363) = 9.36, p = .02)\). Males reported higher resilience and lower perceived stress than females on average. Acculturative Stress significantly differed across racial
groups \((F(5, 361) = 4.79, p < .001)\). Middle Easterners reported the highest Acculturative Stress, followed by Hispanics, Black, Asians, other race, then White. GPA also showed significantly different across the races \((F(5, 361) = 2.27, p = .047)\). On average, Middle Easterners were the best performers, followed by White, other race, and then Asian.

**Bivariate Correlations**

Pearson correlations between all continuous variables are presented in Table 2. Income inequality was positively correlated with resilience \((r(365) = .12, p = .02)\), and negatively correlated with American Identity \((r(365) = -.19, p < .001)\). GDP per capita was positively correlated with American Identity \((r(364) = .12, p = .03)\). Family Economic Status was negatively and significantly correlated with Acculturative Stress \((r(364) = -.16, p < .001)\) and Perceived Stress \((r(327) = -.12, p = .04)\) and, positively correlated with GPA \((r(317) = .12, p < .001)\) and Resilience \((r(327) = .12, p = .03)\).

**Testing Hypotheses**

**Income inequality and resilience.** Hypothesis 1 argued that immigrants from countries characterized by high economic inequality exhibit higher levels of resilience than immigrants from countries characterized by low economic inequality. A One-way ANOVA was conducted with a sample of 365 (Gini for 2 countries were unavailable) respondents. The median Gini among the sample was 41.00, which was equal to the Gini for the U.S. Three groups were created: high Gini (lower than 41.00, \(n = 106\)), medium Gini (41.00, \(n = 171\)), and low Gini (lower than 41.00, \(n = 88\)). The results showed the highest level of resilience in the high Gini group \((M = 20.29, SD = 4.42)\) then the medium group \((M = 19.33, SD = 4.12)\), and lastly the low group \((M = 19.18, SD = 4.63)\). However, the difference was not significant across the groups \((F(2, 362) = 2.08, p = 1.26)\). To investigate the degree of influence by Gini, an additional
independent t-test was performed with first-generation immigrants only sample of 164. Since the medium Gini group was excluded, only two groups - high Gini ($n = 91$) and low Gini ($n = 72$) - groups were compared. On average, immigrants from the high Gini group reported higher resilience ($M = 20.34$, $SD = 4.27$) than Immigrants from egalitarian countries ($M = 18.73$, $SD = 4.64$). This difference, -1.60, BCa 95% CI [-3.080, -.233] was significant $t(161) = -2.29$, $p = .023$, and it did represent a small to medium sized effect, $d = .36$.

**Effectiveness of bioecological model.** Hypothesis 2 posited that variables on the four levels (macro, exo, meso, micro system) would relate to a) psychological well-being and b) academic performance, and was tested using hierarchical multiple regression analyses. Prior to the regression analyses, the relevant assumptions of this statistical analysis were tested. First, a sample size of 376 was adequate given 13 independent variables to be included in the analysis (Tabachnick & Fidell, 2001). The collinearity statistics (Tolerance and VIF) were all within accepted limits, the assumption of multicollinearity have been met (Coakes, 2005; Hair et al., 1998). An examination of the Mahalanobis distance scores indicated no multivariate outliers. Residual and scatter plots indicated the assumptions of normality, linearity and homoscedasticity were all satisfied (Hair et al., 1998; Pallant, 2001).

**Psychological well-being (PWB).** A five-stage hierarchical multiple regression was conducted with PWB as the dependent variable (see Figure 1). Stage 1 included all macrosystem variables, namely the Gini index and GDP per capita. Stage 2 included all exosystem variables, specifically, family economic status and 2 dummy variables of immigration status, Second-generation, and Other (with First-Generation Immigrants serving as the reference group). Stage 3 included acculturative stress, and perceived stress as mesosystem variables: Stage 4 included all microsystem variables: Age, Male (with Female serving as the reference group for gender),
White (with Non-White serving as the reference group for race), Resilience, Ethnic identity, and American identity. The variables were entered in this order as it represents the Bronfenbrenner (1994)’s bioecological model of development. Regression statistics appear in Table 3, and depicted in the form of a Venn diagram in Figure 3. The results showed no significant relation between stage 1 (macro) and stage 2 (exo) variables and well-being. Adding the two stress variables at stage 3 (meso) to the regression model explained an additional 33% of the variation in PWB with significant change in $R^2(F(2,315) = 80.35, p < .001)$, and both Acculturative Stress and Perceived Stress were associated to higher potential for PWB. At the stage 4, the addition of the individual factors (micro) increased 6% of the variation in PWB, and this change in $R^2$ was significant $F(6,309) = 5.45, p < .001$. Together the thirteen independent variables accounted for 41% of the variance in PWB. Five out of thirteen predictor variables were statistically significant, with Perceived Stress recording the highest beta value ($\beta = -.37, p < .001$) followed by Resilience ($\beta = .23, p < .001$), Acculturative stress ($\beta = -.15, p = .004$), Ethnic identity ($\beta = .11, p = .02$) and Age ($\beta = .10, p = .05$). The results explain that societal and familial characteristics do not influence individuals’ well-being directly: the stress level and individual factors were most critical for higher PWB. Interestingly, The Gini increased its predictability from stage 1 ($\beta = -.04, p = .53$) to stage 4; ($\beta = -.08, p = .07$). In order to examine the moderating effect of the Gini and Resilience, additional analysis was conducted with covariate Perceived stress.

