

TRANSNATIONALISM AND NEWCOMERS' SETTLEMENT PROCESS IN CANADA:
A CASE STUDY OF AFRICAN INTERNATIONAL STUDENTS IN PETERBOROUGH.

A Thesis Submitted to the Committee on Graduate Studies
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ABSTRACT

Transnationalism and Newcomers' Settlement Process in Canada: A Case Study of African International Students in Peterborough.

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The successful settlement of international students is important to their academic success as well as their integration into the host community. This thesis attempts to investigate the settlement needs and experiences of African international students in Peterborough, Canada, from a transnationalism perspective. Surveys were used to collect data from 351 students. A chi-square tests and multivariate ordinal logistic regression were used for the data analysis.

The findings reveal that African International Students engage in a variety of transnational activities including, contacting family and friends at home, attending religious and cultural events, and eating traditional food which contribute to the settlement of African International Students. On the other hand, sending money and investing in one's home country were found to hinder the settlement of African International Students in Canada. This study contributes to the existing literature on international education and transnationalism and makes recommendations for policy makers and educational institutions.

Keywords: International Student Migration, African International Students in Canada, Transnationalism, Settlement Process.

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CHAPTER ONE

INTRODUCTION

1.0 Background of the Study

Several studies have indicated that the world has experienced a considerable growth in international migration in the past few decades (Bound et al., 2021; Hemsley-Brown, 2021; Tataru, 2019). As Tataru (2019) posits, many economic, structural, and individual factors are driving people to migrate from developing to developed or industrialized countries like Canada. In this contemporary era, given rapid human migration and its impact on sustainable development, the migration-sustainability nexus cannot be overlooked. Thus, exploring the complex interactions between human migration patterns and sustainable development (Gavonel et al, 2021) is crucial. According to Brunow et al. (2015), human migration impacts economic, social, cultural, and environmental pillars of sustainability through labour market dynamics, entrepreneurship and innovation, knowledge transfer, social inclusion and equity, and cultural diversity. Also, as highlighted by Gavonel et al. (2021), human mobility has changed the lives of those engaged in international migration and has transformed many societies and economies globally through economic contributions, remittances, diversified workforce, globalization, and cultural exchanges.

Trans-border migration has implications for migrants and countries globally. This has resulted in many migrants including international students relocating to developed countries like Canada in the past decades. In Canada, in 2021 nearly one-fourth (23%) of the population, or more than 8.3 million people, are people born outside (immigrants) (Statistics Canada, 2022). This is the highest percentage among the G7 countries and the greatest since Confederation, breaking the previous record of 22.3% set in 1921 (Statistics Canada, 2022). Out of this number of immigrants, international students make up a large proportion of people migrating to Canada. This study adopts Statistics Canada's definition of international students.

According to Statistics Canada (2010), International students in Canada are defined as "non-Canadian students who do not have permanent resident status and have had to obtain the authorization of the Canadian government to enter Canada to pursue an education.

Since Mid-2000, the number of international students in Canada has continuously increased, reaching 638,300 in 2019 (Statistics Canada, 2022). In 2020, there was a fall in the international student population from 638,300 to 528,200; a 17% fall from 2019 and the first annual decline in the number of international students in Canada in 20 years because of the COVID-19 pandemic (Statistics Canada, 2022). However, the 2021 population census from Statistics Canada (2022) indicates that the number of international students has dramatically increased to 621,600 in 2021.

1.1 Statement of Problem

The Canadian economy has seen significant contributions from immigrants, including international students, who bring various benefits that support economic development, social and technical innovation, and general prosperity of the country (Momani, 2016; Scott, 2015). According to Bodvarsson & Van den Berg (2013), the benefits immigrants contribute to Canada include filling up the labour market gaps, introducing diverse skills and knowledge, expanding the Canadian labour market, creating jobs, increasing consumer spending and contributing to government revenue through taxes. Aside from international students being part of the contribution to the Canadian economy, international students form part of the larger Canadian student population that contributes to innovation and research which enhances the intellectual capital of Canadian universities/colleges, and thereby contributing immensely to Canadian economic development (Bramwell et al, 2012). Despite their enormous contributions to the Canadian economy, international students in Canada encounter challenges in settling

successfully into the communities of their study destinations (El Masri & Khan, 2022; Kahlon, 2021).

Many scholars have identified some of the challenges international students experience while they pursue their education in Canada (Guo & Chase, 2011; Hari et al., 2023; Smith, 2020). The core challenges facing international students as explored in the literature (Guo & Chase, 2011; Hari et al., 2023; Smith, 2020; Mbous et al., 2023; Han et al., 2022; Scott et al., 2015; El Masri & Khan, 2022; Kahlon, 2021; Peel Newcomer Strategy Group Report, 2018) include but limited to cultural adaptation, financial stress, language barriers, prejudice and racial discrimination, social exclusion, mental and physical health, housing issues, academic difficulties, and unemployment. These settlement needs and challenges affect the settlement process of international students in Canada (Guo and Chase, 2011; El Masri & Khan, 2022). Also, systemic barriers, such as racism and discrimination in the labour market impede successful settlement of immigrants, including international students (Firang, 2020). International students' transnational ties to their country of origin can help them to overcome some of these settlement barriers at their study destination. International students through transnationalism, maintain connections with their home countries which facilitates their settlement in host countries and this was more evident during the Covid-19 pandemic (Hari et al., 2020).

Unfortunately, many studies tend to examine immigrants', including international students', settlement process without exploring the ties these immigrants maintain with their homeland. Firang (2022) indicates that most immigrants, including international students, do not break ties with their home country, rather they maintain a connection with their country of origin through Whatsapp, Facebook and other social media platforms. Scholars and researchers (Portes, 1996; Portes et al, 1999; Schiller et al, 1992; Faist, 1998; Vertovec, 2003; Basch et al, 1992; Levitt, 2001) have termed this phenomenon (the habit of maintaining ties with the

homeland) as transnationalism. Much of the literature on transnationalism and immigrant settlement (e.g., Akbar, 2019; Brzozowski, Cucculelli, & Surdej, 2014; Chaudhary, 2016; Délano, 2010; Firang, 2021, 2022; Lanphier & Anisef, 2003; Nkrumah, 2018; Ozkul 2012; Pessar & Mahler, 2003) have not explicitly captured transnational activities among international students in general, and African International Students in particular, and their impact on their settlement process in Canada. This study addresses this gap by investigating the settlement needs and challenges of African International Students in Peterborough, Canada, and how their transnational ties with the homeland influence their settlement processes. This study is specifically located within sustainability's economic and social/cultural pillars.

1.2 Rationale

Studying the links between international students' settlement needs and transnationalism is important. Many scholars have studied international students' settlement processes in the context of larger, urban cities, however, a thorough understanding of the experiences, challenges, and settlement processes of international students in medium-sized Canadian communities, like Peterborough, within a transnational framework is missing from the literature. As stated earlier, international students encounter many social and economic challenges, which include cultural shock, food insecurity, housing crisis, mental health, differences in home country and host country academic settings and labour market integration challenges, (El Masri & Khan, 2022). It is noteworthy that international students leaving their family and friends in their country of origin often put them in emotional, social/cultural and economic challenges in the host country. Supposedly, this study hypothesizes that international students' transnational engagements with their country of origin will provide them with a crucial social support network to allow them to meet their settlement needs in the study destination.

Given that international students bring significant benefits, including financial, cultural and social benefits to the Canadian economy (CBIE, 2020, Statistics Canada, 2022), it is crucial to promote the successful settlement of international students and subsequent integration into mainstream Canadian society. However, policies by educational institutions, as well as all levels of government - federal, provincial, and municipal - have failed to promote international students' settlement process in Canada.

This researcher's motivation to conduct this study stems from the author's social status as an international student in Canada and engagement with African International Students in Peterborough. This author has personally observed that international students do not sever ties with their homeland, but continue to have a strong tie with their country of origin, while in Canada through transnational ties such as attending ethnic religious activities, participating in ethnic community programs, maintaining regular contacts with families and friends in the homeland, and sending remittances to the homeland. It is therefore imperative to investigate the impact of these transnational ties on international students' academic, economic, and social/cultural needs as they strive to settle in their study destination.

Another rationale for conducting the present research is that most studies (Guo & Chase, 2011; Hari et al., 2023; Smith, 2020; Mbous et al., 2023; Peel Newcomer Strategy Group Report, 2018) have solely relied on qualitative methods to explore the settlement needs and challenges of international students which include financial stress, academic challenges, housing issues, personal and social difficulties. This study departs from the previous qualitative research by aiming at quantifying the extent of these different aspects of settlement needs and challenges perceived by international students. Through such a quantitative approach, the researcher will be able to adopt statistical analysis to highlight trends, patterns, and possible relationships between these settlement needs and transnational ties.

1.3 Objectives

The overarching objective of this study is to examine, in broader terms, relationships between the settlement needs of international students and transnational ties. The specific objectives are:

1. To investigate the types of settlement needs of African International Students in Peterborough, Canada.
2. To examine the nature and types of transnational ties maintained by African International Students in Peterborough, Canada.
3. To investigate the impact of socio-demographic characteristics of African International Students in Peterborough on the nature of transnational ties.
4. To determine the impact of transnational ties in facilitating the attainment of settlement needs of African International Students in Peterborough, Canada.

1.4 Research Questions

In line with the study's objective, the thesis seeks to explore the following research questions to achieve its objectives:

- What are the settlement needs and experiences of African International Students in Peterborough, Canada?
- What are the nature and types of transnational ties of African International Students in Peterborough?
- Do socio-demographic characteristics influence the nature and types of transnational ties among African International Students in Peterborough?
- To what extent do transnational ties facilitate international students' settlement needs?

1.5 Significance of Study

This research has both scholarly contributions and social benefits. Scholarly contributions include building on existing knowledge on migration, transnationalism, and immigrant settlement needs, particularly the needs of African International Students. By focusing on the distinctive dynamics of transnationalism and settlement in Peterborough, the study addresses a gap in the literature by exploring the particular context of a medium-sized city in Canada. The findings from this study will have policy implications for the government of Canada. It will inform the policy direction of Federal, Provincial and Municipal Government agencies and Non-Profit Organizations responsible for newcomers' resettlement and integration and act as a planning tool that can help these institutions formulate policies to foster international students' resettlement. By understanding the experiences, needs, and aspirations of African International Students', policymakers, educational institutions, and community organizations can better tailor their programmes and initiatives to facilitate African International Students' successful settlement to maximize their contributions to Canadian society. Also, the findings from the study will help educational institutions to create culturally responsive programs, services and initiatives to support diverse groups of students. In a broader context, the recommendations from this study will also serve as a policy-making guide to the international organizations, including the United Nations' International Organization for Migration and contribute to the UN Global Compact, for Safe, Orderly and Regular Migration (GCM). In terms of direction for future research, the findings from this study will open avenues for research considerations on transnationalism, migration and settlement processes of African International Students in other small and medium-sized cities in Canada

1.6 Organization of Study

This thesis consists of five chapters, including this introductory chapter. Chapter 2 provides a comprehensive review of the literature on transnationalism and the settlement experiences of international students. This chapter integrates three themes: human mobility, settlement, and transnationalism, to situate the experiences of African International Students. It also establishes the theoretical and conceptual frameworks that underpin the study. Chapter 3 details the research methodology employed for this study. It describes the research design, data collection procedures, sampling method, and techniques of data analysis used to achieve the study's objectives. Additionally, this chapter addresses the limitations of the study. In Chapter 4, the main findings of the research are presented alongside the study's limitations. This chapter also examines the evidence generated through data analysis and discusses its relevance to the research questions that guided this investigation. Finally, Chapter 5 offers conclusions and recommendations based on the research findings.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

As a background to the literature review, it is important to mention that the interconnection between human migration and sustainability fosters economic development and serves as a crucial driver for global economic growth and advancement (Hermele, 2021; Oliinyk et al., 2021). The United Nations Agenda 2030 for Sustainable Development also acknowledges that human migration is a significant driver of sustainable development (Adger et al., 2019). This is why the issues related to migration are dynamic and integral to the UN Agenda 2030, as they intersect with all Sustainable Development Goals (SDGs), reflecting its profound impact on sustainable development. The relocation of international students to Canada does not only contribute to the country's economic prosperity, but also to the broader global sustainable development goals.

International students' migration has emerged as a defining characteristic of the global landscape in an era of rising interconnectedness of the world. Canada's welcoming and inclusive immigration policies have made the country a target destination for international students seeking quality education and exciting prospects (Desai-Triloker et al., 2016; Flynn & Arthur, 2013; Sá & Sabzalieva, 2016). African immigrants have been a substantial and vibrant group among these students, bringing a variety of cultural values and beliefs to Canadian institutions and communities.

This chapter reviews and synthesizes the literature on the key themes of this study, namely, international students' mobility, immigrants' settlement process, and transnationalism. Thus, the literature review is organized under three main thematic areas: International students'

migration, international students' settlement process in the study destination, and transnationalism

2.1 International students Migration

International students' migration involves the relocation of students from their native countries to pursue education abroad for a certain period of time. After 2006, the Organisation for Economic Co-operation and Development (OECD) started using the term "International student mobility" on a global scale. This term refers to the mobility of students who have crossed borders expressly with the intention to study [Organisation for Economic Co-operation and Development (OECD), 2009]. UNESCO and the International Organisation for Migration (IOM) offer a definition that is comparable. According to the United Nations Educational, Scientific, and Cultural Organisation (UNESCO) (2014) and the International Organisation for Migration (IOM) (2019), International student migration encompasses all individuals who travel across international borders to engage in educational activities in the destination country.

The trends of international student migration have changed significantly over the last few decades due to a variety of reasons, such as cultural experiences, educational quality, economic prospects, and visa requirements. International student migration has been considerably enhanced by the tendency towards globalisation and the marketization of higher education (Bound et al., 2021; Choudaha, 2017). According to the OECD (2021), 6.1 million students pursued higher education abroad in 2019.

International student migration brings in money for the host schools (Riaño et al., 2018) and makes a big difference in fostering a multicultural society and economic expansion (Lo, 2019) in the study destination. Many studies have argued that international education has unavoidably been produced from a purely economic viewpoint in tandem with globalisation and the marketization of higher education (Hemsley-Brown & Oplatka, 2015; Oplatka &

Hemsley-Brown, 2021). International students are significant consumers of higher education (Calma & Dickson-Deane, 2020; Herrero-Crespo et al., 2016). In order to address individual needs during the study process, international students choose and pay for educational goods and services (Koris & Nokelainen, 2015; Rahman et al., 2017). They are able to voice their opinions and communicate how satisfied they are with the customer experience (Guilbault, 2018; Watjatrakul, 2014).

Globally, there are many different countries from which international students originate, and each one adds to the diversity of the internationalization of higher education agenda. International students mostly originate from many countries, including India, Mexico, the Russian Federation, China, the Philippines, Syria, Pakistan, Nigeria, Ghana, Bangladesh, Venezuela and Cuba (IOM World Migration Report, 2022). Zheng (2014) lists China, India, South Korea, Saudi Arabia, Vietnam, Nigeria, and South Korea as the top countries that are significant sources of international students in the English-speaking industrialized countries like the UK, USA, Canada, and Australia. Particularly noteworthy has been the increase in Indian and Chinese students attending universities in the UK, USA, Canada, and Australia. This pattern reflects the diversity of the international student's population in the world (Zheng, 2014).

Although many International students study in English-speaking industrialized countries, there is no single destination for international students. The International student population as of 2022 is spread across all continents (IOM World Migration Report, 2022). In the past decades, international students preferred traditional study destinations such as the United Kingdom, Germany, Netherlands, Belgium, Russian Federation, United States, Canada and Australia. However, there have been significant changes in the preferences of international students' study destinations recently. Countries like Finland, China, Malaysia, Egypt, Saudi Arabia, and the United Arab Emirates, in addition to the traditional study destinations are

becoming more popular recently for international students (Beech, 2017). As Beech (2017) observed, universities in these countries have had to modify their recruitment techniques to enhance their market position. As a result, post-secondary institutions in these countries are competing with traditional study destinations. International students' decision to study in other countries is premised on different reasons and are unique to each individual.

There are various factors that influence international students to relocate and pursue education outside their country of origin. Some students travel to pursue education abroad because of future employment opportunities while others travel for purposes of seeking a better future in countries with highly developed economies (Arnett, 2002; Castles, 2017; Drachman, 2014; Feller 2006; Langevang & Gough, 2009). Parkins (2010) also stressed on employment opportunities as one of the primary factors that influence international students' migration decision. The possibility of finding graduate-level employment after school is a major factor driving international students to study abroad (Adnett, 2010). As Besech (2017) posits, immigration policies within host countries are also factors that attract international students to pursue studies abroad. For instance, there has been a discernible decline in the number of Indian students opting to study in the UK, which has been partially ascribed to modifications in the UK visa regulations (Beech, 2017). Contrary to the UK policies, Canada's immigration policies attract many international students. Economic hardship, limited employment opportunities, and unavailability of financial support in home countries are also other factors that compel international students to leave their country and pursue education elsewhere.

Now that international student migration in general has been discussed, it is imperative to review the literature on international students in Canada. This review will help us understand the trends of international students in Canada, the opportunities available for these students and the challenges they face while studying in the country.

2.1.1 International students in Canada

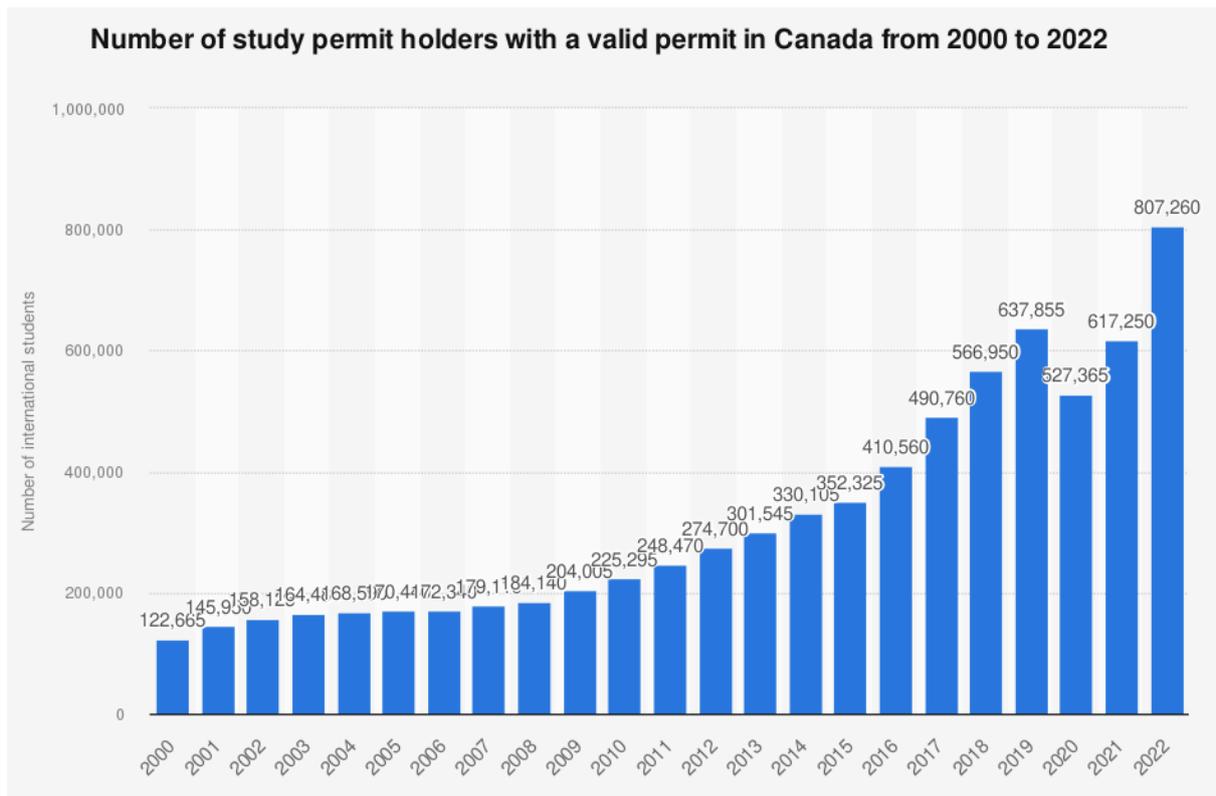
Three decades ago, there were a limited number of international students in Canada. However, the dynamics have changed in recent years due to the change in political administration and immigration policies. International students complement Canada's population. Canada considers international students as a source of population growth, as the country's population is aging and the fertility rate is below replacement levels (Statistics Canada, 2022). Also, Esses, et al. (2021) noted Canada's immigration policies continue to attract many international students to support the country's COVID-19 resilience and recovery. According to population projections, if these trends continue, international students will be a significant proportion of Canada's population in the next decade (Statistics Canada, 2022).

Thus, International students form a substantial percentage of immigrants in Canada. The International student population in Canada has increased substantially over the last 20 years, although there was a dip in the number of students coming to Canada during the pandemic. As of 2019, El Assal (2020) reported data from CIC news which indicated that the number of international students in Canada continues to rise, exceeding 642,000. The data from Immigration, Refugees, and Citizenship Canada (IRCC) (2023) also indicates that the international student population has continued to rise to higher levels in the post-pandemic period. According to Liu-Farrer (2022); Migration Policy Institute (2012); WES (2013a) an unprecedented number of students have taken advantage of the generous Canadian immigration policy to participate in international education in Canada in recent years. With suitable Canadian immigration policies, including the *Express Entry program*, *Provincial Nominee Program*, *Canadian Experience Class*, *Atlantic Immigration Pilot Program*, and *Rural and Northern Immigration Pilot*, all encouraging permanent residency transition, many international students have chosen Canada as their study destination. These students choose

Canada not only to acquire skills and knowledge but also for economic reasons to make the country a new permanent home (Belkhodja & Esses, 2013).

