

INFLUENCE OF FAMILY BACKGROUND ON ACADEMIC
ACHIEVEMENTS AMONG NURSING STUDENTS AT UNIVERSITI
SAINS MALAYSIA HEALTH CAMPUS

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LIST OF ABBREVIATIONS

FBIQ	-	Family Background Influence Questionnaire
USM	-	Universiti Sains Malaysia
PTPTN	-	Perbadanan Tabung Pendidikan Tinggi Nasional
OSCE	-	Objective Structured Clinical Examination
JPA	-	Jabatan Perkhidmatan Awam
DOSM	-	Department of Statistics Malaysia's

**PENGARUH LATAR BELAKANG KELUARGA TERHADAP PENCAPAIAN
AKADEMIK DALAM KALANGAN PELAJAR KEJURURAWATAN DI
UNIVERSITI SAINS MALAYSIA KAMPUS KESIHATAN**

ABSTRAK

Kajian ini bertujuan untuk mengkaji faktor latar belakang keluarga yang boleh mempengaruhi pencapaian akademik pelajar dalam kalangan pelajar kejururawatan di Kampus Kesihatan Universiti Sains Malaysia. Kajian ini berbentuk kajian kuantitatif dan reka bentuk kajian keratan rentas digunakan dalam penyelidikan ini untuk mengumpul maklumat daripada pelajar kejururawatan di Kampus Kesihatan Universiti Sains Malaysia. Soal selidik yang digunakan dalam kajian ini ialah soal selidik pengaruh latar belakang keluarga (FBIQ) daripada Ugwuja. G (2010). Seramai 80 orang responden telah menyertai kajian ini. Data yang dikumpul dianalisis secara statistik menggunakan perisian SPSS versi 26.0. Pearson's Chi-square telah digunakan untuk analisis data. Terdapat perkaitan antara data sosio-demografi (pendapatan ibu bapa) dengan pencapaian akademik pelajar ($p=0.111$). Manakala, tiada perkaitan antara data sosio-demografi (tahap pendidikan ibu bapa) terhadap pencapaian akademik pelajar ($p=0.033$). Namun, berdasarkan hasil kajian ini, responden bersetuju bahawa tahap pendidikan ibu bapa boleh mempengaruhi pencapaian akademik pelajar kerana ibu bapa yang berpendidikan sentiasa mahukan anak-anak mereka mendapat pendidikan (item soal selidik nombor 1 hingga 7) dengan skor min melebihi 2.50. Responden juga bersetuju bahawa motivasi ibu bapa turut mempengaruhi pencapaian akademik pelajar dengan skor min 3.44. Berdasarkan keputusan tersebut, kajian mencadangkan antara lain bahawa ibu bapa perlu mengembangkan sumber pendapatan mereka agar mampu membiayai pendidikan anak-anak mereka. Ibu bapa harus memahami betapa pentingnya untuk memotivasikan anak-anak menggunakan ganjaran dan kaedah lain.

INFLUENCE OF FAMILY BACKGROUND ON ACADEMIC ACHIEVEMENT AMONG NURSING STUDENTS AT UNIVERSITI SAINS MALAYSIA HEALTH CAMPUS

ABSTRACT

This study was aimed to investigate the family background factors that can influence students' academic achievement among nursing students at Universiti Sains Malaysia Health Campus. This was quantitative study and cross-sectional study design was used in this research to gather the information from nursing students in Universiti Sains Malaysia Health Campus. The questionnaire used in this study was family background influence questionnaire (FBIQ) from Ugwuja. G (2010). A total of 80 respondents participated in this study. Data collected were statistically analysed using the SPSS software version 26.0. Pearson's Chi-square was used for data analysis. There is no association between socio-demographic data (parents' income) and students' academic achievement ($p>0.05$). While, there is an association between socio-demographic data (parents' level of education) and students' academic achievement ($p<0.05$). However, based on the result of this study, respondents agreed that parent's level of education can influenced students' academic achievement as the educated parents always want their children to be educated (questionnaire item number 1 until 7) with mean score above 2.50. The respondents also agreed that parental motivation also influenced students' academic achievement with mean score 3.44. Based on these results, the study suggested among other things that parents should expand their sources of income in order to be able to pay for the education of their children. Parents should understand how important it is to motivate children using rewards and other methods.

CHAPTER 1

INTRODUCTION

1.1 Introduction

This research proposal aims to know the influence of family background on academic achievement among nursing students at Universiti Sains Malaysia Health Campus. The first chapter of this research proposal will start with study's background, the problem statement, research questions, research objectives, research hypothesis, definition and operational terms, and lastly the significance of the study.

1.2 Background of the Study

Today, education is critical to a person's achievement, regardless of gender, age, races, nationalities, or religious beliefs. It can help any individual excel in their work and contribute to society's progress. Education is a process of transmitting knowledge or any worthwhile information from one person to another person. Such as lecturers at universities giving lectures to the students. Education aims to develop students' knowledge, character, or even skills (Varia, 2011).

