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**Impact of parent's country on wellbeing of  
multicultural adolescents: Using Korea  
National multicultural adolescents panel  
survey**

Abdullatif Ghafary

Graduate School of Public Health

Yonsei University

Department of Health Policy & Financial Capacity Building

Division of Global Health Policy & Financial Capacity  
Building Detection Program

**Impact of parent's country on wellbeing of  
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Directed by Professor Jaeyong Shin

A Master`s Thesis

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Division of Health Policy & Financial Capacity Building Detection Program

and the Graduate School of Public Health of Yonsei University

in partial fulfillment of the requirements for the degree of

Master of Public Health

Abdullatif Ghafary

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This certifies that the Master`s Thesis  
of Abdullatif Ghafary is approved.



Thesis Committee Member: Professor Jaeyong Shin



Thesis Committee Member: Professor Sang Sook Beck



Thesis Committee Member: Professor Jieun Jang

Graduate School of Public Health

Yonsei University

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## Abstract

### **Impact of parent's country on wellbeing of multicultural adolescents: Using Korea National multicultural adolescents panel survey**

This research investigates and describes the association of parent's relationship on wellbeing of adolescents with a multicultural background. Over the past two decades, the population of multicultural families consisting of a married immigrant or foreigner with Korean citizenship in Korea has grown. Since people with multicultural backgrounds are increasing, children from multicultural families are gradually increasing as well in Korea. The mental health and wellbeing of multicultural adolescent are significant public health concerns in many countries.

We used data from Korea National Youth Policy Institute, wave 8th, year 2018 multicultural adolescents panel study MAPS, which included responses from 1,147 individuals. Logistic regression analysis was used to examine the association between depression, worries and concerns, life satisfaction and social withdrawal with other variables.

Adolescents whose mother was born abroad are more likely to have depression specifically Chinese or Philippian mothers (OR=1.13; 95% CI, 0.50-2.56) than adolescents whose mothers were native Korean. Female respondents were more like to have depression, worries and less satisfaction with life (OR=1.28; 95% CI, 0.99-1.66) (OR=1.98; 95% CI,

1.51-2.59) (OR=0.75; 95% CI, 0.56-1.01) than male adolescents. Mothers level of education was associated with adolescent's depression (OR=0.31; 95% CI, 0.13-0.72).

As the number of multicultural adolescents is growing in South Korea and this numbers will form future Koreans society, in this matter government and society should understand and implement multicultural family support policies.

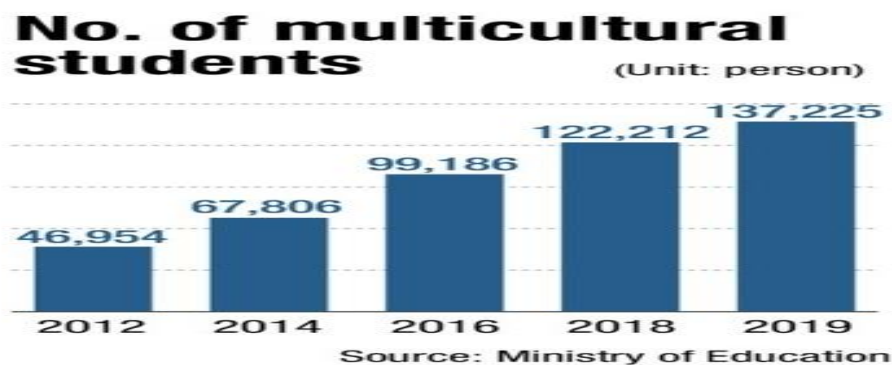
**Keywords:** Multicultural; Depression; Worries and Concerns; Life satisfaction; Social Withdrawal; Wellbeing

## I. Introduction

### 1. Background

Over the past two decades, the population of multicultural families consisting of a married immigrant or foreigner with Korean citizenship in Korea has grown. (Shin et al., 2021) Based on the statistic in 2020, the number of students from multicultural families has a growth of 7.4% to 147 thousand persons. On the other hand, the number of total students in Korea shows a drop compared to the multicultural students. With the continuously increasing multicultural adolescents annually, in 2018, the number of adolescents in multicultural families (AMFs) was about 122,200 that accounted for 2.2 % of the total Korean adolescent population. (Shin et al., 2021)

**Figure 1.** Number of multicultural students



<http://english.moe.go.kr/boardCnts/view>

According to Social determinants of health released by WHO which determine the quality of individual health outcomes requires more attention on the overall adolescent wellbeing, such as mental health, by considering a relationship with their parents and the environment that they are living, such as surrounding people like school peers.

The quality of parent-child relationships is directly related to adolescent mental health outcomes. Understanding how parent-child relationships affect adolescent development outcomes such as mental health performance (depression, worries and concerns) that cause social withdrawal and lower life satisfaction level. Understanding how adolescents see critical positive and negative traits in their relationships with their parents can help prevent adolescent mental health problems and enhance their mental health.(Smokowski et al., 2015)

This study did not examine distinct parenting styles over adolescent wellbeing however, we are considering their relationship, and the factors like parents' level of education or country of birth have any effect on adolescent condition such as depression, life satisfaction, self-esteem, and social withdrawal.

Multicultural families are comprised of immigrants and persons who have acquired Korean nationality, according to Article 2 of the Multicultural Families Support Act.(act, 1990) Since the 1990s, Korea, long known as a culturally homogeneous society, has become more culturally diverse due to a rapid increase in interethnic marriages.

By definition, multicultural youth includes children from a family of international marriage, immigrant youth, and foreign children (Institute, 2018). Therefore, in this study children from the family of international marriage can be said to be the primary target.

In addition, the geographical area (rural or urban) and the environment and socio economic status of the family have a direct effect first on parenting style and second can affect adolescent's mental health (Smokowski et al., 2015). These stressors are associated with risky behaviors in adolescents, and compared to the adolescent who lives in urban area adolescents in rural areas are more likely to use substances like (i.e., drugs, alcohol, and tobacco), bring weapons to school, and have sexual intercourse (Atav and Spencer, 2002). These risky behaviors increase the stress on the family dynamic and impact parenting, especially given that in the rural area, access to support from mental health care providers is limited(Radunovich and Wiens, 2012).

As a result, South Korean society is changing due to the sudden increase in multicultural families. As a result, adolescents experience physical, emotional, and social changes and growth. Furthermore, middle, and late adolescents experience impulsive thinking and unstable psychological issue such as conflict, tension, and stress due to their parents and schools. This phenomenon is more prominent among adolescents belonging to multicultural families (Lee and Jeong, 2021).

Since people with multicultural backgrounds are increasing, children from multicultural families are gradually increasing as well in Korea. The mental health and

wellbeing of multicultural adolescent are significant public health concerns in many countries. Its challenges, and barriers that they face in their routine school life, effect of host country culture and relationship with environment and parents which directly and indirectly affect their wellbeing(Goodman, Slap and Huang, 2003). Therefore, it is necessary to investigate the parent's country or birth and its effects on wellbeing of the adolescent from multicultural background. Thus, multicultural adolescent health problems, including mental health, will become an important social issue. (Lee et al., 2019)

Studies have reported an increased risk of mental health problems such as depression and suicidal behavior among the offspring of immigrants. (Stevens and Vollebergh, 2008). According to the data from Statista, in 2020, Korea suicide rate reached 25.7 per 100 thousand populations, which is the highest among other OECD member countries for ten years up leading to 2016. (You, Jeong and Cho, 2020)

In this matter, Korean people, especially adolescents, are more likely to suffer from mental health considering parent relationship and the environment. Adolescence is a dynamic period in human development. Aside from accompanying biophysiological changes, it is marked by significant psychosocial growth. (Khanlou, 2004) Adolescence is a critical transitional period when individuals begin to explore their identities and positions in society as they grow up physically, psychologically, and socially. (Steinberg and Morris, 2001)

Several studies have shown that acculturation stress—a proxy of measure for acculturation—is associated with higher levels of depressive symptoms and lower levels of self-esteem and life satisfaction among multicultural adolescents in Korea. (Oh and Kim, 2021). Furthermore, focusing on the multicultural community is meaningful in that it allows researchers to consider the significance of social sustainability in seeking strategies to promote the well-being of current and future generations rooted in ethnic diversity (Kosanović et al., 2018). Evidently, parenting plays a critical role in the developmental process because it has the most direct and lasting influence on adolescents. Parental affection and concern significantly contribute to adolescents' ego-resilience (Lim, 2013), while parental abuse and neglect negatively affect adolescent development (Lim, 2018).