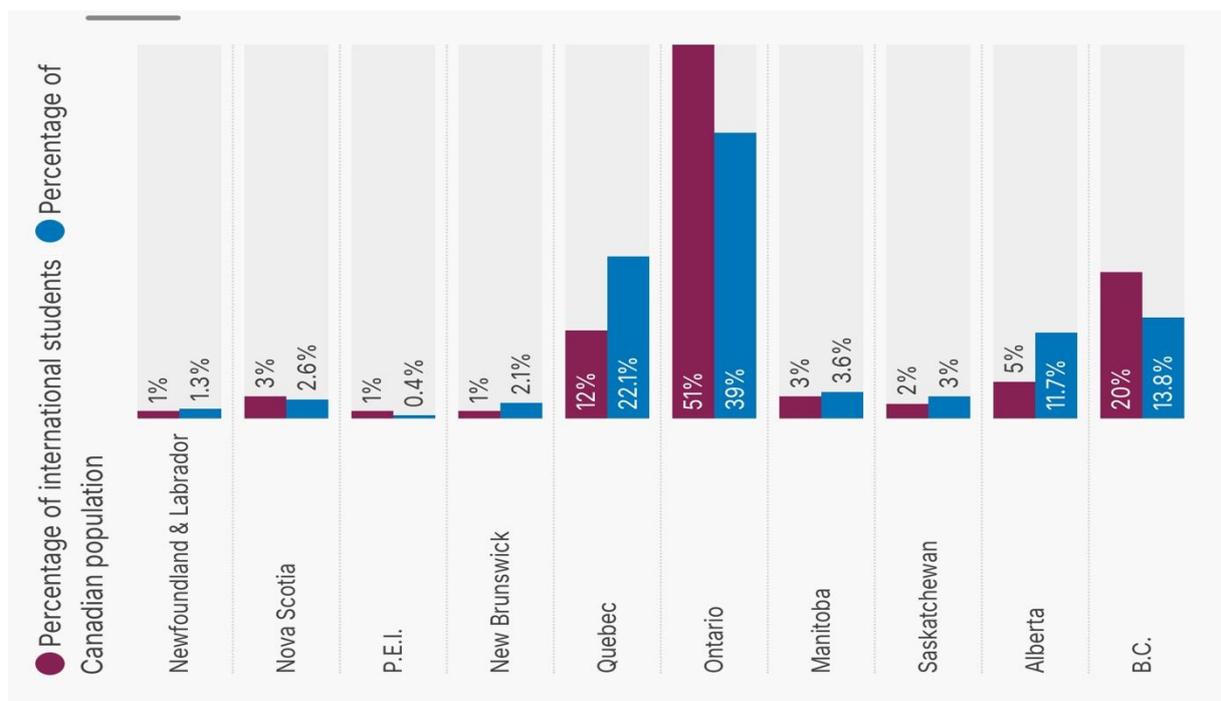
The table below shows the flow of international students with valid study permits from 2000 to 2022.

Figure 2.2 Trends in International students in Canada – Number of study permit holders from 2000 to 2022.



Source: From Immigration Refugee Citizenship Canada (2023).

Figure 2.2 Trends in International students in Canada – International students’ numbers for the end of 2022.



Source: Canadian Bureau for International Education; Statistics Canada, 2023.

Figure 2.2 shows the trends in international students in Canada over the two decades. As shown in Figure 2.2, the number of international students in Canada has continuously increased since the middle of the 2000s, reaching 638,300 in 2019 (Statistics Canada, 2022). In 2020, there was a fall in the international student population to 528,200, a 17% fall from 2019 and the first annual decline in the number of international students in Canada in 20 years as a result of the COVID-19 pandemic. However, Statistics Canada (2022) indicates that the number of international students increased to 621,600 in 2021. The most recent data published by IRCC (2023) also shows that the number of international students in Canada continued to increase from 621,600 recorded in 2021 to 807,260 in 2022.

International students in Canada come from different continents and countries. In line with the general global trend, international students in Canada also mostly originate from many countries, including India, Mexico, the Russian Federation, China, the Philippines, Syria, Pakistan, Nigeria, Ghana, Bangladesh, Venezuela and Cuba (IOM World Migration Report, 2022). Zheng (2014) lists China, India, South Korea, Saudi Arabia, Vietnam, Nigeria, and

South Korea as the top countries that are significant sources of international students in Canada. A report from Statistics Canada (2022) shows that Asia is the largest continent that international students migrate from to pursue their education in Canada, followed by Africa.

Canada presents myriad opportunities to international students studying in the country. One of the most exceptional of these opportunities is Canada's outstanding educational system. Academic quality and rigorous standards of instruction and research are well-known characteristics that international students consider in their choice of Canadian study destination (Esses et al., 2018). Students in Canada have the option of selecting from a wide range of academic specialties and fields of study, regardless of whether they plan to enroll in undergraduate, graduate, or doctorate programs (Chen, 2008). Additionally, the emphasis on practical training, research opportunities, and hands-on learning gives students the chance to get useful real-world experience, which improves their abilities and employability (Sattler et al., 2011).

Canada is renowned for its tolerance and appreciation of ethnic variety. The country's multicultural nature is also advantageous to international students (Netierman et al., 2021; Ng & Metz, 2015). Their educational experience is enriched by this cultural interaction, which also promotes friendships and international understanding. According to Ng & Metz (2015), through multiculturalism, international students bring diverse perspectives, experiences, and cultures from their countries of origin to the Canadian educational system which helps to enrich the country's higher education and promote economic development.

The higher educational institutions in Canada also offer financial opportunities to international students in terms of scholarships, grants and bursaries which reduces the financial burden from educational expenses (tuition, fees, health insurance, living expenses). Tamtik & Guenter (2019) documented some of the financial benefits international students gain in

Canada. This financial opportunity increases the accessibility and affordability of quality higher education in Canada.

Another significant opportunity is the country's immigration policy that allows students to gain Canadian work experience while pursuing their education. International students are allowed to work full-time on-campus and part-time hours off-campus (Chand & Tung, 2019; Hari, 2023). Canada's immigration policy also allows these students to transition to Post-Graduate Work Permit (PGWP) and subsequently permanent residents (Arthur & Flynn, 2013). These immigration policies have become an added influence on the immigration intentions of international students in Canada (Geddie, 2013). Aside from the opportunities the country presents to international students, they still go through challenges in their quest to settle in the country.

2.1.2 International students' Settlement Needs and Experiences

When migrants including international students arrive in Canada, the expectation is that their journey of migration ends with a successful settlement and subsequent integration into mainstream society. As Marchi (2005) posits, a successful settlement of immigrants in their host country is dependent on the quality of the settlement process. The successful settlement process depends on immigrants' ability to meet basic settlement needs which include housing, employment, healthcare, food insecurity, clothing, safety and security.

Housing: Housing is a critical need for every immigrant. Adequate housing plays a fundamental role in the settling of immigrants including international students into their new environment (Ager & Strang, 2008; Flatau et al., 2015). Housing has a big influence on international students' academic achievement, mental health, and general well-being; therefore, these students consider it as an important part of their experience (Flatau et al., 2015). International students can concentrate on their schoolwork and study in a comfortable

atmosphere when they have permanent accommodation, free from the stress of moving about. A sense of integration and belonging into the local community is facilitated by adequate housing and is crucial for acclimating to a new academic and cultural setting.

Despite the important role of housing in settlement processes, international students struggle to find affordable and adequate housing, particularly in cities where there is a high demand for housing. Finding suitable housing for their studies is a major difficulty for many international students studying in Canada (Mensah & Williams, 2013; Preisler, 2021). Akanwa (2015) also notes the housing accessibility issues among international students in Canada. It has become challenging for international students to afford the housing prices in Canada, especially in major cities like Toronto and Vancouver due to the strong demand and cutthroat rental market. Pottie-Sherman et al. (2024) observed that prices of houses in Canada have skyrocketed after the COVID-19 pandemic, making international students arriving in the country struggle to afford housing.

To synthesize the literature, finding suitable housing can have an impact on an international student's capacity to participate in university life and the intensity to make use of their educational opportunities. Due to a lack of options or budgetary constraints, many international students end up living in shared apartments or in subpar accommodation unwillingly. The housing crisis is even worse in on-campus accommodation, as these facilities are frequently overloaded. In order to support international students' academic achievement and improve their overall experience in the host country, it is imperative to address the housing challenges and ensure access to cheap, safe, and decent accommodation for International students.

Employment: Another major settlement need emphasized by literature (Scott et al., 2015) is employment. Immigrants rely on employment in the host country to generate income to finance their expenses. In the case of international students, employment is very crucial as

this supports their tuition payments, rents and daily expenses (Worae, 2011). However, most international students who have migrated to Canada recently struggle to secure jobs. The increase in international students in the country has put pressure on the labour market resulting in these students' difficulties in finding a job (Ghadi et al., 2023). Choudry & Smith (2016) also associated part of this challenge to the failure of the labour market to recognize the international credentials and work experience of international students.

Creese & Wiebe (2012) also posits that international students in Canada struggle to secure a job after graduating from varying programs in Canadian Universities and Colleges. Creese & Wiebe (2012) explored that employers in Canada require international students to have Canadian experience before they are hired, though these students had their education and training in Canadian higher education institutions.

The employment challenges encountered by international students subsequently lead to financial challenges as found by (Worae, 2021). According to Worae (2021), International students are not eligible for certain categories of jobs and internships, also, there is a cap on the number of hours these students can work, and certain governmental and institutional financial support is limited to only domestic students.

Food: The significance of food cannot be overlooked in the settlement process of immigrants. Food is a basic human need for survival. The importance of food has caused a shift in national and international perspectives on food insecurity which shape our understanding of the issue (FAO 2002; Henry 2017: 13; Himmelgreen and Romero-Daza, 2010). Maslow's theory also highlights the important role of food in human life which is classified as a basic need. However, many international students are observed to be food insecure. Food insecurity arises due to factors including accessibility, availability, and affordability of food.

Due to budgetary limitations, international students are among the most vulnerable to food poverty. Worae (2011) determined that managing daily expenses such as rent and other

living bills results in financial stress for international students making it difficult to diversify their food. Afulani et al. (2018) also highlight the difficulty for international students to access their preferred and culturally acceptable meal options. Afulani et al. (2018) defined food insecurity beyond just hunger by considering the availability of culturally preferred food for international students. The affordability issues make many of these students unable to purchase their culturally preferred food hence relying on a particular kind of meal for a living. This has made many international students' food insecure.

To synthesize the literature, students may find it challenging to afford wholesome food due to rising living expenses and tight budgets. A lot of students therefore depend on food banks on campus or neighbourhood services to help them with their meals. However, these food banks do not present international students with culturally preferred food and also have specific food categories available on a weekly basis. This makes it difficult for international students to diversify their meal plans. Many International students therefore end themselves overburdened and forced to work longer hours just to pay for meals. The decision to overwork is detrimental to their academic performance. Hughes et al. (2011) noted that a significant number of international students in Australia engage in extra jobs outside of their studies to purchase preferred food, which impedes their ability to progress academically.

Safety and Security: The safety of a new environment is essential for fostering a sense of belonging and well-being among newcomers, particularly in unfamiliar communities (Brar-Josan, 2015; Campbell et al., 2016; Caxaj et al., 2010). Therefore, when immigrants arrive in a new country, their safety and security must be a priority to both the individual and the host community. Though safety and security measures are in place by Government and academic institutions in Canada to ensure the protection of every resident, whether permanent or temporal, international students often report their difficulties in making friends or connecting with the local community (Popadiuk & Arthur, 2004; Sherry et al., 2010; Wu et al.,

2015). Firang (2011) and Worae (2011) also observed issues of discrimination and racism which sometimes affect the security and safety of immigrants including international students in Canada.

To summarize the literature, international students have significant concerns about safety and security because they may feel vulnerable because of their lack of familiarity with the local area and cultural differences. Experiences of prejudice or mistreatment may intensify emotions of unease. To eradicate these concerns and give students a feeling of security, Canadian post-secondary institutions have put in place safety measures and tools including support networks and campus security services. Notwithstanding, the efficiency of these measures may differ within institutions, and students may encounter challenges in guaranteeing their security and welfare.

Healthcare: The health of every person is an important aspect of their lives. As immigrants travel to start life in a new country, their health needs become very paramount due to factors including, changes in weather, difficulty in navigating healthcare systems, food insecurity, etc. It is therefore important for international students to meet their healthcare needs as they pursue their education. However, financing healthcare is another hurdle international students face in Canada compared to domestic students. International students, despite higher tuition fees, are also required to pay health insurance premiums which exceeds the budget of many of these students (Levent, 2016; Marom, 2023). Dastjerdi et al. (2012) also suggest a lack of clarity or familiarity with the healthcare system, indicating a potential challenge in terms of health literacy. Access to healthcare services is another stumbling block for many immigrants in Canada (Dastjerdi et al., 2012).

Clothing: Due to the changing weather conditions in Canada, appropriate clothing is an important need for immigrants in Canada. The weather in Canada is sometimes devastating for international students. Students from tropical regions who have never experienced extremely

cold weather before struggle to settle in Canadian cold weather without warm clothing (Ng, 1998). Though the literature has not explicitly investigated the challenges associated with clothing of immigrants, Worae (2011) discusses the financial stress associated with the acquisition of appropriate clothing by international students during Canadian cold seasons.

To synthesize the literature, the challenge with clothing needs goes beyond the inability of international students to obtain appropriate clothing. It is important to consider understanding of when and how to use the available clothing effectively. For many students coming from warmer climates, the concept of layering and choosing weather-appropriate attire may be unfamiliar. For instance, students may not know the importance of thermal underwears, waterproof outer layers, or the appropriate times to switch from lighter jackets to heavier coats. This knowledge gap can lead to discomfort, and even health risks, during harsh winter conditions.

Again, it is impossible to undervalue the significance of footwear in terms of enduring the Canadian winter. Wearing the right winter boots is crucial for navigating slippery or snow-covered terrain and for protection against cold, damp weather. International students who do not have the proper footwear run the risk of suffering severe injuries like frostbite or slipping on ice. For many International students, for instance students from Africa, acquiring and understanding the need for specialised winter boots can be a challenge.

2.1.3 Contribution of International Students to the Canadian Economy.

In Canada, the country's International Education Strategy (2019-2024) recognizes the significant contribution of international students to all the various sectors of the economy. It is for this reason that the aim of this strategic framework encourages the internationalization of higher education in the country. According to the Minister of International Trade Diversification, The Hon. James Gordon Carr, "In 2018, International students in Canada

contributed an estimated \$21.6 billion to Canada's GDP and supported almost 170,000 Jobs for Canada's middle class. This is a significant economic contribution – and one that's felt right across the country.” (CBIE, 2020). In five years, this figure has increased. Kunin et al. (2024) has reported that international students spent \$37.3 billion and made a \$30.9 billion contribution to Canada's GDP in 2022. International students through tuition payment, taxation, and housing contribute significantly to Canada's GDP each year (Statistics Canada, 2022).

Tuition fees are one of the most apparent economic contributions of international students to Canada's economy. International students in Canada pay higher tuition than domestic students (Calder et al., 2016) and most of these students receive money from families, friends, governments and other sponsors through cross-border money transfers to pay their tuition fees and living expenses. The substantial increase in the international student population in recent years has also increased the economic contributions to Canada through tuition payments and consumer spending. International students in Canada have no access to Government of Canada student loans and bank loans (Calder et al., 2016) and the limited scholarships available are mostly available to postgraduate students (Guo & Guo, 2017). Most International students especially those in undergraduate programs and Canadian Colleges rely on other forms of financial sponsorships from home countries to finance their education in Canada due to the limited availability of funding assistance in the host country. Calder et al. (2016) projected an increase in international students' contribution to the Canadian GDP in subsequent years, since Canada's immigration policies, quality of education and welcoming environment continue to attract more international students. This impact of international students promotes the cross-border circulation of money and its influence on globalization and global economic development.

International students also contribute significantly to the local economy through their daily living expenses, including accommodation, food, transportation, and recreational activities. Their consumer spending not only sustains local businesses but also stimulates economic growth in various sectors. For instance, neighbourhoods surrounding universities often experience increased economic activity as a result of international students' spending patterns. International students' consumer spending not only contributes to Canada's economy, just like other migrants, through the consumption of culturally related foods and commodities, these students heighten their engagement in transnational activities and promote their ties with their home countries (Parasecoli, 2014; Rizvi, 2005). Cultural-related commodities, including food, clothing and artisans are imported to Canada due to the high demand for these commodities. International students maintain their cultural ties with their home countries and Wu et al. (2015) observed that these students encounter difficulties in eating new food that is not known in their culture. This makes international students consume more of the food imported from their home country which they are already familiar with.

Canada's immigration policy allows international students to work full-time or part-time to gain Canadian work experience during their studies or school breaks (Trilokekar & El Masri, 2019). This not only provides students with valuable work experience but also contributes to the Canadian labour market. By engaging in part-time and/or full-time employment, international students contribute to the labour force of Canada. These policies have given the opportunity to international students in Canada to transfer their existing skills, knowledge and expertise from their countries of origin to the Canadian labour market.

Considering the differences in socio-demographic and economic characteristics among international students, it is imperative to discuss international students in Canada who originate from Africa. This review provided an understanding of the trends, specific needs and

challenges of students who migrate from the global south to pursue educational opportunities in Canada.

2.1.4 African International Students (AIS) in Canada

Canada is becoming a more popular destination for African students. The trend of AIS in Canadian universities has shown a significant increase in recent years (CBIE, 2018). A CBIE (2018) survey revealed that African International Students formed 14% of the international student's population in Canada, as of 2017. According to Statistics Canada (2018), the number of international students from Africa studying in Canadian universities ranges from around 11,000 in 2010/2011 to over 22,000 in 2018 (Statistics Canada, 2022). This number continues to rise as many students from Africa prefer to pursue higher education in Canada. Research indicates that the percentage of international students from Africa enrolled in Canadian post-secondary institutions has been increasing at a rapid pace (Statistics Canada, 2022). The most recent data from Statistics Canada (2022) shows Africa ranked third among the regions represented by international students studying in Canada as of 2022.

This study defines Africa International students as students who were born in Africa and came to Canada primarily to pursue higher education. These include students who were born in North African countries such as Morocco, Algeria, Egypt, and Libya or were born in Sub-Saharan African countries including Ghana, Nigeria, Cameroon, Somalia, Ivory Coast, and Liberia. Nigeria, Kenya, Ghana, and Ethiopia are a few of the top African countries that send international students to Canada. Despite the increasing numbers, there is a knowledge gap in Canadian academia regarding the specific settlement experiences of AIS (Okusi, 2021). Research focussing on AIS in Canada is essential to understand and address the challenges they face related to their settlement, while studying in Canada.

2.2 Review of Theories Influencing International Students' Migration

International students' migration involves the movement of students from one country to another for educational purposes. It has been indicated in the literature that students from Global South countries are the main source of international students' migration to Global North industrialised countries like Canada. There are numerous competing theories that explain why immigrants, including international students, migrate. In order to improve our comprehension of the discourse on international student migration, transnational networks, and settlement process, four theoretical frameworks: the neo-classical economic theory, the world systems model, and the push-pull model are reviewed. The combined discussions on these frameworks clarify the factors influencing international student migration. It further widens our understanding of the effects of international students' migration on sending and receiving countries.

2.2.1 Neo-Classical Economic Theory

The Neo-Classical Economic theory is one the frameworks that has been widely considered to explain the causes of international migration. This theory, which emphasises the function of supply and demand in labour markets, is based on the ideas of classical economics. The theory posits that economic factors, particularly the disparity in earnings and employment possibilities between countries, are the main drivers of migration (Robinson, 2005). According to the theory, there is an abundant supply of labour in poor countries compared to capital (Firang, 2011). Poor countries have low incomes and high unemployment rates due to excess labour supply while rich countries have higher earnings and more job prospects resulting from excess capital (Firang, 2011). This situation has caused high living standards and greater economic fortunes in rich countries, hence there is labour migration from poor countries to rich countries (Robinson, 2005).

In consideration of the financial gains, better future and career prospects, quality training and education that push students to pursue education abroad, we can understand how the Neo-Classical Economic framework explains why students from African and other developing-countries opt to study in advanced and rich countries like Canada.

The pursuit of advanced education, which is assumed to be a pathway for better career opportunities, higher lifetime incomes, are among the motivations for international students to study abroad. Economically advanced countries like Canada have prestigious educational institutions that are well-known for providing advanced training, and internationally recognised qualifications. The perception is that, travelling from a poor country to study in one of these prestigious educational institutions is a life-changing decision due to the numerous economic opportunities that abound in the host country post-graduation.

The expectation of many international students is that their employability and job prospects will improve if they graduate from educational institutions in developed countries. As the neo-classical theory posits, the abundance of capital in these advanced countries has increased the demand for labour. These students who are likely to be unemployed in their poor countries consider this as a great opportunity for them to relocate. In many advanced countries like Canada, the high demand for labour has resulted in policies allowing international students to work, even while in school. There are also policies that provide a pathway for these students to be retained and integrated into the labour market after graduation. This opportunity is lacking by many international students in their home countries. Again, the training, skills and educational credentials from advanced countries are recognised by international students' home countries, therefore increasing their rate of employability and career prospects when they decide to return to their homeland.

Neo-Classical Economic Theory offers a framework to comprehend the rationale underlying international students' migration, and help us understand immigration and

settlement policies in host countries. In line with Neo-Classical economic theory, a number of developed countries, such as Canada, have implemented immigration policies in an effort to motivate international students to travel to the country (Firang, 2011; Worae, 2021). Also, Canada has immigration policies that aim to retain international students who possess the required human capital to meet the labour market demands. There is fierce competition on a global scale for capitalist immigrants and highly qualified professionals, given the intense competition in investment and technological innovation. Developed countries such as Canada, US, and Australia have all developed and are still upgrading their immigration policies to attract international students who are believed to be highly skilled labour.

2.2.2 World System Theory

To further understand the factors influencing international students' migration, the World Systems Theory is reviewed as one of the explanatory frameworks for international students' mobility. This framework was propounded by Wallerstein (1970) and provides a macro-structural framework for understanding global inequalities, especially within the context of international migration. According to Wallerstein the world is divided into three hierarchical regions: core, semi-periphery, and peripheral countries. All these regions have unique functions to play in the international economy. The core countries are the most economically developed capitalist countries, while the semi-peripheral countries are in a gradual process of industrialization. According to this framework, the peripheral countries are the less developed economies which are mostly classified as developing countries. As discussed in Firang (2011), the theory explains how global capitalism drives unequal exchanges between these regions, leading to economic exploitation and dependency.

This theory is applied in the context of African International Students migration as it highlights the structural forces that push students to leave their home countries. According to

Robinson (2005), historically, African countries were positioned in the global periphery during the colonial and post-colonial periods, a process that disrupted local economies and social structures. As global capitalism expanded into these peripheral regions, non-capitalist patterns of organization—like state-owned enterprises and traditional agricultural systems—were dismantled under neoliberal policies (Firang, 2011). Governments, often pressured by international financial institutions, privatized public resources and industries, which destabilized local economies and reduced job opportunities, especially in the agricultural and artisanal sectors.

In the context of many African countries who were within the peripheral regions, many state-owned safety nets, such as public education systems, healthcare, and employment guarantees, were weakened by these macroeconomic shifts (Robinson, 2005). According to Robinson (2005), this dismantling of economic supports created social instability and increased unemployment, particularly among peasants and artisans who traditionally relied on state protection. The dislocation from their traditional forms of livelihood and the increasing inequality between the core and periphery resulted in migration as a strategy for economic survival (Robinson, 2005).

To synthesize the literature, African International Students, in this framework, are part of a broader wave of migration driven by the economic inequalities fostered by global capitalism. Many students see education in developed (core) countries as a means to escape the limited opportunities in their home countries which was caused by the capitalist's suppression and exploitation of their home country's local economies. The disruption of local economies, lack of educational infrastructure, and underdevelopment of local industries caused by inequalities in global economic system push these students to seek educational opportunities abroad in countries with more stable economies and well-funded educational institutions. Despite the eagerness of African students to pursue education in an economically advanced

countries, the contemporary capitalist system, is been used to brain drain students from Africa. Also, the monetization of higher education exploits financial resources from the African continent.

In summary, World-Systems Theory helps us to understand the link between the historical and structural process of suppression and exploitation, in the context of African International Students migration. The economic and social disruptions caused by global capitalism compel these students to leave their home countries, making migration a byproduct of global inequalities and a tool for social mobility within a system where opportunities are concentrated in the core or economically advanced countries.