**Academic performance (GPA).** An equivalent four-stage hierarchical regression model as depicted in Table 4 and described above was conducted with Academic Performance as the dependent variable. The corresponding Venn diagram appears in Figure 4. At stage 1, macrosystem showed no significance in GPA. After entry of the exosystem variables at stage 2
the total variance explained by the model was 4% \( F(5, 307) = 2.39; p = .04 \) with a significant change in \( R^2 \) \( F(3,307) = 3.63, p = .014 \). Adding the mesosystem variables to the regression model explained an additional 0.8% of the variation in GPA, this change in \( R^2 \) was not significant. Finally, the addition of Microsystem variables to the regression model explained an additional 7% of the variation in GPA and this change in \( R^2 \) was significant, \( F(6,299) = 3.62, p = .002 \). Mesosystem and Microsystem variables were significant predictors of GPA. The most important predictor of GPA was Age \( (\beta = -.23, p < .001) \), followed by Family Economic Status \( (\beta = .18, p < .001) \), Resilience \( (\beta = .15, p = .03) \). All variables combined captured 11% of the variation in GPA.

For a) psychological well-being, the results didn't explain the significant predictor(s) equally on the all blocks. Only two blocks; mesosystem and microsystem revealed the significant variation in PWB. The results supported Bronfenbrenner’s model partially. For b) academic performance, the results didn't explain the significant predictor(s) equally on the all blocks. Only two blocks; exosystem and microsystem revealed the significant variation in academic performance. The results supported Bronfenbrenner’s model partially.

**Moderation effect of income inequality and resilience.** The 3rd hypothesis asserted that income inequality would moderate the relation between resilience and the outcomes such that immigrants from countries characterized by high economic inequality and higher levels of resilience would have better psychological well-being and academic performance, than immigrants from countries with low economic inequality and lower levels of resilience, holding constant all prior variables. Two separate tests were conducted to examine income inequality as a moderator of the relation between resilience and the outcomes. First, in the previous hierarchical multiple regression model used to predict PWB (H2-a), interaction effect of the Gini and
resilience was entered in Stage 5. \( R^2 \) change was significant, \( F(1, 308) = 6.27, p = .01 \). The moderation of the Gini and resilience showed a significant interaction effect \( (\beta = -1.23, p = .01) \).

Second, the interaction effect was examined to predict the academic performance (H2-b) using the same method. The interaction effect of the Gini and resilience was entered in Stage 5. \( R^2 \) change was not significant, \( F(1, 298) = .54, p = .46 \). The moderation of the Gini and resilience did not show a significant interaction effect \( (\beta = -.46, p = .46) \).

While higher resilience was confirmed in immigrants moved from unequal countries from the result of H1, their resilience was not strong predictor for PWB compared to immigrants moved from equal countries after controlling perceived stress. The hypothesis 3 was partially supported as the effect of resilience was shown to be contrary to the a priori expectation.

**Discussion**

This is the first study to empirically test Jensen’s conceptualization of Bronfenbrenner’s Ecological System theory applied to immigrants in the U.S. to examine the proximity of environmental influences on PWB and academic performance. At the same time, this is the first study to investigate the resilience path on the relation between income inequality and well-being. Given this goal, the current study provided the answers to the questions.

Overall, the results from the hierarchical regression analyses didn't reveal equal impact from each level of environmental factors for the well-being of immigrant students. Individual factors on micro and mesosystems, as well as familial factors on exosystem impact more on PWB and academic performance than the distal influence, the country’s characteristics. However, it is important to recognize the moderating effect of “income inequality and resilience” which turned out significant for PWB. The details will be discussed as follows.
Macrosystem