A previous cross-sectional study using secondary data from MAPS 2017, suggested that negative parenting styles led to loneliness and a lack of close relationships with friends among multicultural adolescents. Subsequently, it caused social withdrawal and depression. (Lee and Jeong, 2021)

## 2. Purpose

This study seeks to analyze the wellbeing among multicultural youth within the context of South Korea, a country with a predominantly homogenous ethnic population. Specifically, the impact of parent's country on wellbeing of multicultural adolescents was examined. Moreover, this study investigated whether parent's (country of birth, level of education, job, married life, and socio-



economic status) influence depression, worries and concern, life satisfaction, and social withdrawal experienced by multicultural adolescents.

### 3. Research Questions

Is there an association between parent's country of birth and wellbeing of multicultural adolescents?

- How does this association differ by gender and environment (urban or rural)?
- Do the Parent's characteristics (parental education level, occupation, income, residence) affects the wellbeing of multicultural adolescent?

#### 3.1. Definition

#### 3.2. Adolescent Wellbeing

Adolescent well-being is an outcome that has been defined in various ways and previously investigated relative to various influences. Several studies measure adolescent well-being by using indicators of academic and scholastic achievement (Manning and Lamb, 2003).

The present study advanced this literature by linking yet another social context – the context of parental relationship – with multicultural adolescent wellbeing.

‘Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity’. Health and wellbeing are, on the surface, described as the same thing. However, a person who is not healthy is not automatically excluded from

a state of wellbeing using the Cambridge definition; their state is judged by how they feel about their health. This illustrates another underlying assumption: that wellbeing can only be subjectively assessed. (Simons and Baldwin, 2021)

In this study, well-being is a subjective and multidimensional concept considered to reflect multicultural adolescents overall physical, psychological, and social status and social functioning in their environment. Well-being was measured using a short version of PERMA-Profilier (Butler and Kern, 2016), which was initially developed to measure adolescents' well-being based on five pillars of wellbeing: PERMA (Positive emotion, Engagement, Relationships, Meaning, and Accomplishment) (Helliwell and Putnam, 2004).

### 3.3. Multicultural families

Multicultural families are defined as families comprised of immigrants and persons who have acquired Korean nationality, according to Article 2 of the Multicultural Families Support Act. (Oh and Kim, 2021)

By definition, multicultural youth include children from a family of international marriage, immigrant youth, and foreign children. Although the survey was not intended to be limited to children from the family of international marriage, the majority are the children from the family of international marriage in the sample distribution. As a result, children from families of international marriage can be said to be the primary target.

## II. LITERATURE REVIEW

This study figured out whether parents' country of birth can affect adolescents' overall wellbeing (Mental, physical, social) and the effect parent's characteristics on their worries and concerns, social withdrawal, and life satisfaction. To figure out this association, we used Multicultural Adolescent Panel Survey data from the year 2018.

Other studies indicated a significant relationship between parents' country of birth and adolescents' depression. The findings from Jieun Jang et al, (Association between Parents' Country of Birth and Adolescent Depressive Symptoms: The Early Stages of Multicultural Society) revealed that, adolescents whose parents are both native Korean and adolescents whose parents were born abroad are more likely to have depressive symptoms. In high school students, the parent's country of birth has more significant influence on depressive symptoms than that in middle school students. By subdividing the parents' country of birth, we found that if the father was born in North Korea, or Japan or Taiwan and the mother was native Korean; the adolescents were more likely to have depressive symptoms. When the mother's country of birth was developing countries, adolescents are more likely to have depressive symptoms (Jang et al., 2018).

Additionally, adolescents of immigrants were more likely to experience poor parenting and family functioning and discrimination such as school violence. These factors can affect the mental health of multicultural adolescents (Stevens and Vollebergh, 2008).

In addition, we found that low parental education levels and low household income were more commonly observed among multicultural families. Several previous studies have reported that lower parental education levels are associated with a higher probability of impaired mental health in the child. Moreover, children belonging to families with low household income levels are more likely to be depressed (Angold, 1988; Goodman, Slap and Huang, 2003).

The study by Shin et al, revealed that social and community network and environmental factors beyond individual factors were identified as important determinants affecting multicultural adolescent well-being (Shin et al., 2021). This study shows that environmental (family and school) factors in the contexts of Social Determinants of Health, such as economic status, explain the consistencies in the previous studies on the relationship between multicultural adolescent well-being (Lee, Kim and Kim, 2013). Multicultural families themselves are not the problem, but rather socio-economic issues have a larger effect on multicultural adolescent well-being, indicating a need to focus on the socio-economic vulnerabilities of multicultural families.

Another study analyzed secondary data from the Multicultural Adolescent Panel Study MAPS (2017) to identify the factors that influenced depression among male and female multicultural adolescents. Gender had a small-medium effect size on depression in multicultural adolescents. The depression levels among female multicultural adolescents were higher than among male multicultural adolescents (Lee and Jeong, 2021). These

results are consistent with previous studies, which reported that women are more depressed than men throughout their lives (Bhatia and Bhatia, 2007; Lin et al., 2008).

Furthermore, since adolescence is an irregular period, where biological, cognitive, and social changes occur rapidly, adolescents are vulnerable to developing depression and suicidal symptoms (Steinberg and Morris, 2001). Previous studies have shown that depression in adolescence is likely to transpire into depression during adulthood (Bhatia and Bhatia, 2007); therefore, constant efforts are required to detect depression among adolescents early and tackle their symptoms.

#### 1. Terms of Multicultural adolescents

The term ‘multicultural child’ is incoherently referred to among different grounds. Article 2 of the Multicultural Family Support Act legally defines the term ‘multicultural family’ as a Korean nationals and married immigrants or neutralized persons. Because the Multicultural Family Support Act regulates that at least one person of a family member must have a Korean nationality, the multicultural child generally refers to a child from an international marriage family and does not include a child whose parents are both foreigners. Nevertheless, this definition of multicultural family is criticized for being too narrowly interpreted for school and related institutions to respond to reality.

Ministry of Education applies the expanded definition of multicultural students by including domestically born and immigrated children from the international marriage family (including North Korea refugee children) and foreign children (Lee, 2019a). Because that the Ministry of Education’s definition is more widely referred to in the

research on the multicultural child in education, the multicultural child in this paper will, denote a definition made by the Ministry of Education.

## 2. Well-being and health of multicultural adolescent

Contrasting results have been reported in studies that compared the well-being of immigrant and native youth. Some studies indicate poorer mental health in the immigrant group (Vieno et al., 2009), and others find the opposite (Perreira and Ornelas, 2011). Different results have led researchers to explore the issues of immigrant generations (Katsiaficas et al., 2013), ethnic background, occupational background, and social support (Oppedal, Røysamb and Sam, 2004) in order to understand better what may explain observed differences. For example, in Ireland, first-generation immigrant youth reported higher life satisfaction than natives while considering family affluence, gender, and age (Molcho et al., 2009). Other studies have found no difference in psychological adaptation between natives and immigrants, and still, others have reported lower life satisfaction for immigrant youth (Ullman and Tatar, 2001). Studies of mixed and non-mixed ethnic backgrounds as factors in mental health also report different results.

Carlerby et al. found girls with a foreign background reporting more distress than other groups mixed and native background (Carlerby et al., 2011). Weathers et al. also found that non-mixed foreign background was associated with worse health than mixed background (Weathers et al., 2008), while Abu-Rayya found a higher prevalence of depression and anxiety in mixed background youth than in those with a non-mixed foreign background (Abu-Rayya, 2005).

### 3. The relationship between self-esteem and family support

Of the various sources of social support, family support may persistently influence the psychological well-being of children because, despite some conflicts with parents, children are under parental protection and supervision, and children should feel comfortable with their parental care (Kim and Han, 2017). Previous Korean studies have proven a positive association between family support and self-esteem for multicultural adolescents (Choi, 2017; Lee, 2019b; Yoon and Hur, 2017). Multicultural adolescents with a positive perception of family support showed positive self-esteem (Lee, 2019b). Another study also proved that primary and middle school students with positive perceptions of parent–child relationships showed higher self-esteem and school adaptation and that self-esteem played a mediating role in the relationship between parent–child relationships and school adaptation (Yun, 2017).