2.2.3 The Push-Pull Model

This model is a popular framework in migration studies and explains why individuals relocate from one location to the other. The model discusses the factors that "push" people to leave their place of origin and the factors that "pull" people to a new location. The push factors are the harsh conditions in one's own country that compel them to depart. These factors include social unrest, poor living conditions, lack of educational possibilities, political instability, and economic hardship (Mensah, 2002).

On the other hand, pull factors are the perceived attractions that entice people to travel to the country of destination. Such factors include, improved living conditions, better educational opportunities, and better economic opportunities (Massey et al., 1994, Mensah, 2002; Mensah, 2010). Firang (2011) is of the view that the pull factors could only be imaginary as they are vaguely known to immigrants. Migration decisions are frequently made by migrants based on idealistic, abstract conceptions and exaggerated hopes of their chosen destination (Firang, 2011).

The push factors compelling international students to travel from their home countries to study abroad include economic challenges and limited educational opportunities. Students who graduate from academic institutions in developing countries often struggle to secure jobs. As the neo-classical economic theory highlighted, the abundance of labour in developing countries leads to unemployment. Again, there is often a high cost of living against low income in developing countries. Also, there are limited educational opportunities in developing countries and this allows students from such countries to secure the necessary financial support to progress with their academic career. Students from underdeveloped countries may not have access to modern educational infrastructures, or research opportunities. Many students from these countries find these conditions unpleasant hence compelling them to leave the country to find greener pastures elsewhere.

In developed countries, pull factors, ranging from cultural, social, economic, to educational factors entice international students to pursue their education in such countries (Mensah, 2002). Social and cultural networks in the destination countries, such as community and kinship associations, religious groups, and family ties sometimes influence the decisions of students to pursue their studies in that country (Mensah, 2008). The availability of jobs and high economic values in developed countries also motivate students to choose such countries as study destinations. These students' decision is based on enhancing their chances of finding employment, quality living, higher incomes, and improving professional advancement in the future. International students from underdeveloped countries may find it easier to study abroad if scholarships, grants, and financial aid packages are available in the host countries. These factors within the host countries often draw many international students to pursue education outside their country of origin.

To sum up the theoretical review, all the three theories provide a distinct but interconnected lens through which we can understand the factors that influence African

International Students migration decision. The intersections of these theories help us to understand the economic, structural and individual factors that drive African International Students to travel to study in Canada.

When international students travel to pursue education in the host country, they do not disconnect from their home country. Like many other immigrant groups, these students continue to maintain ties with their homeland. This phenomenon has been termed as “Transnationalism” (Vertovec, 2004; Portes et al., 1999). Next, I will review the concept of transnationalism to enhance our understanding of how immigrants, including international students, navigate and maintain connections across borders. The understanding of the relationship between immigrants and their cross-border connections will enable us to explore the impact it has on immigrants' settlement experiences.

2.3 Understanding Transnationalism and Its Dynamics

The concept of immigrant transnationalism emerged in the 1990s as a way to challenge the traditional, nation-centered understanding of international migration and integration. This concept emphasizes the importance of immigrants' cross-border activities in the intellectual and scholarly debate on international migration, as discussed by scholars such as Firang (2011), Mensah (2008), Robinson (2005), and Wimmer and Glick-Schiller (2003). Although "immigrant transnationalism" was initially introduced by cultural anthropologists like Glick Schiller and colleagues who examined immigrant settlement patterns across various communities (Glick-Schiller et al., 1992), it is the definition provided by Linda Basch and her co-authors that has gained widespread acceptance. They describe immigrant transnationalism as "the process by which immigrants forge and sustain multi-stranded social relations that link together their societies of origin and settlement" (Basch et al., 1994, p.27). This definition is widely adopted by transnational scholars and is therefore adopted for this paper.

Following Basch and her colleagues, numerous scholars, predominantly from the social sciences (Castles, 2002; Faist 2000a; Kelly, 2001; Kivisto, 2001; Levitt 2004; Portes, 1999, 2001; Robinson, 2005; Rottenberg et al., 2023; Sethi, 2022; Sethi et al., 2022), have further popularized transnationalism across various academic disciplines. The growing body of transnational literature underscores the fact that many immigrants, including international students, aim to settle and integrate into their host countries while simultaneously maintaining connections with their homelands. They often pursue transnational settlement, living their lives across national borders to sustain these ties.

Transnationalism is viewed as a multidimensional phenomenon that includes the social, economic, political, and cultural ramifications of cross-border ties between the homeland and destination (Portes et al., 1999). Portes et al. (1999) emphasize the notion that transnationalism entails ongoing, dynamic and complex relationships preserved by immigrants and their communities beyond international borders. It is evident that many migrants engage in activities and orientations that connect them to important persons (family, fellow villagers, and members of their cultural communities) who live in countries other than where migrants reside. Vertovec (2009) points out that migrants frequently stay in touch with friends and families back home, participating in a range of cross-border social, cultural and economic activities.

There is an array of cross-border economic, social, and cultural practices that have been discovered within migrant populations. According to Portes et al. (1999), these activities happen and will continue due to human migration, as people relocate to different places with diverse economic, social, and cultural orientations. When people migrate, they do not completely leave behind their original economic, social, and cultural practices (Schiller et al, 1992). Firang (2011, 2022) also highlights the long-lasting relationships immigrants have with their home countries. As Ban (2009) posits, migrants create and inhabit transnational social, economic, and cultural landscapes in ways that transcend the national boundaries of both their

home and host country. These studies suggest that immigrants may not lose ties with their home countries but maintain strong relationships.

Although transnationalism has provided insightful information on how globalization is changing, it has also provoked a variety of debates and criticisms in the migration space after its emergence in the 20th century. Transnationalism, according to its critics, lacks precision and is frequently applied too broadly (Vertovec, 2004). De Jong & Dannecker (2018) discovered that there are recurring groups of critics from a variety of literature. It is difficult to give a clear and comprehensive description of transnationalism, they claim, because it incorporates a vast spectrum of phenomena, from multinational companies to global social movements (Vertovec, 2004). Some scholars (Colas, 2013; Van Apeldoorn, 2004) also argue that transnationalism overemphasizes non-state actors at the detriment of state sovereignty, including multinational corporations, NGOs, and international activists. They assert that in global politics, the nation-state still plays a crucial role. Other critics (Lazar, 2011; Likosky, 2002) highlight the power disparities within transnational networks. Critics further argue that transnationalism and globalization frequently benefit the already privileged rich people, as well as escalating social and economic inequalities within and across nations (Likosky, 2002).

The debate about whether immigrant transnational practices are new or old has also become a contentious issue, and this has garnered scholarly investigations into the temporal dimensions of the phenomenon. Scholars (e.g., Castells, 2009; Foner, 1997; Portes, 2004; Smith, 2003) have offered differing perceptive explanations to help clarify the situation. For instance, Castells (2009) contends that modern transnational activities differ significantly from historical ones due to various factors including technological advancement, changes in global governance, and shifts in economic structures.

On the other hand, Portes (2004) and Smith (2003) claim that there will always be similarities in the activities immigrants engage in, whether historical or contemporary. Portes

(2004) indicates that the transnational traditions within immigrant groups have a rich historical background and are still prevalent among immigrant populations today. Foner (1997) asserts that the practices and lifestyles of the immigrant population across nation-states throughout the world in the present have not changed from the past transnationalism and concludes that there is nothing new to the concept of transnationalism (Foner, 1997; Portes, 2001; Portes et al., 2002). Smith (2003) also posits that, if transnational practices existed in the past but were not recognized within a theorized framework before, it is possible to recognize this life now, through a new analytical work using the transnational lens.

To synthesize the literature, the difference between the new and old transnational practices is the intensity and propensity between the two. Based on current advances in technology, which has developed communication methods, including social media (Facebook, Snapchat, Twitter, WhatsApp) and mobile phones, contemporary immigrants have easier means to connect with family and friends than the past migrants. This has increased the frequency and intensity for recent immigrants to maintain ties with their home country. For instance, video conferencing has made it possible to have face-to-face communication with family and friends. Also, transnational entrepreneurs are able to easily supervise activities of their businesses in the home country through video surveillance and other technologies.

Due to the complex nature of the phenomenon and the different kinds of activities and practices that happen among immigrant populations, both Portes (1999) and Vertovec (2004) describe these practices of migrants within three basic domains of activities – socio-cultural, political, and economic domains. Two of these domains (socio-cultural and economic) are relevant to this study and are highlighted in the paragraphs below.

Social and Cultural Transnationalism: Both social and cultural transnationalism, describes how immigrants continue to feel a part of their home country even as they adjust to life in the host country (Portes et. al. 1999). In the social-cultural domain, migrants preserve

cultural links and social ties by taking part in a variety of activities both in the host and home countries. These activities include celebrating traditional festivals, attending religious activities and communicating through cultural language, all of which contribute to a feeling of identity and belongingness (Mensah, 2008; Firang, 2011; Portes et. al. 1999, 2002).

Social transnationalism manifests in practices such as immigrants maintaining close ties to their home countries religious organisations, participation in home country events such as funerals, weddings and other family gatherings, remaining active in home country political organizations, participating in diaspora networks (Firang, 20011; Mensah, 2008; Portes et. al. 1999). Both Firang (20011) and Mensah (2008) noted that immigrants return home temporarily for some of these activities or do so virtually through online platforms due to technological advancement. For instance, a large number of immigrants in Canada no matter their status continues to participate in religious activities back home through online services, monetary donations, and spiritual support (Mensah, 2008). Immigrants consider this type of cross-border engagement as a way to maintain a sense of identity and belonging (Firang, 20011; Mensah, 2008).

On the other hand, cultural transnationalism is when immigrants actively protect and celebrate their cultural heritage while living in their host country. For instance, immigrants frequently plan burials, traditional ceremonies, and cultural festivals that honour their native cultures (Firang, 2011; Mensah, 2008). These gatherings offer a forum for cross-cultural interaction with the host country in addition to serving as a reminder of their cultural heritage. Both Baldasar & Merla (2013) and Sethi et al. (2022) also observed that, many immigrants continue their culture in their country of origin, by providing care to their families through transnational caregiving. Immigrants ensure that their cultural identities are preserved during the process of assimilating into their new community by participating in these activities that foster a sense of community and continuity.

Economic Transnationalism: Economic transnationalism discusses the growing interdependence and interconnection of economic actors, institutions, and activities across international boundaries. This concept represents the increasing interconnectedness of economies on a global scale, when economic interactions, transactions, and processes transcend national boundaries (Ban, 2012).

In an era of neoliberalism where education has been monetized to make profit, international students' settlement experiences in their host countries can be better understood by considering the dynamics of transnational economic activities among international students. Different types of economic transnationalism such as transfer of skills and ideas, financial mobility and integration, globalization of trade exist across national boundaries (Ban, 2009).

Immigrants also play a vital role in supporting their host countries' economies and their families and communities they leave behind by sending money. This activity is known as remittances and is one of the main economic transnational activities observed among immigrants. Solimano (2004) defines remittances as payments or financial transfers made by an individual or organization, usually a migrant worker, to their family or friends back home or in another region. Through remittances, immigrants frequently create financial links between their host countries and their home countries. Banga & Sahu (2010), Chimhowu et al., (2005), and Ratha (2013) argue that remittances help reduce poverty in immigrants' home countries. Remittance is a source of basic needs like food, shelter, and healthcare for vulnerable populations (Gubert, 2005). Transnational entrepreneurs as noted by Portes et al. (2002) also use remittances as seed capital to create business and investment opportunities in home countries. These jobs eliminate unemployment and contribute to the home country's economic development. Levitt & Lamba-Nieves (2011) highlight how migrant ethnic groups contribute to local infrastructure and community development by using remittance to build schools, health centers, and markets for their hometowns.

Another crucial component of economic transnationalism is the relationship between immigrant communities and the global flow of labour. In the global economic system, immigrants play a vital role as transnational labour actors. Immigrants frequently relocate from their places of residence in search of better employment opportunities in foreign countries, mostly advanced economies (Parutis, 2014). This labour migration, which involves people traveling across borders to engage with labour markets in other countries, constitutes a fundamental feature of economic transnationalism.

2.3.1 International Students as Transnational Actors

In the past or prior to the last two decades, the notion of international students as transnational actors did not gain much attention in the literature of international students' mobility, despite the increasing cross-border mobility by these international students. Just as the concept of transnationalism is not new (Portes, 2001), so is cross-border migration among international students who cross national borders for educational purposes. According to Gargano (2009), scholars from diverse disciplines that examine educational border crossings failed to investigate the realities and lived experiences of the students engaged within a transnational context. Most of the discourse surrounding cross-border education tended to mainly concentrate on the globalization and internationalization of higher education (Knight, 2012; Varghese, 2018; Ziguras & McBurnie, 2014). Gargano (2009) discovered that the literature, and the discourse around international student mobility in particular, lacks strong and meaningful ideas that highlight the experiences and identity reconstructions of international students, homogenizing and generalizing the debates among international students when significant differences and dimensions exist.

Despite pointing out the dearth of literature on international students and transnationalism in the past, recently, research on international students and transnationalism is emerging in literature (Hari et al., 2021; Tran & Pham, 2016; Waters & Brooks, 2012).

Reflecting the growing importance of student migration in a globalized world, it is important to conduct a comprehensive investigation of international students' cross border experiences, by exploring how international students contribute to and engage in transnational activities and how these engagements may influence their settlement in host countries. Gargano (2009) argues that adopting a new lens that highlights students' experiences within the context of transnationalism, the effects of processes on students-inhabited transnational spaces, identity formations and social networks, rather than to focus on only national trends and statistics of mobility, will enhance our understanding of international students' settlement experiences.

Through a transnationalism-based lens, it is feasible to prioritize the perspectives of international students in the scholarly discussions on international students' migration. Transnationalism can illuminate new approaches for examining and assessing the movements of international students and their settlement over time and space (Waters & Brooks, 2012). The notion of transnationalism among international students, encompasses rich and diverse experiences that extend far beyond geographical boundaries. Harriss & Osella (2010) highlight the economic, cultural, educational, and social dimensions of transnationalism among international students. Waters & Brooks (2012) provide a comprehensive framework by emphasizing that transnationalism involves more than just the physical movement of students across borders; it encompasses a holistic engagement with various dimensions of society and institutions. The most common form of international students' cross-border engagement is their economic contribution to both host and home countries (Fahlevi, 2011).

International students are increasingly recognized as significant economic actors within the transnational framework. As part of the larger migrant population, Tran & Pham (2016) identified many forms and nature of transnational activities international students engage in while they study in a new environment which contributes to the development of their host and home country economies. The economic dimension of transnationalism in higher education is

evident in the financial contributions international students make to both the host and the home countries (Akanwa, 2015). Findings by (Fahlevi, 2011) indicate that international students contribute substantially to the economies of host countries through tuition fees, accommodation and consumer spending. These contributions collectively form a significant impact on the host country's economy. International students often engage in part-time/full-time work, contributing to the labour market of host countries. Also, the opportunity given to international students to work while studying in host countries provides these students with valuable work experiences which are transferable to these students' home countries.

According to Gribble (2008), beyond the immediate economic benefits of international students to the host countries, there is a growing acknowledgment of the significant economic contributions that international students make to their home countries through the various types and nature of transnational engagement. The economies of international students' countries of origin also benefit from international students' engagement in transnational activities (Perkins & Neumayer, 2013). One of the primary ways in which international students contribute economically to their home country is through remittances (Adnette, 2010). International students are part of the larger immigrant population that continues to send money in the form of remittances to families and friends in their home countries. Meyer & Shera (2017) discovered that remittances from immigrants' host countries have been a significant contributor to the GDP of immigrants' home countries. African diaspora often send money back to their families, providing crucial financial support and also strengthening the economies of most African countries (Arthur, 2016). These remittances contribute to poverty alleviation, education, and healthcare in their home countries.

Gu & Schweisfurth (2015) observed that skill transfer and knowledge exchange are also forms of transnational activities through which international students contribute to the economic development of their home countries. International students contribute to their host

nation's intellectual capital and labour force by bringing a diverse range of knowledge and skills from a variety of fields (Smith & Khawaja, 2011). Aside from the knowledge and skills international students bring to the host country, international students acquire valuable skills and knowledge during their studies in Canada. Upon returning to their home countries, they become conduits for knowledge transfer and skills exchange (Gu & Schweisfurth, 2015). This is particularly relevant in fields such as science, technology, engineering, and mathematics (STEM) and Gu & Schweisfurth (2015) cited Chinese graduate professionals who return to China from Canada to contribute to the development of STEM. Also, Knight (2012) highlights how international students returning from host countries contribute to the growth of STEM sectors in their home countries by applying advanced knowledge and technologies in competitive research. Pagani et al. (2019) postulate in their paper that international students, like scientists and professionals, may contribute to increasing knowledge in academia and workplace in the home country through transfers of skills, knowledge and technology even when they continue to live in the host countries, or return to home country and these skills and knowledge transfer is very beneficial to the home countries of these students.

International students often with a global perspective cultivate an entrepreneurial mindset during their studies in Canada. Some of these students establish businesses in their host and home countries while living in Canada, while others often return to their home countries to engage in entrepreneurial activities and create jobs for their countries. Research by Nafukho & Helen Muyia (2010); Ngota et al., (2017); Davey et al., (2011); Osirim (2008) demonstrate that African International Students are part of the African diaspora who become entrepreneurs, establishing businesses that contribute to job creation and economic development in their home countries. The innovation and cross-cultural perspectives gained in Canada enhance their ability to navigate diverse markets. Transnational engagement facilitates networking with Canadian professionals, businesses, and institutions. This networking often

leads to investment opportunities in the home countries of these international students. International students in Canada often leverage their connections created in the host country to attract foreign investments, fostering economic growth and sustainability.

There is a cultural exchange between international students in Canada and the host country and this experience contributes to the economic growth of both the host and home countries of these students. The cultural exposure gained by international students in Canada enhances cultural diplomacy between their home countries and Canada. This cultural diplomacy can positively influence international trade relations. In addition to providing universities and colleges in host countries with much-needed financial support, international students also provide richness to these countries by bringing with them a diversity of backgrounds, viewpoints and cultures that foster cultural awareness and appreciation (Bevis, 2002; Harrison, 2002; Pandit, n.d.).

In conclusion, from the literature review, international students in Canada are emerging as transnational economic actors, contributing to the country's economic vibrancy in various ways. From direct contributions through tuition fees to indirect impacts on local economies, their presence reflects the interconnected nature of the global economy and the significant role that international students play in shaping Canada's economic landscape.

2.4 Transnationalism and Settlement Process of Immigrants

Transnationalism acknowledges immigrants' maintenance of connections to both the host and the home countries. Migrants may maintain close ties to their countries of origin while also participating in and adapting to their host societies (Firang, 2020). Migrants do not completely break ties with their original country and Wingers et al. (2011) submit that migrants will always participate in economic, socio/cultural and political activities across national boundaries.

It is important to note that the ties immigrants maintain with their countries of origin contribute to their settlement process in the host country. Both Faist (2020) and Ghosh (2007) emphasized how transnational ties in the short or long term influence the settlement experiences of immigrants when they arrive in host countries and even their subsequent integration into mainstream Canadian society. The impact of transnational ties, including networks and support systems is very crucial to the settlement process of all immigrants. Immigrants rely on kinship associations including religious and cultural groups, and networks in the home country for all forms of support, which include, housing, job referrals, emotional support, and guidance when they first arrive in host countries. Mensah (2008) cited the role of religious transnationalism in providing support to the Ghanaian immigrant community in Toronto. This support does not end after a short period but continues during the settlement and integration process, and even there aftermath.

Immigrants often face unique challenges related to cultural adaptation, language barriers, and social integration. These unfavourable experiences have further worsened in recent years, especially in the case of Canada, where the country's immigration policies have welcomed more immigrants including international students (Worae, 2021; Wu et al., 2015; Yan & Berliner, 2010). The significance of transnational ties in helping to mitigate the challenges immigrants encounter has been well-documented by some scholars (Gomez et al., 2014). Gomez et al. (2014) emphasize the importance of transnational social networks in providing emotional support, information, and a sense of belonging to newcomers.

The influence of transnational ties on the settlement process of immigrants is in many dimensions. Maintaining connections with home countries through transnational ties provides a sense of belonging and identity, contributing positively to the overall settlement experience. These ties, encompassing family, friends, and diaspora communities, are often relied upon for emotional support, advice, and practical assistance during the settlement process. Also,

immigrants' transnational networks serve as both a source of support and a means of preserving cultural ties. Transnational networks are instrumental in offering practical advice on settlement issues, fostering a sense of community, and aiding in cultural adjustment. Transnational networks sometimes provide immigrants, including international students, with resources and services which include clothing (especially during the winter), money, foodstuffs, housing search, job referrals and interview preparations.

Immigrant religious organizations also serve as pivotal transnational networks, facilitating the settlement of immigrants in Canada. The study on religious transnationalism among Ghanaian immigrants in Toronto provides insights into the influence of transnational ties on immigrant communities (Mensah, 2008). The research highlights the variations in transnational practices among immigrants based on factors such as socioeconomic background, citizenship status, and period of immigration (Mensah, 2008). Additionally, Mensah (2008) emphasizes the locational focus of transnational activities, indicating that immigrants may maintain connections with their home communities through religious and social networks, which can contribute to their settlement in the host country. Mensah (2008) suggests that transnational ties, including religious and social connections, play a crucial role in supporting the settlement process of newcomers in Canada.

2.5 Research Gap in the Literature

In synthesizing the literature, there are numerous qualitative and quantitative research works that have been conducted on international students' settlement experiences in Canada. Also, studies on international students' transnationalism are emerging. A significant gap in the literature remains. Looking at all these literature on international students' mobility, no work has been done on African International Students in Peterborough, Canada. Again, there have been studies on transnationalism and settlement of larger immigrant populations in Canadian

large cities (e.g., Firang, 2011; Mensah, 2008), studies that connect international students' settlement experiences and their transnational engagement in medium-sized cities are still missing from the cross-border educational literature (Gargano, 2009). Furthermore, there is no work done on transnationalism and African International Students' settlement in medium-sized cities, particular in Peterborough, Canada.

To address this major research gap in the literature, this study investigates African International Students' settlement needs and experiences, their transnational engagements and how this relationship with their home countries influences their settlement needs in a medium-sized Canadian city (Peterborough).

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The research questions raised to achieve the research objectives of this study are: 1) What are the settlement needs and experiences of African International Students in Peterborough, Canada? 2) What are the nature and types of transnational ties of African International Students in Peterborough? 3) Do socio-demographic characteristics influence the nature and types of transnational ties among African International Students in Peterborough? 4) To what extent do transnational ties influence international students' settlement needs? Considering the objective dimension of these questions, the question is, what is the best approach to proceed with this research on transnationalism and newcomers' settlement process in Canada: a case study of African International Students in Peterborough while minimizing both actual and perceived biases, and simultaneously acknowledging human agency and maintaining intellectual rigor? This chapter discusses the methodologies and approaches used in the study to address the research questions. The chapter comprises the research design, sample size, sampling techniques, data collection strategies and data analysis for this study.

