UiT The Arctic University of Norway

Department of Pharmacy

Push and pull factors for migration of foreign pharmacists to Norway

An interview-based qualitative study

Saleem Iqbal

Master's thesis in Pharmacy [2022]

PUSH AND PULL FACTORS FOR MIGRATION OF FOREIGN PHARMACISTS TO NORWAY

AN INTERVIEW-BASED QUALITATIVE STUDY

COLLABORATION BETWEEN THE ARCTIC UNIVERSITY OF NORWAY AND THE UNIVERSITY OF OSLO

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May 2022

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2022

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Print production: UiT-The Arctic University of Norway

Acknowledgment

This master study was conducted in collaboration between research groups IPSUM (UiT-The Arctic University of Norway) and PharmaSafe (University of Oslo) from August 2021 to May 2022.

I would like to express my special thanks of gratitude to my supervisors Associate Professor Kristian Svendsen and Professor Anne Gerd Granås on giving me this golden opportunity to do a wonderful project on migration of foreign pharmacists to Norway. Their immense knowledge, experience, and expertise in qualitative research has enabled me to complete this master project successfully. Their insightful feedback and guidance pushed me to sharpen my thinking and brought my work to a higher level.

I would like to thank all participants of the study, who were kind enough to devote time for the interviews. This study was not possible without their cooperation. It was a pleasure to interact with the multicultural pharmacist community in Norway.

I would like to acknowledge the contribution of my mentor and boss, Dr. Gulzeb Aziz, in my professional development and success in Norway. Thank you for your support and motivation in challenging times.

I am also grateful to my friend Sabrin Moueffaq for her valuable inputs and support during the writing process. Thank you for always being available, whenever I asked you for proof reading.

Finally, I would like to thank my parents for love, affection, and prayers.

الحمد لله ربّ العالمين

"Praise be to God, Lord of the Universe"

Oslo, 12th May 2022

Saleem Iqbal

Abstract

Background: Migration of foreign pharmacists to Norway has increased considerably in recent years. Data from the Directorate of Health shows that 1592 foreign pharmacists received authorization in Norway from 2013 to 2021 as compared to 1952 Norwegian pharmacists. There are several theories of migration, but "push and pull theory" is the most widely used approach to learn about reasons of migration. According to this theory, migration takes place due to "push factors" in the origin countries and "pull factors" in destination countries.

Aim of the study: The aim of this study was to gain in-depth understanding of the migration trends of foreign pharmacists to Norway. This was done by determining "push and pull factors" which are involved in this migration.

Method: The master project is a qualitative study using semi-structured in-depth interviews with foreign pharmacists. I have interviewed 14 pharmacists from six different countries, which were audio recorded. These recordings were transcribed verbatim and coded in NVivo 1.5 software. Thematic analysis was performed to analyse these interviews.

Results: There were four main themes for push factors and seven main themes for pull factors that emerged after the analysis. Three of them were common in push and pull factors, one was present only in push factors and four were present only in pull factors. "Socio-political and economic factors", "personal factors", and "friends and family" were common main themes. "Occupational factors" were only identified in push factors. "Active recruitment", "authorization process", "social media" and "Norway was well known" were present only in pull factors.

Conclusion: The study found push and pull factors involved in migration and divided these into eight main themes. These factors were involved at both axis of migration, i.e., the origin countries and the destination countries. A quantitative study based on questionnaire would further strengthen the findings of this study.

Keywords: Migration, pharmacists, push factors, pull factors, qualitative study, in-depth interview

Table of Contents

1 Introduction 1

1.1 Migration 1

1.2 Health care professionals and migration 3

1.2.1 Impact of migration of health care professionals 4

1.3 Health care professionals in Norway and authorization 6

1.3.1 Pharmacists in Norway 7

1.3.2 Migration of pharmacists into Norway 10

1.3.3 Authorization process for foreign pharmacists in Norway 13

1.4 Push and pull factors 15

1.4.1 Push factors 15

1.4.2 Pull factors 16

2 Aim of the study 19

3 Method 20

3.1 Selection of research methodology 20

3.2 Preconception 20

3.3 Consent form 21

3.4 Ethical review 22

3.5 Recruitment of the participants 22

3.6 Pilot interview 23

3.7 Development of interview guide 23

3.8 Interview and recoding 24

3.9 Analysis of interviews 25

4 Results 28

4.1 Themes 28

4.2 Push factors 31

4.2.1 Occupational factors 31

4.2.2 Socio-political and economic factors ... 35
4.2.3 Friends and family ... 38
4.2.4 Personal factors ... 39
4.3 Pull factors ... 41
4.3.1 Active recruitment ... 42
4.3.2 Authorization process ... 44
4.3.3 Social media ... 46
4.3.4 Friends and family ... 47
4.3.5 Socio-political and economic factors ... 48
4.3.6 Norway was well known ... 50
4.3.7 Personal factors ... 50
4.4 Other inputs from participants ... 51
5 Discussion ... 53
5.1 Occupational factors ... 53
5.2 Active recruitment ... 54
5.3 Authorization process ... 55
5.4 Friends and family ... 56
5.5 Social Media ... 57
5.6 Socio-political and economic factors ... 57
5.7 Personal factors ... 58
5.8 Norway was well known ... 58
5.9 Other inputs from informants ... 58
5.10 Limitations and strengths ... 60
6 Conclusion ... 62
Bibliography ... 63
Appendix ... 68
Appendix-I: Consent to take part in research project ... 68

Appendix-II: NSD assessment 70
Appendix-III: Interview guide 72
Appendix-IV: Interview list 75
Appendix-V: Code book 76

List of Tables

Table 1- Top five countries of destination and origin for migrants (3)............ 2
Table 2- Study places for pharmacy education in all Norwegian universities (2021) (44) 9
Table 3- Push and pull factors for migration of health care professionals (3, 22, 54, 58)............ 17
Table 4- Participants of the study............ 28
Table 5- Main themes extracted from 14 interviews with pharmacists 29