Family is the first group where the children learn something before they are exposed to the school environment. From family, individuals learn behaviors and attitudes via operant conditioning and observational learning. Individuals also learn how to socialize with their surrounding such as culture, social norms, and social roles (Begun, n.d.). Family environment plays a huge role in ensuring a good achievement among the children in the family. Family environment also can cause of the increasing or decreasing of students' intellectual achievements at the home, school, university or other education institutions (Ugwuja, 2010b).

After the children become teenager, the relationship between parents and families will change. During childhood, the parents act as guider and to nurture the children. However, teenagers need the parents to build an equal relationship with the adolescence (Aremu *et al.*, 2019). The parents are the source of adolescents' care, emotional support, safety, security and financial and practical help (Aremu *et al.*, 2019). The teenagers still needs their parents' involvement in their life even though sometimes the teenagers attitude and behavior might tell the opposite message (Aremu *et al.*, 2019). The adolescent phase might be hard for the children as they are going through some physical evolution and experiencing emotional ups and down (Aremu *et al.*, 2019). However, over time, their attitudes and the way they think improve and become more mature, and the relationship between the adolescents and the families tend to stay strong (Aremu *et al.*, 2019).

As they enter the university age, the students also require parental support. It is because family involvement demonstrates their interest in their children's education, awareness of their interests, and enthusiasm for taking an active part in the children's day-to-day activities at the university (Arshad *et al.*, 2016). As cited in Arshad et al. (2016), according to Burke (2010), parental involvement entails the following: reading with children, asking the children about their routine at university, their interest and performance in each subject of study, problems and issues they are facing regarding their studies and institution, assisting with projects and assignments, and regular communication with their lecturers for feedback on progress.

Social and economic standing, family composition, size, parents' levels of education, parental drive, and other aspects of family life are all considered part of one's family background (Osuafor & Okonkwo, 2013). Family background refers to the settings and circumstances inside the family. It might impact the student's mental, physical, and

emotional health (Ugwuja, 2010b). In this study, family background will be focused on parents' level of education, parental income, and parental motivation. Parents' level of education is classified into primary education, secondary education, diploma, bachelor's degree, and higher education. Meanwhile, parental income is classified into high and low income. Regarding parental motivation, it is very important to give the child some spirit to succeed in their studies and life.

Student's academic achievement means how far or which extent the student has reached their goals (Ballotpedia, 2014). Students' success is crucial for developing young people in society. Many elements contribute to a better outcome of a student's academic achievement. So, in this study, the researcher will look at the influence of family background on academic achievement among nursing students in Universiti Sains Malaysia Health Campus.

1.3 Problem Statement

A good and great academic achievement is everyone's desire, not just for children but also for their families. Parents frequently place high expectations on their children's academic achievement. It is because parents are constantly concerned with what is best for their children. They want to see them become great people with outstanding achievements. Nowadays, education is the most important factor in living a better life.

However, various factors impact a student's academic success. One of the reasons is family background. Some students from well-educated families will be expected by their families to obtain good examination results. The students must work hard to meet their families' expectations of them. In other ways, the students must also obey their family's wish to continue their studies at the following level. For example, if both parents have degrees in nursing, the children must study in the same area as their

parents. It is not always a good idea to do such things because youngsters have their interests and ambitions.

At another point, the student who comes from poor and low level of education family does not mean that their parents do not want to see their success. A person may be inspired to work hard in university by their family, especially if they are young at home and older family members did not have the chance to pursue their education when they were younger. The family's financial hardship may also serve as motivation. A great parental motivation typically influences good and excellent academic achievement. But, in some cases, a few students can achieve a better result in their studies even without family support and parental motivation.

Especially in nursing, parents and family play vital roles in supporting the students to ensure they get a better and good academic achievement. Nursing is a noble profession that offers the chance to help others. Nursing students' motivation for their studies is a question of energy, sustaining and directing their study behavior (Vinet & Zhedanov, 2011). People chose nursing for various reasons, including a desire to help or care for others and accomplish something valuable. Although caring for others was discovered to be a major motivator for nursing students selecting nursing school, over half did not choose nursing studies as their first option (Vinet & Zhedanov, 2011).

Making a quality nurse starts from a good academic achievement including the student's skills in clinical setting, their performance in classes, and socialization skills. So that, parents and other close family members will serve as the nursing students' pillar of support as they work toward achieving their goal.

Because of that, researcher conducted this study to identify the influence of family background on academic achievement among nursing students in Universiti Sains

Malaysia Health Campus.

1.4 Research Questions

- i. What is the influence of parents' level of education on academic achievement among nursing students in Universiti Sains Malaysia health Campus?
- ii. What is the influence of parents' income on academic achievement among nursing students in Universiti Sains Malaysia Health Campus?
- iii. Is there any relationship between parents' level of education and parents' income on academic achievement among nursing students in Universiti Sains Malaysia Health Campus?