3.1 Research Design

This study used quantitative methods to address the research questions and to achieve the research objectives. According to Burns & Grove (2010), quantitative research follows a formal, objective, rigorous, and deductive approach with systematic strategies to generate and refine knowledge for problem-solving. Considering the nature of this study which aims to investigate the settlement experiences of African International Students and their transnational

ties, it would have been prudent to use the mixed-method research approach to allow these students to share their lived experiences and offer a vivid description of the experiences of the sample population. However, much qualitative research has been conducted on the topic (Akanwa, 2015; 2021; Brar-Josan, 2015; Campbell et al., 2016; Caxaj et al., 2010; Gargano, 2009; Mensah & Williams, 2013) and this quantitative research illuminates our understanding of the findings explored by literature that adopted qualitative methods.

The quantitative approach generated evidence-based data that improved comprehension of the relationships between the settlement experiences of international students in Canada and the level of transnational activities among these students. The quantitative method made it possible to identify the settlement needs and challenges of African international students in Peterborough, the types and nature of transnational activities these students engage in, and the influence of socio-demographic characteristics on the ties these students maintained with their homeland, as well as the influence the ties these students maintained with their homeland have on their settlement in Peterborough, Canada.

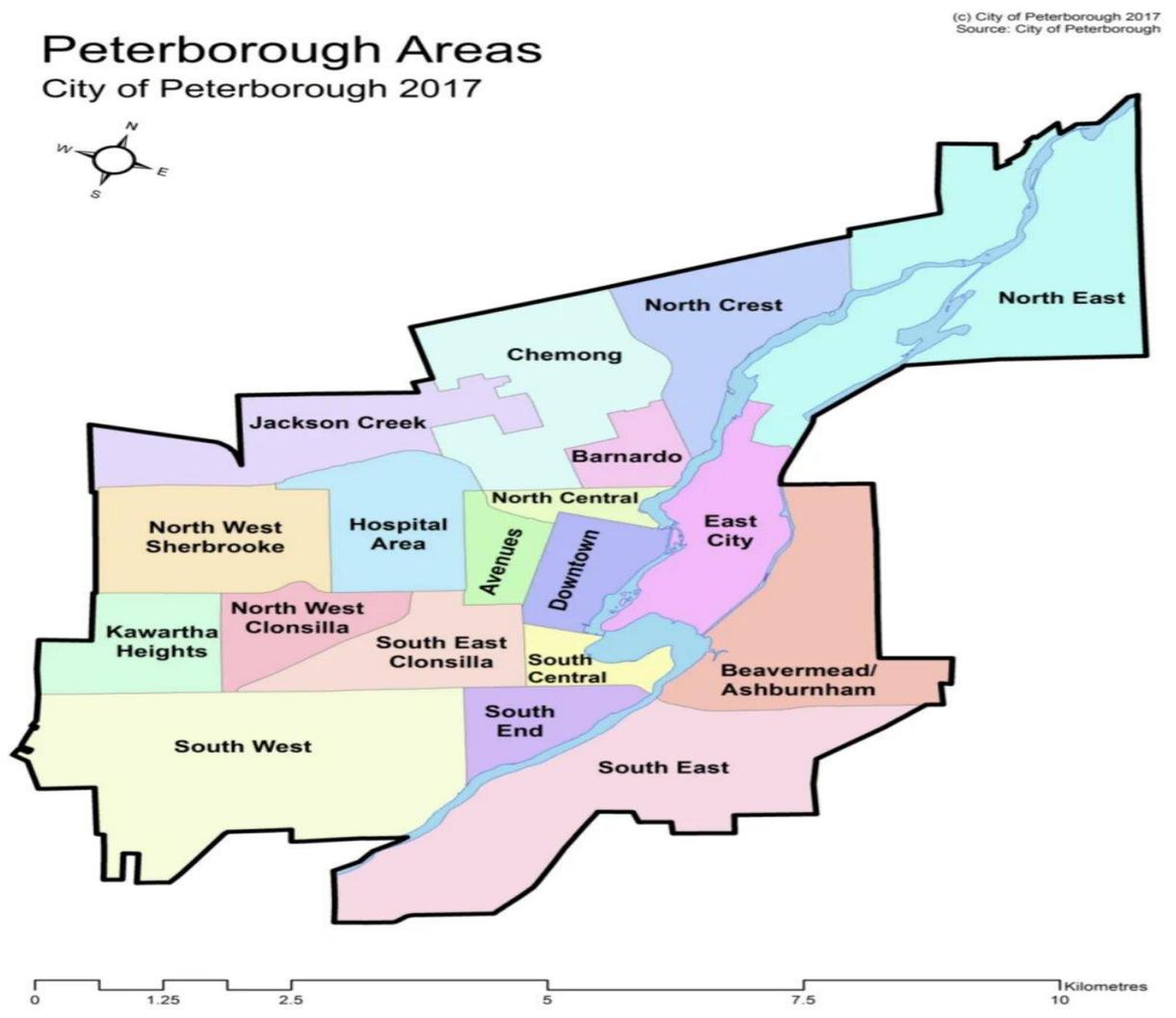
3.2 The Study Location: Peterborough

The study location is Peterborough, which is part of the Kawartha Lakes region in Central Ontario. Peterborough is well-known for its Indigenous heritage. Trent University and Fleming College are two postsecondary educational institutions in the city. In the past years, the city has recorded a high population of international students due to Canada's immigration policies that have encouraged international students from all over the world to choose the country as their study destination. Trent University is a liberal arts and science-focused postsecondary institution, while Fleming College contributes to arts, sciences, technology, and the business community by preparing students for the labour market.

Trent University's main campus, Symons Campus, and Fleming College's main campus, Sutherland Campus, were the focus of this research project because these campuses

are located in Peterborough. Approximately 2,799 International students from 80 different countries were enrolled at Trent University as of 2023/2024 (Trent University, 2024). Fleming College has approximately 3,225 International students (Fleming College, 2024).

Figure 3.1 A map of Peterborough.



3.3 Rationale for Study Area

Peterborough, Ontario is a mid-sized city in Central Ontario. The city is renowned for its rich cultural diversity and hospitable environment. The city has had a consistent stream of immigrants, including skilled migrants, refugees, and international students which has contributed to its diverse community, according to the most recent census data (Statistics

Canada, 2022). Studying the experiences of international students, especially those from Africa as they settle in the city is essential, considering the demographic growth of the city. Trent University and Fleming College have contributed to Peterborough's economy and identity.

Peterborough's increase in international student population makes it a useful site to investigate experiences of immigrants in this city. This will help design and tailor support services that will facilitate the settlement of this population. The city's numerous community, and cultural organizations, as well as local government require evidence-based data to inform projects and policies that aim to help immigrants settle and integrate into the community. Again, examining the transnational ties and settlement of AIS in the city offers in-depth information to community organizations, educational institutions, and policymakers. The creation of focused policies and initiatives that improve the settlement experiences for international students can be influenced by an understanding of the unique challenges of these students and the resources available to support them.

The city provides an opportunity for targeted research focusing on the small size and clearly defined community structures. The readiness and accessibility of institutional data from Trent University and Fleming College also influenced the choice of the city as a study area. This allowed for a strong partnership that allowed access to the institutions' databases and facilitated the research process.

3.4 The Study Population, Sample and Sampling, Data Collection Procedure

The Study Population: The target population was African International Students currently studying at Trent University and Fleming College. These two post-secondary educational institutions in Peterborough have a large African student population. The number of African International Students in these two institutions, who live or have lived in the Peterborough community is estimated to be 6,024 (Trent International, 2024; Fleming

International, 2024). The international student population at Trent University and Fleming College is not homogenous. The study population in these two institutions is diverse in terms of age, sex/gender, race, ethnicity, religion, nationality, academic levels, and programs of study.

Study Sample: This study predominantly relied on primary data sourced from the international student body at Trent University and Fleming College. From the estimated target population of 6,024, a sample of 351 was derived from the survey. Therefore, the sample size for this study is 351 ($n=351$), which is somehow considered small. The study ought to have relied on a large sample size to generate and boost the statistical power of the study's findings (Suresh et al, 2012; Jackson, 2003; Myers et al, 2014). The large sample also lowered the margin of sampling error and enabled more precise results of the findings to be reported (Myers et al, 2014).

Considering the target population of 6024, a power analysis was performed before deciding on the sample size. A G*power statistical software was used to determine a sufficient sample size that can be used to establish statistically significant relationships among variables in the study. A chi-square test was employed in the sample size calculation since most of the survey data were categorical. The G*power results proved that a sample size of 351 was above the minimum sample size required to generate a power of 0.852, at a significance level (α) of 0.05 (95% Confidence Interval). Therefore, a sample size of 351 has sufficient power to establish a statistically significant relationship between variables in the study and draw conclusions.

Sampling Technique: Developing a sampling frame for a study of African International Students in Peterborough was challenging due to the diverse and varied nature of the international student population across the two institutions. For research like this, the ideal sampling technique should have been probability sampling, a typical example being random

sampling. However, considering the difficulty in obtaining a reliable sample frame from the population, it was impossible to perform proper randomization. Therefore, the researcher opted for a non-probability sampling technique (convenience sampling). This sampling technique does not make it possible to generalize inferences from the sample due to its lack of statistical representativeness of the population the sample was selected from (Mensah & Owusu Ansah, 2022). A convenience sampling technique was used to select students from the larger population. This allowed the researcher to easily access the students who were readily available and willing to participate in the study, considering the timeline of the study, the resources available, and the diversity of the study population. The researcher again considered the cost-effectiveness of this sampling technique. Compared to other sampling techniques, convenience sampling was easy to use to conduct a pilot study to test the research instrument and the online survey procedures to identify and address potential issues before the researcher conducted the main studies.

The International students' database of Trent University and Fleming College was depended on for the recruitment of the research participants. For this study, the sample only included African International Students who live or have lived in the Peterborough community. This criterion was explicitly stated in the initial recruitment email distributed by international student offices of Trent University and Fleming College to student email addresses within these institutions.

A survey questionnaire was designed to explore the settlement needs and experiences of African International Students, the nature and types of transnational ties they maintain with their homeland while in school, and the impact of these transnational activities in facilitating their settlement needs in Peterborough, Canada.

The nature of the questionnaire: The first section of the questionnaire asks demographic characteristics of respondents (i.e., age, gender, nationality, academic level,

period of stay in Canada, year of arrival in Canada, and academic institution) to gather basic information about respondents. The second section of the questionnaire asks respondents about their settlement needs and experiences of living in Peterborough, Canada.

The second section reflected these variables; housing, employment, healthcare, food insecurity, clothing and safety/security. The third section of the questionnaire asks about the types and nature of transnational activities respondents engage in. The fourth section asks about the influence of transnational ties on the settlement process of respondents. The indicators that were assigned to each variable in the research instrument were closed-ended questions with a 5-point Likert scale. This helped the researcher to collect structured and quantifiable data that was easily summarized and analyzed statistically. It is important to note that the variables from the second section (settlement experience), the third section (transnational ties with homeland) and the fourth section (transnational ties and settlement) were captured to reflect the existing literature (Firang, 2011; Worae, 2011).

The questionnaire was first prepared using Microsoft Word and later designed using Qualtrics, an online survey software. An online survey of African International Students at Trent University and Fleming College was conducted. The online survey was easily accessible and allowed international students to participate in the study at any time and location due to its compatibility with smartphones and personal computers.

A pilot study was first conducted using six students from Trent University and Fleming College. The goal of the pilot study was to assess the clarity, comprehensibility, and appropriateness of the research instrument. Also, the pilot study was to ensure that the Qualtrics software has been programmed to meet the anonymous standard of the study. The number of students for the pilot study was agreed collaboratively by the researcher and the advisor. The researcher critically selected students who were friends and had initial contacts, to reflect varying nationalities, institutions, academic levels, genders, and ages. Before the

commencement of the pilot study, ten African International Students were informed via email about the objective of the pilot study and were requested to provide their consent to participate, six students out of this number duly granted their consent. A preview link to the survey was generated by the Qualtrics software and sent to these students via email. Based on the suggestions and comments from the students who volunteered in the pilot study, minor changes were made to the original questionnaire, the Qualtrics software was reprogrammed to avoid recording participants' IP addresses, geographical location and other identifying information.

The recruitment of participants began on February 15, 2024. The assistance of the international student offices of both Trent University and Fleming College was required in facilitating the recruitment of African International Students from these institutions to participate in this research. Initially, the researcher reached out to the international student offices of both institutions via email, seeking their support in contacting African International Students to recruit voluntary participants for the study. The offices consented to forwarding the initial email to international students upon ethics approval. Though an ethics application was submitted to Trent University, Fleming College also required a separate ethics application by the researcher. Subsequently, after obtaining ethics approval from Trent University and Fleming College Research Ethics Boards, the international students' offices were furnished with the initial recruitment email announcement that contained the survey link via email, which they then distributed to all Trent University and Fleming College International students. Since these institutions did not have a separate database for African International Students, a filter or qualifying question was set as the first question in the Qualtrics software. The purpose of the qualifying question was to ensure that only African International Students filled out the questionnaire to help eliminate or minimize potential confounding factors that could affect the study's validity or outcome.

The initial recruitment email for international students outlined the purpose of the study. Those students who were interested in participating and met the inclusion criteria in the initial email accessed the next page for further details by clicking the link provided in the email. The email addresses were obtained from the international students' databases of Trent University and Fleming College. The first page that opens after clicking the link contains the qualifying question. The informed consent letter was opened for students who answered "yes" to the qualifying question. After students read the informed consent and click on "I agree to participate in this research" the software records that they have provided their informed consent and directs them to a webpage that has the actual survey questions. Once respondents have completed answering the questions they choose to respond to, they click the submit button, which records their responses in the Qualtrics system for analysis purposes.

The initial recruitment email was sent by the international student offices during [February 15, 2024], with a subsequent follow-up email sent three weeks thereafter. Thus, data collection occurred at two different times. The survey remained accessible from February 15, 2024 to March 26, 2024 spanning a duration of six weeks. Overall, the survey recorded responses from a total of 376 African International Students enrolled at Trent University and Fleming College before the survey was made inaccessible on [March 26, 2024]. Out of the 376 responses recorded, 21 respondents indicated that they are not African International Students, and therefore clicked "no" to the qualifying question. Four respondents proceeded to the informed consent letter, however, did not agree to the consent form. A total of 351 respondents partially or completely filled the survey questionnaire and this number was used for the data analysis. Both complete and partial responses were used for the data analysis. The missing data for each variable analyzed was highlighted in the specific table (see Chapter 4).

Methods of data analysis: The data analysis employed SPSS software and the R statistical package for the multivariate analysis. The raw data from the survey was provided by

the Qualtrics software in an SPSS software .sav file and the researcher did not need to do any data entry in the SPSS software and R statistical package. To get the data ready for analysis, the researcher carried out an initial data cleaning using SPSS and R filter codes, depending on the type of analysis to be performed. The questions on the demographic information were multiple choice questions but allowed respondents to choose only one answer, except the question on nationality which allowed respondents to type their nationality. The question on nationality was later recorded from string to numeric using SPSS. The questions on the settlement experiences, transnational ties and the influence of transnational ties on settlement were in close-ended statements that required respondents to rate them. The data was analyzed using univariate, bivariate, and multivariate statistical techniques.

Univariate statistical analysis is a type of descriptive statistics that analyzes single variables in a dataset (Park, 2015). Univariate data analysis techniques including frequencies, percentages, means and standard deviations were used to describe the characteristics of the single variable dataset. The univariate technique was used to analyze the demographic variables (independent variables), the dependent variables from the second section (settlement needs and experiences) and the third section (transnational ties with the homeland). This technique addressed the first, second and part of the third research questions.

Bivariate analysis which is an inferential statistics technique which is used to study the overlapping relationships between two variables (Chatfield, 2018) was used to study the relationships between sociodemographic characteristics and transnational activities in the study. Out of the thirteen (13) transnational activities, six (6) key activities were considered for the bi-variate analysis. The goal was to investigate whether socio-demographic characteristics have a relationship with engagement in transnational activities. Cross-tabulation was used to determine the relationship between the socio-demographic characteristics and the selected transnational activities. A Pearson's chi-square test (with significance level of 0.05) was used

to determine the statistical significance of these relationships. This technique was used to address research question two which investigates the relationship between socio-demographic characteristics and transnational ties.

Multivariate analysis which studies the statistical relationships between more than two variables and makes predictions (Byrne, 2007) was also adopted to determine the statistical associations which exist between transnational activities and settlement needs. To answer research question four, “To what extent do transnational ties influence African International Students' settlement process”, a Multivariate Ordinal Logistic Regression (MOLR) was used to build six (6) different MOLR models. The purpose of these models was to establish statistically significant associations between transnational activities and settlement needs and predict the extent to which these transnational activities impact the perceived influence of transnational ties on settlement needs. According to Thomas et al. (2011), ordinal logistic regression (OLR) is an appropriate analysis technique for dependent variables that are categorical and also ordinal. OLR is the suitable method used when the response variable (dependent variable) is ordinal (Liang & Zhan, 2020) and also enables prognostic factors and covariates to be included (Walters et al., 2008).

The MOLR was a preferred technique to Univariate Ordinal Logistic Regression (UOLR) for the models because the researcher decided to combine twelve (12) predictor variables (independent) to predict each selected response variable. The response variables were developed from a question on the perception of the influence of transnational activities on settlement needs. This identification and selection of these response variables yielded six (6) models. All the six dependent variables that yielded the six (models) have been described in Chapter 4 (See table 4.7).

The twelve predictor variables included in each model were selected from the transnational activities and have been described in Chapter 4 (See Table 4.7).

The general model equation is below:

$$\log(P(Y \leq j)/P(Y > j)) = \alpha_j + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k$$

where:

- Y is the ordinal response (dependent) variable.
- X_1, X_2, \dots, X_k are the predictor (independent) variables.
- α_j are the threshold (or cut-off) parameters for each level j of the ordinal response.
- $\beta_1, \beta_2, \dots, \beta_k$ are the coefficients (estimates) for the predictor variables.

R statistical package codes were used to build all six models. The specific model equation for each of the six (6) models, the dependent and independent variables is explicitly discussed in Chapter 4.

3.5 Ethical Considerations: Ethical considerations are fundamental to all types of research, with studies involving human participants necessitating heightened attention. With this study, maintaining anonymity, confidentiality, and securing informed consent were paramount to the researcher. Before engaging with the survey questions, participants were provided comprehensive information regarding the study's objectives, ensuring clarity regarding the handling of the privacy of data and their personal information. The participants were reassured of the anonymity and confidentiality of this study. The survey was conducted exclusively in English throughout all phases of its administration. Prospective participants were explicitly informed of the voluntary nature of their involvement, emphasizing their right to withdraw at any point and the option to refrain from answering any questions.

There was no significant risk involved in this study. However, the researcher assured participants of the anticipated minimal risk associated with their participation in this study. The anticipated risk was psychological risk (feeling worried or upset as a result of responding to questions about potentially precarious living situations/conditions). The anonymity and

confidentiality of this study ensured that this risk was mitigated and the anticipated risk involved was also outlined to participants in the informed consent letter. No form of compensation was offered to participants for their involvement in the study. In this study, transparency was upheld throughout all levels of the research process. There was clear and comprehensive information regarding the purpose, procedures and potential implications of the study provided to participants in the initial recruitment email and on the informed consent form. The researcher designed the survey instrument to be straightforward and non-leading. This aimed at eliciting genuine responses from participants. There were no instances of deception. Ethical considerations were thoroughly addressed to ensure the integrity and trustworthiness of the study.

The survey questions were deliberately designed to abstain from soliciting respondents' names or any potentially identifying information. The survey data is completely anonymous and is exclusively intended for academic purposes, encompassing this thesis and potentially future journal publications. The survey data will not be shared with any external party. Additionally, the international student offices of Trent University and Fleming College will be furnished with a copy of this data. The data is stored on the researcher's password-protected computer, with access given to only the advisor. As per the ethical approval conditions of the Trent University and Fleming College Research Ethics Boards, the raw data will permanently be deleted 5 years after the completion of this Thesis.

3.6 Limitations

The most evident limitation the researcher encountered during the recruitment process was the unwillingness of some participants to respond to the anonymous email since individuals in the targeted population were unknown. It was likely individuals did not see the emails or opened the emails. It is also assumed that some students saw the initial recruitment email but refused to engage in the study. This delayed the participant recruitment process and

data collection. However, the number of participants and the responses recorded in the Qualtrics software increased after sending the reminder email in the third week of the recruitment process.

3.7 Positionality Statement

As a racialized temporary migrant, I acknowledge that I am a visitor and temporary settler on the lands of the indigenous people of Canada. I respectfully acknowledge that I am on the traditional territory of the Mississauga Anishinaabeg. I offer my gratitude to the First Nations for their care for, and teachings about, our earth and our relations. May we honour those teachings. I appreciate the ancestors, elders, and people of Nogojiwanong, for offering me the lands, waters, air of Peterborough to live and harmonise with nature while I conduct my research in global migration.

My research focusing on transnationalism and the integration process of African International Students in Peterborough was inspired by my interaction with some international students in Ontario. This gave me insights about issues international students in general face in Canada. International students are part of Canada's "education-migration nexus," and immigration policies aim to keep us in the country as "skilled" immigrants after graduation. As a researcher my life experiences in a developing country (Ghana) influenced the formation of my understanding of the world. I believe in humanitarianism, multiculturalism, tolerance, diversity and inclusivity and these are principles that strengthen and empower communities towards sustainable development. Based on my understanding of the world, I was wondering about how students from diverse socio-cultural orientations can integrate into a new western economic and socio-cultural environment, coexist in communities and promote development. The immigration policies become a failed investment without a successful integration of these students. This directed my path to the research.

I hold a bachelor's degree in mathematics, and I am always motivated to use my experiences as a student and community leader to impact communities. Working as a research assistant at the Ministry of Information, Ghana, I embarked on collaborative and community-based projects seeking to understand the challenges of communities and proposing recommendations which informed government policy directions. My belief in community capacity building as a tool for community development and sustainable world motivates me to volunteer in communities to offer my services and impart knowledge. I interned in some high schools in Ghana as a mathematics tutor during my undergraduate studies in the University of Cape Coast.

My academic background in the physical sciences, specifically mathematics has no connection to migration studies which relates to my study. However, this influences my worldview as a positivist and this research paradigm guided me throughout my studies. I have not conducted or been part of a group which conducted social science research. Throughout my professional experience in the corporate world, I have not engaged any NGO, agency or institution responsible for migration or migrant affairs. Again, I have had my research experiences both academic and professional in the Global South which has varying systemic structures, culture, societal beliefs and norms from that of the Global North. For these reasons, I remain an outsider conducting research on Global Migration in Canada. On the other side, my study seeking to investigate issues among international students in Peterborough situates me as an insider since I have already created connections with the domain of participants to be studied for my research, as an international student residing in Peterborough. My position for the purposes of this study remains both an insider and outsider to the research and participants.

This study's purpose is to unleash accurate findings and recommendations appropriately to solve economic and socio-cultural problems. My insider position in the research will not influence the data or findings of the research negatively, but rather direct my

focus to the specific issues in the study which will inform the choice of my specific objectives and research questions. My insider position will again enhance my data collection due to my existing connection with the participants of the study. I have carefully chosen the quantitative approach as the methodology for the research considering my outsider position in the research and survey questionnaire as a specific method or tool for my data collection. The research will be objective using quantitative research which depends on survey numerical data. I will rely on my knowledge of mathematics and statistics to give a clear interpretation of the analysis in the study for easy understanding and generalisation of facts by other researchers and audiences. Throughout the research, my reflections on my position will not influence the outcome or lead to bias.