List of Figures

Figure 1- Percentage of migrant population living in different income countries (3) 1
Figure 2- Number of people migrated into Norway between 2000-2020 from different regions (13) 3
Figure 3- The number of authorizations of health persons in Norway over the years (2013-2021) (32)............ 7
Figure 4- Total number of pharmacies and pharmacists working in pharmacies over the years in Norway (2010-2021) (39, 40) 8
Figure 5- Foreign pharmacists registered in Norway (2013-2021) (32) 10
Figure 6- Percentage of newly authorized pharmacists over the years (2013-2021) in Norway (32) 11
Figure 7- Number of pharmacists authorized in Norway over the years (2013-2021) (31)............ 12
Figure 8- Number of pharmacists authorized over the years from different countries (2013-2021) (31)............ 13
Figure 9- Authorization process for foreign pharmacists in Norway(50)............ 14
Figure 10- Push and pull for migration (54) 15
Figure 11- Thematic analysis as described by Robson (70)............ 25
Figure 12- Main themes and number of sub-themes in each category............ 29

Figure 13- Thematic map network for push factors describing four main themes and 21 sub-themes..31
Figure 14- Thematic map network for pull factors describing 7 main themes and 24 sub-themes..41

1 Introduction

1.1 Migration

Migration is the movement or displacement of people from one place to another due to a variety of reasons. It is not a new phenomenon, rather it has a long history. Many studies have been conducted to understand reasons behind migration of people. There are two types of migration: internal migration and international migration (1). Internal migration is within the country from one area to another and is most usually from rural areas to urban areas. International migration is from one country to another country, which is largely associated with migration from developing countries to developed countries. In recent years, migration is a result of globalization and it is considered a freedom of choice of any individual (2).

In 2020, 281 million people were living outside their country of origin, which account for almost 4% of total world population (3). This has increased considerably in past two decades, with nearly 108 million people added from 2000 to 2020. This migration is partly a result of humanitarian crises and war in different parts of the world, which led to an increase of 17 million refugees and asylum seekers in last two decades, and it accounts for almost 12 percent of total migrant population (3). However, labour and family immigration account for the majority of this increasing trend (4). Most migrants live in high income countries due to better opportunities and living standard for them and their families. As of 2020, 65% of migrants live in high-income countries, 31% live in middle-income countries and 4% were living in low-income countries (Figure 1) (3).

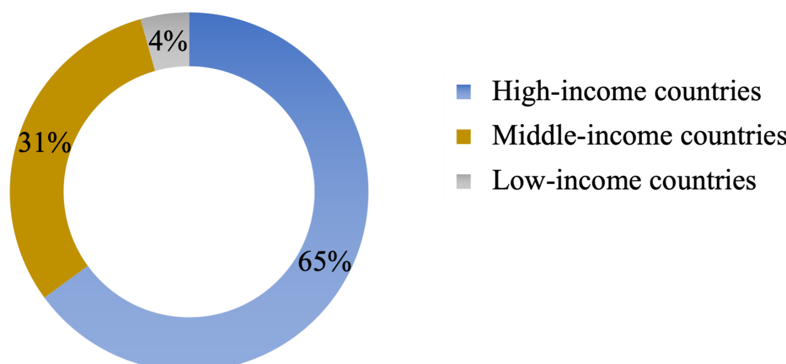

Figure 1- Percentage of migrant population living in different income countries (3)

As per 2020, almost two-third of the total migrant population was living in 20 countries. The United States of America hosts 51 million, which is 12 percent of total world migration. Germany, Saudi Arabia, The Russian Federation, and The United Kingdom of Great Britain are among the largest host countries (Table 1). Europe is still considered the most attractive destination continent for migrants, which hosts 87 million or almost 31% of the total migrant population (Table 1) (3).

Table 1- Top five countries of destination and origin for migrants (3)

Top five countries of destination		Top five countries of origin	
The United States of America	51 million	India	18 million
Germany	16 million	Mexico	11 million
Saudi Arabia	13 million	The Russian Federation	11 million
The Russian Federation	12 million	China	10 million
The United Kingdom	9 million	Syria	8 million

Migration of highly skilled workers is relatively common into English speaking countries due to lower language barriers (5). English is a widely spoken second language in most of the countries, thereby it is easy to migrate in an English-speaking country. "Highly skilled worker" is the terminology referring to individuals who have completed tertiary level education (6). This type of migration is different from other common type of migration e.g., studies, family, asylum etc. The developed countries have focused a lot to make their country more attractive for skilled workers, by giving them preferential treatment, reducing the visa requirements for family reunification and better working environment (7). The immigrants often like to be entrepreneurs and establish their own businesses in the destination country, therefore they considerable contribute to creating new jobs (8).

Migration into Norway have also increased in the recent two decades. In 2000, the total migrant population was 238,462, which accounted for 5 percent of total Norwegian population. As per 2021, 800,094 people were living in Norway with background from another country, which contributes to 14.8 percent of total Norwegian population (9-11). The

immigrant population in Norway is from different parts of the world and almost 200 nationalities are living in Norway. In recent two decades, 801404 new migrants registered in Norway with background from different regions. Highest number of people migrated from Europe with a total of 430,165, followed by Asia 221,389, Africa 97,171, South and Central America 20,162, and Oceania 4512 (Figure 2) (12). However, 389,397 foreign citizens emigrated from Norway between 2001 to 2020, thereby net migration is this period is 580,578 (13).

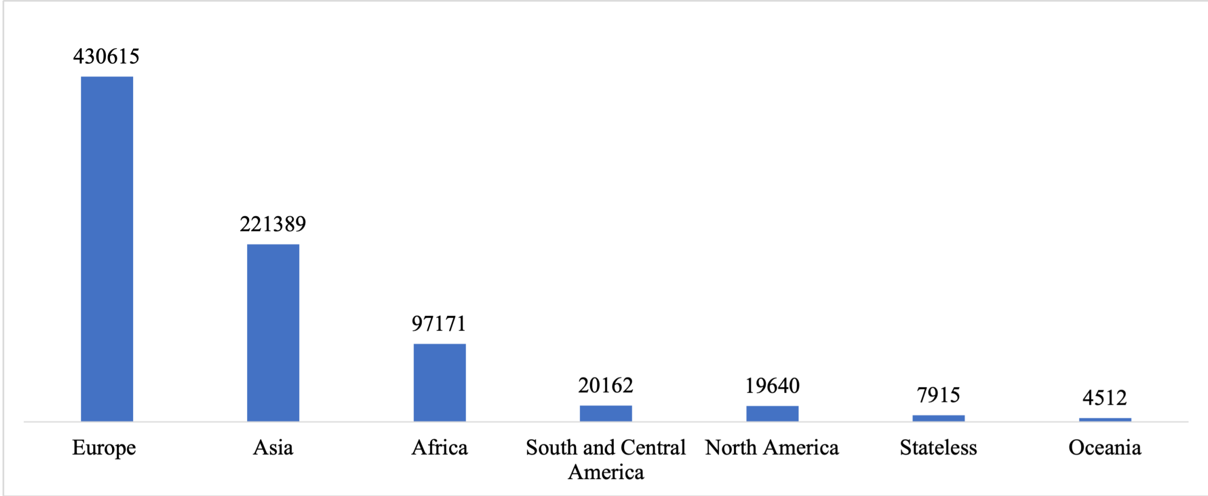

Figure 2- Number of people migrated into Norway between 2000-2020 from different regions (13)