None of the macrosystem-level variables turned out as a significant predictor itself. However, the results from moderation analysis were inconsistent with the findings of the recent immigrant study (Hamilton & Kawachi, 2013). While their research found that moving from a less egalitarian country to a more egalitarian country is associated with better health, the findings of the current study suggest contrariwise; that moving from a more egalitarian country to a less egalitarian country is associated with better PWB. Importantly, the Pearson correlation revealed that moving from a less egalitarian country to a more egalitarian country is significantly associated with higher levels of resilience. The results suggest that having higher levels of resilience does not directly predict PWB. Presumably, the conflict stemmed from the sample size and its characteristics, as well as the nature of the outcome variables. A self-reported measurement of health and PWB may not be interchangeable. Statistically, the reasons why the Gini or GDP per capita alone did not impact PWB in the current study, while they did Hamilton’s in study, must be the small sample size employed in this study and the little racial variation among the respondents. Hamilton used a sample of 35,620 immigrants aged from 25–64 ($M=40.49$) that was racially well-balanced from various countries/regions of the world. This also explains the larger variance of GDP per capita and the Gini index. In contrast, the current study used a relatively small sample size ($N = 376$), with ages ranging from 18–42 ($M = 20.42; SD = 3.96$), with only 7% of the respondents identifying as White, while majority were first-immigrants ($n = 164$), having moved from low-income countries. Hypothetically, with this smaller variance of the Gini index, GDP per capita, as well as age might not have impacted the results. Notably, the increase of the Gini’s predictability from stage one ($\beta = -.04, p = .53$) to stage four; ($\beta = -.08, p = .07$), as well as the significant moderating effect of the Gini and
resilience at stage 5, raised the importance of the further investigation. The discussion will continue in the later section.

**Exosystem**

On average, the first-generation reported the lowest level of PWB in comparison to the second-generation or other status and didn't show any significant difference. Therefore, “immigrant paradox” and “epidemiologic paradox” could not be confirmed in the sample, if the immigrant effect really exists. A possible explanation is a negative effect from acculturation. Since most first-generation immigrants moved to the U.S. in their young age, they could have assimilated into American society. In Fact, 72.6% of first immigrants reported English as their first language, compared to 84% in second immigrants. Interestingly, the first-generation immigrants reported lower levels of ethnic identity and American identity than second immigrants or other immigrant status as well. Past literature suggests that first-generation immigrants tend to show a lower set of expectation and aspiration for income attainment (Escobar, Nervi, & Gara, 2000), but the first-generation immigrants in this study might have been overexposed to American capitalism and materialism which causes excessive consumerism that might lower well-being. Especially, the greed impairs the levels of self-realization and personal growth (Ryff, 2017). Often the American Dream is motivated by the financial success that lowers well-being and adjustment when compared to those driven by less materialistic values (Kasser & Ryan, 1993). Hypothetically, their low family income decreased the level of well-being as “Easterlin paradox (1974)” explains that wealthy people are happier than those with low income within a country, while no link between the economic development of a country and the overall happiness of its citizens. In this student sample, their relative income may be more critical, because they can easily compare their financial status to their friends or neighbors
not their peers in the native countries so that they affirm their social position in the hierarchy in the U.S. Overall, family economic status for the whole sample (approx. 80% of “Median household income by family size in NYS”) could not be a protective factor (see Table 1), but not a distress (Gresenz, Sturm, & Tang, 2001; Kiefer et al., 1985; Williams, Yu, Jackson, & Anderson, 1997), either. With respect to academic performance, there was no difference across the immigrant groups. However, higher family economic status was a significant predictor of better academic performance. The result is consistent with empirical research (Farooq et al., 2011; Fantuzzo et al., 2000; Trusty, 1999). The college students in higher financial status more likely to receive parental supports or some other forms of advantages in this college student sample.

Mesosystem

Consistent with prior research (Burns et al., 2002), lower perceived stress was the strongest correlate of better PWB. Equally, but from the other direction, higher self-esteem (which can translate to some components of PWB) resulted in less stress (Madakasira & O’Brien, 1987). Unsurprisingly, Acculturative Stress also was associated with less PWB in this diverse sample, which is consistent with empirical research (Hovey, 2000; Kim et al, 2014; Ying, 1988; Rogler et al., 1991; Shin et al., 2007). Since the majority of the participants are from collectivistic countries (see Figure 2), they may have experienced a great deal of stress adopting to America’s individualistic culture. Interestingly, their acculturative stress was less intense than the perceived stress in this model of PWB. Based on the demographic information (refer to Table 1), majority of them are either full-time students who either have a part-time work or are unemployed, suggesting their environments. Adequate exposure in the diverse school setting might produce less acculturative stress compared to the non-culture-related everyday stress
(perceived stress), or they may interact with only in-group members to avoid cultural conflicts. There was no significant influence of perceived and acculturative stress on their academic performance. Again, the school setting with diverse population didn't induce any stereotype-related threat (Steele & Aronson, 1995), nor exceeded everyday stress. Perhaps, acculturative stress may no longer predict academic performance among the diverse college students in the United States (Chang, 2017; Luciano, 2012). Inconsistent with other studies (Finch, et al., 2004; Antecol et al., 2007; Frisbie et al., 2001) time spent in the U.S. was not correlated with higher acculturation stress \( r = -.02 \) in this sample population.