In reflecting on my positionality as a racialized temporary migrant conducting research in Canada, I recognize both my insider and outsider perspectives. As an African International Student, I share lived experiences with my research participants, granting me unique insights into the challenges they face in the settlement process. However, I was guided by my insider position and designed the survey questions based on existing literature and not my personal experiences. This step allowed me to collect authentic data. Also, to minimize potential sampling bias, particularly the possibility that participants from Ghana might feel influenced to participate due to familiarity, I took specific steps to anonymize the administration of the questionnaire. This ensured that responses were not shaped by any perceived personal connection, reducing the risk of favoritism and promoting more objective findings. Balancing my insider position with an outsider's objectivity in data analysis, I was committed to producing accurate, unbiased results. By employing quantitative methods, I aimed to ensure the integrity of the research, informed by my background in mathematics and statistics, while providing valuable insights that can inform policies affecting African International Students.

CHAPTER FOUR
RESULTS AND DISCUSSION

4.0 Introduction

This chapter of the study discusses the data collected from survey questionnaire respondents. Starting with socio-demographic data (see Table 4.1), the chapter also analyzes data to address the four main research objectives and research questions: (1) the level of settlement needs and experiences of African International Students in Peterborough, Canada; (2) the nature and types of transnational ties of African International Students in Peterborough; (3) the influence of socio-demographic characteristics on transnational activities of African International Students in Peterborough; and (4) the influence of transnational ties on African International Students' settlement needs.

Table 4.1 Demographic information of respondents

Age	Responses (N)	Percent (%)
Less than 20 years	54	15.4
21 – 25 years	100	28.5
26 – 30 years	122	34.8
31 – 35 years	35	10.0
Above 35	22	6.3
No Response	18	5.1
Total	351	100.0

Nationality	Responses (N)	Percent (%)
Botswana	1	0.3
Cameroon	2	0.6
Egypt	9	2.6
Gambia	1	0.3
Ghana	109	31.1
Guinea	1	0.3
Ivory Coast	4	1.1
Kenya	9	2.6
Lesotho	1	0.3
Malawi	1	0.3
Mali	1	0.3
Morocco	2	0.6
Nigeria	137	39.0
Nigerian	1	0.3
Rwanda	2	0.6
Senegal	4	1.1

Somalia	2	0.6
South Africa	4	1.1
Sudan	2	0.6
Uganda	30	8.5
Zambia	1	0.3
Total	351	100.0

Gender	Responses (N)	Percent (%)
Male	130	37.0
Female	204	58.1
Other	0	0.0
Prefer not to answer	2	0.6
No Response	15	4.3
Total	351	100.0

Period of stay in Canada	Responses (N)	Percent (%)
<2	188	53.6
2-5	70	19.9
Above 5	76	21.7
No Response	17	4.8
Total	351	100.0

Year of arrival	Responses (N)	Percent (%)
Before 2015	22	6.3
2015-2020	29	8.3
After 2020	282	80.3
No Response	18	5.1
Total	351	100.0

Academic institution	Responses (N)	Percent (%)
Trent University	215	61.3
Fleming College	119	33.9
No Response	17	4.8
Total	351	100.0

Academic level of study	Responses (N)	Percent (%)
Undergraduate	173	49.3
Postgraduate	77	21.9
Graduate Studies	84	23.9
Postdoctoral	2	0.6
No Response	15	4.3
Total	351	100.0

Source: Primary Questionnaire Survey

The ages of the respondents fall within 21 to 30 years, constituting approximately 63.3% of the total sample. This finding is in collaboration with previous studies (Waters et al., 2011). Waters et al. (2011) suggest that young individuals often pursue higher education opportunities abroad because these younger students perceive education overseas as personal reinvention. The high presence of respondents aged 26 to 30 years (34.8%) indicates that a

significant number of African International Students may be at the advanced phases of their academic pursuits. Also, the fact that (15.4%) of the respondents are under the age of 20 emphasizes the varied composition of the African International Student community in Peterborough.

Females represented most of the respondents (58.1%) compared to the male respondents (37.0%). It is important to note that, some respondents (0.6%) selecting “prefer not to answer” to the gender question highlights how traditional gender binary classifications fall short of accurately representing research findings. Hence it is crucial to use an inclusive methodology in research to respect and acknowledge people's self-identified gender identities.

The survey found that the majority of African International Students in Peterborough were relatively recent immigrants. Few respondents arrived in Canada for their studies prior to 2015 (6.3%) and (8.3%) arrived between 2015 and 2020. The majority of respondents (80.3%) arrived in Canada after 2020. This supports data from Statistics Canada (2022) and Buckner et al. (2022) that many international students arrived in Canada for their studies post Covid-19 pandemic. During the period of the survey (February 2024), the majority of respondents (53.6%) were in Canada for less than two years, (21.7%) had resided in Canada for longer than five years and (19.9%) had lived in Canada for a duration between two and five years. This indicates a relatively short duration of residence for most respondents suggesting that most of African International Students in Peterborough are relatively new arrivals (Statistics Canada, 2022; Strielkowski, 2022).

Trent University emerged as the predominant academic institution with (61.3%) of respondents, followed by Fleming College with 33.9%. The concentration of African International Students in Trent University could be attributed to various factors such as academic programs offered, reputation, and specific initiatives targeting international student recruitment.

Almost half of the participants were in an undergraduate program (49.3%), with the remainder in graduate or postgraduate programs. The smaller portion of respondents pursuing PhD programs could be associated with the limited number of PhD programs at Trent University and also Canadian Colleges not allowed to offer graduate programs.

4.1 Settlement Needs and Experiences of African International Students in Peterborough

One of the research objectives and questions raised in this study is to investigate the settlement needs and experiences of African Students in Peterborough. Using data gathered from a sample of Trent University and Fleming College students to address this research question, it was discovered that African International Students in Peterborough require essential needs to successfully adapt and settle in their new environment. The respondents also shared varying experiences on the needs that were highlighted. From the survey questionnaire data gathered from Trent University and Fleming College students, several critical settlement needs were identified among African International Students. These settlement needs are housing, employment, healthcare, food, clothing, and safety/security. The settlement needs were measured using a 5-point Likert scale with 1 = Very Unimportant, 2 = Unimportant, 3 = Neutral, 4 = Important, and 5 = Very Important. Also, AIS experiences of these settlement needs were analyzed to shed insight on their settlement experience in the Peterborough community. The settlement experiences were measured using a 5-point Likert scale where 1 = Not a good experience, 2 = Neutral, 3 = Somehow good experience, 4 = A good experience, and 5 = A very good experience. Both the settlement needs and AIS experiences with these needs are reported and discussed below (see Table 4.2.1 and Table 4.2.2).

Table 4.2.1 shows the settlement needs and experiences of African International Students in Peterborough.

Settlement Needs	1 # (%)	2 # (%)	3 # (%)	4 # (%)	5 # (%)
Housing	13 (3.7)	2 (0.6)	8 (2.3)	51 (14.5)	254 (72.4)
Employment	9 (2.6)	3 (0.9)	15 (4.3)	52 (14.8)	250 (71.2)
Healthcare	11 (3.1)	4 (1.1)	22 (6.3)	62 (17.7)	228 (65.0)
Food	8 (2.3)	4 (1.1)	15 (4.3)	152 (43.3)	149 (42.5)
Clothing	13 (3.7)	13 (3.7)	35 (10.0)	188 (53.6)	80 (22.8)
Safety/Security	11 (3.1)	5 (1.4)	21 (6.0)	60 (17.1)	232 (66.1)

Note: 1 = Very Unimportant, 2 = Unimportant, 3 = Neutral, 4 = Important, 5 = Very Important

Source: Survey Questionnaire, Winter 2024

Table 4.2.2 shows the experiences of African International Students in Peterborough on the selected settlement needs.

Experiences	1 # (%)	2 # (%)	3 # (%)	4 # (%)	5 # (%)
Housing	169 (48.1)	32 (9.1)	61 (17.4)	40 (11.4)	25 (7.1)
Employment	228 (65.0)	33 (9.4)	34 (9.7)	16 (4.6)	17 (4.8)
Healthcare	40 (11.4)	75(21.4)	53 (15.1)	127 (36.2)	29 (8.3)
Food	12 (3.4)	46 (13.1)	161 (45.9)	82 (23.4)	22 (6.3)
Clothing	8 (2.3)	68 (19.4)	153 (43.6)	80 (22.8)	16 (4.6)
Safety/Security	8 (2.3)	32 (9.1)	41 (11.7)	89 (25.4)	152 (43.3)

Note: 1= Not a good experience, 2 = Neutral, 3 = Somehow good experience, 4 = A good experience, 5 = A very good experience

Housing: As shown in Table 4.2.1, a significant number of respondents (86.9%) indicated that housing was either important or very important for their settlement process. Adequate housing plays a fundamental role in settling international students into their new environment (Ager & Strang, 2008; Flatau et al., 2015). Despite the important role of housing in settlement processes, the majority of respondents (48.1%) rated their housing experience as not good, indicating a critical challenge in this area (see Table 4.2.2). This data supports the findings of (Akanwa, 2015; Calder et al., 2016; Pottie-Sherman et al., 2024; Zhou & Zhang, 2014) and highlights the housing challenges faced by international students, including issues such as affordability and accessibility. Pottie-Sherman et al. (2024) explored that prices of houses in Canada have skyrocketed after the COVID-19 pandemic, making international students arriving in the country struggle to afford housing. These issues have made housing a serious settlement need for immigrants arriving in Canadian communities after Covid-19 posing a critical challenge to these new arrivals López Salinas & Teixeira (2022).

Employment: Similarly, employment also evolved as a crucial settlement need, with (90%) of respondents considering it important or very important (See Table 4.2.1). However, a significant proportion of respondents (65.0%) expressed dissatisfaction with their employment experience in Peterborough (See Table 4.2.2). This resonates with previous research by Scott et al. (2015) emphasizing the employment barriers encountered by international students, including limited job prospects, unfamiliarity with local labour markets, non-utilization of skills and education from home their country, etc. This finding reflects the economic aspirations and practical challenges faced by international students in securing part-time work or internships to support themselves financially during their studies. This situation is associated with factors ranging from; poor connectedness to host communities, language barriers, and perceived employer discrimination against international students.

International students in Canada again struggle to secure a job after graduating from varying programs in Canadian Universities and Colleges (Creese & Wiebe, 2012). Both Creese & Wiebe (2012) and Popadiuk & Arthur explored that employers in Canada require international students to have Canadian experience before they are hired, though these students had their education and training in Canadian higher education institutions. Majority of International students do not have the required Canadian work experience as they are new to the country and spent their initial years in the country studying in various academic institutions.

International students also struggle to secure jobs that align with their academic and professional backgrounds from their home countries (Chwialkowska, 2020). This discrepancy not only poses a settlement challenge for these students but also contributes to feelings of underutilization and frustration among international students attempting to leverage their expertise in the Canadian labor market (Esses et al., 2014; Rashid, 2009).

Healthcare: Healthcare services were deemed important or very important by (82.7%) of respondents, highlighting the essential role of access to quality healthcare in ensuring the well-being of international students (See Table 4.2.1). Majority of the respondents (44.5%) have had a good or very good experience with healthcare services in Peterborough (See Table 4.2.2).

This suggests a lack of clarity or familiarity with the healthcare system, indicating a potential settlement need in terms of health literacy and supports the findings of (Dastjerdi et al., 2012). Dastjerdi et al. (2012) through their investigation discovered that “tackling the stumbling blocks of access” was the key challenge for many immigrants in Canada trying to utilize healthcare services which corroborate with the findings of this study.

The findings also highlight a potential gap between academic institutional support services and the Government support services on health and suggest a need for improved assistance mechanisms from the Government of Canada to ensure that international students

are adequately covered for healthcare expenses. This finding is consistent with the findings of (Asanin & Wilson, 2008; Garasia et al., 2023; Lane, et al., 2021; Woodgate et al., 2017).

Food: The significance of food as a settlement need was also reported by (85.8%) of respondents who considered it important or very important as shown in Table 4.2. Majority of the respondents (45.9%) reported having some experience with food. A less proportion of respondents (23%) indicated that they have had a good experience with food needs. This indicates that a whopping majority of these students may be struggling to meet their food needs. This supports the findings of Afulani et al. (2018) who discovered that international students encounter challenges in meeting their food needs. Also, Worae (2011) determined that managing daily expenses put international students in critical financial situations making it difficult for them to diversify their meal plans.

Clothing: While clothing ranked slightly lower in perceived importance compared to other needs, a majority of respondents (76.4%) still considered it important or very important (See Table 4.2.1). Despite a majority of respondents considering clothing as an important need, only a small proportion (22.8%) indicated that they have had a good experience with this need while only (4.6%) indicated having a very good experience (See Table 4.2.2).

Safety/Security: As highlighted by Table 4.2.1 and Table 4.2.2, safety and security emerged as paramount concerns for international students, with 83.2% of respondents considering it important or very important. A safe environment is essential for fostering a sense of belonging and well-being among newcomers, particularly in unfamiliar communities (Brar-Josan, 2015; Campbell et al., 2016; Caxaj et al., 2010). Notably, safety and security needs emerged as the most positively rated aspect of the settlement, with (68.7%) of respondents indicating a good or very good experience.

4.2 What are the Nature and Types of Transnational Ties of African International Students in Peterborough, Canada?

The purpose of the second research question was to investigate the nature and types of transnational ties African International Students maintain with their home country. Before addressing this research question, the researcher first investigated the factors that influence African International Students to travel to Canada for their education by using a 5-point Likert scale with 1 = Very Unimportant, 2 = Unimportant, 3 = Neutral, 4 = Important, and 5 = Very Important (see Table 4.3). The researcher then moved to address the main research question. This was also measured by using a 5-point Likert scale with 1 = Very Unimportant, 2 = Unimportant, 3 = Neutral, 4 = Important, 5 = Very Important (see Table 4.4). The survey results have been reported and discussed in Table 4.3 and Table 4.4 below.

Table 4.3 shows the factors that influence African International Students' decision to travel to Canada.

Factors/Reasons	1 # (%)	2 # (%)	3 # (%)	4 # (%)	5 # (%)
Relatives/friends in Canada	30 (8.5)	25 (7.1)	31 (8.8)	172 (49.0)	68 (19.4)
Seeking a better future for my children	11 (3.1)	11 (3.1)	30 (8.5)	58 (16.5)	217 (61.8)
Better income/more suitable job opportunities	4 (1.1)	0 (0.0)	21 (6.0)	88 (25.1)	214 (61.0)
Seeking new opportunity	2 (0.6)	0 (0.0)	15 (4.3)	166 (47.3)	143 (40.7)
Quality of education	2 (0.6)	0 (0.0)	9 (2.6)	75 (21.4)	240 (68.4)
Cultural diversity and exposure	4 (1.1)	19 (5.4)	51 (14.5)	168 (47.9)	82 (23.4)
Opportunities for post-graduation work	3 (0.9)	0 (0.0)	13 (3.7)	81 (23.1)	226 (64.4)
Access to research opportunities	2 (0.6)	8 (2.3)	30 (8.5)	176 (50.1)	110 (31.3)
Quality of life and safety	1 (0.3)	5 (1.4)	16 (4.6)	73 (20.8)	231 (65.8)

Note: 1 = Very Unimportant, 2 = Unimportant, 3 = Neutral, 4 = Important, and 5 = Very Important Source: Survey Questionnaire

4.2.1 Factors influencing African International Students' Decision to pursue Education in Canada

Table 4.3 reveals diverse factors that influenced African International Students' decisions to travel from their home countries to pursue education in Canada. Among these reasons, seeking better income and more suitable job opportunities emerges as the most significant, with (86.1%) of respondents rating it as important or very important. This underscores the economic motivations that drive transnational mobility, highlighting the transnational tie between education and economic advancement. Furthermore, seeking new opportunities (88% rating it as important or very important), quality of education (89.8% rating it as important), opportunities for post-graduation work (87.5% rating it as important or very important), and access to research opportunities (81.4% rating it as important or very important) also emerge as significant factors influencing the decision of respondents to study in Canada. These reasons indicate the importance of academic and career opportunities as transnational ties that shape migration decisions.

Additionally, the desire for a better future for their children (78.3% rating it as important or very important), cultural diversity and exposure (71.3% rating it as important or very important), and quality of life and safety (86.6% rating it as important or very important) highlight the varying nature of transnational ties. These reasons reflect not only personal aspirations but also a desire for socio-cultural enrichment and well-being for African International Students and their families, indicating a broader engagement with the host country beyond purely economic or academic interests. This finding is consistent with (Firang, 2011). Firang (2011) observed that, seeking a better future for children, reuniting with family and friends, better economic opportunities, better education, new opportunities, and quality of life were among the key reasons that motivated Africans to migrate to Canada.

Table 4.4 shows the nature and types of transnational activities African International Students engage in.

	1 = YES #(%)		2 = NO #(%)		
Since coming to Canada have you maintained contact with your homeland?	314 (89.5)		12 (3.4)		
Main Activities and/or Ties with Homeland	1 #(%)	2 #(%)	3 #(%)	4 #(%)	5 #(%)
Keeping in touch with family and friends	2 (0.6)	1 (0.3)	4 (1.1)	50 (14.2)	255 (72.6)
Sending money, items or goods to family/friends	10 (2.8)	23 (6.6)	52 (14.8)	86 (24.5)	141 (40.2)
Travelling to homeland for vacation	17 (4.8)	123 (35.0)	71 (20.2)	58 (16.5)	42 (12.0)
Business investment/ventures	21 (6.0)	107 (30.5)	76 (21.7)	73 (20.8)	34 (9.7)
Attending cultural festivals	34 (9.7)	142 (40.5)	68 (19.4)	52 (14.8)	15 (4.3)
Attending funerals	41 (11.7)	129 (36.8)	79 (22.5)	39 (11.1)	21 (6.0)
Religious activities	32 (9.1)	37 (10.5)	74 (21.1)	143 (40.7)	24 (6.8)
Travelling to the homeland for a job	29 (8.3)	72 (20.5)	74 (21.1)	124 (35.3)	11 (3.1)
Using the native language to communicate with colleagues from the home country	20 (5.7)	29 (8.3)	63 (17.9)	149 (42.5)	52 (14.8)
Eating traditional dishes from the homeland	13 (3.7)	15 (4.3)	49 (14.0)	174 (49.6)	60 (17.1)
Engaging in face-to-face communication	17 (4.8)	23 (6.6)	47 (13.4)	157 (44.7)	69 (19.7)
Attending to caregiving responsibilities (e.g., making arrangements for family care needs, making funeral arrangements)	22 (6.3)	120 (34.2)	79 (22.5)	49 (14.0)	38 (10.8)
Attending medical/dental needs in home country	29 (8.3)	64 (18.2)	55 (15.7)	132 (37.6)	30 (8.5)

Note: 1 = Very Unimportant, 2 = Unimportant, 3 = Neutral, 4 = Important, 5 = Very Important
Source: Survey Questionnaire

4.2.2 The Nature and Types of Transnational Activities African International Students engage in.

As shown in Table 4.4, the majority of respondents (89.5%) report maintaining contact with their homeland since coming to Canada. This indicates the significance of transnational ties among African International Students, indicating a continued connection to their home country despite being away from the homeland. Among the reasons cited for maintaining ties

with their homeland, keeping in touch with family and friends emerges as the most significant, with 86.8% of respondents considering it very important or important. This communicates the centrality of familial and social connections in the transnational experiences of African International Students, indicating a strong emotional attachment to their home communities. This finding corroborates with the findings of Firang (2011). Firang (2011) further indicated that, there are various ways that immigrants keep contact with friends and family in the homeland.

Another significant aspect of transnational ties is the practice of sending money, items, or goods to family and friends in their homeland. Firang (2011) categorized all these practices as remittance. A considerable proportion of respondents (64.7%) consider this very important or important. Firang (2011) discovered that African immigrants in Canada visiting their home country was a common transnational practice. However, the finding from this study is contrary to the findings of Firang (2011) and follows that, unlike other immigrant groups, the majority of African International Students do not consider travelling to the homeland for vacation as important or very important while still maintaining their student status in Canada. It is noteworthy that a small portion of respondents (28.5%) considered travelling to the homeland for vacation as important or very important. This finding supports the findings of Mensah (2008). The author, Mensah, (2008) indicates the high financial burden related to African immigrants travelling back home from Canada. This could be the reason why African International Students do not consider travelling to the homeland for vacation as important or very important, as they are financially handicapped.

Also, the majority of respondents (64.4%) considered engaging in face-to-face communication as important or very important. Engaging in religious activities and eating traditional dishes from the homeland were also considered important or very important by a significant portion of respondents (47.5%) and (66.7%) respectively.

The survey's findings draw attention to the sophisticated nature of social, cultural, economic, and familial connections that exist among African International Students studying in Peterborough. These connections facilitate the maintenance of identity, social networks, and support systems across borders by acting as a crucial link between the experiences of students in Canada and their home countries. Furthermore, the emergence of practices like participating in religious activities, attending cultural festivals, and eating local foods emphasises how crucial it is to preserve culture and identity in cross-border settings.

Table 4.5 shows the method of contacts, frequency of contacts and transactions of respondents to friends and family in their home country.

Method of Contact	With family # (%)	With friends # (%)
Social media (snapchat, WhatsApp, Instagram, Facebook messenger, etc.)	294 (83.8)	268 (76.4)
Telephone calls	138 (39.3)	90 (25.6)
Visits	24 (6.8)	19 (5.4)
Others	1 (0.3)	2 (0.6)
Total	351	351
Frequency of Contact	Ties with family # (%)	Ties with friends # (%)
Never	4 (1.1)	5 (1.4)
Rarely (once a week)	36 (10.3)	82 (23.4)
Regularly (more than once a week)	278 (79.2)	234 (66.7)
(Refused)	5 (1.4)	4 (1.1)
Missing Value	28 (8.0)	26 (7.4)
Total	351 (100.0)	351 (100.0)
Frequency of Transaction	Money # (%)	Items/Material goods # (%)
Never	90 (25.6)	229 (65.2)
Rarely (once a week)	170 (48.4)	59 (16.8)
Regularly (more than once a week)	61 (17.4)	27 (7.7)
(Refused)	4 (1.1)	7 (2.0)
Missing Value	26 (7.4)	29 (8.3)
Total	351 (100.0)	351 (100.0)

Source: Survey Questionnaire

4.2.3 Methods and Frequency of Contacts of African International Students with the Home Country.

As observed in table 4.6, Facebook Messenger, Instagram, Snapchat, WhatsApp, and other social media platforms are the most popular ways to stay in touch with friends and family back home. The vast majority of respondents use social media as their main communication channel (83.8% for family and 76.4% for friends). This illustrates how important digital technology is in enabling cross-border interpersonal ties and fostering transnational connections. This supports the findings of Mensah (2008). Mensah (2008) discovered that, the use of cellphones has increased drastically across African countries and therefore helping immigrants in Canada to communicate with families back home through digital media. Also, 39.3% of respondents maintain contacts with family through telephone calls while 25.6% maintain contacts with friends through the same medium.