1.5 Research Objectives

1.5.1 General Objective

The study aims to identify the influence of family background on academic achievement among nursing students in Universiti Sains Malaysia Health Campus.

1.5.2 Specific Objectives

- i. To identify the influence of parents' level of education on academic achievement among nursing students in Universiti Sains Malaysia Health Campus.
- ii. To identify the influence of parents' income on academic achievement among nursing students in Universiti Sains Malaysia Health Campus.
- iii. To determine the relationship between parents' level of education and parents' income on academic achievement among nursing students in Universiti Sains Malaysia Health Campus.

1.6 Research Hypothesis

- 1) **H₀**: There is no significant association between socio-demographic data of the

parents (parents' level of education, parents' income) on academic achievement among nursing students in Universiti Sains Malaysia Health Campus.

H_A: There is significant association between socio-demographic data of the parents (parents' level of education, parents' income) on academic achievement among nursing students in Universiti Sains Malaysia Health Campus.

2) **H₀:** There is no significant relationship between family background and academic achievement among nursing students in Universiti Sains Malaysia Health Campus.

H_A: There is significant relationship between family background and academic achievement among nursing students in Universiti Sains Malaysia Health Campus.

1.7 Definition and Operational Terms

Family It is defined as people united by marriage, related by blood, birth, adoption, or kinship who share or live in the same house, interacting and communicating with each other and having financial resources regularly (Sharma, 2013).

Family in this study refers to the biological parents that may or may not influence the academic achievement among nursing students in Universiti Sains Malaysia Health Campus.

Family background It refers to birth, childhood, home, economic status or conditions, and parents' job (Internet Public Library, 2022). Family background includes family size, parental income, parents' level

of education, parental motivation, and so on.

Family background in this study refers to influence of family background on academic achievement among nursing students in Universiti Sains Malaysia Health Campus.

Nursing student It is defined as an individual who is enrolled in a nursing educational program (Law Insider, 2022).
Nursing student in this study refers to the nursing students who are registered as full-time student in Universiti Sains Malaysia Health Campus.

Academic achievement It represent performance outcome in which extent have a person has achieved the specific goals that were the focus of activities in instructional environment such as schools, college, and university (Kane, 2017). Academic achievement have a broad meaning and in this study it will be measured through education which is students' current CGPA result.
Academic achievement in this study refers to what extent the students have achieved their study goals and how the family background influenced their academic achievement at the university.

1.8 Significance of the Study

This research desired to know the influence of family background on students' academic achievement among nursing students in Universiti Sains Malaysia Health

Campus. It sought to know whether the parents' educational level, parents' income, and parental motivation affect students' academic achievements. The researcher hopes that the findings from this study will give benefits and useful to the students, parents, family, university, researchers and the general public. Such as, parents will not force their children to pursue the study based on parents' desire; students from low-income level family become more inspire to study hard and do their best in study to change their family fate; and lastly, parents will be more alert in giving adequate attention and be more understanding by giving moral support to their children.

The students will be able to understand the family background that may or may not affect students' academic achievement from the findings. At once, it will make them appreciate their parents' hard work to raise them until they become successful. Then, it is aided to make the students aware of their parents' ability to provide all the necessities at the university. The findings also benefit the parents to understand their children deeply. Besides, the parents at home could plan a better way to raise their children with love, attention, and other necessary roles to ensure that their children will get excellent academic achievement and perform well in the university. So that everyone's family might learn from and adopt a better family background.

Theoretically, the study's findings are important because it can aid in identifying and understanding the many family background characteristics and how those variables affect students' academic ability. This will improve our comprehension of the phenomenon. Furthermore, it is anticipated that the results will contribute to the explanation of how Maslow's motivational theory's theoretical postulate's function. According to Maslow, motivation is essential in learning, and a motivated learner demonstrates behavior targeted at reaching the set goal. Students are motivated to learn when their physiological needs such as shelter, food, drink, rest, and safety needs such

as love, and belonging are met. Satisfying basic need leads to the pursuit of higher needs, such as self-esteem and self-actualization. Understanding this theory, particularly as it relates to students, instructors, and parents, would be significant to education and family studies scholars.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter reviews some literature related to the influence of family background on students' academic achievements among nursing students in Universiti Sains Malaysia (USM) Health Campus. In this chapter, the previous research study related to this topic will be discussed and explained to expand our knowledge. The conceptual framework that has been chosen will guide this study.

2.2 Literature Review

2.2.1 Family

There are two types of families: nuclear and extended. The most basic type of family structure is the nuclear family. The mother (wife), father (husband), and kids make up this group. The children may be the couple's biological children, their own biological children, or family members who were adopted (Ugwuja, 2010a).