1.2 Health care professionals and migration

The World Health Organization (WHO) defines health care professionals as *"all persons engaged in actions whose primary intent is to enhance health"* (14). It includes doctors, nurses, pharmacists, midwives, dentists, and many other professionals, which involve in prevention, promotion, and cure of health services. Poor socioeconomic an environmental conditions contribute to migration of health care professionals from home country, and this migration is deteriorating health care systems in developing countries (15).

The migration of health care professionals has an almost similar trend to the general migration of people. This migration is primarily led by shortage of health work force in the destination country. The health care professional migration might have changed recently due to electronic access to global job market and regulatory framework in destination countries (6).

This trend of migration of health care professionals is increasing internationally. The number of migrant doctors and nurses in the Organization for Economic Co-operation and Development (OECD) countries has increased by 60 percent in the last decade (16).

Moreover, the global data for this migration from destination countries is more reliable than origin countries (6).

WHO has issued "The Global Code of Practice on the International Recruitment of Health Personnel" to ensure ethical recruitment of foreign health care professionals in its member states. Recruitment of health care professionals from developing countries increase health services inequality in the origin countries. This code of practice limits active recruitment from developing countries, which are already facing critical shortage of health care professionals (17). The developed countries have the responsibility to reduce factors which lead to migration of health care professionals and help the poor countries to coup with extensive migration (17, 18).

Little research has been done on the migration of pharmacists, and there is no database available to assess the extent of pharmacist migration. The only comprehensive international study into pharmacy workforce and migration was conducted by the International Pharmacy Federation (FIP) in 2006 (19). This report also states that data available about migration of pharmacists cannot fully capture the extent of migration. FIP collected the data from ten countries and over 70 regulatory bodies, between 27th September 2005 to 10th February 2006. Countries included in this study were Australia, Canada, Ghana, Ireland, Kenya, New Zealand, South Africa, Uganda, United Kingdom, and United States of America. It also collected data of foreign pharmacist that registered from 1995-2005 in these countries. This data showed an increasing trend of pharmacist migration in many countries. However, migration was low in those countries who had complex and long registration process for foreign pharmacists (19).

1.2.1 Impact of migration of health care professionals

Migration of health care professionals not only impacts the individuals themselves, but also, the origin and destination countries (1, 20). Health care professionals play a vital role in improving the health of the population and contribute to social and economic development. Therefore, the impact of migration of health care professionals is relatively greater than the other skilled workers (21).

This migration leads to the global health professionals crises, which is the main cause for global health inequality (20). It causes "brain drain" in the origin country and shortage of health care professionals, which leads to poor health services and facilities in the country.

Brain drain is referred to as loss of skilled and talented professionals from a country (22) and this term emerged in 1960s (23). Brain drain of health care professionals is not a new phenomenon, and concerns were expressed in 1965 at Edinburgh Commonwealth Medical Conference (24). The cost implication due to brain drain is very high for origin countries. In 2012, The United Nations Commission for Trade and Development (UNCTAD) has estimated that migration of a doctor from a sub-Saharan Africa cost at least USD 364,000 to the origin country, while corresponding costs for nurses was USD 238,000 (25). In most of the cases, developing countries are countries of origin, which are already suffering with poor health system, and this migration worsens the situation. These countries spend considerable resources for education and training of health care professionals, but cannot retain highly skilled professionals due to poor economy and employment conditions (1). This migration leads to loss of professionally active citizens, which increase the dependency ration in the country (26). However, immigrants working in other countries, send remittances to home countries to support their families. Remittances are significance sources of income for many developing countries. This money flow from developed countries to developing countries, help to eradicate poverty in poor societies and stimulate development (1, 22). In 2020, USD 702 billion remittances were recorded globally (27). Although, these economic benefits cannot compensate loss of workforce in the health sector.

Destination countries are also affected by the migration of health care workers. Highly skilled workers bring valuable skills into the destination country and help to boost the social welfare system (5). Due to the increase in elderly population in developed countries, they need more health care professionals to provide good health care facilities and services. This migration fulfils the shortage of workforce in the health sector, and results in the good health services and facilities in the country. Moreover, migrant skilled workers may accept lower salaries packages, and they can fulfil the need of workers in rural areas, which native workers avoid (26).

The individual itself seeks beneficial outcomes such as financial gain and professional development. In contrary to that, they face many problems, such as disturbance in family life, separation from friends and relatives, integration challenges in a new culture, learning a new language, expenses to settle up at new place, and negative reactions from colleagues (26).

1.3 Health care professionals in Norway and authorization

Health care professionals are persons who have authorization in Norway as per Health Persons' Law. The persons without authorization might also be considered as health care professional, who assist authorized health persons in providing the health services, e.g., students (28). The Directorate of Health is responsible for authorization of health personnel in Norway (29). There are 29 groups of health personnel, mentioned in §48 of Health Person´s Law, who require authorization to be recognized in their respective professions. However, the Directorate of Health can issue a temporary license to students and foreign health worker for a limited period, which allows them to perform their duties under the supervision of another health person of same profession (28).

As per 2020, the number of health care professionals in Norway, between 15-74 years of age, was 569,630, which is an increase of 23 percent in one decade. Moreover, 452,051 are employed in health and social sector, which accounts for 78 percent of the total number of health care professionals (30). In 2021, Directorate of Health authorized 17,419 new professionals as health persons in all categories (31).