**Microsystem**

Consistent with other studies, (Outten et al., 2009; Ruiz, 1990), a higher ethnic identity was associated with greater PWB, such as a sense of strength, competence, and self-acceptance that buffers against distress (Ponterotto & Park-Taylor, 2007). In contrast, American identity was not a good predictor for PWB in this sample. Since 93% of participants were ethnic minorities, they showed less feelings of belonging to the U.S. (Phinney et al., 1997). Consequently, the result conflicts with the past studies that advocated the importance of having biculturalism (Chae & Foley, 2010; Chen et al., 2008; Schwartz et al., 2007; Szapocznik et al., 1980), especially among young immigrants (Coatsworth et al., 2005; David et al., 2009). Interestingly, ethnic identity was positively and significantly correlated with resilience \( r = .12, p = .02 \) and acculturation stress \( r = .11, p = .03 \), whereas American identity showed no impact on these items (refer to Table 2). The results suggest that resilience can be developed in a challenging schema per this cross-sectional, correlational study.

Per se, higher resilience was associated with greater PWB and academic performance in the sample. This study suggested that positive adaptation can also act as a facilitator for
achieving goals, which was supported by previous studies (Wagnild & Collins, 2009; Scales et al., 2006).

Being advanced in age was a significant predictor of better psychological well-being, but also of lower academic performance. While the participants were mostly young adults ($M = 21.01, SD = 3.97$), some older participants might have skewed the results for both outcomes. As Ryff (1995) stated, well-being cannot be generalized by age because each component of well-being has different aspects over a lifetime. Further investigation is needed. For academic performance, the result was consistent with the study (Pellizzari & Billari, 2012) that showed younger students’ outperformance. As the authors suggested, young students might have lower levels of social activity that made them devote more time to college study. Yet, they might not be comparable due to the different age distribution and size. Unlike other studies (Gresenz et al., 2001; Kiefer et al., 1985; Williams, 2002), being a female did not influence levels of PWB, nor academic performance possibly due to the imbalanced gender ratio in the sample. However, it is important to note the significant gender difference in resilience and perceived stress that resulted in the independent t-sample. The male students’ higher resilience than their female counterpart may be explained by the presence of androgynous personality in a diverse setting (Bem, 1979; Verma, 2016) that leads to developing positive PWB (Sharma, 2013), whereas environments could contribute to predicting PWB for females (Verma, 2016). The current study didn't reveal a mediation or moderation effect of gender on the relationship between resilience and PWB possibly due to the imbalanced gender ratio. However, males and females may have different mechanisms to construct well-being (Verma, 2016).
Role of Resilience

Based on the result from the Pearson correlation, the experience of income inequality was associated with higher resilience (see Table 2). The result is consistent with its definition, i.e. “individual's ability to successfully adapt to life tasks in the face of social disadvantage or highly adverse conditions” (Pecillo, 2016). Moreover, the resilience was positively correlated with all six dimensions of PWB – self-acceptance, personal growth, purpose in life, environmental mastery, autonomy, and positive relations with others, and negatively correlated with perceived discrimination, hate, and fear, culture shock, and guilt. The results are consistent with the previous study, suggesting that resilience can increase through adverse events and engender greater sense of control over one’s life among immigrants (Pitzer & Fingerman, 2010).

However, the results showed that the effect of resilience was not universal among the immigrant students who come from many different countries. Although Gini alone was not a relevant correlate of well-being, when the Gini was combined with resilience, the result revealed a different view. The effect of resilience was shown to be higher in the immigrants from more equal countries, with the result that they had higher well-being after controlling perceived stress.

In the current study, the immigrant students from high income inequality countries seem to have acquired their coping skill to be resilient against “distress” by repetition. While the skill makes it possible for them to be normal (i.e. accept the reality), it does not make them feel happier. They may still be disappointed seeing the relatively unequal American society, which is a similar social construct to their native country. To prove, the Pearson correlation revealed that the immigrants from higher income countries reported less American identity that had no association with better PWB. Assumingly, they may be too young and inexperienced to find meanings in their life, or their overall low economic status or other unmeasured factors might be
responsible for their low psychological well-being. Yet, their higher levels of resilience need to expand beyond coping with distress to enhance their well-being.

In contrast, the effect of resilience was stronger in the immigrants from equal countries. Possibly, the immigrants from egalitarian countries might continue to lead a lifestyle similar to the ones they had in their native country. The countries with the low-income inequality tend to be homogeneous or less multicultural. Therefore, preserving the ethnic tradition, values and goals with in-group members lead to higher levels of psychological well-being. It is critical to receive emotional and social support during life transition process. Especially, sufficient communal resources, such as engaging with the co-ethnic group and sharing one’s experiences can effectively help one to cultivate resilience in case of adverse events. Furthermore, their better living standard (increased GDP from native country to the U.S.) might have improved their well-being. In the sample, excepting Switzerland, the U.S. had the highest GDP per capita among the countries. Since these immigrants from equal country are also low-to-mid income countries, they didn't suffer from irrational status competition. Therefore, they tend to accept the opportunity and gain the sense of happiness with no interference. Simply, the access to better, safer environment likely improved their well-being.