The term "extended family" refers to a family that includes the father (husband), mother (wife), children, husbands' and wives' relatives, etc. Since the members of the constituent groups do not all reside in the same home, Alio (1995) noted that the extended system is a dispersal form of the joint family. He views the extended kin-group as the entire household or a group of closely related households that span three or four generations (Ugwuja, 2010a).

2.2.2 Family Background

Family background plays a big role on the children's life. It is refer to all the objects, forces, and conditions in the family. In which it will affect the children not only

physically but also intellectually and emotionally (Ugwuja, 2010b). In this study, the researcher focused on the university students. Students from various family backgrounds are affected by such variations differently. That is why there is different family background among the students. Some are comes from a good family background meanwhile others come from poor family background (Ugwuja, 2010a). Family background may be evolving from time to time for the same individuals in some families. It is because parents are the most important person in a family who are primarily responsible for establishing and controlling the family (Ugwuja, 2010b).

2.2.3 Parents' Level of Education

When choosing a neighbourhood to live in, parents with greater education are more likely to take the quality of the nearby schools into consideration. Educated parents are also more likely to focus on the calibre of their youngsters' educators while they're in school and make an effort to make sure that their youngsters are receiving the best care possible. They may influence staff to attention to their children's specific needs by taking part in discussions between parents and educators and volunteering at the institution of study (Egalite, 2016). In addition, highly educated parents are more likely than their less-educated counterparts to read to their children. Educated parents enhance their children's development and human capital by drawing on their own advanced language skills in communicating with their children (Egalite, 2016).

Most of research have found that parental education is the greatest indicator of children's academic success, the number of years they spend in educational institutions, and their success in the future. We do not know how much of the association may be attributed to direct impact and how much to school-related factors because parental education influences children's learning both directly and through the decision of a school. It can be difficult to determine the exact causative effect of parental education,

but the direct impact is undoubtedly significant given the significant correlation between parental education and student achievement in every developed nation (Egalite, 2016).

2.2.4 Parents' Income

Based on Wang *et al.*, 2021, children with higher socioeconomic status have better access to educational resources and more opportunities to engage in activities that support their growth from childhood to adulthood (Yee et al., 2021). However, it's also possible that having wealthy parents has a negative impact on their children's academic achievements. For example, high-income parents' hopes for children to follow in their footsteps may instead lead to sadness in their children (Ma, Siu, & Tse, 2018), which would negatively affect their academic performance (Yee et al., 2021).

There are said to be 32.7 million people living in Malaysia. This is based on data from the Department of Statistics Malaysia's (DOSM) Demographic Statistics First Quarter 2021 (Malaysia) report. The DOSM defines household income as a total of all incomes received (accumulated) by members of the household, whether in cash or in forms that occur often over the reference period (annually or more frequently). The Malaysian household income classifications are B40, M40, and T20. B40 stands for the bottom 40% of household income in Malaysia, M40 for the middle 40%, and T20 for the top 20% (Jobstreet MY, 2023).

B40 is the Bottom 40% of the Malaysian household income. They earn less than RM4,850 per month. The COVID-19 pandemic also has pushed many Malaysians to lower-income categories due to income reduction and loss of employment. The B40 group is eligible for the Bantuan Sara Hidup (BSH) or Bantuan Prihatin Rakyat (BPR). There are also government housing schemes especially for B40 groups such as the Program Perumahan Rakyat (PPR) and Program Perumahan Rakyat Termiskin (PPRT)

for the hardcore poor (Jobstreet MY, 2023).

The M40, or Middle 40%, group represents Malaysia's middle class. According to the 2019 Household Income and Basic Amenities Survey, the average monthly income in Malaysia is between RM4,851 and RM10,970. Additionally, in 2019 the M40 group contributed 37.2% of all household income (Jobstreet MY, 2023).

2.2.5 Academic Achievement

Academic achievement represents an outcome in which a person has achieved the specific goals that were the focus of activities in the instructional environment such as schools, college, and university (Kane, 2017). Meanwhile, according to the Maine Department of Education, academic achievement can be defined as comparing individual students' performance assessment scores from one year to the next, aggregated to the school level (Mante *et al.*, 2021). Academic achievement is seen as something that a learner does or achieves at university, school, or college. The term of academic achievement itself have a broad meaning. It may refer to a person's goal being met by acquiring various knowledge and skills (Ugwuja, 2010b). The author established the objectives based on the age, previous learning and capacity of individuals with regards to education, skills, and socialization (Ugwuja, 2010b).

The purposes of academic achievement measurement are to determine the effectiveness of a programme in students' behavioral outputs aspect; to identify students growth or lack of growth in earning desirable knowledge skills, attitudes, and social values; to motivate the students to learn more after knowing and discovering their lack of progress in certain given task and to encourage students to develop a sense of systematic and discipline study habits (Ugwuja, 2010b).

In this study, the academic achievement includes the students' education, skills,

and socialization. Hence, the education will be measured using students' current CGPA.