Meanwhile, An et al., contended that conflicts with parents negatively affected on adolescents' self-esteem (An, Lee and Lim, 2013). Other study also reported that multicultural adolescents' perception of maternal support affected self-esteem (Hwang, 2013). Among Western studies that have also shown longitudinal reciprocal effects between self-esteem and family support, Marsha et al., found in their 4-year study that self-esteem predicted changes in social support, but not the other way around (Marshall et al., 2013). Harris et al., in their meta-analysis, found reciprocal effects between self-esteem and social relationships (Harris and Orth, 2019). Study by Schmidt et al., found that family encouragement helps adolescents develop self-

confidence and positive images of themselves (Schmidt and Padilla, 2003). Another study also found that the family environment in early childhood predicted self-esteem in young adulthood, addressing the quality of home life in developing long-term self-esteem (Orth, 2018). Finally, Krauss et al., in their longitudinal study of adolescents aged 10 to 16, found that parental warmth and monitoring positively predicted self-esteem across gender and age (Krauss, Orth and Robins, 2020). Although these Western studies do not specifically target multicultural families, for this study, they provide insight into the long-term reciprocal relationships between the variables in which this study is interested.

#### 4. The relationship between family support and life satisfaction

Studies on the life satisfaction of Korean adolescents identified various factors at the individual, familial, and social levels. Parents and family supports have been a consistent influential factor (Kim et al., 2012; Park and Kim, 2006; Sohn et al., 2012). That is, positive parental support increases psychological well-being and life satisfaction. Ko et al., also indicated that family support was a strong predictor for life satisfaction (Ko, 2014). However, hostile parenting such as neglect and abuse increased in school and life satisfaction (Kwon, Lee and Nho, 2013). Similar results have been found in studies on multicultural adolescents in Korea. Another article reported that multicultural adolescents who had a high level of conflict with their parents had lower life satisfaction (An, Lee and Lim, 2013). Meanwhile, multicultural adolescents who perceived parents as supportive and affectionate had higher levels of



life satisfaction (Lee and Lim, 2012). Ahn et al., found a moderating effect of family support in the relationship between acculturative stress and life satisfaction (Ahn, 2019).

In 2017, also found a longitudinal effect of family support on life satisfaction among multicultural adolescents in Korea. Although life satisfaction has been used as a dependent variable, one may assume that adolescents with higher life satisfaction may also maintain highly supportive family relationships. However, there is a lack of studies on the effects of life satisfaction on family support. A few researchers have attempted to establish a causal effect of life satisfaction on family support. For example, Choi et al., attempted to examine a bidirectional effect between Korean adolescents' and relationships with parents and found no causal effect satisfaction on family relationships (Choi, Hwang and Kim, 2009). Meanwhile, in 2017, found a positive effect of life satisfaction on family support.

Thus, it can be said that a causal effect of life satisfaction on family support may need further examination. This study would like to test the assumption that life satisfaction may have long-term effects on family support for Korean multicultural adolescents. Although previous cross-sectional studies have established causal relationships between self-esteem, family support, and life satisfaction, very few have dealt with longitudinal reciprocal associations between these variables, particularly covering the period from primary school to middle school, which coincides with a transition from a smaller to a larger school setting. Such a transition can create stress

for many adolescents as they may be less supervised by parents and teachers because they look for more independence and autonomy. Therefore, the authors pose two research questions to test longitudinal reciprocal relationships between self-esteem, family support, and life satisfaction to draw out the implications for human services for multicultural adolescents.

#### 5. Parental attitude and adolescent social withdrawal

The immediate family forms an essential context for social and emotional development (Hart, Newell and Olsen, 2003). To some researchers, the expression of social withdrawal represents the developmental outcome of temperamental dispositions (e.g., Fox et al. 2005). To others, withdrawal is viewed as a behavioral index of the child's isolation, exclusion, or rejection by the peer group (e.g., Boivin et al. 1995, Gazelle & Ladd 2003).

In families of adolescents, parenting changes as parents face the challenge of allowing their children to become more autonomous while confronting the reality of increasing risks associated with the adolescent period (Soenens B, 2019). Levels of parents' psychological support and understanding of children behavior are typically linearly related to adolescent adjustment, with higher parental relation being associated with better social adjustment (Soenens B, 2009)

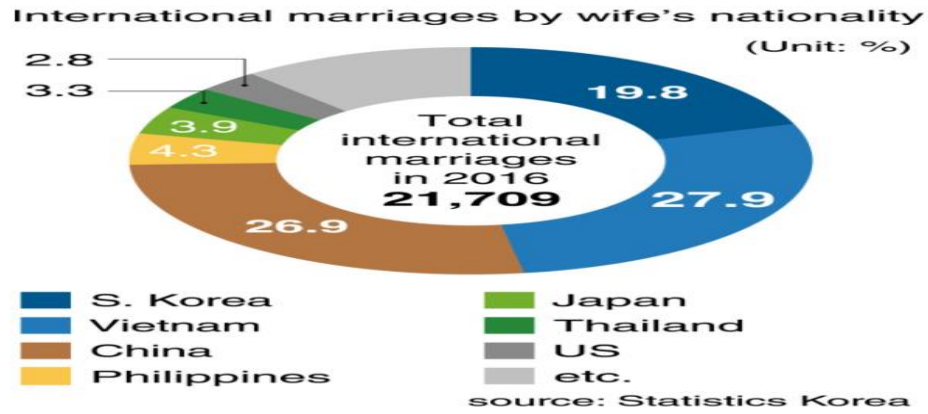
A previous report suggested that negative parenting styles led to loneliness and a lack of close relationships with friends among multicultural adolescents.

Subsequently, it caused social withdrawal and depression (Wang et al, 2020; tang et al, 2018). Finally, some believe that social withdrawal is linked to psychological maladaptation as it represents a behavioral expression of internalized thoughts and feelings of social anxiety or depression associated with the parental relationship, school environment, and peer group supports (Espetela et al, 2019; Lee y et al, 2019; Lee et al, 2014).

Over 65 percent of the international unions in 2016 were between a foreign wife and a Korean husband. For the first time that year, Vietnam took over China as the No. 1 country of birth for the foreign wives, with 27.4 percent. China came in second at 26.9 percent, while 4.3 percent of the wives came from the Philippines.

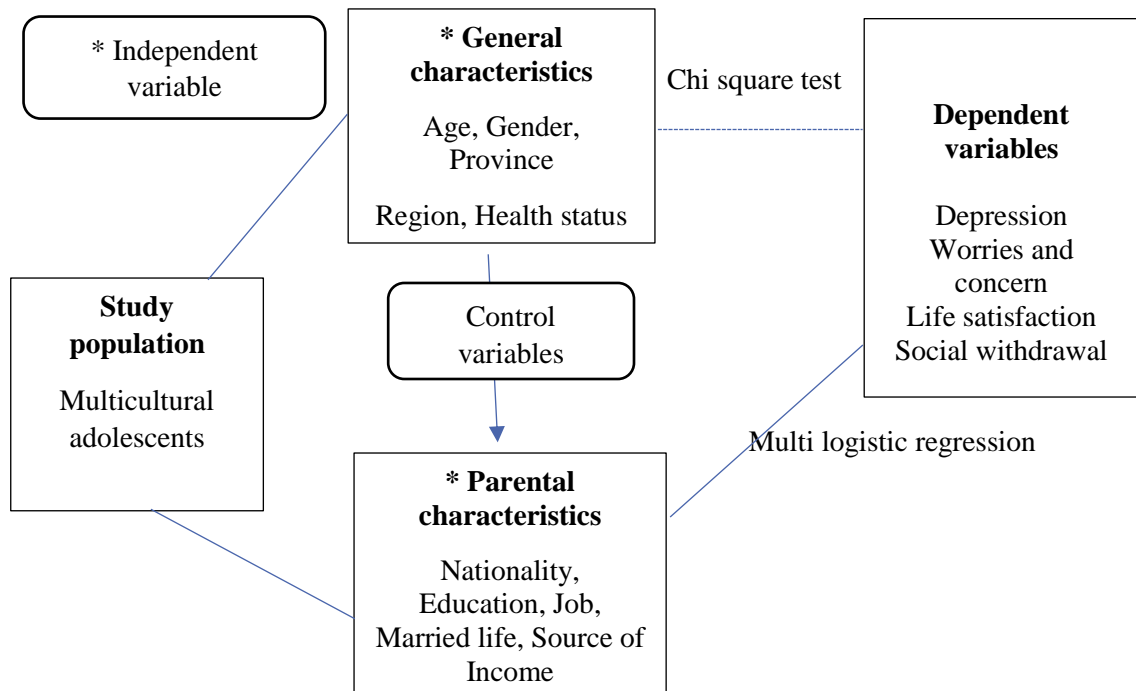
The following **figure 2** shows the international marriages by wife's nationality in Korea. As it is clear in the figure Vietnam and China and Philippine are the first, second and third most married to a Korean man as result the number of children from this multicultural family were higher than others.