As per data from Directorate of Health, one out of five of newly authorized health care professionals have education from outside Norway. This ratio has declined heavily from 2013, which was two out of five (Figure 3). This shows the migration of health care professionals reduced in the recent years by almost 50 percent. Moreover, this decline in foreign educated health care professionals also impact the total number of authorizations. In 2013, the number of newly authorized health care professionals was 20,863, as compared to 17419 in 2021, a decline of 16 percent (Figure 3) (32).

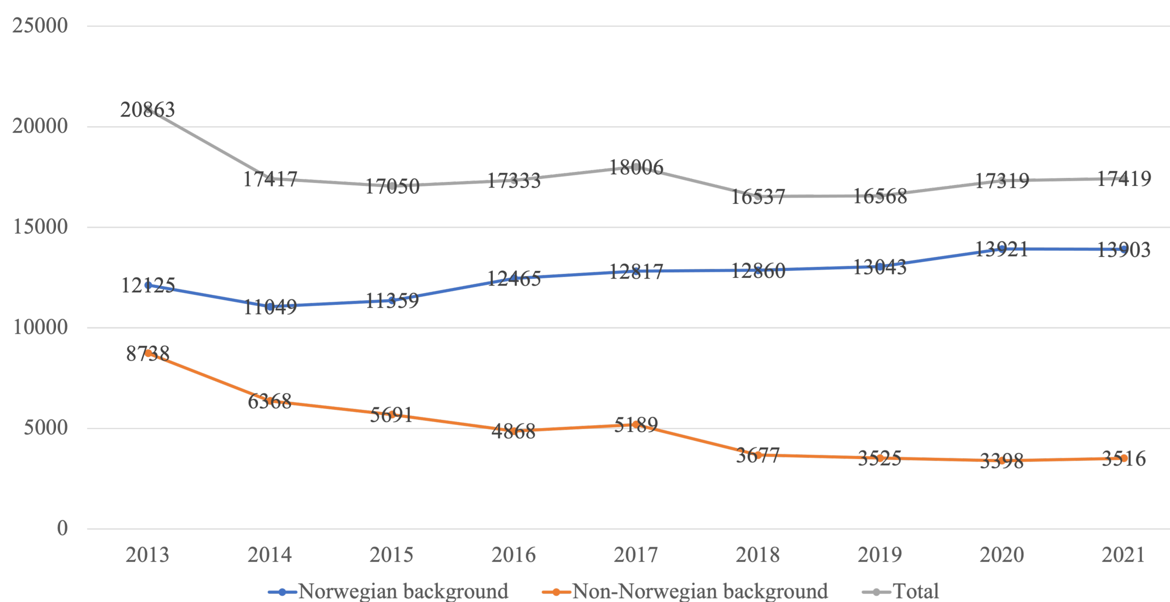

Figure 3- The number of authorizations of health persons in Norway over the years (2013-2021) (32)

Until recently, there have not been done much research for the migration of health professionals in Norway. However, a recent study has been published about the nurse's migration from Philippines and their challenges to adjust in a new health care system and society (33).

1.3.1 Pharmacists in Norway

Pharmacists are the third largest group of health care professionals in the world (19). The role of pharmacists is limited and under-exploited in developing countries, but in developed countries this role is very diversified in providing health care (34). After the implementation of Health Person´s Law in 1999, pharmacists were included as a new group of health care professionals in Norway with requirement of authorization (28). Pharmacists are the only group of health care professionals who have the right to dispense medicines in Norway as per Pharmacy Act (35). In 2006, an amendment in Health Person´s law and Pharmacy Act split the pharmacists in two groups based on their education level. Pharmacists with bachelor education were named as "prescriptionist", and with master education named as "pharmacist". However, both these group have the general title of pharmacist (36). Prescriptionist have full rights to dispense medicines on a pharmacy in Norway, like a pharmacist. Additionally, a pharmacist with a master degree is the only professional in Norway who can apply for operating license for a pharmacy and can work as pharmacy manager, according to the Pharmacy Act (35).

As per 2020, the total number of authorized pharmacists in Norway was 6913, which is an increase of 34 percent in the last decade. Almost 84 percent of these pharmacists have the employment (37). The majority (64 percent) of pharmacists work in pharmacies (38). Moreover, pharmacists are working in hospitals, public sector, pharmaceutical industry, research, and education.

Despite an increase in number of pharmacists in the recent years, there is shortage of pharmacists in the country. The number of community pharmacies increased considerably in last ten years, from 673 pharmacies in 2010 to 1032 pharmacies in 2021. Furthermore, man-hours on pharmacies increased by 27 percent from 2010. This increase is due to number of pharmacists working in pharmacies increased from 2347 in 2010 to 3888 in 2021, which is an increase of 66 percent (Figure 4) (39, 40). The use of medications has been increased by 10 percent in the last decade due to increase in elderly population among others (41). These might be considered as main reasons for high demand and shortage of pharmacists in Norway.