2.3 Conceptual Framework of Study

According to Li & Qiu (2018), based on existing studies, the article aims to explore the mechanisms and paths of the impact of family socio-economic status on the children's academic achievement at the microlevel. Through the organizing of existing literature, combined with the situation of education in China, the following analysis framework (Figure 1) is proposed (Li & Qiu, 2018).

Daily life demonstrates that there are two ways in which a family's socioeconomic situation affects the academic achievement of its children rather than directly: first, families with a reasonably high socioeconomic position will work to provide their kids with options for a top-notch education, such as those offered by important institutions and organizations in the system, which will have an impact on their academic performance. Excellent teachers and students at the key schools not only directly affect students' differences in academic achievement, but also influence students' learning attitudes and behaviors through teachers and peers, which in turn affects students' academic achievement and opportunities for further education (Li & Qiu, 2018).

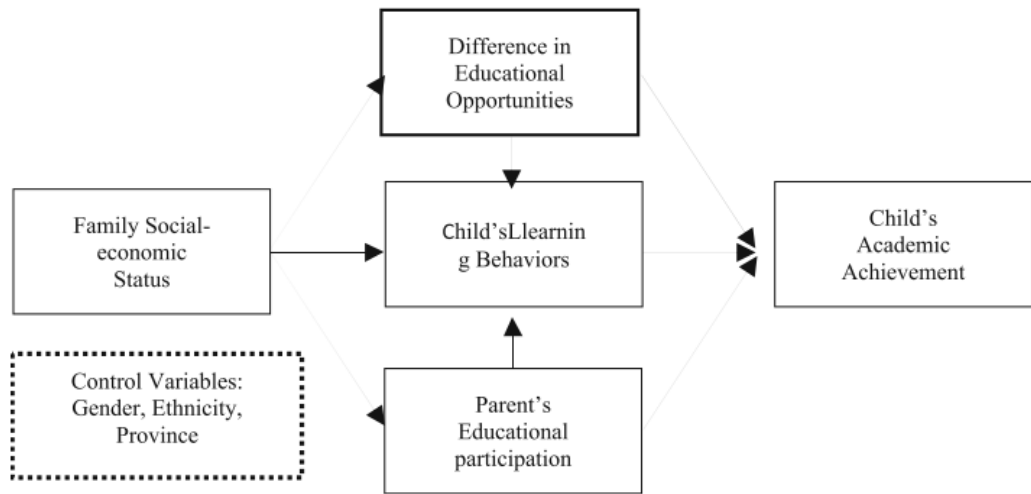


Fig. 1 Analysis framework

Figure 1: Analysis Framework. Adapted from Li, Z., & Qiu, Z. (2018). How does family background affect children's educational achievement? Evidence from Contemporary China

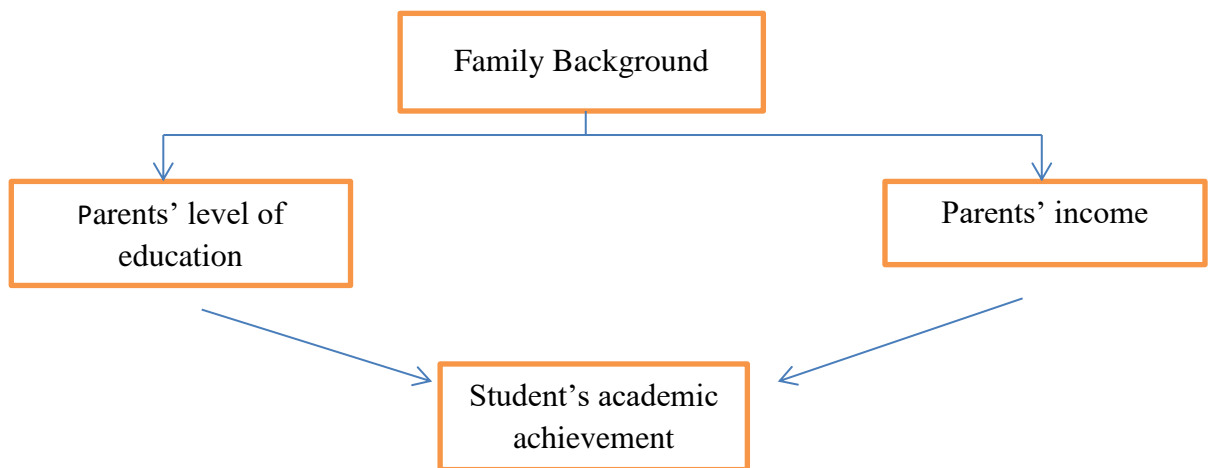


Figure 2: The Adapted Analysis Framework

Figure 2 shows the adapted analysis framework. The family background, parents' educational level, parents' income, and parental motivation, are the independent variables that may affect the academic achievement among nursing

students in Universiti Sains Malaysia Health Campus.