**Figure 2.** International marriage by wife`s nationality



(Statistic, 2016)

### III. CONCEPTUAL FRAMEWORK



**Figure 3.** Conceptual framework of the study

## **iv. METHODS**

### **1. Design**

National Youth Policy Institute conducted the Multicultural Adolescent Panel Study, a longitudinal study started in 2011 and will be conducted each year until 2025. The study was designed to assess the challenges the multicultural adolescents are facing, as the number of multicultural adolescent are increasing each year in Korean society the result emphasizes the need for support based on the insufficient aspects of children from multicultural families across society by government ministries, private organizations and researchers, it has led to a social phenomenon which views multicultural youth as ones lacking in development aspects compared to their Korean counterparts. The present study is a cross-sectional analysis of data collected in the Multicultural Adolescent Panel study wave 8<sup>th</sup>. The 8<sup>th</sup> wave of MAPS gathered data from 1,147 students. In this study, students were the main population who analyzed to confirm the parent's country and its effect on the wellbeing of multicultural adolescents in Korea.

### **2. Participants**

This study used data from the 8th Multicultural Adolescents Panel Study (MAPS). A total of 1,653 adolescents participated in the survey study in 2018; however, prior to data analysis, 506 adolescents who refused to participate were excluded. This sample was selected based on the assumption that 95% of multicultural adolescents in South

Korea have a foreign mother and a Korean father. Eventually, we selected a sample of 1,147 multicultural adolescents. The MAPS surveyed mothers and their multicultural adolescent children, who were in the 4th-grade of elementary school (9 to 10 years old) and could understand and respond to the contents of the questionnaire.

It is a longitudinal survey that began in 2011 and will end in 2025 when the participating adolescents turn 24. The 8th-year (2018) data were used in this study, it was the most recent published. The MAPS data was collected by a trained professional who visited the adolescents' homes and interviewed them. The questionnaire for multicultural adolescents was in Korean. At the same time, the mothers were provided with a questionnaire translated into nine languages (as per their countries of origin: China, China (Korean Chinese), Vietnam, Philippines, Japan, Thailand, and others) along with the Korean questionnaire. In the first stage, a stratified random sampling technique was applied. Followed by probabilistic sampling in the second stage, to extract schools; multicultural adolescents from the extracted schools were investigated. The sample retention rate was 77.0%, and sample replacement was not performed for sample deviation.

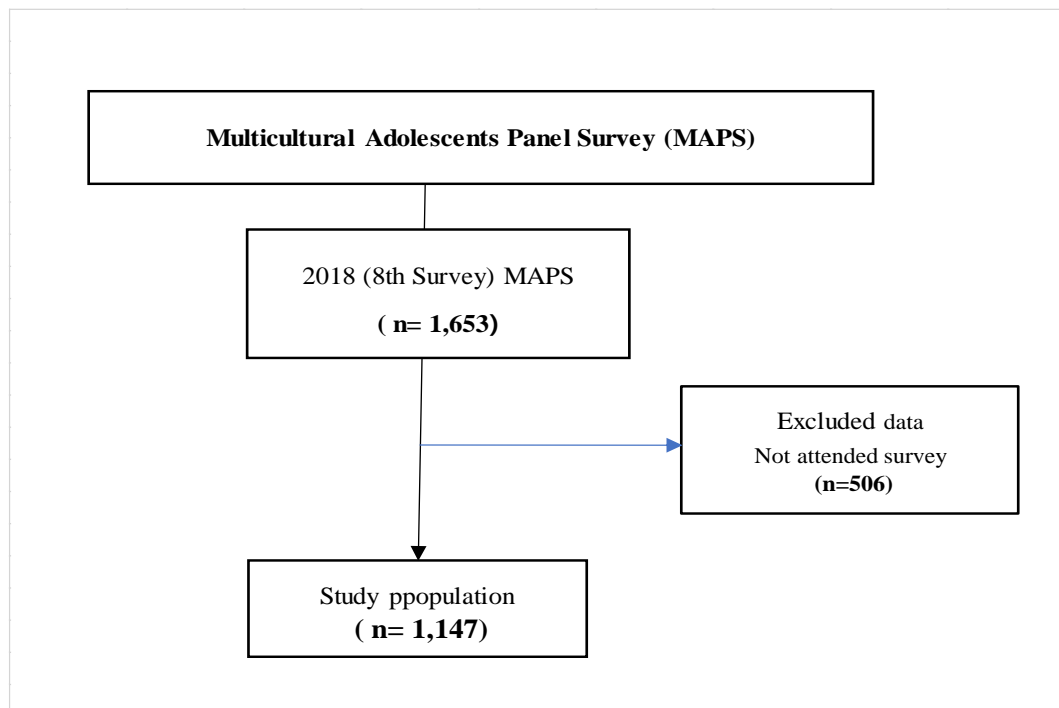
### 2.1. Inclusion and exclusion criteria

The 8<sup>th</sup> round of MAPS was consisting of 1,653 students enrolled in middle or high school. From the total students we exclude the missing or the students who refuse participating in this study or did not provide information.

## 2.2. Sampling

We used data from the 2018 Multicultural Adolescents Panel study (MAPS). The MAPS consist of panel data tracked annually and since 2011, the study population consists of multicultural students enrolled in the 4<sup>th</sup> grade of an elementary school in Korea. As of 2018, 1,653 students were paneled. The outcome variable of this study was adolescent wellbeing. This has been investigated in the MAPS 2018. Out of total of 1,653 individuals surveyed in 2018, 1,147 respondents were included in the analysis.

**Figure 4:** Flow chart



### 2.3. Variables

These study variables were derived from the MAPS data which is given by the National Youth Policy Institute. the summary of interdependent and dependent variables was given in table 1.

**Table 1.** Description of variables and indicators

<b>Variables</b>	<b>Categories</b>	<b>Classification</b>	<b>Definition</b>
Dependent	<b>Health status</b>	1. Healthy 2. Unhealthy	Health condition, Physical satisfaction level
	<b>Worries and Concern</b>	0. Not good 1. Good	Worries and concerns about future life
	<b>Life satisfaction</b>	0. Disagree 1. Agree	whether students are satisfied with their life or not
	<b>Depression</b>	0. Not good 1. Good	Students who develop depressive symptoms
	<b>Sex</b>	1. male 2. Female	Gender of the participant
	<b>Age</b>	16-20 years	Age of the participant
Independent	<b>Parents education</b>	1. Middle school or less 2. High school 3. Undergraduate and higher	participants parents' level of education
	<b>Parents occupation</b>	1. Professional or experts 2. skilled worker or labor 3. others	participants parent job
	<b>Parents country of origin</b>	1. Korea 2. Chinese 3. Vietnam 4. Philippines 5. Other	participants parent's country of birth
	<b>Region</b>	1. Urban 2. Rural	Participants living in urban or rural area



<b>Main source of income</b>	1. Father 2. Mother 3. Others	Who is the main source of income for family
<b>Communication with parents</b>	1. Korea 2. Other	The language participants used to communicate with parents
<b>Socio-economic status</b>	0. Difficult 1. Good	Perception of family circumstances
<b>Academic achievement</b>	1. Below average 2. Above average	Participants school performances

### 3. Measures

The study instrument was based on CAPI (Computer Assisted Personal Interviewing). The survey language was Korean. The main categories which adolescents interviewed were (Multicultural characteristics, Individual characteristics, and Environmental characteristics).

The survey collected information from both adolescents and their parents, however in the study focus was on adolescents and we used data from the 8<sup>th</sup> wave of a cross-sectional survey of multicultural youth, the year 2018.