It is important to take note of the covariate in the model, i.e. perceived stress. Inversing resilience theory, as well as the results from the current study (refer to table 2), the immigrants from equal countries were expected to be more vulnerable in the U.S. than the immigrants from unequal countries, because they should perceive and experience more adversity now in the U.S. than when they were in their native countries. Hence, cultivating resilience from everyday life can be challenging for those from egalitarian countries due to their lack of coping skill with distress. Rather than experiencing distress or other negative emotion, interventions to reinforce
their resilience is recommended. A possible reason for the different degrees of the effect of resilience can be the low level of acculturation in this sample.

Overall, the study findings are similar to the past empirical studies that used the sample of “local residents” (not immigrant populations) across the world, which explained how the risk of income inequality can harm people’s health (Lynch et al., 1998; Pickett & Wilkinson 2010; 2015; Kawachi, Adler, & Dow, 2010). Considering the sample’s cultural identity (the high-level of ethnic identity and the low-level of American identity), their acculturation level can be considered to be low. Thus, their worldview from their native country (mostly the low-level of development) might persist strongly when they observe the American society. As such, they all should perceive the U.S.’s income inequality as an economic opportunity (Inglehart, 1997) and a signal for future mobility (Hirschman & Rothschild, 1973) so their negative elements, such as the low family economic status can build their tolerance higher and enhance their well-being.

Yet, these empirical studies ignored the resilience factor, which is essential to investigate well-being. Nonetheless, the effect of resilience among this immigrant sample facilitated differently, depending on the courtiers they moved from. In this sample, cultural upbringing and life experience were highly correlated with their worldview development through repetitive self-examination about the meaning of life, and expectations imposed by family and society. Resilience can enhance psychological well-being by using positive emotions as a coping skill (Tugade & Fredrickson, 2004). It is worthy to recognize the importance of positive adaptation, especially for immigrants with low acculturation so that their immigration experience can be prosperous and successful.
Effectiveness of the Model

The hierarchical model did not yield a significant effect from all block/system level, and overall, microsystem variables were the most potent predictors for well-being. However, the additional moderation analysis was able to support the simultaneously influential factor of resilience that bridged the gap between income inequality and psychological well-being. Equally important, resilience was also a significant predictor, together with family’s economic status (exosystem), that lead the students to achieve better grades. While the model explained 41% of PWB was in this model, it explained only 11% of academic performance. Presumably, the low variation for the academic performance have caused from the variable selection. As empirical research explained that the academic performance can be more predicted by other variables, such as the combination of intelligence and personality trait (Alexander, 1935; Poropat, 2009; Webb, 1915), or intellectual curiosity (von Stumm et al., 2011). Overall, the results suggest psychological well-being and academic performance share a small amount of source.

Notably, the right selection of variables can account for the effectiveness of the model. As Ngamaba et al. (2017) pointed out, the inconsistency of results (the relation between income inequality and well-being) stemmed from other moderation factors. For example, the past epidemiological or sociological studies investigating income inequality facilitated various economic indicators such as wealth, Human Development Index, or area income as a control. In contrast, the current psychological study used environmental factors, and more individual and psychological aspects (i.e. stress, cultural identity) were assigned on the microsystem block. While the core of the self-identity might be the most stable during a lifetime, other social factors are important. Although there were more macro indicators prepared, such as religiosity, diversity, population density to analyze social environments, most indicators were eliminated
from the statistical model due to the small sample size and multicollinearity. After apprehending the sample characteristics, it is critical to employ appropriate variables/factors for each environment level. To conclude this section, the bioecological model of development (Bronfenbrenner, 1994) was partially supported in the current study, and findings suggest the importance of the variable selection in designing the statistical model.

**Study Limitations**

There are various limitations in this study. First, some macroeconomic variables (Gini and GDP) were unavailable for every country for economical (e.g. St. Kitts) or political reasons (e.g. Taiwan, Tibet). Additionally, inconsistent year of issuance across the countries may contribute to decreasing internal validity. It is not realistic for any nation to maintain the same political condition that influences its economic indicators. Community graphics, such as racial or co-ethnic size was limited due to conflicts of operational definition across the study fields (e.g. sociology, economics, and psychology). It could have been an important protective factor for immigrant’s well-being to measure a degree of social support or ethnic cohesion. The small sample of the study also made me to minimize the number of variables, which constrained me from conducting extensive investigation. Crucially, the bioecological model (Bronfenbrenner, 1994) includes Chronosystem, which indicates changes over time. Since this was not a longitudinal study, it was not feasible to add this element in the model. Similarly, the cross-sectional nature of the design precludes me from making causal claims. Ideally, measurements should have been conducted before and after the immigration experience so that the changes can be investigated precisely. Importantly, the results from the college students sample raises concerns regarding external validity. The case of young subjects with similar socioeconomic status is less likely to be applicable to the general population due to their insufficient social
interactions with out-group, as well as in-group members, as well as general personal experiences. However, the sample actually represents the demographics of the recent largest groups of immigrants in the U.S. – Hispanics and Asians. Their psychological and behavioral patterns can be a good indicator for the current and forthcoming immigrants. Also, the finding from diverse young adults in diverse locations can be advantageous because the U.S. is not alone; economic inequality is increasing in most regions, most especially in the wealthiest countries over the past three decades (OECD, 2011; Ortiz & Cummins, 2011). Hence, the research needs to be replicated to prove its validity and to present more insightful findings.