According to the survey, a significant percentage of participants keep in regular communication with friends and family back home—79.2% of respondents say they do so with friends, and 66.7% with family. This shows that African International Students studying in Peterborough consistently make an effort to stay in touch with their social networks back home, indicating the importance of preserving interpersonal connections, despite geographic distance. These findings support the findings of scholars (Akbar, 2019; Ban, 2009; Firang, 2011; Firang, 2022; Portes et al, 1999) who observed that immigrants keep constant communication with friends and families back home as a way of maintaining ties with the homeland.

Regarding remittances, most respondents (65.8%) indicated that they have rarely or regularly sent money to their home country. This finding supports the findings of Firang (2011) and Mensah (2008). The principal means by which Ghanaian immigrants in Canada, like their colleagues from other African countries preserve cross-border relationships with their home

country is through remittances (Firang, 2011). Remittances are a means by which immigrants create connections between their host country and their country of origin (Robinson, 2005). However, sending goods/items emerged as an uncommon practice for AIS with 24.5% of respondents indicating that they have rarely or regularly remitted goods/items to their home country. Firang (2011) again observed that African immigrants in Canada send goods and items to their home country, which is a cultural practice and this data is in contrast to the findings of this study.

4.3 Do Sociodemographic Characteristics Impact the Nature and Types of Transnational Activities?

The third research question for this study was do sociodemographic characteristics impact the nature and types of transnational activities? This research question translates to the relationship between sociodemographic characteristics and transnational activities African International Students engage in. To address this research question, I utilized the methodologies employed by Firang (2011) and Mensah (2008) to cross-tabulate six major transnational activities with socio-demographic characteristics. The variables that represented the socio-demographic characteristics include age, sex, period of stay in Canada, year of arrival in Canada and academic institution. Also, the six variables selected for the transnational activities are: (1) keeping in touch with family and friends; (2) sending money, items or goods to family/friends (remittances); (3) visiting homeland for vacation; (4) business investment in the home country; (5) attending cultural festivals; (6) engaging in religious activities. The selection of these key transnational activities (variables) was influenced by existing literature (Firang, 2011; Mensah, 2008).

A Pearson's chi square test with significance level of 0.05 was used to determine the relationship between the socio demographic characteristics and selected transnational activities. A p-value less than 0.05 was considered statistically significant. One socio-demographic characteristic (nationality) was not testable for chi-square because more than 20% of the cells had an expected count of less than 5. This violated the assumption of Pearson's chi-square test. The actual frequencies were used in the chi-square test and have been reported in Table 4.6. Also, the number of respondents for each variable and categories are shown in table 4.6. The chi-square test values are not displayed in Table 4.6 but were used in the discussion. The degrees of freedom and probability values are reported in Table 4.6. Statistically significant associations have been **boldened** (b)

Table 4.6 shows cross tabulation and Pearson's chi square analysis of the impact of sociodemographic characteristics on transnational activities.

Socio-demographic characteristics	Number	Contacts with family/friends	Remittances	Visiting homeland for vacation	Business investment/venture	Attending cultural festivals	Religious activities
Age (in years)	308						
<20	50	98.1	48.0	44.0	36.0	34	50.0
21 – 25	88	95.5	65.6	27.3	29.4	13.7	56.4
26 – 30	117	99.1	85.4	70.4	18.1	11.4	64.1
31 – 35	34	97	75.7	73.7	69.7	30.3	45.5
>35	19	100	79	82.3	79.0	67.4	68.4
<i>probability</i>		0.130	0.000*	0.000*	0.000*	0.000*	0.065
<i>df =16</i>							
Sex	312						
Male	121	96.6	84.7	39.2	42.5	52.5	52.9
Female	189	98.4	83.9	45.4	43.9	43.1	58.3
Prefer not to answer	2	100	100	0.00	0.00	100	0.00
<i>probability</i>		0.836	0.366	0.139	0.144	0.877	0.232
<i>df =8</i>							
Period of stay in Canada (in years)	310						
0-2	173	97.7	45.4	33.5	43.1	68.4	92.6
2-5	69	95.6	81.1	58.4	58.7	64.6	88.2
above 5	68	100	95.6	61.9	63.4	37.2	71.2
<i>probability</i>		0.065	0.000*	0.000*	0.000*	0.000*	0.000*
<i>df =8</i>							

Year of arrival	309						
Before 2015	17	100	100	58.8	47.1	59.6	65.8
2015 - 2020	26	100	80.3	38.4	38.4	88.4	73.2
After 2020	265	97.3	70.1	29.9	33.4	72.3	93.4
<i>probability</i>		0.837	0.044*	0.006*	0.242	0.000*	0.001*
<i>df=8</i>							

Academic Institution	311						
Trent University	201	99.5	75.5	59.1	48.8	74.3	61.2
Fleming College	110	94.6	68.3	53.6	42.3	81.4	73.4
<i>probability</i>		0.077	0.524	0.080	0.615	0.800	0.012*
<i>df=4</i>							

Note: df is the degrees of freedom; probability is the probability value obtained by the variable; ‘*’ indicates the variable with a statistically significant association (p<0.05). Statistically significant associations have been **bolded (b)**.

Source: Survey Questionnaire, Winter 2024.

Age: The chi square analysis in table 4.7 suggested that, there is a statistically significant relationship between age and remittances ($\chi^2 = 49.620$; $df = 16$; $p = 0.000$), visiting homeland for vacation ($\chi^2 = 55.357$; $df = 16$; $p = 0.000$), investing in business in the home country ($\chi^2 = 82.335$; $df = 16$; $p = 0.000$) and attending cultural festivals ($\chi^2 = 48.781$; $df = 16$; $p = 0.000$). The percentage of respondents that engage in these transnational activities at various levels as shown by the cross-tabulations further emphasize the statistically significant associations. These findings imply that different age groups have varying propensities to send money and goods/items to their home country. In comparison to older students who may have more established financial duties to their families back home, younger students may have fewer financial resources and responsibilities. Firang (2011) observed that, due to the increased possibility of older immigrants from Africa having dependents or extended family responsibilities, they are more likely to send money back home and also plan on regular visitations. In comparison to older AIS, younger AIS may have fewer possibilities or resources for travel. It's possible that older students have more ties to their home countries, a stronger desire to get back in touch with family, or the financial resources to support travels. This finding corroborates with Mensah (2008) which also realized that older immigrants have strong bonds in their home country due to years they have lived there. This reason could be associated with the statistically significant relationship between age and visiting homeland for vacation. Additionally, older AIS could have scheduled routines and the leisure to organise and carry out these visits more often.

The statistically significant correlation suggesting that older International students are more inclined to invest in local businesses is in consistency with Brzozowski et al. (2014) which realized that older immigrants have greater financial resources, entrepreneurship experience, and a better grasp of domestic (home country) market potentials. In addition, they

might want to diversify their investments and get ready to return to their own countries in the future.

The absence of a significant correlation between age and keeping contacts with friends and family suggests that age has little impact on how frequently or how intensely one keeps in touch with friends and family. Firang (2011) realized that all age categories maintain ties with their home country which is in consistency with this finding. Keeping in touch with friends and family is a need that is felt by people of all ages. All age groups can maintain relationships with their loved ones regardless of age, especially during an era with the accessibility of contemporary communication technology like social media and messaging apps. Also, age does not impact the engagement in transnational religious activities as reported in table 4.6. A person's religious beliefs and desire for spiritual fulfilment are quite personal and frequently hold true for people of all ages. Rather than age, the motivation for engaging in religious activities is probably derived from cultural customs and personal beliefs.

Sex: The sex of African International Students was the only socio-demographic characteristic that exhibited no statistically significant association with any of the selected transnational activities. As shown in table 4.6, the p-values for all these variables are greater than 0.05 ($p > 0.05$) indicating no statistically significant associations. The lack of a statistically significant correlation suggests that the likelihood of engaging in all the selected transnational activities is the same for male and female students. This finding again corroborates with Firang (2011) which also determined that sex does not influence all these transnational activities except investment in home country. The findings of this study in relation to the influence of sex on investment in the home country departed from the findings of Firang (2011) which realized that more African men migrated to Canada are likely to invest in businesses in their home country.

Remittances are frequently sent because of financial commitments and familial duties, which are not always influenced by a person's gender. Both sexes may be held to the same cultural standards of providing financial support to family members. Also, sex may not have as much of an impact on vacation travel behaviour as personal preferences, financial means, time constraints, and academic calendars. Again, entrepreneurial interest, cash availability, and market opportunity are the main drivers of business investments, and these can be equally pursued by men and women. An individual's inclination to engage in commercial endeavours is not always determined by their sex.

Male and female students do not significantly differ in the frequency of maintaining contacts with family and friends. Emotional ties and the need for social support—neither gender-specific—drive the desire for communication with family and friends, which is basic. Also, engaging in religious activities and practices is very personal, sometimes driven more by spiritual needs and personal beliefs than by a person's gender. It is possible for male and female students to participate in religious activities and have comparable degrees of religious engagement.

Period of stay in Canada: As revealed by the chi square table, this socio-demographic characteristic was statistically significant with all the transnational activities except keeping contacts with family and friends. As shown in table, the statistically significant transnational activities obtained these chi square test values; remittances ($\chi^2 = 60.789$; $df = 8$; $p = 0.000$), visiting homeland for vacation ($\chi^2 = 40.682$; $df = 8$; $p = 0.000$), investing in business in the home country ($\chi^2 = 55.825$; $df = 8$; $p = 0.000$), attending cultural festivals ($\chi^2 = 32.006$; $df = 8$; $p = 0.000$) and transnational religious activities ($\chi^2 = 40.682$; $df = 8$; $p = 0.000$). This finding indicates that, as the period of stay increases, so does the likelihood of engaging in transnational practices such as remittances, investing in business in the home country, attending cultural festivals and transnational religious activities. This data corroborates with the findings of

(Mensah, 2008) which observed that, migrants who have been in Canada for a longer period are more likely to send remittances to their country, consider investment portfolios and also support churches or religious activities in the home country.

Students who stay longer in Canada usually earn more money and have greater economic stability, which allows them to provide more support to their families back home. Long-term residency might also increase one's sense of obligation to family members who rely on these remittances. These reasons might have resulted in a statistically significant relationship between period of stay and remittance. The length of stay in Canada also has an influence on how often people travel home for vacations. Students may have more opportunities to schedule vacations home and save money if they stay in Canada for a longer period of time.

As shown in Table 4.6, the length of stay in Canada has an impact on the propensity to invest in the home country. Owning investments including houses is important for older immigrants (Firang, 2011). Students that stay longer in Canada have improved financial, intellectual, and skill sets that they can use to their advantage when planning on business investments. As Mensah (2008) notes, investing in businesses in the home country requires long term planning, financial preparation and commitment. The longer period of stay facilitates the formulation of entrepreneurial strategies and the formation of essential networks for commercial ventures.

Regarding engagement in cultural festivals, AIS who stay in Canada for a longer period may eventually experience a greater need to be true to their cultural identity by staying connected to their heritage and taking part in cultural activities. Furthermore, the chi-square results indicate a significant association between the period of stay in Canada and the engagement of AIS in transnational religious practices. AIS who stay longer in Canada may benefit from greater stability and resources for their religious pursuits, especially those that

reunite them with their home country. Such engagement may be motivated by the need for ongoing religious practice and spiritual support.

On the contrary, the length of stay in Canada has little influence on how frequently one stays in touch with friends and family. This finding supports Gomes et al. (2014) which emphasizes the importance of contact with transnational social networks in providing emotional support, information, and a sense of belonging to international students. This makes contact with family and friends important to all international students no matter the period of stay in Canada.

Year of arrival: The results of the chi-square test again offered strong observations into how the year of arrival of African International Students impacts the transnational activities of these students. The results of the investigation showed statistically significant relationships between the year of arrival and remittances ($\chi^2 = 15.136$; $df = 8$; $p = 0.044$), visiting homeland for vacation ($\chi^2 = 21.345$; $df = 8$; $p = 0.006$), attending cultural festivals ($\chi^2 = 32.414$; $df = 8$; $p = 0.000$) and transnational religious activities ($\chi^2 = 27.501$; $df = 8$; $p = 0.001$).

The year of arrival in Canada influences the propensity to send money back home and also to travel to the home country for vacation. This finding corroborates with Firang (2011) which suggests that all older immigrants are likely to remit regularly and also travel frequently to their homeland for vacation due to their financial ability. The inability of recent arrivals to remit payments may stem from their lack of work experience and potential financial hardships. On the other hand, those who have resided in Canada for a longer period of time may have been well established, have more access to income and financial stability, allowing them to make remittances more often and also plan vacations (Firang, 2011).

The statistically significant association between the year of arrival in Canada and participation in cultural events emphasises the significance of cultural connections during the early years of residence in a new country. Through these events, new immigrants may try to

preserve their cultural identity and establish a sense of belonging. These engagements also provide the opportunity for AIS to receive support services from their home country communities/groups and kinship associations (Gomez et al., 2014).

The strong association observed between the year of arrival and involvement in international religious activities also highlights the role that religion plays as a stabilising force in the early phases of settlement. The findings of Mensah (2008) corroborate with this finding. In order to get support from their community and deal with the difficulties of settling in a new country, newly arrived AIS could heavily depend on religious activities and churches for varying support (Mensah, 2008).

On the other hand, the findings of this study on the year of arrival to Canada and the propensity to invest in business depart from the literature (Firang, 2011; Mensah, 2008). This study observed no statistically significant relationship between the year of arrival and business investment in the home country. While both Firang (2011) and Mensah (2008) suggest that the longer period of stay of immigrants increases their financial capacity and allows them to plan for investment in the home country, this study observed the opposite. It is possible that the complexity and resource-intensive nature of business investments account for the lack of statistically significant association. No matter how long students have been in Canada, their own financial capabilities and entrepreneurial goals may have a greater impact on their decision to invest in home-based businesses than their length of stay in the country.

4.4 To What Extent Do Transnational Ties Influence International Students' Settlement Needs?

The fourth research question is to what extent do transnational ties influence international students' settlement needs? This research question predicts the influence of transnational ties on African International Students' settlement needs in Peterborough. To address the fourth research question, a Multivariate Ordinal Logistic Regression with 95% Confidence Interval (CI) was used to determine the influence of certain transnational activities (predictor variables) on six settlement needs (response or outcome variables). For ordinal logistic regression analysis, it is advisable to employ the compound index approach if there are varying dependent (response) variables measuring the same construct. This approach allows the regression analysis to use a single dependent variable leading to a single model and concise report and interpretation of results. However, the goal of this study was to investigate the influence of transnational activities on each highlighted settlement need. Therefore, this study relied on the approaches of Zaim et al. (2010) to develop separate regression models for each settlement need. This approach allowed for meaningful results and discussion tailored towards each settlement need.

The dependent variables (response variables) were housing needs, employment needs, healthcare needs, food insecurity needs, clothing needs, and safety/security needs. In all the dependent variables, respondents were asked to indicate their experiences using an ordinal interval scale with a 5-point Likert scale. These variables were coded as 1 = No influence at all, 2 = Less influence, 3 = Neutral, 4 = Strong Influence, and 5 = Very Strong Influence (See table 4.7). The choice of the ordinal interval for the dependent variables was based on the assumptions underlying an ordinal logistic regression model. For ordinal intervals, the categories are ranked, however it is an error to assume that the intervals for all levels of categories are the same. For instance, we cannot assume that the interval between "no influence at all" and "less influence" are the same.

The independent or predictor variables for all the six models altogether include 12 variables, as shown in the bottom half of table 4.7 below. They are:

1. *whether respondents keep in touch with family and friend*
2. *whether they send money, items or goods to family/friends*
3. *whether they travel to the homeland for vacation*
4. *whether they consider investing in business investment/ventures in the home country*
5. *whether they attend cultural festivals*
6. *whether they attend religious activities*
7. *whether they travel to the homeland for a job*
8. *whether they use the native language to communicate with colleagues from the home country*
9. *whether they eat traditional dishes from the homeland*
10. *whether they engage in face-to-face communication with family and friends*
11. *whether they attend to caregiving responsibilities (e.g., Making arrangements for family care needs, making funeral arrangements)*
12. *whether they attend to medical/dental needs in of family and friends in the home country*

All the independent (predictor) variables were coded as 0 = No and 1 = Yes (See Table 4.7). A “No” response indicates that the respondent does not engage in such transnational activity while a “Yes” response indicates otherwise. The goal of this coding was to base on the presence or otherwise of such transnational activity among African International Students to predict its influence on the selected settlement need (response variable) (See Table 4.7).

The MOLR analysis resulted in six different models that predicted the influence of the predictor variables on the response variables. The six separate models generated six different

equations. A general equation for ordinal logistic regression analysis has been discussed in the methodology (see Chapter 3).

Table 4.7 shows variables for the multivariate ordinal logistic regression analysis.

Variable description	Variable Coding
Dependent Variables	
Housing Needs	1 = No influence at all 2 = Less influence 3 = Neutral 4 = Strong Influence 5 = Very Strong Influence
Employment Needs	1 = No influence at all 2 = Less influence 3 = Neutral 4 = Strong Influence 5 = Very Strong Influence
Healthcare Needs	1 = No influence at all 2 = Less influence 3 = Neutral 4 = Strong Influence 5 = Very Strong Influence
Food Insecurity Needs	1 = No influence at all 2 = Less influence 3 = Neutral 4 = Strong Influence 5 = Very Strong Influence
Clothing Needs	1 = No influence at all 2 = Less influence 3 = Neutral 4 = Strong Influence 5 = Very Strong Influence
Safety/Security Needs	1 = No influence at all 2 = Less influence 3 = Neutral 4 = Strong Influence 5 = Very Strong Influence
Independent Variables	
Do you keep in touch with family and friends?	0 = No 1 = Yes
Do you send money, items or goods to family/friends?	0 = No 1 = Yes
Do you travel to the homeland for vacation?	0 = No 1 = Yes
Do you consider investing in business investment/ventures in the home country?	0 = No 1 = Yes

Do you attend cultural festivals?	0 = No 1 = Yes
Do you attend religious activities?	0 = No 1 = Yes
Do you travel to the homeland for a job?	0 = No 1 = Yes
Do you use your native language to communicate with colleagues from your home country?	0 = No 1 = Yes
Do you eat traditional dishes from the homeland?	0 = No 1 = Yes
Do you engage in face-to-face communication with family and friends?	0 = No 1 = Yes
Do you attend to caregiving responsibilities (e.g., Making arrangements for family care needs, making funeral arrangements)?	0 = No 1 = Yes
Do you attend to the medical/dental needs of family and friends in the home country?	0 = No 1 = Yes

In table 4.8, the regression coefficients (estimates), their corresponding Odd Ratios (OR) and probability values (p-values) are displayed. Considering the significance level of 0.05, $p > 0.05$ indicates no statistical significance relationship between variables and $p < 0.05$ indicates a statistically significant relationship between variables. In table 4.8, ‘*’ was used to show regression coefficients that are statistically significant. For the purposes of this study’s interpretation, Standard Errors (SE) and Confidence Intervals (CI) were not reported. The regression coefficient and odds ratios have been used to interpret and discuss the regression output.

Table 4.8 shows a regression analysis of the influence of transnational activities on settlement needs of African International Students in Peterborough.

Variables	Housing Needs		Employment Needs		Healthcare Needs		Food insecurity Needs		Clothing Needs		Safety/Security Needs	
	β	OR	β	OR	β	OR	β	OR	β	OR	β	OR
Keeping in touch with family and friends	0.050*, p=0.005	1.052	1.022* p=0.002	2.778	0.390* p=0.017	1.477	0.390* p=0.015	0.012	-5.213 p=0.352	0.005	1.375* p=0.025	3.955
Sending money, items or goods to family/friends	-1.470 p=0.419	0.230	1.009* p=0.017	2.743	-2.226* p=0.024	0.108	-2.226* p=0.043	0.108	-2.019* p=0.029	0.133	-0.414 p=0.807	0.661
Travelling to homeland for vacation	-4.320* p=0.004	0.013	-5.402 p=0.347	0.005	-4.028 p=0.062	0.018	0.028* p=0.026	1.028	0.535 p=0.063	1.707	-4.765* p=0.027	0.009
Business investment/ventures	-1.086 p=0.208	0.338	-3.551* p=0.026	0.029	-4.509* p=0.034	0.011	-4.540* p=0.041	0.012	-4.141* p=0.000	0.016	-2.921 p=0.107	0.054
Attending cultural festivals	1.781 p=0.612	5.935	0.945 p=0.579	2.573	0.259* p=0.003	1.296	0.259* p=0.001	1.296	0.059* p=0.000	1.061	0.601* p=0.006	1.824
Religious activities	0.601* p=0.032	1.824	0.272* p=0.036	1.313	-1.080 p=0.062	0.339	-7.080* p=0.016	0.001	-1.257 p=0.101	0.285	-1.377 p=0.099	0.252
Travelling to the homeland for a job	-3.729 p=0.136	0.024	-5.512* p=0.013	0.004	-5.133 p=0.101	0.006	-5.133 p=0.347	0.006	1.730 p=0.211	5.641	-2.812* p=0.019	0.060
Using the native language to communicate with colleagues from the home country	0.093* p=0.027	1.097	0.489* p=0.039	1.631	0.966* p=0.000	2.627	0.967* p=0.010	2.630	0.294 p=0.256	1.342	*1.025 p=0.043	2.786
Eating traditional dishes from the homeland	-2.927 p=0.052	0.054	1.164 p=0.724	3.202	0.124 p=0.056	1.132	1.124* p=0.002	3.077	1.104 p=0.103	3.016	0.687 p=0.950	1.988
Engaging in face-to-face communication	-1.691 p=0.279	0.184	-2.669 p=0.821	0.069	-0.513 p=0.774	0.599	-0.512 p=0.603	0.599	-1.549 p=0.465	0.213	0.156 p=0.357	1.169
Attending to caregiving responsibilities (e.g., Making arrangements)	1.076 p=0.980	2.933	-5.877 p=0.444	0.003	0.213 p=0.919	1.238	0.213 p=0.716	1.238	0.517 p=0.213	1.677	-1.984 p=0.764	0.137

for family care needs, making funeral arrangements)												
Attending medical/dental needs in home country	-7.135* p=0.034	0.001	1.951 p=0.533	7.036	-0.999 p=0.669	0.368	-0.999 p=0.211	0.368	-5.090 p=0.102	0.006	0.537 p=0.357	1.711

Note: β (beta) represents the regression coefficient or estimate of the predictor variable; OR is the odd ratio obtained by the predictor variable; ‘*’ indicates the predictor variables that were statistically significant ($p < 0.05$). The probability values (p-values) for each variable have been reported in the same cells with the regression coefficients.

Source: Survey Questionnaire, Winter 2024.