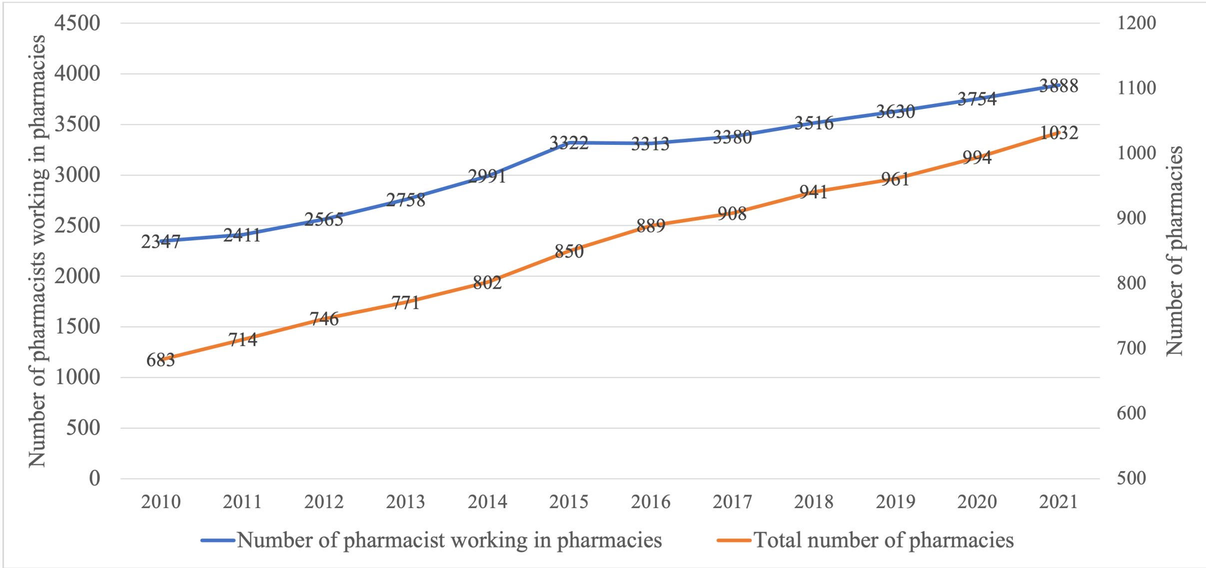

Figure 4- Total number of pharmacies and pharmacists working in pharmacies over the years in Norway (2010-2021) (39, 40)

Pharmacists plays an important role to ensure the correct use of medicines. Moreover, many new services e.g., inhalation technique assessment, new medicine service, vaccination, have been added in pharmacies, which expand the role of pharmacist. In 2016, a pharmacist-led inhalation technique assessment service was introduced in Norwegian pharmacies for COPD and asthmatic patients who use inhalation medicines. Almost 75,000 assessments were performed in 2021. New medicine service started in 2018, intended for patients who are going to start new medicines for cardiovascular diseases. This service consists of two follow-up

consultations with a pharmacist to ensure correct use of medication and compliance with the therapy. In 2021, 22,450 consultations were made in pharmacies. Vaccination of influenza started in pharmacies in 2017, after necessary training of pharmacists and other pharmacy staff. In 2020, pharmacists were granted with prescribing rights for influenza vaccines in Norway. During the pandemic in 2021, pharmacist got prescribing rights for covid-19 vaccines and played a vital role to achieve national vaccination goal. In 2021, Norwegian pharmacies have administered almost 154,000 influenza vaccines. More than 14,000 covid-19 vaccines were administered in Oslo in 27 pharmacies (42).

The Norwegian Pharmacy Association launches a yearly campaign before school admissions to motivate students to choose pharmacy education (41). University of Oslo and University of Bergen offer integrated five years master programs in pharmacy, and students get authorization as pharmacist. Oslo Metropolitan University and Nord University in Namsos have bachelor programs in pharmacy, and pharmacists get prescriptionist authorization. However, University of Tromsø offers two-year master's program, in addition to three-years bachelor education. The Norwegian University of Science and Technology Trondheim offer just two years master`s program. The students, who chose to study master´s in pharmacy after bachelor education, get authorization twice (43). Maximum 342 pharmacy graduates can receive authorization in Norway as health care professional, including 172 pharmacists and 170 prescriptionist, based on study places for pharmacy education in different Norwegian universities (Table 2) (44).

Table 2- Study places for pharmacy education in all Norwegian universities (2021) (44)

	Integrated master´s (5 years)	**Bachelor (3 years)**	**Master´s (2 years)**
University of Oslo	78	-	-
University of Bergen	29	-	-
University of Tromsø	-	50	35
Oslo Metropolitan University	-	90	-
Nord University in Namsos	-	30	-

The Norwegian University of Science and Technology Trondheim	-	-	20
Maximum number of Norwegian pharmacists receiving authorization per year = 342	107	170	65

1.3.2 Migration of pharmacists into Norway

In the recent years, the migration of foreign pharmacists to Norway has increased considerably. 1552 foreign pharmacists registered between 2013 and 2021 from 71 different countries, as compared to 1952 pharmacists of Norwegian background (Figure 5) (32). Highest number of pharmacists were registered from Serbia with a total of 301, followed by Pakistan 168, Sweden 161, Denmark 121, Portugal 115, Poland 95, Hungary 59, and Romania 39.

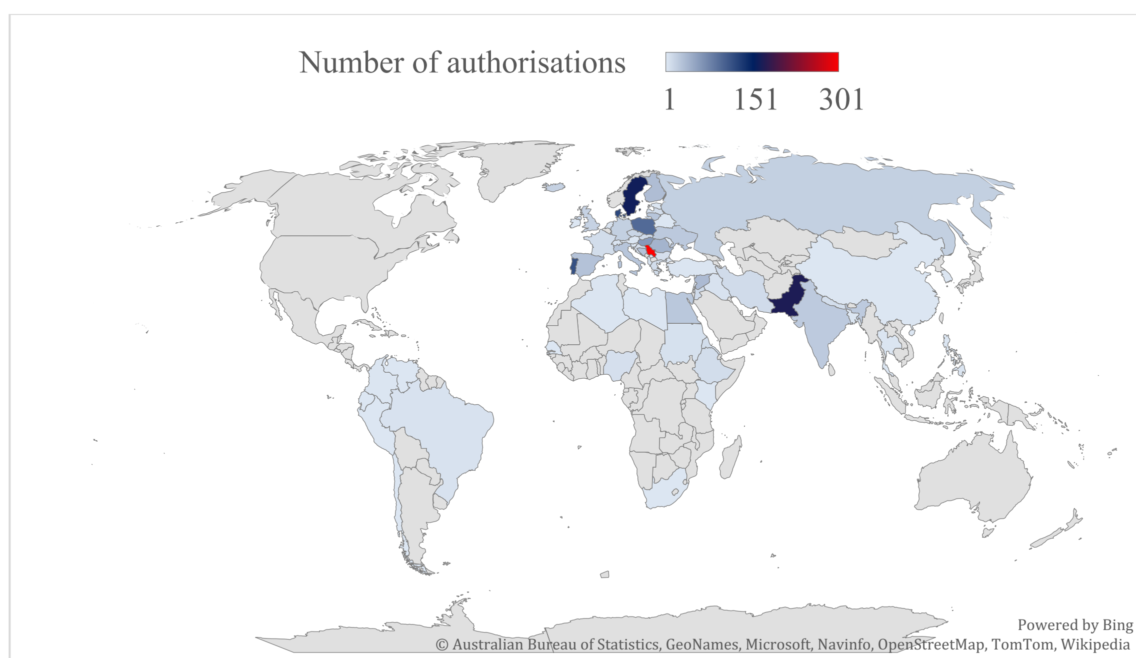

Figure 5- Foreign pharmacists registered in Norway (2013-2021) (32)

As per data from Directorate of Health, 37 percent of pharmacists who received authorization in Norway in 2021, were having education from abroad. In 2013, 2014 and 2017, the percentage of newly authorized foreign pharmacists was higher than 50 percent. Highest number of foreign pharmacists authorized in 2017, with total of 246, which was 52 percent of total pharmacist authorization in Norway (Figure 6) (32).