In this study, the independent variables which are demographic data (age, gender, year of study, type of nursing programme, current CGPA result) are included to determine the relationship between demographic factors and dependent variable which is influence of family background on student's academic achievement (parents' income, parental level of education, parental motivation). So, the analysis framework is suitable to adapt with the researcher topic.

CHAPTER 3

METHODOLOGY AND METHOD

3.1 Introduction

Research methodology such as research design, subject criteria, sampling plan, instrumentations, expected outcomes of study and ethical consideration will be discussed in this chapter.

3.2 Research Design

This was quantitative study and cross-sectional study design was used in this research to gather the information from nursing students in Universiti Sains Malaysia Health Campus.

3.3 Research Location

This study was conducted at Universiti Sains Malaysia (USM) Health Campus. USM Health Campus consists of three schools: School of Medical Sciences, School of Dental Sciences, and School of Health Sciences. This study focused on the students from School of Health Sciences, which is the Diploma and Degree in nursing programme.

3.4 Research Duration

This study was conducted about 10 months starting from October 2022 until August 2023. The data collection was expected to be started from January 2023 until March 2023.

3.5 Research Population

The populations targeted in this study are nursing students in Universiti Sains Malaysia Health Campus. It involved second- to fourth-year nursing students regardless

of diploma or degree programme. The total of students from second and third year for both degree and diploma in nursing are 130.

3.6 Subject Criteria

3.6.2 Inclusion Criteria

- Year 2 and Year 3 students from Diploma in Nursing
- Year 2, Year 3, and Year 4 students from Degree in Nursing

3.6.2 Exclusion Criteria

- Individual who are not registered as student in Universiti Sains Malaysia

3.7 Sampling Plan

3.7.1 Sample Size Estimation

Double proportions formula is used in this study to calculate the sample size. The sample size is calculated for all the objectives using Sample Size Calculator (web). For objectives one until three, the sample size is calculated using double proportion formula and the proportion data is taken from the previous study. The formula is as below:

$$n = \frac{p_1(1 - p_1) + p_2(1 - p_2)}{(p_1 - p_2)^2} (z_\alpha + z_\beta)^2$$

Where,

n = Sample size

p = Anticipated population proportion

α = Level of statistical significance ($z_\alpha = 0.05$)

1 - β = Power of the study ($z_\beta = 80\%$)

For objective 1, the data to identify the most important influence of family background on academic achievement among Nursing students in Universiti Sains Malaysia Health Campus was taken from previous study by Machebe *et al.* (2017); $p_1 = 70.3\%$; $p_2 = 85\%$.

2 proportions - Hypothesis Testing

Proportion in control (p_0):	<input type="text" value="0.703"/>
Proportion in case (p_1):	<input type="text" value="0.85"/>
Significance level (α):	<input type="text" value="0.05"/> Two-tailed
Power ($1 - \beta$):	<input type="text" value="80"/> %
Expected dropout rate:	<input type="text" value="10"/> %
<input type="button" value="Calculate"/> <input type="button" value="Reset"/>	
Sample size, $n =$	<input type="text" value="125"/>
Sample size (with 10% dropout), $n_{\text{drop}} =$	<input type="text" value="139"/>

Therefore, the minimal sample size was 125. After considering the 10% drop out, the calculated sample size was 130.

For objective 2, the data to determine the association between socio-demographic data of the parents (income, level of education, age of parents) on academic achievement among Nursing students in Universiti Sains Malaysia Health Campus was taken from previous study by Machebe *et al.* (2017); $p_1 = 54\%$; $p_2 = 73\%$.

2 proportions - Hypothesis Testing

Proportion in control (p_0):	<input type="text" value="0.54"/>
Proportion in case (p_1):	<input type="text" value="0.73"/>
Significance level (α):	<input type="text" value="0.05"/> Two-tailed
Power ($1 - \beta$):	<input type="text" value="80"/> %
Expected dropout rate:	<input type="text" value="10"/> %
<input type="button" value="Calculate"/> <input type="button" value="Reset"/>	
Sample size, $n =$	<input type="text" value="100"/>
Sample size (with 10% dropout), $n_{\text{drop}} =$	<input type="text" value="112"/>

Therefore, the minimal sample size was 100. After considering the 10% drop out, the calculated sample size was 112.

Lastly, for objective 3, the data to determine the correlation between family

background and academic achievement among Nursing students in Universiti Sains Malasia Health Campus was taken from previous study by Machebe *et al.* (2017); $p_1 = 60\%$; $p_2 = 77\%$.