4.4.1 Influence of Transnational Activities on Housing Needs

The results from the regression analysis displayed in the table suggest that keeping in touch with family and friends (coefficient=0.050, OR=1.052), religious activities (coefficient=0.601, OR=1.824), using the native language to communicate with colleagues from the home country (coefficient=0.093, OR=1.097) has a positive significant impact on housing needs. These findings indicate that, as African International Students keep in touch with friends and family, engage in religious activities, and use their native language to communicate with friends and family, the influence of these activities on housing needs will remain in higher categories of influence (i.e. “strong influence” and “very strong influence”) hence these predictors obtained $OR > 1$. The odds ratios were calculated by exponentiating the regression coefficients. In other words, these transnational activities play key role in influencing (supporting) African international students’ housing needs

The coefficient of 0.050 obtained by keeping in touch with friends and family suggests that, as African International Students engage in this activity, the influence level is expected to increase by 0.050 in terms of the ordered log odds of influence level holding all other variables constant. Similarly, engaging in religious activities and using the native language to communicate with friends and family from the home country obtained coefficients of 0.601 and 1.097 respectively. This finding suggests that the influence of these activities on African International Students’ housing needs is expected to increase by 0.601 and 1.097 respectively in terms of the ordered log odds of influence as these students engage in such transnational activities. Both Firang (2011) and Mensah (2008) suggest that contacts maintained by immigrants, religious organizations, home country and kinship associations offer practical assistance during immigrants’ housing search. Also, maintaining contacts with family and friends help African International Students to be directed to the appropriate ethnic network in the study destination. These ethnic support networks can help new students in addressing their housing needs.

Also, the regression results suggest that travelling to the homeland for vacation (coefficient=-4.320, OR=0.013) and attending to medical needs in home country (coefficient=-7.135, OR=0.001) have a negative significant impact on housing needs of African International Students. The odds ratio less than one (OR<1) indicates that, the presence of these transnational activities among African International Students will lead to the influence levels remaining in lower categories (i.e., “less influence” and “no influence at all”). The coefficients associated with these transnational activities imply that, as these students travel to their homeland for vacation or attend to medical needs in the home country the influence of these activities on housing needs is expected to reduce by -4.320 and -7.135 within the lower categories of influence. According to Mensah (2008), it requires long term financial planning for immigrants to plan a trip back home. This finding suggests that as an African International Students plan to travel to the homeland for vacation, they have to save towards these trips which leads to a cut in their budget for housing. In other words, engaging in these transnational activities are likely to put financial pressure on AIS making it difficult for them to raise enough money to address their housing needs.

4.4.2 Influence of Transnational Activities on Employment Needs

The results from the regression analysis displayed in the table reveals a positive significant impact on keeping in touch with family and friends (coefficient=1.022, OR=2.778), sending money or goods to family and friends (coefficient=1.009, OR=2.743), religious activities (coefficient=0.272, OR=1.313), using the native language to communicate with colleagues from the home country (coefficient=0.489, OR=1.631) on employment needs. These findings indicate that, as African International Students keep in touch with friends and family, engage in remittances, involve themselves in transnational religious activities, use their native language to communicate with friends and family,

the influence of these activities on employment needs will remain in higher categories of influence (i.e. “strong influence” and “very strong influence”) hence these predictors obtained $OR > 1$.

The coefficient of 1.022 obtained by keeping in touch with friends and family suggests that, as African International Students engage in this activity, the influence level on employment needs is expected to increase by 1.022 in terms of the ordered log odds of influence level holding all other variables constant. Also, engaging in religious activities and using native language to communicate with friends and family from the home country obtained coefficients of 0.272 and 0.489 respectively. This finding suggests that the influence of these activities on African International Students’ employment needs is expected to increase by 0.272 and 0.489 respectively in terms of the ordered log odds of influence as these students engage in such transnational activities. Again, remittances which have an expected statistically positive impact on employment needs obtained a coefficient of 1.009, indicating that as these students participate in such transnational activities, the influence level on employment needs will increase by 1.009. This prediction supports the findings of Délano, (2010) which suggests that immigrant transnational networks in the host country assist immigrants with their job search processes, through referrals, interview preparations and career guidance. Keeping in touch with family back home may also remind students of their responsibilities and motivate them to secure employment to support both themselves and their family. Also, engaging in religious activities introduces these students to communities that can connect AIS to job opportunities or individuals who can assist with their employment search.

Additionally, the regression results indicate that investing in businesses in the homeland (coefficient=-3.551, $OR=0.029$) and traveling to the homeland for a job (coefficient=-5.512, $OR=0.004$) have a negative significant impact on employment needs of African International Students. The odds ratio less than one ($OR < 1$) indicates that, the presence of these transnational activities among African International Students will lead to the influence levels remaining in lower categories (i.e., “less

influence” and “no influence at all”). The coefficients associated with these transnational activities imply that, as these students travel to their homeland for a job or invest in businesses in the home country, the influence of these activities on employment needs in Canada is expected to reduce by -5.512 and -3.551 within the lower categories of influence respectively. Though Firang (2011) notes that immigrants will invest in businesses in their home country and travel to the homeland for vacations, this study suggests that such transnational activities negatively affect international students’ propensity to meet their employment needs.

4.4.3 Influence of Transnational Activities on Healthcare Needs

From Table 4.8, keeping in touch with family and friends (coefficient=0.390, OR=1.477), attending cultural festivals (coefficient=0.259, OR=1.296) and using the native language to communicate with colleagues from the home country (coefficient=0.966, OR=2.627) are the positive significant predictors on healthcare needs.

The odds of contacts with family and friends influencing African International Students’ healthcare needs increases by 0.390 within higher categories of influence. This situation is similar for attending cultural festivals and using the native language to communicate with colleagues from the home country with expected increase by 0.259 and 0.966 respectively in terms of the ordered log odds of influence level holding all other variables constant. These findings are confirmed by an odds ratio greater than (OR>1) for all the three significant predictors. It is important to know that maintaining contacts with family and friends back home can provide emotional stability to these students, which can reduce their stress and anxiety levels, indirectly supporting their mental and physical health. This increased support is likely to help AIS address some of their healthcare needs. Also, connections created during cultural events are likely to share advice and experiences related to healthcare services. These transnational engagements are likely to aid AIS to address their healthcare needs.

On the other hand, sending money, items or goods to family and friends (coefficient=-2.226, OR=0.108) and investing in businesses in the home country (coefficient=-4.509, OR=0.011) emerged as predictors with negative significant impact on healthcare needs. The odds ratio less than one (OR<1) indicates that, the presence of these transnational activities among African International Students will likely lead to the influence levels remaining in lower categories (i.e., “less influence” and “no influence at all”). The coefficients associated with these transnational activities imply that, as these students remit money and items back home or invest in businesses in the home country, the influence of these activities on healthcare needs in Canada is expected to reduce by -2.226 and -4.509 within the lower categories of influence respectively. The cost of healthcare in Canada is very expensive. Sending remittances or goods to family and friends can also place a financial burden on AIS. Similar to sending remittances, it requires the commitment of financial resources to invest in a business in the home country. These transnational activities increase the financial burden on AIS and are more likely to undermine their ability to afford healthcare services considering the cost of healthcare coverage and other medical services for international student who, due to their temporal .

4.4.4 Influence of Transnational Activities on Clothing Needs

These results show consistency in coefficient signs with other settlement needs, though only one predictor was deemed significant based on the probability values. Attending cultural festivals (coefficient=0.059, OR=1.061) was the only predictor that exhibited a positive significant impact on clothing needs. Surprisingly, keeping in touch with family and friends did not exhibit a significant impact on clothing needs. The odds of attending cultural festivals influencing African International Students' clothing needs increases by 0.059 within higher categories of influence (i.e., “strong influence” and “very strong influence”). The odds ratio greater than (OR>1) for this significant predictor confirm this finding. During warm Canadian weathers, AIS consider wearing their cultural cloths to

showcase their identity. These students sometimes do so through cultural events organised in the host country. Also, while they attend such cultural festivals, they create connections with their ethnic groups and colleagues from their home country. The transnational connections created are likely to offer some clothing assistance, in terms of providing these students with winter cloths, winter boots, and advise on how to dress warm during the cold season. This suggests that attending cultural festivals can help AIS address their clothing needs in Canada.

Conversely, investing in a business in the home country and sending money and goods to the home country exhibited a negative significant impact on clothing needs. As reported in Table 4.8, investing in businesses in the home country obtained a coefficient of -4.141, while sending money and items to the home country obtained -2.019. The findings suggest that the influence of these transnational activities on African International Students clothing needs decreases by -9.141 and -2.019 respectively. This decrease in influence occurs in lower categories of influences (i.e “less influence” and “no influence at all”) and is confirmed by the odds ratios less than one ($OR < 1$) for these predictors. Investing in businesses back home and sending remittances and goods to family and friends can be financially demanding and involves significant financial resources. As AIS channel their financial resources back home, they may have less disposable income for personal expenses like clothing. This is likely to undermine their financial ability to address their clothing needs in the host country.

4.4.5 Influence of Transnational Activities on Safety/Security Needs

The results indicate a positive significant impact on keeping in touch with family and friends (coefficient=1.375, $OR=3.955$), attending cultural festivals (coefficient=0.601, $OR=1.824$), and using the native language to communicate with colleagues from the home country (coefficient=1.025, $OR=2.786$) on safety/security needs. These findings indicate that, as African International Students keep in touch with friends and family, attend cultural festivals, and use their native language to communicate

with friends and family, the influence of these activities on safety/security needs will remain in higher categories of influence (i.e “strong influence” and “very strong influence”) hence these predictors obtained odds ratios greater than 1 ($OR > 1$).

The likelihood of these predictors, keeping in touch with friends and family, attending cultural festivals, and using native language to communicate with friends and family from the home country influencing safety/security needs of African International Students increases by 1.375, 0.601 and 1.025 respectively, in terms of the ordered log odds of influence level holding all other variables constant, as students engage in these transnational activities. in terms of the ordered log odds of influence as these students engage in such transnational activities. When AIS keep contacts with family and friends, they are likely to have emotional reassurance and a sense of belonging, which reduces their feelings of isolation and insecurity. This emotional support can enhance AIS perception of safety and security in the host country. Also, attending cultural festivals can provide an opportunity for these students to meet people from same cultural backgrounds. This widens their social connections in the host country and allow them to benefit from ethnic community support network, thereby helping these students feel more secured and less vulnerable in their new environment.

On the other hand, certain predictors, including travelling to the homeland for vacation (coefficient=-, $OR=0.009$) and traveling to the homeland for a job (coefficient=-7.135, $OR=0.001$) exhibited negative significant impact on the safety/security needs of African International Students. From the table, both predictors obtained odds ratios less than one ($OR < 1$) indicating that, the presence of these transnational activities among African International Students will lead to the influence levels remaining in lower categories (i.e. “less influence” and “no influence at all”). The coefficients for these predictors suggest that, the influence of travelling to the homeland for vacation on African International Students’ safety/security needs decreases by -4.765, while travelling to the homeland for a job will lead to a -2.812 decrease in influence on these students’ safety/security needs. Both travelling to the

homeland for vacation and travelling to the homeland for a job are transnational activities that disconnects AIS from their host country. Therefore, these students will not require any safety and security need in the host country.

4.4.6 Influence of Transnational Activities on Food Needs

Among all the response variables, food needs emerged as the one with the majority of statistically significant predictors. The positive significance of keeping in touch with friends and family is confirmed again. As African International Students engage and keep in touch with family and friends, the influence level with this settlement need is expected to increase by 0.390 in terms of the ordered log odds of influence. Travelling to the homeland for vacation (coefficient=0.028, OR=1.028) and attending cultural festivals (coefficient=0.259, OR=1.296), using the native language to communicate with colleagues from the home country (coefficient=0.967, OR=2.630), and eating the traditional dishes from the homeland (coefficient=1.124, OR=3.077) were other predictors that exhibited a positive significant impact on food needs. Surprisingly, keeping in touch with family and friends did not exhibit a significant impact on food needs. The odds ratios greater than one ($OR > 1$) for these predictors indicates that, the odds of these predictors influencing African International Students' food needs increases by the regression coefficient and the increase occurs within higher categories of influence (i.e. "strong influence" and "very strong influence"). This suggests that, AIS are likely to rely on their friends and family from the home country for financial resources that aid them to address their food needs in the host country. Also, AIS often rely on friends and family to send the cultural food through courier services (DHL, FedEx, postal services) while they remain in the host country for studies. Again, when students travel to the homeland for vacation, they may travel back to the host country with cultural foods. This indicates that engaging in such transnational activities can help AIS address their food needs in the host country.

On the contrary, investing in business in the home country and sending money and goods to the home country again exhibited a negative significant impact on food as a settlement need. Despite remittances helping to reduce poverty in immigrants' home countries (Banga & Sahu, 2010; Chimhowu et al., 2005; and Ratha, 2013), this study predicts that AIS engagement in this transnational activity affects their food needs negatively. As noted earlier, investing in businesses in the home country, and sending money to the home country are transnational activities that require financial commitment by AIS. When AIS engage in such transnational activities, it limits their purchasing power therefore undermining their ability to address their food needs in the host country.

As reported in Table 4.7, investing in businesses in the home country obtained a coefficient of -4.540, while sending money and items to the home country obtaining -2.226. The findings suggest that the influence of these transnational activities on African International Students' food insecurity needs decreases by -4.540 and -2.226 respectively. This decrease in influence occurs in lower categories of influences (i.e "less influence" and "no influence at all") and is confirmed by the odds ratios less than one ($OR < 1$) for these predictors. The predictor that emerged surprisingly as having a negative significant impact on food insecurity needs was engaging in transnational religious activities. Engaging in transnational religious activities obtained a coefficient of -7.080 with an odds ratio less than one ($OR < 1$) indicating a decrease in influence on this need as African International Students engage in this transnational activity.

CHAPTER FIVE

CONCLUSION

5.0 Introduction

The settlement of international students is an important factor in the study of internationalization in higher education literature. One factor in the settlement of international students is the maintenance of ties with their home countries, communities, and kinship associations. There have been several studies on international students' settlement in Canada (e.g., Esses et al., 2021; Laseinde, 2022; Worae, 2011). Also, studies on international students' transnationalism are emerging (Hari et al., 2021; Tran & Pham, 2016; Waters and Brooks, 2012). However, studies on international students have not explicitly investigated the settlement of African International Students in Canada within a transnational framework.

This study of the settlement process and transnationalism of African International Students in Peterborough, Ontario aims to increase our understanding of the settlement needs and experiences of African International Students in Canada. This study again sheds insights on the nature and types of transnational activities African International Students engage in and how these connections could provide them with support services and facilitate their settlement in the host country while they pursue their academic journey. The study also throws light on how these students can rely on their transnational connections to meet their settlement needs and subsequently integrate into mainstream Canadian society.

In this chapter, the main findings from the study have been summarized. Also, the chapter draws conclusions based on the main findings. The findings are organized into four main sections: settlement

needs and experiences of African International Students; nature and types of transnational ties African International Students engage in; influence of socio-demographic characteristics on transnational activities; and influence of transnational activities on settlement needs. The chapter finally concludes with the study's limitations, suggested directions for future research and recommendations.

5.1 Settlement Needs and Experiences of African International Students

As immigrants including international students continue to travel to other countries temporarily or permanently, there are certain basic needs they must satisfy to settle successfully in their new environment. Lindstrom (2019) considered the successful settlement of international students as a topmost priority for every destination country because, the settlement of these students widens their propensity to contribute significantly to the economic development of their host country (Marchi, 2005). As International students strive to meet these needs, they also encounter challenges. Some of these challenges have been documented by scholars (Guo & Chase, 2011; Hari et al., 2023; Smith, 2020; Mbous et al., 2023; Han et al., 2022; Scott et al., 2015). This research further discovered certain needs of African International Students in Peterborough and the importance of the needs of this migrant group. Again, experiences of African International Students in Peterborough on these settlement needs emerged.

In the survey, the majority of the respondents considered housing, employment, healthcare, clothing, food and safety/security needs as important needs to their settlement in Peterborough, Canada. However, housing and employment emerged as the two topmost needs that African International Students have not had a good experience with. Both López Salinas & Teixeira (2022) and Ager & Strang, 2008 stresses on the foundational role housing and employment plays in immigrants' settlement and how many immigrants prioritizes these needs. However, this study's findings corroborate with the findings of scholars (e.g., Akanwa, 2015; Calder et al., 2016; Pottie-Sherman et al., 2024; Scott et al.,

2015; Zhou & Zhang, 2014) who also determined that international students including those from Africa do not have good experiences with housing and employment in Canada.

The majority of respondents were not happy with the current housing prices in Peterborough and the quality of the houses they reside in. Also, access to housing support services evolved as a critical issue from the survey. Many of these students do not have access to support services during their search for houses in Peterborough and this has resulted in many African International Students having limited housing options to choose from.

African International Students understand the labor market and job search processes in Peterborough, yet it is difficult to secure a job that matches their skills and education in the city. Wiebe (2012) has already identified this challenge international students in Canada encounter after graduating from varying programs in Canadian Universities and Colleges. Although Canadian post-secondary institutions rely on African International Students' credentials from their home countries during the admission process, employers do not consider these credentials. This has led to many international students, no matter their prior skills, competencies, academic and professional qualifications before travelling to Canada, ending up taking menial jobs for a living.

5.2 Nature and Types of Transnational Activities

Since African International Students do not reside entirely within Canadian borders, this study has shown that AIS in Peterborough, Canada is not disconnected from their home country. Instead, AIS in Peterborough maintain social, cultural, and economic ties with their homelands. AIS in Peterborough participate in a variety of transnational activities, such as keeping in touch with family and friends, eating traditional dishes from the homeland, attending religious and cultural activities, and sending money home on a regular basis.

AIS in Peterborough continue to prioritise keeping contact with their family and friends. Most of these students do so through telephone calls and social media (Snapchat, WhatsApp, Instagram, Facebook, Messenger, etc.). It was observed from the study that AIS keeps regular contact with their friends and family.

It was also discovered that another typical transnational activity among AIS in Peterborough was remittances. Immigrants maintain connections between their host country and their country of origin through remittances (Robinson, 2005). This transnational engagement preserves cross-border relationships with African International Students' home countries and Canada. African countries receive remittances from Canada in the form of money and items from their natives residing in Canada (Firang, 2011). The findings from this study were not different from the findings of Firang (2011). The vast majority of AIS in Peterborough send money back to their country of origin on a regular basis. However, the findings from this study determined that items are not commonly sent by AIS. It is important to appreciate the importance of remittances as a transnational tie among immigrants as a means of fulfilling immigration commitments to families and friends back home.

Another type of transnational activity is attending religious and cultural activities. These activities are essential cross-cultural activities that support AIS in managing life in a new environment while preserving ties to their cultural and religious heritage. Religious and cultural events are frequently used as social hubs by students to connect with colleagues from the same country. These networks provide helpful information on managing life, as well as practical assistance and emotional support for settlement in Canada (Mensah, 2008).

The study's findings about the nature and types of transnationalism among AIS in Peterborough point to a well-established trend in the literature. Modern technology is one of the main forces behind modern transnationalism, especially the development of communication technologies (Firang, 2011; Mensah; 2008). The emergence of contemporary modes of money transfers and communication

technology, such as social media and smartphones, zeepay, taptap send, remitly and lemfi has enabled immigrants, including African International Students to intensify their cross-border activities (Firang, 2011; Mensah, 2008).

5.3 The relationship between sociodemographic characteristics and transnational activities

This study extends beyond previous research on international student settlement and studies on transnationalism by examining the statistical relationship between sociodemographic characteristics and transnational activities. The findings of this study suggested that certain types and nature of transnational activities, including remittances, investment in businesses in the home country, religious and cultural activities, and visiting homeland for vacation, that African International Students engage in can be greatly influenced by sociodemographic factors like age, length of stay in Canada, and year of arrival in Canada.

However, the Pearson chi-square test suggested that, regardless of AIS sociodemographic characteristics, they keep contact with their friends and family. Also, sex and academic institutions are not likely to influence the nature and types of transnational activities African International Students engage in.

Older African International Students and those who have resided in Canada for a longer period tend to remit money to their home country and often plan to travel to their home country for vacation. This finding was again consistent with Firang (2011) and Mensah (2008) who observed that older immigrants travel frequently to their homeland for vacation due to the connections established in the homeland and also years spent in preparing for a trip back home.

5.4 The influence of transnational ties on settlement needs

The multivariate ordinal logistic regression analysis further enhanced our understanding of transnational activities that are likely to influence the settlement needs of African International Students in Peterborough. Based on the six regression models, the study identified significant transnational activities (predictors) that influence settlement needs prioritized by African International Students in Peterborough, such as housing, employment, healthcare, clothing, safety and security, and food.

Housing: The MOLR analysis suggested that housing needs are likely to be positively influenced by maintaining contacts with family and friends, engaging in religious activities, and using the native language to communicate with colleagues from the home country.

Employment: Also, using the native language to communicate with colleagues from the home country, sending money or goods to family and friends, participating in religious activities, and maintaining contact with family and friends were predictors that emerged as having a significant influence on employment needs of AIS in Peterborough.

Healthcare: Attending cultural festivals, using the native language to communicate with colleagues from the home country, and maintaining relationships with family and friends have appeared to have a positive impact on healthcare needs.

Clothing: Traveling to the homeland for vacation and attending cultural festivals showed a higher level of influence on clothing needs of African International Students.

Security/Safety: The regression analysis again suggested that attending cultural festivals, using the native language to communicate, and keeping contacts with family and friends all have a positive influence on AIS need for safety and security, suggesting higher levels of influence.

Food: Based on the findings from the regression analysis, AIS who eat traditional foods from the homeland, communicate in their original language with colleagues, attend cultural festivals, keep

contacts with family and friends, and travel to the home country for vacations are more likely to meet their food insecurity needs.

5.5 Study Limitations

This thesis has several limitations and does not comprehensively address African International Students' settlement experiences. This study employed a convenience sampling technique to recruit participants from only two post-secondary institutions in Peterborough, Canada (Trent University and Fleming College). This limits the generalization of the study's findings to other African International Students studying in Canada. The survey-based method of data collection and researcher's selection of settlement needs based on existing literature may have overlooked certain important settlement needs. Again, this study did not capture the variations in sociodemographic characteristics and settlement experiences of African International Students in Peterborough. Again, while other studies have shown that the settlement needs of international students affect their academic progress and mental health, the study failed to capture these pressing issues observed among the larger international student's population in Canada.

5.6 Direction for future research

Future research might involve numerous post-secondary institutions, as the study only used a convenience sample from two post-secondary institutions. To capture unexpected and more comprehensive students' lived experiences, qualitative methods such as interviews and focus groups could be employed for future studies. Again, it is imperative for future research to conduct bivariate analysis on sociodemographic characteristics and settlement needs. This study will unleash the unique

settlement experiences of age group, sex, period of stay in Canada, academic institutions and other sociodemographic characteristics of African International Students.

5.7 Recommendations

The study determined that African International Students require settlement needs as they adapt to their new environment. It is therefore important for these students to be assisted in first acclimatizing their self with their new city. Government and academic institutions should provide thorough orientation programs designed specifically to assist international students in understanding their Canadian academic and host communities and the general social environments when they arrive in the host city. Academic institutions should again offer mental health services that specifically address the difficulties international students encounter, such as homesickness and cultural adjustment. Academic institutions should also assist international students in locating affordable and suitable housing.