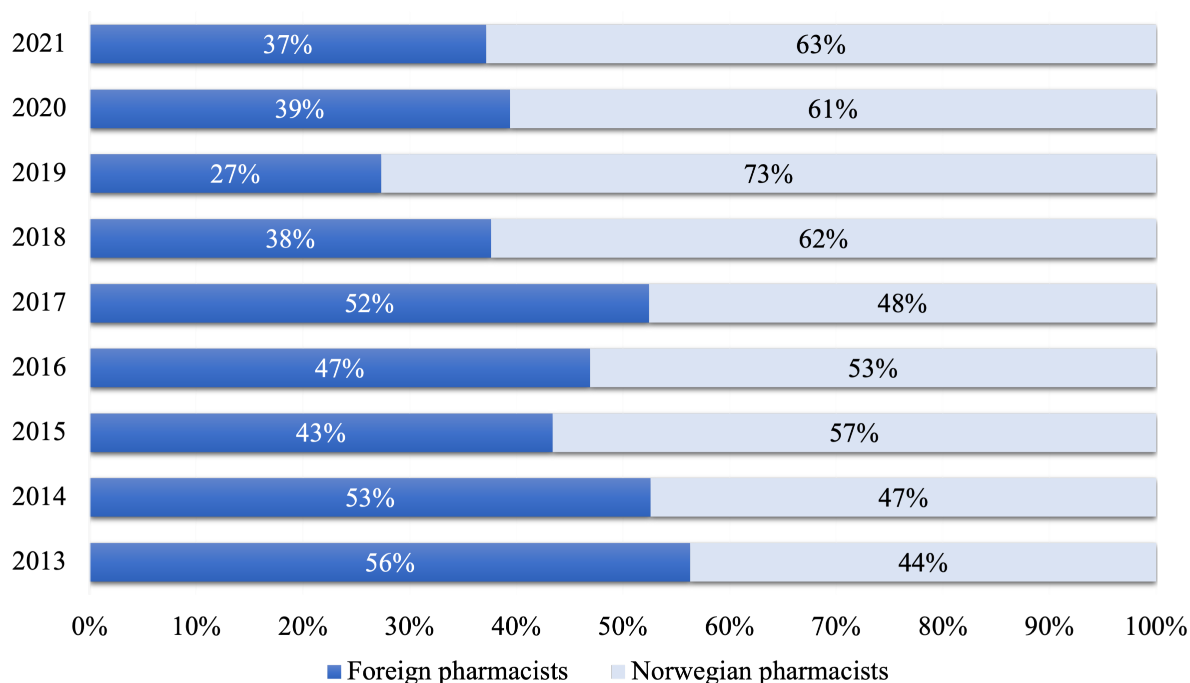

Figure 6- Percentage of newly authorized pharmacists over the years (2013-2021) in Norway (32)

The data shows that the number of new pharmacists of Norwegian background has also increased from 2013 (31). Data from Directorate of Health does not differentiate between those who received pharmacist authorization after integrated master´s program or after the bachelor program. Therefore, this data does not give the accurate picture of pharmacist registration and the percentage of foreign pharmacists might be even higher than as presented in Figure 6.

This migration is from all around the world, both from EU/EEA countries and non-EU/EEA countries (Figure 7). There is a decrease in number of pharmacists from EU/EEA and Nordic countries in recent years. This trend of migration is increasing for countries outside EU/EEA.

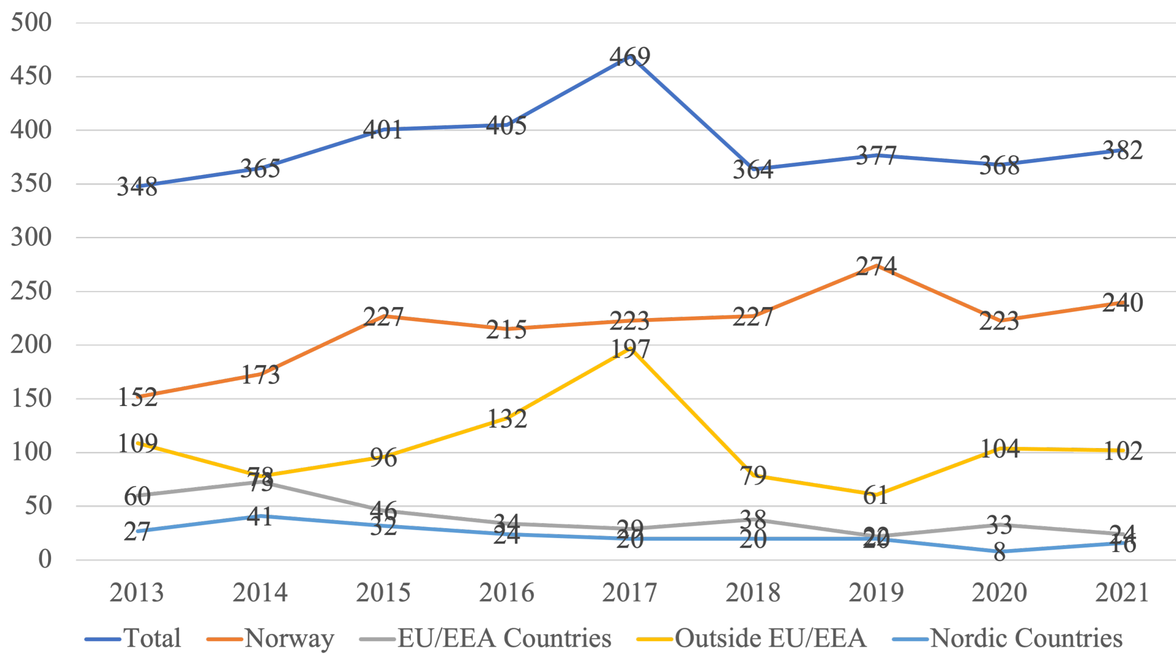

Figure 7- Number of pharmacists authorized in Norway over the years (2013-2021) (31)