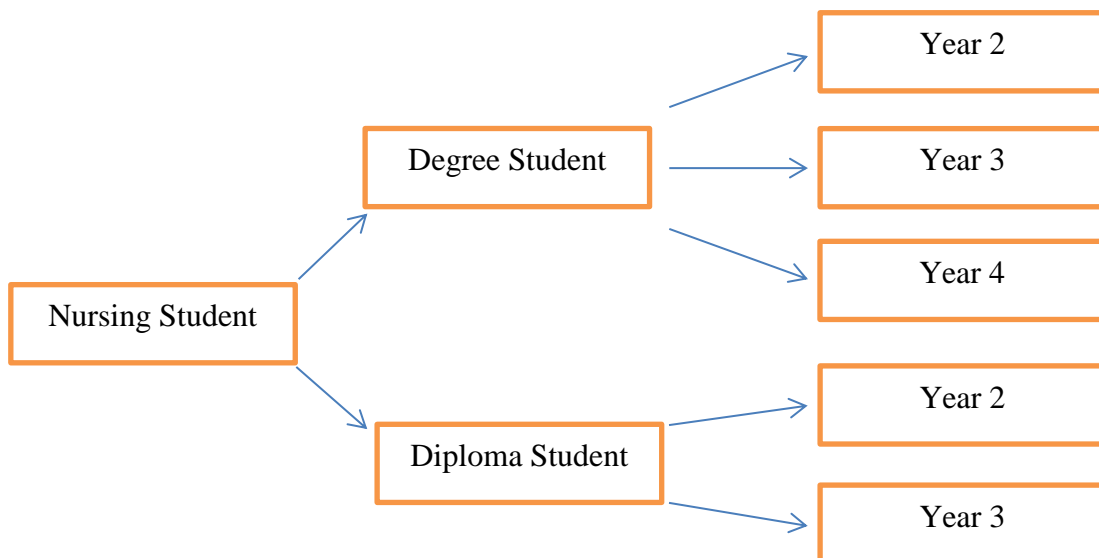
2 proportions - Hypothesis Testing	
Proportion in control (p_0):	<input type="text" value="0.6"/>
Proportion in case (p_1):	<input type="text" value="0.77"/>
Significance level (α):	<input type="text" value="0.05"/> Two-tailed
Power ($1 - \beta$):	<input type="text" value="80"/> %
Expected dropout rate:	<input type="text" value="10"/> %
<input type="button" value="Calculate"/> <input type="button" value="Reset"/>	
Sample size, $n =$	<input type="text" value="117"/>
Sample size (with 10% dropout), $n_{drop} =$	<input type="text" value="130"/>

Therefore, the minimal sample size was 117. After considering the 10% drop out, the calculated sample size was 130.

Based on the calculations, the greatest sample size will be selected in this study which is about 130 participants who fulfilled the inclusion and exclusion criteria in this research.

3.7.2 Sampling Method

This study used stratified sampling method that will divide the sample into subpopulations and proceed with random sampling procedure to get the list of the participants for this study.



3.8 Research Instruments

3.8.1 Instrument

I. Part A (Socio-demographic Data)

This questionnaire on socio-demographic data consists of five questions which include gender, age, year of study, programme, and CGPA.

For family background data of students, it consists of five questions. The questions are total of children in the family, parents' average income, parents' level of education, and occupation of the parent or guardian.

II. Part B: Family Background Influence Questionnaire (FBIQ)

(Ugwuja, 2010b)

This part consists of five sections which are Section A (the influence of parents education level on students' academic achievement), Section B (Influence of parents level of income on students' academic achievement).

3.8.2 Translation Instrument

The questionnaires were originally in English and all the students were expected to understand it. The title of the questionnaire is Family Background Influence Questionnaire (FBIQ).

The questionnaire has two parts: part 1 provides demographic data of the respondents, and the information regarding the students' family background. Part 2 has five clusters which is A to E; cluster 'A' contains questionnaire items concerning the influence of education level of parents, cluster 'B' contains questionnaire items concerning the influence of parental occupation, cluster 'C' has item statements that seek information on the influence of parental level of

income, cluster 'D' contains item statements concerning the influence of family size. In contrast, cluster 'E' contains questionnaire items concerning the influence of parental motivation (Ugwuja, 2010b).

The questionnaire are utilizing likert scale which are strongly agree (SA)=4, agree (A)=3, disagree (D)=2, and strongly disagree (SD)=1 (Ugwuja, 2010b).

3.8.3 Validity and Reliability

The FBIQ questionnaire was trial- tested using 30 students at Obollo Afor educational zone which is entirely outside the geographical scope of the study. This area is considered to have similar characteristics with the study area. For example the two zones (Nsukka and Obollo Afor Zones) share similar cultural background and even the same curriculum (Ugwuja, 2010b).

To determine the reliability of the FBIQ questionnaire, the scores from 30 respondents in the trial testing of the instrument were used in establishing the internal consistency using the Cronbach Alpha procedure. The internal consistency reliability estimate yielded 0.69 for influence of parental education, 0.66 for influence of parents occupation, 0.61 for influence of parents income, 0.70 for influence of family size and 0.84 for the influence of parental motivation. These results showed that the instrument was fairly reliable, which means it good for the study (Ugwuja, 2010b).