**Conclusion**

This is the first study to examine multi-level factors for well-being in the diverse sample of the first and second-generation immigrants. The results demonstrated that moving from a more egalitarian country to the U.S. is associated with better health, with the resultant effect of resilience. At the same time, the results suggested the importance of the social surrounding of every level. Equally important resultant was the immigrants’ strength factor. Thus, resilience needs to be recognized in the intervention programs and further immigration policymaking.

As the U.S. has welcomed numerous immigrants historically, 26% percent of native residents still feel threatened that the immigrants will negatively impact their own employment and ruin the U.S. economy (PRC, 2017). Moreover, due to the recent politically charged climate, immigrants might feel more pressured or stressed to meet expectations of their new social roles in the U.S. than ever. According to a research, while low-skilled immigrants experienced economic inequality compared to U.S. natives, high-skilled immigrants experienced less income inequality (Xu, Garand, & Zhu, 2015). Perhaps, these selective income pairings might have pointed the importance of the values that underlie American immigration policy, but it is
important to note that the educational or skill gaps can be decreased by cultivating their resilience. Happiness has powerful causal effects on labor efficiency and productivity (Nelson, 2012; Oswald, Proto, & Sgroi, 2015). Hence, an intervention is equally recommended for every immigrant no matter whether or not he or she moved from a more egalitarian country or a less egalitarian country. Hopefully, this study will benefit academic research by enabling understanding of the importance of mental health and personal values of members of a diverse community. In this regard, it is important to understand that unrecognized risks also affect our well-being and stress. Knowledge of these factors can help us improve the quality of life on an individual level. Nonetheless, along with resilience, social support can predict psychological well-being (Malkoc & Yalçin, 2015). When these are absent, we cannot better our society as a whole.
Appendix