Data from the Directorate of Health shows that major countries involved in this migration are Pakistan, Serbia, Poland, Denmark, Sweden, Portugal, Syria, and Egypt. However, this trend is not increasing for all countries, rather has a considerable fluctuation for different countries. From 2016 onwards, Serbia and Pakistan became two main countries of origin for foreign pharmacists in Norway. Serbian pharmacists dominated foreign pharmacists in 2015 and 2016, with the highest number of authorizations. Whilst, 2016 might be considered as a start year for Pakistani pharmacists in Norway, and they show considerable peak in Figure 8 (31). In last three years, Pakistan is leading with the highest number of authorized foreign pharmacists in Norway. In start of Figure 8 from 2013 to 2015, Danish, Swedish and Polish pharmacists had the highest ratio of authorization but has declined afterwards. Moreover, peaks were seen for Portuguese pharmacists in 2015 and 2016, which has also decreased in later years. Migration trend for Syrian and Egyptian pharmacists seems t relatively new but has slightly increased in the past two years.

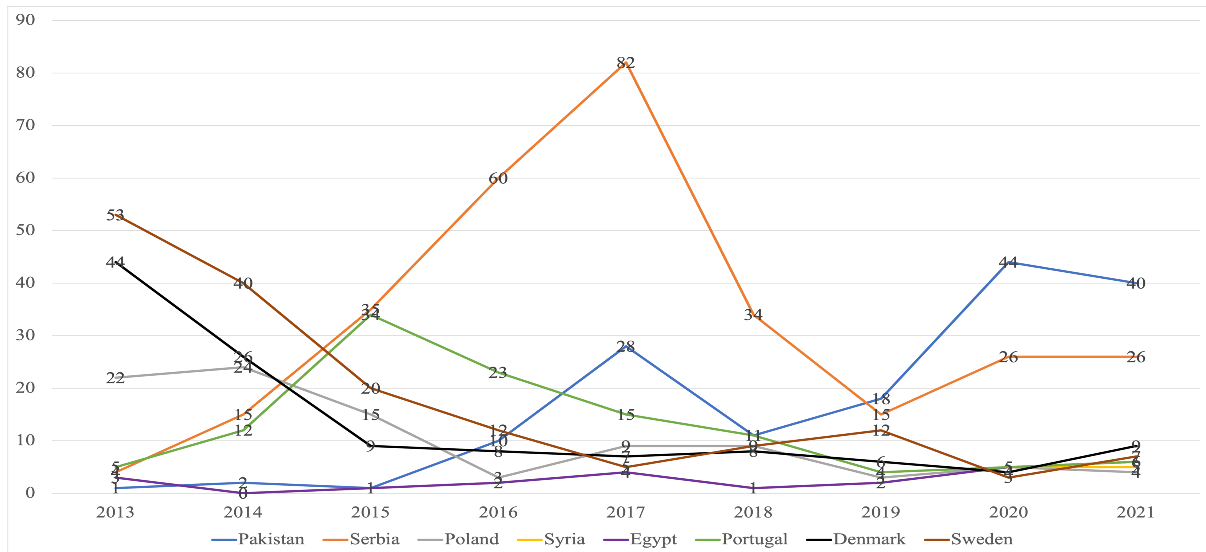

Figure 8- Number of pharmacists authorized over the years from different countries (2013-2021) (31)

1.3.3 Authorization process for foreign pharmacists in Norway

As the prerequisite to job, foreign pharmacists must learn the Norwegian language to communicate with customers and colleagues in pharmacies. However, the process of authorization is different for European countries and non-European. New regulations for authorization of foreign qualified health care professionals were implemented in 2018, with the B2 level Norwegian language requirements (45).

1.3.3.1 Process for pharmacist from EU/EEA countries

For the pharmacists graduated from EU/EEA countries, they should submit the application to the Directorate of Health for evaluation of their education. They have the processing time of three months and receive authorization after the assessment of the application. In 2008, the European Qualification Framework (EQF) was implemented across the European countries to relate national qualification to common European framework (46). It approves the pharmacy education from other EU/EEA countries without any additional requirements (47).

Despite relatively easier processes of authorization and no additional requirements, they must learn Norwegian language to work in a pharmacy. Although it is no Norwegian language requirement from the Directorate of Health or Norwegian Medical Agency (SLV) for pharmacists from EU/EEA countries, pharmacy chains often ask for minimum language requirements in their vacancy announcements (48).

1.3.3.2 Process for pharmacist from outside EU/EEA countries

For pharmacists outside EU/EEA, must submit documents to the Directorate of Health for approval of their foreign education. They get response on the application within the maximum processing time, which is nine months nowadays (49). The response, usually, consists of a decision letter and a license for period of three years. After the decision, applicant must complete the courses mentioned in the decision letter to become authorized pharmacists. The applicant must pass an approved Norwegian test at level B2 on the Common European Framework of Reference of languages (CEFR). After passing the language exam, one should pass the course in Norwegian health services, health legislation and society (kurs i nasjonale fag), course in safe handling of medicine and calculations (legemiddelhådtering og legemiddelregning). After fulfilling these requirements, foreign pharmacists receive authorization as pharmacist in Norway (Figure 9) (50).