#### 3.1. Depression

The revised version of the Symptom Checklist-90-Reversion (Park et al., 2018) was used to detect depression symptoms (Kim, Kim and Won, 1984). It has 10 items with a 4-point Likert-type response scale. A higher score on this scale indicates a higher level of depression. In Shon's and Park's studies with Korean multicultural adolescents, this scale reported reliability of 0.91 and 0.90,

respectively (Park and Yang, 2020; Sohn, 2019). In this study, this scale reported high internal consistency with a Cronbach's alpha of 0.82. The depression variable consists of an average sum of all items divided by the number of items. Basically, it was consisting of 4-point Likert- scales which was changed to two-point Likert-scale in current study as: (1. Not at all and 2. I cannot, was changed to 0= Not good), and (3. I am good 4. Very good was changed to 1= Good).

### 3.2. Social Withdrawal

The social withdrawal was evaluated using the Behavior Problem Scale for Children and Adolescents developed by Kim and Kim and revised by Lee et al. (Kim, Kim and Won, 1984). This scale assessed the degree of appropriate social relationships by evaluating the participants' interactions with the surrounding people and the environment. It has five items with a 4-point Likert-type response scale. A higher score indicated a higher level of social withdrawal. The Cronbach's alpha of this scale in Kim and Kim's study was 0.79 (Kim and Kim, 1998), and it was 0.85, 0.84, and 0.86 in the 4th, 5th, and 6th, respectively. In this study, the scale reported high internal consistency with a Cronbach's alpha of 0.86. The Social withdrawal variable consists of an average sum of all items divided by the number of items.

Basically, it was consisting of 4-point Likert- scales which was changed to two-point Likert-scale in current study as: (1. Not at all and 2. I cannot, was changed to 0= Not good), and (3. I am good 4. Very good was changed to 1= Good).

### 3.3. Health Condition

It was scored by adolescents to measure the degree of subjective health perception. There was four Likert-scales which in the current study changed into two categories: (1. Very healthy; 2. On the healthy side) were changed to 1= Healthy, and (3. Not very healthy; 4. Very Unhealthy) were changed to 2. Unhealthy.

### 3.4. Others—Demographic Characteristics

Information about parents` country of origin, their economic status, parents` marital status, gender, age, and the job and education level of the father and mother were collected as demographic characteristics.

## 4. Data Collection

Data started to be collected each year since 2011 by National Youth Policy Institute on 4th-year elementary school multicultural students. The present study used data from the 2018 Multicultural Adolescent Panel study.

## 5. Ethical consideration

To have the recent available MAPS, 2018 data for current study, after submitting research proposal and discussing about how the data will be used, National Youth Policy Institute has approved and shared the data to be used under current study title in the Global Health Security and Financial Capacity building program of Graduate School of Public Health, Yonsei University.

## 6. Data Analysis

SPSS (version 26.0) was used for data analysis. The demographics of multicultural adolescents were categorized by gender and analyzed using descriptive statistics (frequency, percentage). Skewness, kurtosis, and Levene's test were assessed to verify the normality and homogeneity of variance assumptions. All continuous variables in this study satisfied the normality and homogeneity of variance assumptions. Parental characteristics and variables among multicultural adolescents were analyzed using the Chi-square test.

Additionally, Multiple logistic regression was used to analyze the association in depression levels, self-esteem, life satisfaction, and social withdrawal according to the parent's country of birth, age, gender, parent's education level, and job, parents married life, perception of family socioeconomic status and main source of income, among male and female multicultural adolescents. Fisher's exact test was used to analyze the association between multicultural adolescents' depression, worries and concerns, social withdrawal, life satisfaction and other research variables. Factors influencing depression, worries and concerns, social withdrawal, and life satisfaction were examined by performing multiple logistic regression analyses.

## v. RESULTS

### 1. Characteristics of Participants

#### 1.1. General Characteristics

A total of 1,147 multicultural adolescents in South Korea participated in this study. There were 561 boys (48.9%) and 586 girls (51.1%), and these numbers remained the same throughout the study. A summary of participants' characteristics such as numbers and percentages are presented in **table 2**. Of the 1,147 participants, 1,109 (96.7%) their mothers were foreigners, and 1,107 (96.5%) fathers were Korean. Among them Philippian and Chinese mothers constitutes the most numbers of students with foreigner mother with the percentage of 25.1% and 24.4% accordingly. In the current study 70% of participants live in urban area and 30% were in rural area. The Multicultural Adolescent Panel Study is a longitudinal study that started in 2011 with the adolescent who was in the 4<sup>th</sup> grade of school; in the present study, data used from the year 2018 or the wave 8<sup>th</sup> that most of the participants were 17 years old (1,023 (89.2%)). 75.2% of total participants reported that fathers are the main source of income and 51.5% reported that their families have a difficult socio-economic situation. In addition, 49.7% of participants reported socially withdraw and 53.7% they had depression. 36.0% reported they are concerned and worried about their future, socio economic status, study, school, career, and physical and mental health condition. Multicultural adolescents' parents mostly had a high school degree.

**Table 2.** Characteristics of study participants (N=1,147)

<b>Variables</b>	<b>Categories</b>	<b>N</b>	<b>%</b>
<b>Mother's country of birth</b>	Korean	38	3.3
	Non-Korean	1109	96.7
<b>mother nationality</b>	Korean	38	3.3
	China	280	24.4
	Vietnam	25	2.2
	Philippine	288	25.1
	Other	516	45.0
<b>Father's country of birth</b>	Korean	1107	96.5
	Non-Korean	40	3.5
<b>Communication with parents</b>	Korean	776	67.7
	Other language	371	32.3
<b>Gender</b>	Male	561	48.9
	Female	586	51.1
<b>province</b>	capital	397	34.6
	others	750	65.4
<b>Region</b>	Urban	803	70.0
	Rural	344	30.0
<b>Age</b>	16	84	7.3
	17	1023	89.2
	18	36	3.1
	19	3	0.3
	20	1	0.1
<b>Mothers` education</b>	Middle school or less	45	3.9
	High school	541	47.2
	Undergraduate & over	474	41.3
<b>Fathers` education</b>	Middle school or less	360	31.4
	High school	594	51.8
	Undergraduate & Over	193	16.8
<b>Mothers` job</b>	Professional or experts	358	31.2
	Technician or labor	201	17.5
	Others	588	51.3
<b>Fathers` job</b>	Professional or experts	207	18.0

	Technician or labor	410	35.7
	Others	530	46.2
<b>Parents` married life</b>	Married	1059	88.5
	Others Ω	138	11.5
<b>Main source of income</b>	Father	862	75.2
	Mother	217	18.9
	Others	68	5.9
<b>Socio-economic status</b>	Difficult	616	51.5
	Good	559	46.7
	Missing	22	1.8
<b>Health status</b>	Healthy	1038	90.5
	Unhealthy	109	9.5
<b>Self-esteem</b>	Not good	1025	89.4
	Good	122	10.6
<b>Life satisfaction</b>	Not good	287	25.0
	Good	860	75.0
<b>Depression</b>	Not depressed	531	46.3
	Depressed	616	53.7
<b>Social withdrawal</b>	No	577	50.3
	Yes	570	49.7
<b>Worries and concerns</b>	No	734	64.0
	Yes	413	36.0
<b>Academic achievement</b>	Below average	399	34.8
	Above average	748	65.2

**Table 3** demonstrates the differences of depression, worry and concern with general characteristics of multicultural adolescents. Table 3 shows adolescents with foreigner mother are more depressed and worried than those with Korean mother. Among adolescents with foreigner mother, adolescents whose mother is from Philippine or China are more depressed and worried with the percentage of 45.83% and 51.07%, 36.8% and 36.1% respectively. Depression is more common in adolescents with Korean father (53.21%) and 35.7% of adolescent with Korean father reported that they are worried about their future. Gender shows a significance association that females are more depressed than the male with a 57.51% of total girl respondents and 44.0% of girls were worried for their future. Adolescent living in urban areas 55.92% are shown to experience depressive symptoms compared to those who are living in rural areas 48.55% and 11.5% of adolescent living in urban areas are worried for their future, this opposition to the result reported by (Atav and Spencer, 2002) “These stressors are associated with risky behaviors in adolescent and compared to adolescents who lives in urban area adolescents in rural the area are more likely to use substances like (i.e., drug, alcohol, and tobacco), bring weapons to school and have sexual intercourse”.

Students whose parent had high school level of education shows more depressed and worried than middle school and undergraduate above.

Students whose parents had no specific job, or their parents were students or housewife and their occupation cannot be classified were more depressed and concern about their situation and their future.