Table 1

Demographics Characteristics of the Sample by Immigrants Generation

<table>
<thead>
<tr>
<th></th>
<th>Total (N = 367)</th>
<th>1st Gen. (n = 164 (45%))</th>
<th>2nd Gen. (n = 129 (35%))</th>
<th>Other (n = 74 (20%))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>104 (28.3%)</td>
<td>43 (26.8%)</td>
<td>37 (29.5%)</td>
<td>22 (29.7%)</td>
</tr>
<tr>
<td>Female</td>
<td>263 (71.7%)</td>
<td>120 (73.2%)</td>
<td>91 (70.5%)</td>
<td>52 (70.3%)</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>26 (7.1%)</td>
<td>14 (8.5%)</td>
<td>7 (5.0%)</td>
<td>5 (6.8%)</td>
</tr>
<tr>
<td>Black</td>
<td>58 (15.8%)</td>
<td>28 (17.2%)</td>
<td>19 (14.7%)</td>
<td>11 (14.9%)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>134 (36.5%)</td>
<td>51 (31.1%)</td>
<td>59 (45.7%)</td>
<td>24 (32.4%)</td>
</tr>
<tr>
<td>Asian</td>
<td>110 (30.0%)</td>
<td>59 (36.0%)</td>
<td>28 (21.7%)</td>
<td>23 (31.1%)</td>
</tr>
<tr>
<td>Middle Eastern</td>
<td>22 (6.0%)</td>
<td>8 (4.9%)</td>
<td>7 (5.4%)</td>
<td>7 (9.5%)</td>
</tr>
<tr>
<td>Other</td>
<td>17 (4.6%)</td>
<td>4 (2.4%)</td>
<td>9 (7.0%)</td>
<td>4 (5.4%)</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>349 (95.1%)</td>
<td>150 (91.5%)</td>
<td>128 (99.2%)</td>
<td>71 (95.9%)</td>
</tr>
<tr>
<td>Married</td>
<td>14 (3.8%)</td>
<td>11 (6.7%)</td>
<td>1 (0.8%)</td>
<td>1 (2.7%)</td>
</tr>
<tr>
<td>Separated</td>
<td>1 (.3%)</td>
<td>1 (0.6%)</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Divorced</td>
<td>3 (.8%)</td>
<td>3 (1.2%)</td>
<td>--</td>
<td>2 (1.4%)</td>
</tr>
<tr>
<td>Family Economic Status</td>
<td>.80 [.62]</td>
<td>0.80 [.62]</td>
<td>0.83 [.62]</td>
<td>0.77 [.60]</td>
</tr>
<tr>
<td>Semester Attend</td>
<td>3.89 [2.59]</td>
<td>4.03 [2.61]</td>
<td>3.84 [2.70]</td>
<td>4.03 [2.60]</td>
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<tr>
<td>Student Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-Time</td>
<td>335 (91.3%)</td>
<td>149 (90.9%)</td>
<td>117 (90.7%)</td>
<td>69 (93.2%)</td>
</tr>
<tr>
<td>Part-Time</td>
<td>32 (8.7%)</td>
<td>15 (9.1%)</td>
<td>12 (9.3%)</td>
<td>5 (6.8%)</td>
</tr>
<tr>
<td>Employment Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-Time</td>
<td>30 (8.2%)</td>
<td>13 (7.9%)</td>
<td>10 (7.8%)</td>
<td>7 (9.5%)</td>
</tr>
<tr>
<td>Part-Time</td>
<td>187 (51.0%)</td>
<td>79 (48.2%)</td>
<td>67 (51.9%)</td>
<td>41 (55.4%)</td>
</tr>
<tr>
<td>No Work</td>
<td>150 (40.9%)</td>
<td>72 (43.9%)</td>
<td>52 (40.3%)</td>
<td>26 (35.1%)</td>
</tr>
<tr>
<td>First Language</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>282 (76.8%)</td>
<td>119 (72.6%)</td>
<td>111 (86.0%)</td>
<td>52 (70.3%)</td>
</tr>
<tr>
<td>Spanish</td>
<td>29 (7.9%)</td>
<td>16 (9.8%)</td>
<td>9 (7.0%)</td>
<td>4 (5.4%)</td>
</tr>
<tr>
<td>Other</td>
<td>56 (15.3%)</td>
<td>29 (17.6%)</td>
<td>9 (7.0%)</td>
<td>18 (24.3%)</td>
</tr>
<tr>
<td>Psychological Well-being</td>
<td>223.35[33.27]</td>
<td>219.54[33.75]</td>
<td>223.52[32.16]</td>
<td>226.30[33.67]</td>
</tr>
</tbody>
</table>
Table 1 continued

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>1st Gen.</th>
<th>2nd Gen.</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 367</td>
<td>n = 164</td>
<td>n = 129</td>
<td>n = 74</td>
<td></td>
</tr>
<tr>
<td>Acculturative Stress Scale</td>
<td>88.83 [24.59]</td>
<td>89.02 [25.18]</td>
<td>87.48 [25.23]</td>
<td>90.76 [22.19]</td>
</tr>
</tbody>
</table>

Note. 1st Gen. = First-generation immigrant, 2nd Gen. = Second-generation immigrant (%) [SD]
Figure 1. Bronfenbrenner’s Bioecological Model of Development (1994): Edited to predict well-being of Immigrants
Figure 2. Gini Index World Map. Illustrates income inequality of Participants’ country of origin. 

### Table 2

*Bivariate Correlations between Continuous Variables*

<table>
<thead>
<tr>
<th>Measures</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gini</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. GDP per capita</td>
<td>.07</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Family Eco.Status</td>
<td>.03</td>
<td>.08</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Perceived Stress</td>
<td>-.07</td>
<td>.04</td>
<td>-.12*</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Acculturative Stress</td>
<td>.04</td>
<td>-.03</td>
<td>-.16**</td>
<td>.35**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Ethnic Identity</td>
<td>-.03</td>
<td>.07</td>
<td>-.09</td>
<td>-.02</td>
<td>.11*</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. American Identity</td>
<td>-.19**</td>
<td>.12*</td>
<td>-.11</td>
<td>-.12*</td>
<td>-.22**</td>
<td>.11*</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Resilience</td>
<td>.12*</td>
<td>-.06</td>
<td>.12*</td>
<td>-.58**</td>
<td>-.20**</td>
<td>.12*</td>
<td>.00</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Age</td>
<td>.06</td>
<td>-.11*</td>
<td>.19**</td>
<td>-.20**</td>
<td>-.12*</td>
<td>-.18**</td>
<td>-.10</td>
<td>.17**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. PWB</td>
<td>-.02</td>
<td>.09</td>
<td>.06</td>
<td>-.54**</td>
<td>-.29**</td>
<td>.14**</td>
<td>.15**</td>
<td>.48**</td>
<td>.17**</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. GPA</td>
<td>-.04</td>
<td>.04</td>
<td>.12**</td>
<td>-.11*</td>
<td>-.02</td>
<td>.01</td>
<td>-.11*</td>
<td>.16**</td>
<td>-.13*</td>
<td>.10*</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>12. YrsStay</td>
<td>.10*</td>
<td>.52**</td>
<td>.11*</td>
<td>.09</td>
<td>-.02</td>
<td>-.09</td>
<td>.19**</td>
<td>-.05</td>
<td>.09</td>
<td>.03</td>
<td>-.05</td>
<td>--</td>
</tr>
</tbody>
</table>