The study also highlighted that international students maintain social ties with their colleagues from the same country. This suggests that many international students might feel comfortable to connect with people from their country when in need. This is because colleagues from same country might understand their background and can relate well to their challenges. Academic institutions should therefore encourage mentorship programs that will connect these students with senior students or alumni, probably from their home countries. Also, the study revealed that international students are from diverse countries with varying cultures. Cultural competency training should therefore be organised by educational institutions for their teaching and non-teaching staff to better understand the diversity of their student population. This will help promote diversity, equity, and inclusion.

To lessen financial constraints on international students, both the government and academic institutions should make more financial aids and scholarships available for international students. Also, taking into account the employment needs highlighted by the study's results, provision of career counselling and job placement services by Government, academic institutions, and NPOs is important for international students as they navigate their new environments. Academic institutions can establish channels of communication between international students and organisations and professionals related to their area of study. This will promote internship opportunities and easy employability post-graduation.

Furthermore, the government should also promote flexible work opportunities that enable international students to combine part-time jobs with their study. This will allow students to gain the required Canadian experience by employers in the labour market. It is also important for the government and employers in host countries to recognise the professional experience and academic qualifications obtained by international students from their home country. These initiatives will help curb some of the employment challenges highlighted by this study.

The government and academic institutions should assist international students who might require help honing their English language skills by offering language support services, for instance free English as a Second Language (ESL) sessions. The government must also promote immigration laws that facilitate international students' long-term settlement and integration, especially those that provide a path to permanent residence. Government institutions, academic institutions and NPOs that focus on immigrant settlement should also carry out further studies on the experiences of international students' settlement in Canada. There should also be academic seminars and debates on migration and transnationalism in post-secondary institutions to help all students understand the global context of education.

Academic institutions should offer resources and childcare, as well as family integration programs, to international students who travel to Canada with their families. Some international students who have dependent children often struggle combining childcare responsibilities and academic duties. Also, academic institutions can enhance the function of international students' offices by giving African students more specialised assistance and resources due to the diversity in culture and needs.

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APPENDIX A: SURVEY QUESTIONNAIRE

TRENT SCHOOL OF THE ENVIRONMENT
1600 West Bank Drive Peterborough, ON Canada
K9L 0G2 705-748-1011 ext. 7199
tse@trentu.ca trentu.ca/environment



Transnationalism and Newcomers' Settlement in Canada: A Case Study of African International Students in Peterborough.

Samuel Okyere Owusu
MA Sustainability
Studies
Trent University



CONFIDENTIAL Questionnaire

Survey ID Code _____ Date _____

You have been invited to participate in a survey on Transnationalism and Newcomers' Settlement in Canada: A Case Study of African International Students in Peterborough. This study wants to know the needs and challenges African International Students face in Peterborough, Canada. It also looks at how these students stay in touch with their home countries. The study wants to know how these connections with the homeland can influence the settlement experience of these students and help facilitate their settlement in Peterborough. *The study asks these questions: What are the settlement experiences of African International Students in Peterborough, Canada? What do these students do to stay connected to their homeland? How do these connections with the homeland affect their settling-in process?* The information that you provide will be part of this Master's research but may also be part of future presentations or publications. This research cannot be conducted without your insights, knowledge, and perspectives. Your participation in this research is completely voluntary. This study is completely anonymous. Confidentiality will fully be provided. As many international students do not

receive the opportunity to share their experiences as you will, you might find this research to be very enjoyable and rewarding. Your contributions and identity are also guaranteed to be protected. You are allowed to provide as little or as much information as you like in response to the questions.

Section 1: Demographic Information

1. How old are you?
 - a. Less than 20 years
 - b. 21 – 25 years
 - c. 26 – 30 years
 - d. 31 – 35 years
 - e. Above 35

2. Where in Africa were you born? _____

3. What is your gender?
 - a. Male
 - b. Female
 - c. other
 - d. Prefer not to answer

4. How long have you stayed in Canada?
 - a. 0-2
 - b. 2-5
 - c. above 5

5. What year did you arrive in Canada (year)?
 - a. Before 2015
 - b. 2015-2020
 - c. after 2020

6. Which academic institution are you?
 - a. Trent University
 - b. Fleming College

7. What is your academic level of study?
 - a. Undergraduate
 - i. Year one
 - ii. Year two
 - iii. Year three
 - iv. Year 4
 - b. Postgraduate
 - i. Year one
 - ii. Year two
 - iii. Year three
 - iv. Year 4
 - c. Graduate Studies
 - i. Masters
 - ii. PhD
 - d. Postdoctoral

Section 2: Settlement Experience

8. Which of the following do you consider as your settlement needs as you strive to adapt into your study destination? Rank them in order of importance: 1 = Very Unimportant; 2. Somewhat important; 3 = Not at important

Settlement Needs	1. Very Unimportant	2. Unimportant	3. Neutral	4. Important	5. Very Important
Housing					
Employment					
Healthcare					
Food					
Clothing					
Safety/Security					

9. Do you consider any of the following as part of your settlement experience in Peterborough

Please rate them in order of agreement: 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree

Settlement Experience	1. Strongly disagree	2. Disagree	3. Neutral	4. Agree	5. Strongly agree
Housing					
Employment					
Healthcare					
Food					
Clothing					
Safety/Security					

9b. In what ways do you consider the following needs as part of your settlement experience in experience in Peterborough

Please rate them in order of experience: 1 = Not a good experience; 2 = Neutral; 3 = Somehow an experience; 4 = A good experience; 5 = A very good experience

Experiences	1. Not a good experience	2. Neutral	3. Somehow an experience	4. A good experience	5. A very good experience
Housing					
Employment					
Healthcare					
Food					
Clothing					
Safety/Security					

Housing Experience

10. Take a moment to share your thoughts and experiences regarding your current housing situation in Peterborough and related circumstances.

Please rate them in order of agreement: 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree

Experiences	1. Strongly disagree	2. Disagree	3. Neutral	4. Agree	5. Strongly agree
I find my current housing situation affordable					
I am satisfied with the quality of my current housing					
My housing location is convenient for commuting to campus					

I feel safe and secure in my current housing					
Finding suitable housing in Peterborough was easy					
I had a variety of housing options to choose from in Peterborough					
The lease terms of my current housing are fair and reasonable					
I am aware of and have access to housing support services in Peterborough					
My housing situation allows me to engage with a supportive community					
Overall, I am satisfied with my current housing situation in Peterborough					

Employment Experience

11. Take a moment to share your thoughts and experiences related to your employment situation in Peterborough.

Please rate them in order of agreement: 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree

Experiences	1. Strongly disagree	2. Disagree	3. Neutral	4. Agree	5. Strongly Agree
It is difficult to secure a job that matches my skills and education in Peterborough					
I secured a job that matches my skills and education on campus					
I secured a job that matches my skills and education off-campus					
I struggle to understand the Canadian labor market and job search processes					
I encounter difficulties in securing employment that align with my academic and professional background from my					

home country					
Employers in the Canadian labor market do not recognize my foreign credentials/experience					
I face language barriers that hinders me from securing a suitable employment					
The 20 hours of part-time work off-campus for international students is not enough					
I find it difficult to pay my tuition fees with my current job					
I find it difficult to pay my rent					
The minimum wage I am paid working off campus is not sufficient for my expenses					
I borrow money from friends and relatives to be able to survive					

Healthcare Experience

12. Take a moment to share your thoughts and experiences related to your healthcare situation in Peterborough.

Please rate them in order of agreement: 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree

Experiences	1. Strongly disagree	2. Disagree	3. Neutral	4. Agree	5. Strongly Agree
I understand how the healthcare system operates in Peterborough.					
I am satisfied with the responsiveness and receptiveness of healthcare providers in Peterborough					
I find it easy to access healthcare services in Peterborough.					
The healthcare system in Peterborough is very robust.					
Access to healthcare services in Canada is very expensive for me					
I have a health insurance coverage in Canada.					

My institution assisted me in securing a health insurance coverage.					
I am able to secure financial support from the Government of Canada to access all kinds of healthcare services					
I experience discrimination when accessing healthcare services					
The healthcare services provided to domestic students and the general public differ from that provided to international students					

Food Insecurity Experience

13. Take a moment to share your thoughts and experiences related to your food insecurity situation in Peterborough.

Please rate them in order of agreement: 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree

Experiences	1. Strongly disagree	2. Disagree	3. Neutral	4. Agree	5. Strongly Agree
My institution has food provisioning service, i.e., foodbank that is accessible to me					
The Peterborough community has a food provisioning service, i.e., foodbank that is accessible to me					
I consider exploring diverse foods apart from my culturally preferred foods					
I find culturally preferred foods very expensive					
I access culturally preferred food in Canadian grocery stores					
I access culturally preferred foods in intercontinental grocery stores i.e., African markets					
I travel outside Peterborough to access affordable culturally					

preferred foods					
My income restricts me from buying culturally preferred foods					
I consume a particular meal many times in a week					
I am unable to diversify my meal preferences					
I sometimes struggle to decide on the food to eat because I do not find food that suits my preference					
Access to food sometimes affect my ability to concentrate on my academics					

Clothing Experience

14. Take a moment to share your thoughts and experiences related to your clothing situation in Peterborough.

Please rate them in order of agreement: 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree

Experiences	1. Strongly disagree	2. Disagree	3. Neutral	4. Agree	5. Strongly Agree
My cultural clothing is different from that of Canadian clothing					
I am unable to wear my culturally preferred clothing in all Canadian seasons					
Warm clothing for cold seasons in Canada is very expensive					
My institution makes provisions for students who are unable to purchase warm clothing during cold seasons					
The Peterborough community makes provisions for international students who are unable to purchase warm clothing during cold seasons					
I struggle to find clothing in Peterborough that aligns with my cultural preferences					

My clothing choices always align with the climate in Peterborough					
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Security/Safety

15. Take a moment to share your thoughts and experiences related to your security/safety situation in Peterborough.

Please rate them in order of agreement: 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree

Experiences	1. Strongly disagree	2. Disagree	3. Neutral	4. Agree	5. Strongly Agree
I feel secured to move to any location in Peterborough at any point in time					
There is a contact to rely on during emergency situations i.e., Campus security, Peterborough police, Paramedics, Fire department					
The security agencies in Peterborough are very swift in responding to emergencies					
I experience harassment e.g. (physical, sexual, verbal etc.) as a foreign student living in the Peterborough community					
My institution organizes security awareness sessions and communicates safety tips to students					
The Peterborough community organizes security awareness sessions and communicates safety tips to students					
My neighborhood is very hospitable and accommodating					
I live in a safe and secure neighborhood					

Section 3: Transnational Ties with Homeland

16. Thinking back to when you decided to travel from your home country to pursue education in Canada, what were the reasons that influenced your decisions and how important were those reasons?

Rank them in order of importance: 1 = Very Unimportant; 2. Somewhat important; 3 = Not at important

Reasons	1. Very Unimportant	2. Unimportant	3. Neutral	4. Important	5. Very Important
Relative/friends in Canada					
Seeking better future for my children					
Better income/more suitable job opportunities					
Seeking new opportunity					
Quality of education					
Cultural diversity and exposure					
Opportunities for post-graduation work					
Access to research opportunities					
Quality of life and safety					

17. Since coming to Canada have you maintained contact with your homeland?
 a. Yes [] b. No []

18. If yes, what are the main reasons you maintain contacts or ties with your homeland and what are the degrees of importance of those reasons to you (Check all that apply).

Main Activities and/or Ties with Homeland	1. Very Unimportant	2. Unimportant	3. Neutral	4. Important	5. Very Important
1. Keeping in touch with family and friends					
2. Sending money, items or goods to family/friends					
3. Travelling to homeland for vacation					
4. Business investment/ventures					
5. Attending cultural festivals					
6. Attending funerals					
7. Religious activities					
8. Travelling to the homeland for a job					
9. Using the native language to communicate with colleagues from the home country					
10. Eating traditional dishes from the homeland					

11. Engaging in face-to-face communication					
12. Attending to caregiving responsibilities (e.g., Making arrangements for family care needs, making funeral arrangements)					
13. Attending medical/dental needs in home country					

19. How often do you keep in touch with your family and friends from you home country? (check one for frequency of contact)

Frequency of Contact	Ties with family	Ties with friends
a. Never		
b. Rarely (once a week)		
c. Regularly (more than once a week)		
d. (Refused)		

20. By what method do you keep in touch?

Method of Contact	With family	With friends
a. Social media (snapchat, WhatsApp, Instagram, Facebook messenger, etc.)		
b. Telephone calls		
c. Visits		
d. Others		

21. How often have you sent money, items, or material goods, etc., to your homeland since you've been in Canada?

Frequency of Transaction	Money	Items/Material goods
a. Never		
b. Rarely (once a week)		
c. Regularly (more than once a week)		
d. (Refused)		

Section 4: Transnational Ties and Settlement Process

22. Thinking about the ties you maintain with your home country, which of the following ties influence your settlement in Peterborough?

Please rate them in order of agreement: 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree

Item	1. Strongly disagree	2. Disagree	3. Neutral	4. Agree	5. Strongly agree
My friends, family and/or ethnonational or kinship associations have been a source of practical assistance in finding a suitable house					
My friends, family and/or community from my home country share information about affordable housing options with me					
I rely on friends, family and/or ethnonational or kinship association for financial assistance or resources to address housing-related expenses					
I have received formal (university, government etc.) and informal (from families, friends ethnonational or kinship associations) assistance in my housing search					
I have received job referrals or leads through my friends, family and ethnonational or kinship association					
My friends, family and ethnonational or kinship association have been assisting me to secure a job					
I have received formal (e.g., scholarship and informal (e.g., friends, family, ethnonational or kinship association) support in career development and advancement					
I feel a sense of responsibility toward contributing to my home country's development.					
I sometimes rely on imported medications from my homeland for medical treatments					
I sometimes seek advice from my friends, family and/or					

community from my home country on health-related matters					
My friends, family and/or ethnonational or kinship associations have been a source of practical assistance in understanding the health care system in Canada					
My friends, family and/or ethnonational or kinship associations provide me with food when needed					
I buy imported cultural food from African grocery shops					
My friends and family returning from my home country to Canada bring me culturally preferred food					
I visit friends and family and also attend cultural events to eat culturally preferred foods					
My friends, family and/or community from my home country provide me with clothing when needed					
My friends, family and/or community from my home country recommend clothing that suits the specific season in Peterborough for me.					
My sense of belonging to friends, family and/or ethnonational or kinship associations is a source of security to me					
My friends, family and/or community from my home country provided me with emotional support when I was distressed with my housing search.					
I receive security related advice from my friends, family and/or ethnonational or kinship associations from my home country					
My friends, family and/or ethnonational or kinship associations from my home country provide me with assistance in case of emergencies					

23. In what ways do your ties with your homeland influence your settlement needs?

Please rate them in order of influence: 1 = No influence at all; 2 = Less influence; 3 = Neutral; 4 = Strong Influence; 5 = Very Strong influence

Items	1. No influence at all	2. Less influence	3. Neutral	4. Strong Influence	5. Very Strong influence
Housing					
Employment					
Healthcare					
Food					
Clothing					
Safety/Security					

24. Overall, how would you rate your settlement experience in Peterborough?
a. Very Negative [] b. Negative [] c. Neutral [] d. Positive [] e. Very Positive
25. To what extent do you feel settled into the Peterborough Community?
a. Not at all [] b. Slightly [] c. Neutral [] d. Mostly [] e. Completely
26. In your opinion, how have your ties with your homeland influenced your overall settlement experience in Peterborough, Canada?
a. Positively [] b. Somewhat positive [] c. Neutral [] d. No influence [] e. Very Positive
27. With your overall settlement experience, do you think maintaining ties with your home country will help facilitate a successful settlement in the Peterborough community?
a. Yes [] b. No []

THANK YOU FOR YOUR CONSIDERATION IN SHARING YOUR TIME AND EXTENSIVE EXPERIENCE!

APPENDIX B: RECRUITMENT EMAIL

TRENT SCHOOL OF THE ENVIRONMENT

1600 West Bank Drive Peterborough, ON Canada

K9L 0G2 705-748-1011 ext. 7199

tse@trentu.ca trentu.ca/environment



EMAIL ANNOUNCEMENT

MA Thesis on Transnationalism and Newcomers' Settlement in Canada: A Case Study of African International Students in Peterborough.

TO ALL AFRICAN INTERNATIONAL STUDENTS

Are you willing to discuss your experience with settlement in Peterborough as a student? Do you have about 20 minutes to answer some questions on the topic and maybe contribute to enhancing others and your own successful settlement in Peterborough? As part of Trent University's graduate program in Sustainability Studies, I am conducting a study to learn about the settlement needs and challenges African International Students encounter in medium-sized cities like Peterborough, the connection of these students with their homelands after travelling to Canada while exploring how this connection can help mitigate the various aspects of settlement challenges to enable African International Students settle successfully in Canada.

A participant of this study must be an African International Student living or have lived in Peterborough, Canada and have been enrolled at Trent University or Fleming College

If you are not an African International Student living or have lived in Peterborough, Canada and have been enrolled at Trent University or Fleming College, sorry, you cannot participate in this survey.

You can find the survey here: (link to online survey questionnaire to be provided)

If you have any questions, please do not hesitate to contact me.

I appreciate your attention in advance. Thank You

You may withdraw from this study at any time during the survey and at any time thereafter, up until 01/05/2023. ***If you decide to withdraw, you MUST do so before completing and submitting responses by either closing your browser or the webpage with the survey questions. If you decide to withdraw after submitting your responses, your responses will not be deleted. It will be difficult to associate you with a particular response.*** It will not be possible to identify your submitted responses when you decide to withdraw after submitting responses and destroy your data. ***All responses (whether complete or partially completed) submitted will be used for analysis.*** I have attached a copy of a letter providing you with complete information on the study. The Trent Research Ethics Board has reviewed and approved this study. if you have any concerns or inquiries about your rights as a participant or how the study is being conducted, you can contact:

Anna Kisiala,
Coordinator, Research Conduct and Reporting
Tel: 705-748-1011 Ext 7866
Email: annakisiala@trentu.ca

Thank you very much for considering. You will be sent a one-time follow-up email as a reminder after three (3) weeks.

Samuel Okyere Owusu

Masters in Sustainability Studies Candidate
Trent University, Peterborough, ON, Canada
Email: samuelowusu@trentu.ca

David Firang (PhD)

Thesis Supervisor
Department of Social Work
Trent University, Peterborough, ON, Canada
Email: davidfirang@trentu.ca

APPENDIX C: INFORMED CONSENT FORM

TRENT SCHOOL OF THE ENVIRONMENT
1600 West Bank Drive Peterborough, ON Canada
K9L 0G2 705-748-1011 ext. 7199
tse@trentu.ca trentu.ca/environment



Informed Consent Form (Online Survey-based Research)

Project Title: Transnationalism and Newcomers' Settlement in Canada: A Case Study of African International Students in Peterborough.

Principal Investigator
Samuel Okyere Owusu
MA Sustainability Studies
Trent University
Peterborough, Canada
samuelowusu@trentu.ca

Supervisor
David Firang (Ph.D.)
Department of Social Work
Trent University
Peterborough, Canada

You have been invited to participate in a one-time online survey on Transnationalism and Newcomers' Settlement in Canada: A Case Study of African International Students in Peterborough. The survey can be completed online within 20 minutes. Please review the consent information and contact the principal investigator if you have any questions.

This study wants to know the needs and challenges African International Students face in Peterborough, Canada. It also looks at how these students stay in touch with their home countries. The study wants to know how these connections can help students overcome challenges and fit into their new communities. ***The study asks these questions: What difficulties do African International Students go through in Peterborough, Canada? What do these students do to stay connected to their home countries? How do these connections affect their settling-in process?***

The information that you provide will be part of this Masters research but may also be part of future presentations or publications. This research cannot be conducted without your insights, knowledge, and perspectives. The research will require about 20 minutes of your time to complete. The researcher requests that you share your information about your experiences with settlement in Peterborough. Your responses will be stored on my password-protected computer in encrypted files. All information will be destroyed after 5 years.

Your participation in this research is completely voluntary. This study is completely anonymous. ***You will have the right to withdraw your participation at any point in time up until 01/05/2023. If you decide to withdraw, you MUST do so before completing and submitting responses by either closing your browser or the webpage with the survey***

questions. If you decide to withdraw after submitting your responses, your responses will not be deleted. It will be difficult to associate you with a particular response. It will not be possible to identify your submitted responses when you decide to withdraw after submitting responses and destroy your data. **All responses (whether complete or partially completed) submitted will be used for analysis.** After agreeing to participate in this study, you will have the right to answer all questions or refuse to answer (skip) questions that you do not want to. **Once you willingly agree to this consent form, a page to the survey questions will be opened for you. Choose “I do not agree” if you are not willing to participate in this study.**

The anticipated risk of this research is psychological (feeling worried or upset as a result of responding to questions about potentially precarious living situations/conditions). This research has employed all means not to make you distressed after your participation. This survey is completely anonymous. The researcher and/or the public cannot identify who you are or associate your responses with your identity. The researcher will make every possible effort to keep your participation in the survey and your survey responses confidential. Survey information will be stored on a password-protected computer in encrypted files and a backup file will be created and stored on Trent University’s OneDrive server as this server is both password-protected and encrypted. Your name or initials will not be used in any publication or presentation in which the research is reported. Confidentiality will fully be provided. As many international students do not receive the opportunity to share their experiences as you will, you might find this research to be very enjoyable and rewarding. Your contributions and identity are also guaranteed to be protected. You are allowed to provide as little or as much information as you like in response to the questions.

It is envisaged that the findings from this research will lead to the development of an organized social support network, institutional support and coping strategies that will enable international students in Canadian post-secondary educational institutions to settle successfully.

I will not form any negative judgements or perceptions of your character based on your responses. If you are comfortable in participating, choose “I agree to participate in this research project”.

Many thanks once again for your consideration in sharing your time and extensive experience.

Choosing option 1 below indicates that you have carefully read this letter and that you understand this study has been reviewed and approved by the Trent University Research Ethics Board. Please direct questions pertaining to this review to supervisor, Anna Kisiala, Coordinator, Research Conduct and Reporting (annakisiala@trentu.ca).

I have been informed of the expectations of the survey process

1. I agree to participate in this research project.
2. I do not agree to participate in this research project.

APPENDIX D: RESEARCH DESIGN MATRIX

RESEARCH QUESTION	DATA SOURCES	DATA ANALYSIS METHOD
What are the settlement needs and experiences of African International Students in Peterborough, Canada?	Survey Questionnaire	Quantitative Analysis: Univariate - Descriptive Analysis
What are the nature and types of transnational ties of African International Students in Peterborough?	Survey Questionnaire	Quantitative Analysis: Univariate - Descriptive Analysis
Do socio-demographic characteristics influence the nature and types of transnational ties among African International Students in Peterborough?	Survey Questionnaire	Quantitative Analysis: Bivariate - Chi-square test
To what extent do transnational ties influence International students' settlement needs?	Survey Questionnaire	Quantitative Analysis: Multivariate - Ordinal Logistic Regression Analysis
RESEARCH QUESTION	DATA SOURCES	DATA ANALYSIS METHOD
What are the settlement needs and experiences of African International Students in Peterborough, Canada?	Survey Questionnaire	Quantitative Analysis: Univariate - Descriptive Analysis