**Table 4** demonstrate differences of life satisfaction and social withdrawal with general characteristics of multicultural adolescents. Table 4 shows adolescents with foreigner mother are more satisfied with life however, adolescents with foreigner mother from Philippine, China are isolated than with Vietnamese mother. The result is completely opposite for students with Korean father, they reported that they are more satisfied with life. Among students whose father was Korean 49.6% said they experienced social withdrawal. Boy students are happier with the life than girls. Female students reported they are social withdraw less than boys. Students lived in urban area were more satisfied with their life however, they reported more isolated from society. Students aged 17 reported they are satisfied with the life as even though they are more socially withdraw. Students with mothers' high school or higher-level education are more socially withdraw. Meanwhile students whose father has a high school education level are more satisfy with their life and more they report are socially withdraw. Students with good physical health are more satisfied with life than others. Students with academic achievement above average are happier with the life.

**Table 3.** Association of depression, Worry and Concerns with general characteristics of multicultural adolescents (N=1,147)

Variables	Categories	Depression				<i>p</i> *	Worry and Concerns				<i>p</i> *
		Yes		No			Yes		No		
		N	%	N	%		N	%	N	%	
<b>Mother nationality</b>	Korean	25	65.79	13	34.21	0.003	8	32.0	17	68.0	0.972
	Chinese	143	51.07	137	48.93		101	36.1	179	63.9	
	Vietnam	12	48.00	13	52.00		15	39.5	23	60.5	
	Philippine	132	45.83	156	54.17		106	36.8	182	63.2	
	Other	304	58.91	212	41.09		183	35.5	333	64.5	
<b>Father's country of birth</b>	Korean	589	53.21	518	46.79	0.051	395	35.7	712	64.3	0.15
	Non-Korean	27	67.50	13	32.50		18	45.0	22	55.0	
<b>Gender</b>	Male	279	49.73	282	50.27	0.005	155	27.6	406	72.4	<.001
	Female	337	57.51	249	42.49		258	44.0	328	56.0	
<b>Region</b>	Urban	449	55.92	354	44.08	0.013	92	11.5	711	88.5	0.100
	Rural	167	48.55	177	51.45		30	8.7	314	91.3	
<b>Age</b>	16	46	54.76	38	45.24	0.249	32	38.1	52	61.9	0.052

	17	544	53.18	479	46.82		360	35.2	663	64.8	
	18+	26	69.44	14	30.56		21	50.0	19	50.0	
<b>Province</b>	Capital	269	67.76	128	32.24	<.001	153	38.5	244	61.5	0.109
	Other	347	46.27	403	53.73		260	34.7	490	65.3	
<b>Mothers` education</b>	Middle school or less	37	82.22	8	17.78		22	48.9	23	51.1	
	High school	281	51.94	260	48.06	<.001	195	36.0	346	64.0	0.102
	Undergraduate & over	259	54.64	215	45.36		158	33.3	316	66.7	
<b>Fathers` education</b>	Middle school or less	175	48.61	185	51.39		124	34.4	236	65.6	
	High school	330	55.56	264	44.44	0.058	222	37.4	372	62.6	0.606
	Undergraduate & over	111	57.51	82	42.49		67	34.7	126	65.3	
<b>Mather`s` job</b>	Professional or experts	205	57.26	153	42.74		121	33.8	237	66.2	0.573
	Technician or labor	113	56.22	88	43.78	0.106	75	37.3	126	62.7	
	Others	298	50.68	290	49.32		217	36.9	371	63.1	
<b>Fathers` job</b>	Professional or experts	110	53.14	97	46.86	0.838	70	33.8	137	66.2	0.143

	Technician or labor	224	54.77	185	45.23		163	39.8	247	60.2	
	Others	281	53.02	249	46.98		180	34.0	350	66.0	
<b>Main source of income</b>	Father	446	51.74	416	48.26	0.043	320	37.1	542	62.9	0.369
	Mother	126	58.06	91	41.94		72	33.2	145	66.8	
	Others	44	64.71	24	35.29		21	30.9	47	69.1	
<b>Communication with parents</b>	Korean	401	51.68	375	48.32	0.027	256	33.0	520	67.0	<.001
	Other	215	57.95	156	42.05		157	42.3	214	57.7	
<b>Socio-economic status</b>	Difficult	340	56.57	261	43.43	0.024	224	37.3	377	62.7	0.191
	Good	276	50.55	270	49.45		189	34.6	357	65.4	
<b>Health status</b>	Healthy	538	51.83	500	48.17	<.001	346	33.3	692	66.7	<.001
	Unhealthy	78	71.56	31	28.44		67	61.5	42	38.5	
<b>Academic achievement</b>	Below average	251	62.91	148	37.09	<.001	166	41.6	233	58.4	0.002
	Above average	365	48.80	383	51.20		247	33.0	501	67.0	

**Table 4.** Association of Life Satisfaction and Social Withdrawal with general characteristics of multicultural adolescents (N=1,147)

Variables	Categories	life satisfaction				<i>p</i> *	social withdrawal				<i>p</i> *
		Yes		No			Yes		No		
		N	%	N	%		N	%	N	%	
<b>Mother nationality</b>	Korean	30	78.9	8	21.1	0.834	26	68.4	12	31.6	0.088
	China	216	77.1	64	22.9		148	52.9	132	47.1	
	Vietnam	19	76.0	6	24.0		15	60.0	10	40.0	
	Philippine	214	74.3	74	25.7		137	47.6	151	52.4	
	other	381	73.8	135	26.2		251	48.6	265	51.4	
<b>Father's country of birth</b>	Korean	829	74.9	278	25.1	0.436	549	49.6	558	50.4	0.008
	Non-Korean	31	77.5	9	22.5		28	70.0	12	30.0	
<b>Gender</b>	boys	439	78.3	122	21.7	0.007	292	52.0	269	48.0	0.136
	girls	421	71.8	165	28.2		285	48.6	301	51.4	
<b>Region</b>	Urban	582	72.5	221	27.5	0.002	402	50.1	401	49.9	0.426
	Rural	278	80.8	66	19.2		175	50.9	169	49.1	

<b>Age</b>	16	60	71.4	24	28.6		41	48.8	43	51.2	
	17	774	75.7	249	24.3	0.46	514	50.2	509	49.8	0.402
	18 +	26	65.0	14	35.0		22	55.0	18	45.0	
<b>Province</b>	Capital	262	66.0	135	34.0	<.001	197	49.6	200	50.4	0.392
	Other	598	79.7	152	20.3		380	50.7	370	49.3	
<b>Mothers` education</b>	Middle school or less	29	64.4	16	35.6		17	37.8	28	62.2	
	High school	415	76.7	126	23.3	0.105	258	47.7	283	52.3	0.02
	Undergraduate & over	345	72.8	129	27.2		259	54.6	215	45.4	
<b>Fathers` education</b>	Middle school or less	286	79.4	74	20.6		169	46.9	191	53.1	
	High school	423	71.2	171	28.8	0.009	292	49.2	302	50.8	<.001
	Undergraduate & over	151	78.2	42	21.8		116	60.1	77	39.9	
<b>Mathers` job</b>	Professional or experts	276	77.1	82	22.9		185	51.7	173	48.3	
	Technician or labor	147	73.1	54	26.9	0.508	89	44.3	112	55.7	0.17
	Others	437	74.3	151	25.7		303	54.0	258	46.0	

<b>Fathers` job</b>	Professional or experts	167	80.7	40	19.3		111	53.6	96	46.4	0.125
	Technician or labor	317	77.3	93	22.7	0.009	190	46.3	220	53.7	
	Others	376	70.9	154	29.1		276	52.1	254	47.9	
<b>Main source of income</b>	Father	646	74.9	216	25.1		444	51.5	418	48.5	0.359
	Mother	165	76.0	52	24.0		102	47.0	115	53.0	
	Others	49	72.1	19	27.9	0.803	31	45.6	37	54.4	
<b>Communication with parents</b>	Korean	592	76.3	184	23.7	0.080	399	51.4	377	48.6	0.152
	Other	268	72.2	103	27.8		178	48.0	193	52.0	
<b>Socio-economic status</b>	Difficult	447	74.4	154	25.6	0.335	308	51.2	293	48.8	0.271
	Good	413	75.6	133	24.4		269	49.3	277	50.7	
<b>Health status</b>	Healthy	791	76.2	247	23.8	0.003	542	52.2	496	47.8	<.001
	Unhealthy	69	63.3	40	36.7		35	32.1	74	67.9	
<b>Academic achievement</b>	Below average	256	64.2	143	35.8	<.001	152	38.1	247	61.9	<.001
	Above average	604	80.7	144	19.3		425	56.8	323	43.2	