The questionnaire has already reliable and the researcher did not do the pilot study.

3.9 Variables

3.9.1 Independent and Dependent Variable

Table 3.1: Dependent and Independent Variable

Dependent Variable	Independent Variable
Academic achievement (CGPA) among Nursing students in Universiti Sains Malaysia Health Campus.	Socio-demographic data which are: <ul style="list-style-type: none">• Age• Gender• Year of study• Programme of study• Parents' level of education• Parents' income• Parental motivation

3.9.2 Variable Measurement and Variable Scoring

Section A: Socio-demographic Data

This section consists of five questions for demographic characteristics data. Such as age, gender, year of study, programme, and CGPA.

For family background data, it consists of five questions to know the family background of students. The questions are total of children in the family, parents' average income, parents' level of education, and occupation of the parent or guardian.

Section B: Questionnaire for Students

This section consists of 25 questions with 4-point Likert scale coded as strongly agree (SA) = 4, agree (A) = 3, disagree (D) = 2, and strongly disagree (SD) = 1.

3.10 Data Collection Plan

The data collection expected to be started from January 2023 until March 2023 after obtaining the ethical approval from the Human Research Ethics Committee (HREC), USM.

3.10.1 Flow Chart of Data Collection

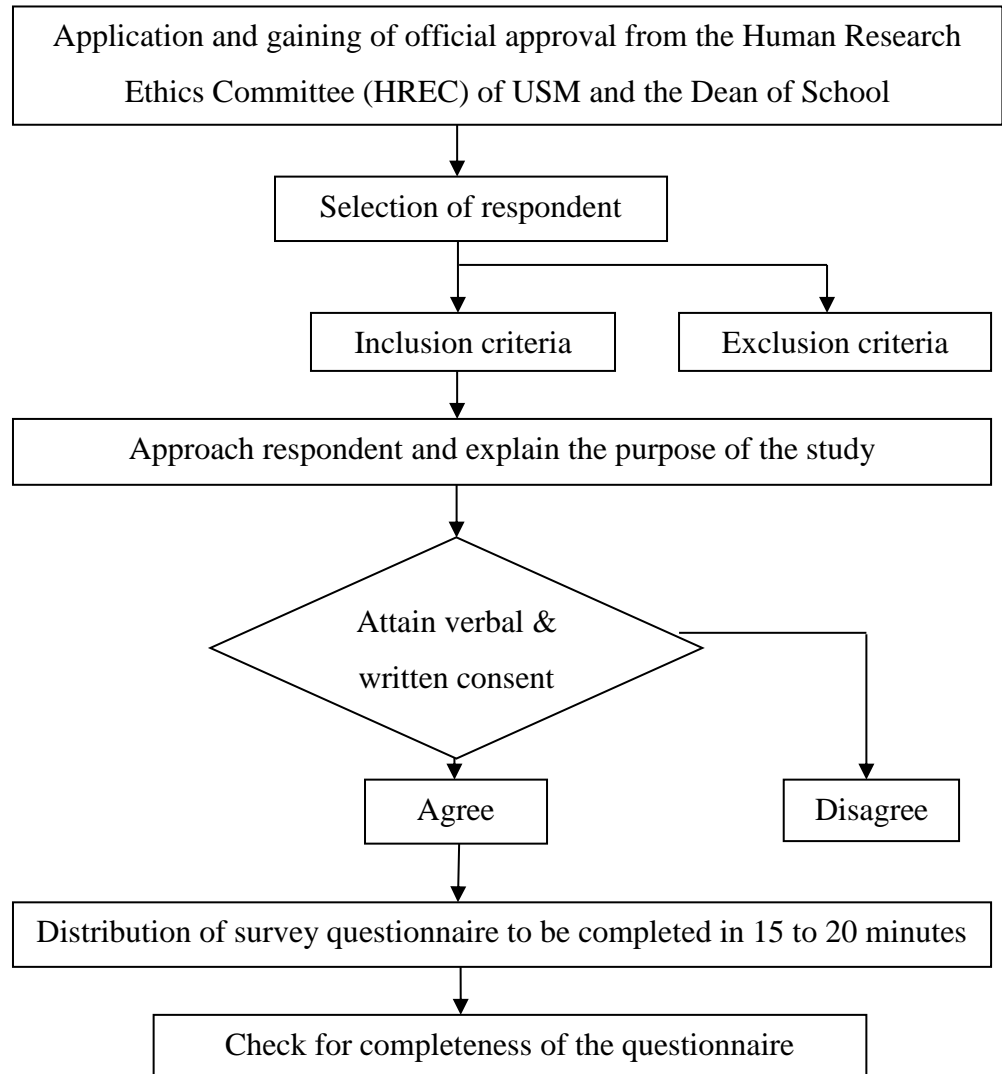


Figure 3: Data Collection Flow Chart