*Note.* GDP per capita = Gross Domestic Product per capita, Family Eco.Status = Family Economic Status, PWB = Psychological Well-being, GPA = Grade Point Average, YrsStay = Years stayed in the U.S. *p < .05, **p < .01
Table 3

Summary of Hierarchical Regression Analysis for Variables Predicting Psychological Well-being (n = 323)

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>β</td>
<td>B</td>
<td>SE</td>
</tr>
<tr>
<td>Gini</td>
<td>-.26</td>
<td>.40</td>
<td>-.04</td>
<td>-.26</td>
<td>.40</td>
</tr>
<tr>
<td>GDP pc</td>
<td>.00</td>
<td>.00</td>
<td>.09</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Family Eco St</td>
<td>1.24</td>
<td>3.15</td>
<td>.02</td>
<td>-2.50</td>
<td>2.60</td>
</tr>
<tr>
<td>Second Gen.</td>
<td>4.23</td>
<td>4.30</td>
<td>.12</td>
<td>5.36</td>
<td>3.52</td>
</tr>
<tr>
<td>Other Status</td>
<td>2.59</td>
<td>2.24</td>
<td>.10</td>
<td>2.97</td>
<td>1.83</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>-2.68</td>
<td>.25</td>
<td>-.52**</td>
<td>-1.89</td>
<td>.29</td>
</tr>
<tr>
<td>Accul. Stress</td>
<td>-.18</td>
<td>.07</td>
<td>-.14**</td>
<td>-.19</td>
<td>.07</td>
</tr>
<tr>
<td>Age</td>
<td>.77</td>
<td>.38</td>
<td>.10*</td>
<td>.94</td>
<td>.39</td>
</tr>
<tr>
<td>Resilience</td>
<td>1.72</td>
<td>.41</td>
<td>.23**</td>
<td>9.53</td>
<td>3.15</td>
</tr>
<tr>
<td>Ethnic ID</td>
<td>.91</td>
<td>.40</td>
<td>.11*</td>
<td>.87</td>
<td>.39</td>
</tr>
<tr>
<td>American ID</td>
<td>.27</td>
<td>.36</td>
<td>.04</td>
<td>.28</td>
<td>.36</td>
</tr>
<tr>
<td>Male</td>
<td>-3.96</td>
<td>3.36</td>
<td>-.05</td>
<td>-3.69</td>
<td>3.33</td>
</tr>
<tr>
<td>White</td>
<td>-6.93</td>
<td>6.28</td>
<td>-.05</td>
<td>-7.84</td>
<td>6.23</td>
</tr>
<tr>
<td>Gini x Resilience</td>
<td></td>
<td>-.19</td>
<td>.08</td>
<td>-.123**</td>
<td></td>
</tr>
</tbody>
</table>

\[ R^2 \] .01 .01 .35 .41 .42

\[ \text{Change in } R^2 \] .01 .01 .33 .06 .01

\[ F \text{ for change in } R^2 \] 1.39 1.50 80.35** 5.47** 6.27*

*Note. GDP pc = GDP per capita, Family Eco St = Family Economic Status, Second Gen.= Second-generation Immigrant, two Generation dummy variables with First-generation Immigrants serving as the reference group, Accul. Stress=Acculturative Stress. *p < .05. **p < .01.
Table 4

*Summary of Hierarchical Regression Analysis for Variables Predicting Academic Performance (n =313)*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
</tr>
<tr>
<td>Gini</td>
<td>.00</td>
<td>.01</td>
<td>-.04</td>
<td>-.01</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>.00</td>
<td>.00</td>
<td>.05</td>
<td>.00</td>
</tr>
<tr>
<td>Family Eco Status</td>
<td>.15</td>
<td>.05</td>
<td>.18**</td>
<td>.15</td>
</tr>
<tr>
<td>Second-Generation</td>
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*Note.* Family Eco Status= Family Economic Status, two Generation dummy variables with First-generation Immigrants serving as the reference group. Accul. Stress=Acculturative Stress. *$p < .05$. **$p < .01$. 
Figure 3. Venn representation of hierarchical regression analysis with PWB as the criterion

Figure 4. Venn representation of hierarchical regression analysis with academic performance (GPA) as the criterion
Figure 5. Interaction Effect of Gini and Resilience on Frequency of Psychological Well-being when controlling Perceived Stress. The effect of resilience shows stronger in the immigrants from Low-Gini (more egalitarian) countries than the immigrants from High-Gini (less egalitarian) countries.
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