**Table 5** shows the result for the factors associated with adolescent wellbeing (depression, worry and concern, life satisfaction, social withdrawal). Table 5 shows fathers' country of birth is significantly associated with student's worries and concerns (OR= 11.42;95% CI, 1.24-105.35). Gender is significantly associated with depression, worries and life satisfaction in multicultural adolescent, with (OR=1.28; 95% CI, .99-1.66) (OR=1.98; 95% CI, 1.51-2.59) (OR=.75; 95% CI, .56-1.01) respectively. Mother education is significantly associated with depression, worries and social withdrawal in multicultural adolescents. Compared to students whose mother has undergraduate or higher education students with middle and high school mother's education level are less likely to be depressed with (OR=0.31; 95% CI, 0.13-0.72) (OR=0.32;95% CI, 0.14-0.77). Students with mother's education level of high school are less likely to have worries and concern with (OR= 0.47; 95% CI, 0.23-0.97) compared to students whose mother has undergraduate or higher level of education. Students whose mother's education level is high school are less likely to be isolated from society with (OR=0.46; 95% CI, 0.22-0.93) compared to those with undergraduate or higher level of education. students whose father has middle school education level are less likely to be satisfied with their life with (OR=0.59; 95% CI, 0.41-0.85) compared to student with father undergraduate or higher education level. Students with father high school education are less likely to be isolated from society with (OR=0.62; 95% CI, 0.39-0.97) compared with fathers having undergraduate or higher degree. Students whose mother has no specific job or she is a students or housewife are less likely to be satisfied with life (OR=0.62; 95% CI, 0.39-0.99) compared to students whose mother is a professional or expert. Students whose father is a labor



worker or technician are less likely to be satisfied with their life (OR=0.56; 95% CI, 0.36-0.88) compared to the students whose father is an expert or has a professional job. Students whose mothers or father and mother-in-law or others are the main source of income in their family are more likely to have depression (OR=1.79; 95% CI, 1.00-3.19) (OR=1.43; 95% CI, 1.01=2.04) compared to those that their father is the main source of income. Compared to students who use Korean language for communication with parents, students who use other language are more likely to have worries and concerns with (OR=1.63; 95% CI, 1.21-2.18). Compared to students whose family have a good socio-economic situation, student with difficult socio-economic situation are less likely to have depression. Health status and academic achievement are significantly associated with depression, worries, life satisfaction and social withdrawal. Compared to healthy students, unhealthy students are more like to have depression, worries, social withdrawal and are less likely to be satisfied with their life. (OR=2.12; 95% CI, 1.32-3.40) (OR=3.40; 95% CI, 2.19-5.27) (OR=2.07; 95% CI, 1.33-3.23) (OR=0.54; 95% CI, 0.35-0.86) respectively. Students with academic achievement below average are less likely to have depression, worries and social withdrawal (OR=0.55; 95% CI, 0.42-0.73) (OR=0.66; 95% CI, 0.50-0.87) (OR=0.48; 95% CI, 0.36-0.62) compared to students have above average achievement. Students who have below average achievement are more likely to be satisfied with their life (OR=2.62; 95% CI, 1.94-3.54) compared to students with above average achievement.

**Table 5.** Multiple logistic regression analysis of associated factors and multicultural adolescent's wellbeing (N=1,147)

Variables	Categories	High depressed			High worries and Concerns			High life satisfaction			High social withdrawal						
		OR	95% (CI)	<i>p</i>	OR	95% (CI)	<i>p</i>	OR	95% (CI)	<i>p</i>	OR	95% (CI)	<i>p</i>				
<b>Mother nationality</b>	Philippine	1.00			1.00			1.00			1.00						
	Chinese	1.13	0.50	2.56	0.77	1.20	0.50	2.88	0.684	1.07	0.41	2.78	0.896	1.34	0.58	3.08	0.49
	Korean	2.08	0.74	5.85	0.16	1.39	0.48	4.01	0.547	1.18	0.36	3.95	0.783	0.69	0.24	1.98	0.49
	Vietnam	0.92	0.40	2.08	0.84	1.24	0.52	2.97	0.632	0.91	0.35	2.37	0.852	1.65	0.72	3.80	0.24
	Other countries	1.55	0.70	3.47	0.28	1.17	0.49	2.76	0.724	0.89	0.35	2.28	0.81	1.58	0.70	3.59	0.27
<b>Father's country of birth</b>	Korean	1.00			1.00			1.00			1.00						
	Non-Korean	1.88	0.26	13.47	0.53	11.42	1.24	105.35	0.032	0.78	0.13	4.74	0.785	0.44	0.08	2.58	0.36
<b>Gender</b>	Male	1.00			1.00			1.00			1.00						
	Female	1.28	0.99	1.66	0.04	1.98	1.51	2.59	<.001	0.75	0.56	1.01	0.057	1.11	0.86	1.43	0.41
<b>Region</b>	Urban	1.00			1.00			1.00			1.00						

	Rural	0.97	0.71	1.32	0.843	1.06	0.77	1.46	0.730	1.2	0.82	1.74	0.350	0.94	0.69	1.27	0.679
<b>Mothers` education</b>	Undergraduate & over	1.00				1.00				1.00				1.00			
	Middle school or less	0.31	0.13	0.72	0.007	0.56	0.28	1.13	0.104	1.20	0.59	2.45	0.616	0.63	0.32	1.24	0.153
	High school	0.32	0.14	0.77	0.010	0.47	0.23	0.97	0.040	0.89	0.42	1.88	0.762	0.46	0.22	0.93	0.03
<b>Fathers` education</b>	Undergraduate & over	1.00				1.00				1.00				1.00			
	Middle school or less	1.12	0.82	1.52	0.468	1.18	0.85	1.62	0.324	0.59	0.41	0.85	0.004	0.86	0.64	1.16	0.332
	High school	1.16	0.74	1.84	0.516	1.21	0.75	1.94	0.441	0.81	0.48	1.39	0.448	0.62	0.39	0.97	0.035
<b>Mothers` job</b>	Professional or experts	1.00				1.00				1.00				1.00			
	Technician or labor	0.80	0.590	1.08	0.15	1.20	0.880	1.65	0.24	0.74	0.530	1.05	0.09	0.91	0.680	1.22	0.53
	Others	1.14	0.750	1.72	0.55	1.02	0.670	1.57	0.92	0.62	0.390	0.99	0.05	1.23	0.820	1.85	0.31
<b>Fathers` job</b>	Professional or experts	1.00				1.00				1.00				1.00			
	Technician or labor	1.11	0.76	1.640	0.59	1.01	0.68	1.510	0.96	0.56	0.36	0.880	0.01	0.76	0.52	1.110	0.16
	Others	1.40	0.92	2.140	0.11	1.37	0.89	2.100	0.15	0.75	0.46	1.230	0.25	0.96	0.64	1.440	0.84

<b>Main source of income</b>	Father	1.00				1.00				1.00				1.00			
	Mother	1.79	1.00	3.19	0.039	0.77	0.42	1.39	0.38	1.10	0.60	2.02	0.762	1.55	0.90	2.69	0.115
	Others	1.43	1.01	2.04	0.044	0.77	0.53	1.10	0.153	0.98	0.66	1.45	0.908	1.21	0.86	1.70	0.272
<b>Communication with parents</b>	Korean	1.00				1.00				1.00				1.00			
	Other	1.13	0.84	1.50	0.422	1.63	1.21	2.18	<.001	0.86	0.62	1.20	0.378	1.27	0.95	1.68	0.102
<b>Socio-economic status</b>	Difficult	0.76	0.59	0.99	0.042	0.79	0.61	1.04	0.093	1.24	0.92	1.66	0.157	1.06	0.82	1.36	0.67
	Good	1.00				1.00				1.00				1.00			
<b>Health status</b>	Healthy	1.00				1.00				1.00				1.00			
	Unhealthy	2.12	1.32	3.40	0.002	3.40	2.19	5.27	<.001	0.54	0.35	0.86	0.008	2.07	1.33	3.23	<.001
<b>Academic achievement</b>	Below average	0.55	0.42	0.73	<.001	0.66	0.50	0.87	0.00	2.62	1.94	3.54	<.001	0.48	0.36	0.62	<.001
	Above average	1.00				1.00				1.00				1.00			

## vi. DISCUSSION

The aim of this study was to identify association between parent's country or birth with multicultural adolescent's wellbeing such as (Depression, Worries and Concerns, Life Satisfaction and Social withdrawal) in Korea. A total of 1,147 adolescents from multicultural families in Korea were participating in this study. Female students accounted 51.1% of total participants and 48.9% were male. Majority of student's parents had a high school education level. 89.2% of participants were 17 years old. Of the total number of participants 96.7% had a foreigner mother and 96.5% had a Korean father. 75.2% of total participants reported that fathers are the main source of income. Of the total female participants 57.51% had depression and 49.73% of male were depressed too. Females with the percentage of 44% out of all female participants reported that they were worried about their future. The findings revealed that, compared with adolescents whose mother is native Korean, adolescents whose mother was born abroad are more likely to have depression, worries and concerns, less likely to be satisfied with their life and were experienced more isolated from the society and peers. Majority of study population were high school students aged 17-year-old with the 89.2% of total study population. By subdividing parent's country of birth, we found that if mother was born in Philippine or China or other countries rather than Vietnam, the adolescent are more likely to have depression, worried about future life and school, and also reported that they are not satisfied with their life as they experienced more social withdrawal compared to the adolescents who comes from a native Korean mother. As well as father country of birth had effect on multicultural adolescents in Korea,

if father was born abroad and he is not a native Korean we found that adolescents are more worried and have concern about their future life, academic performance, future job and their family's financial situation.

In this study, adolescents whose parents specifically mothers were born abroad are more likely to have depression, worries, not satisfy with life and experience social withdrawal than adolescents whose mother was native Korean. This could be explained by several reasons. Adolescents of immigrants experience many conflicts and unfamiliar situation as they grow in dual culture where the values and attitudes of their fathers and mothers are different (Bourque, van der Ven and Malla, 2011; Stevens and Vollebergh, 2008). Moreover, because the adolescents experience different lifestyles at home and in the society, they often experience identity crises and value conflicts. Language used to communicate with parents could lead to difficulty with language competence. In this study we found that adolescent who used to communicate with parents in a language other than Korean are more worried and are concerned about their life, academic performance and their future job. Additionally, multicultural adolescents were more likely to experience poor parenting and family functioning and discrimination such as school violence. These factors can affect the mental health of multicultural adolescent (Bourque, van der Ven and Malla, 2011; Stevens and Vollebergh, 2008). In addition, we found that low parental education levels and low household income, which in this study adolescents were questioned about their socio-economic status whether they have good socio-economic status or they have difficulty with that were more commonly observed among multicultural

adolescents. We found that adolescent with mother level of education high school, middle or lower levels are more suffer from depressive symptoms, they are more worried and have concern about their future as well as they are isolated from society than those whose mother has an undergraduate or higher education levels. The same scenario is correct with father education level. Several previous studies have reported that lower parental education levels are associated with a higher probability of impaired mental health in the child. Moreover, children belonging to families with difficult socio-economic status are more likely to be depressed (Angold, 1988; Goodman, Slap and Huang, 2003). Parents job also has an effect on family's socio-economic status and finally can affect adolescent wellbeing such as (depression, worries and concerns, life satisfaction and finally social withdrawal). Adolescents with their mother from a developing country tend to have depressive symptoms more frequently than other adolescents. It is necessary to consider that many immigrants from developing countries are migration workers (Kim, 2009; Moon, 2010). Most migration workers are given dirty, dangerous, difficult, and low paying jobs that Koreans refuse. Therefore, migration workers are likely to maintain a low economic level (Borrell et al., 2010). According to study by Yi, adolescents with a foreign-born mother had lower subjective happiness and a higher perceived stress level, including socioeconomic status. (Yi and Kim, 2017).

Meanwhile, the adolescents with a foreign-born mother were more likely to perceive stress than those from Korean parent families. Adolescent from multicultural families may have higher stress recognition rates as they perceive themselves as a minority in the group.

In parents and adolescents with different cultural backgrounds, adolescent often serve as linguistic and cultural mediators to non-Korean proficient mothers, which may be an added source of stress. (Goforth, Pham and Oka, 2015).

The findings from Immigrant Minority Health (2014) suggest that intermarried immigrant women in South Korea might have higher levels of anxiety than Korean native women. Furthermore, children of immigrant women were likely to have more emotional and behavioral symptoms relative to native children (Lee et al., 2014).

The result of this study is consistent with the result by (Bahk, Kim and Khang, 2017). This study indicated that the impact of multicultural status on mental health varied depending on the foreign-born status of the parents and the maternal country of birth. Compared with non-multicultural counterparts, boys with Japan-born mothers showed lower depressive mood and social ideation. While adolescents with Korean-Chinese mothers showed similar prevalence of depressed mood and suicidality compared with non-multicultural adolescents. Prior studies have identified that the risk factors for poor mental health among children of immigrants include poor parenting and family functioning, low language competence, issues relating to cultural identity, discrimination, and low socioeconomic status. (Bourque, van der Ven and Malla, 2011)

## 1. Limitation

### 1.1. Weaknesses

This study had some limitations. First, the data were self-reporting by the participants. It is possible that the response did not match the actual depression, worried and concerns,



life satisfaction and social withdrawal rate. Second, this study was focusing on multicultural adolescent's data MAPS 2018, meanwhile it was better to include parent's data too, but due to time constraints we proceed to find out factors which can affect multicultural adolescent's wellbeing in South Korea. It would be better that future researchers consider parents in their studies because parental characteristics are known as important factors that determine the adolescent wellbeing (Hagan et al., 2016; Smith, Lalonde and Johnson, 2004). Third, the study was based on a cross-sectional survey. Causality could not be confirmed clearly and the association could be confirmed. However, the result shows that parent's country of origin specifically students with Chinese or Philippian mother, their job, their education levels, and socio-economic status are associated with multicultural adolescent's wellbeing (depression, worries and concern, life satisfaction, and social withdrawal) but it is not statistically significant.

## 1.2. Strengths

Despite the above limitations, this study also had strengths. First, this study used the most resent nationally, multistage, stratified collected data. Therefore, the results obtained are representative of Korean multicultural adolescents. Second, although most previous studies were conducted in Caucasians who already formed a multicultural society, we conducted research in Asian society, which is experiencing the early stages of a multicultural society. Third, to the best of our knowledge, this study offers new insights into the association between the parent`s characteristics and the multicultural adolescents

wellbeing here such as depression, worries and concerns, life satisfaction and social withdrawal.

## **vii. CONCLUSION AND SUGGESTIONS**

### **1. Conclusion**

This study investigated parent's country of birth on multicultural adolescent wellbeing, we found that, compared with adolescents whose mother or father were native Korean, adolescents whose mother or father were born abroad are more likely to have depression, worries and concern, less satisfy with life and more socially withdraw. We also found out that female adolescents are more likely to have depression, worries and concerns about their future, their family and their academic and their future job as well as the results shows that they are less satisfied with the life than male multicultural adolescents. Another factor which could affect adolescent's wellbeing was parent's education levels, the lower parent's level of education the lower physical and mental health condition in their children. Relationship with parents their job and the language they use to communicate with their child is important. The results show that parents job has relationship with adolescent's wellbeing and adolescent wellbeing can affect their physical ability and academic achievement and performance at school.

### **2. Suggestions**

Korea is in the early stage of forming a multicultural society; therefore, the number of studies on multicultural adolescents and their mental and social wellbeing in Korea is

limited. From a long-term point of view, mental health examination for adolescents from multicultural families should be conducted, and adolescent social and mental wellbeing should be given attention. In addition, the existing multicultural policy does not include a classification according to the parent`s country of birth; the immigrant populations with various nationalities are included in a single policy. The finding of this study confirms that the rates of social and mental wellbeing such as depression, worries and concerns, life satisfaction and social withdrawal differs according to the parent`s country of birth. In addition, multicultural family support policies should be implemented, considering the characteristics of the parent`s country of birth. Also, schools, government, and communities should propose and implement the multicultural education policies so that the growing youth could understand and accept the multicultural as a part of society which any discrimination or ignorance from government or community could lead to affect overall Korean community and government. Other countries experiencing the early stages of a multicultural society could use the result of this study.

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