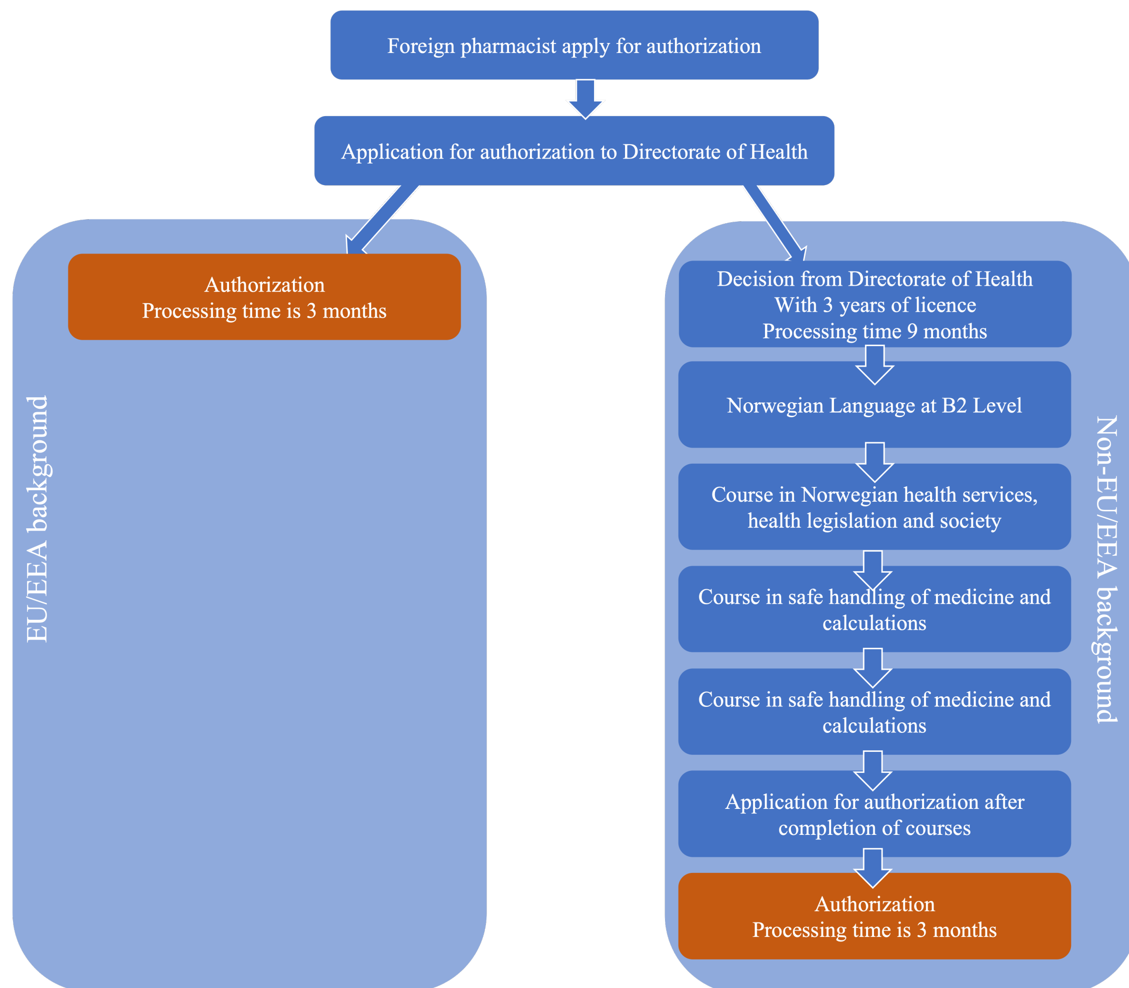

Figure 9- Authorization process for foreign pharmacists in Norway(50)

1.3.3.3 Costs for language and National subject courses

Private or public educational institutes in Norway offer different language courses for foreigners, providing a relatively faster learning through more regular classes. Language courses are divided into three levels at the University of Oslo, and each level costs almost 15,000, - NOK. The courses for authorization (are offered by the Folkeuniversitetet which is a private sector university) costs 25,500,- NOK (51). The total cost for all courses is approximately 60-70,000 NOK.

1.4 Push and pull factors

Migration is caused by various factors and forces at the origin country and the destination country (2). Several studies have been conducted to create the theories of migration of people from the country of origin to the country of destination (52). However, the most widely used approach to study trends of the migration is "push and pull factors theory". According to this theory, migration takes place due to the push factors in the origin country and pull factors in the country of destination (Figure 10) (53). The European Commission defines these factors as *"Factors which initiate and influence the decision to migrate, either by attracting them to another country (pull factors) or by impelling or stimulating emigration (push factors)".*

These push and pull factors take place along both axis of migration, i.e. the origin country and the destination country (53).

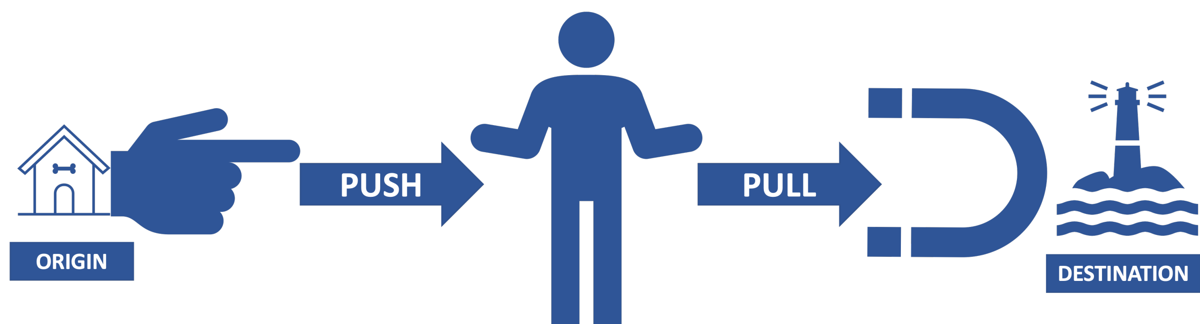

Figure 10- Push and pull for migration (54)

1.4.1 Push factors

Many push factors drive people to emigrate from the origin country such as poor economy and little sources for the health system. The health system often lacks facilities and technology, which makes health professionals less secure to work in a health care institution. Due to the lack of facilities, they are more prone to be infected by infectious diseases, which might also be push factors (54).

Political stability and security are keys to economic growth and are prominent push factors. Many countries face severe political and security issues, which leads to emigration from these countries. Political unrest, security problems and war cause insecurities for the future (3). They are not only concerned for their own lives, but also for the family and children. For the prospect of a secure and stable life, they migrate to a country with more political stability.

Developing countries also lack basic facilities to fulfil the needs and hope of its people. This alone is a push factor for individuals, who have relatively better economy in the home country and seek better living standards for themselves and family.

A cultural obligation in many societies require that emigrants must actively send economic support to parents, siblings, and other close family members in the home country. Many immigrants send remittances to their families to support and uplift their living standard (22). This pressure to support families might be a push factor for many immigrants.

When a highly educated health care professional face difficulties after graduation in work and family life, they prefer to move country to overcome these problems (55). This type of migration is usually from developing countries to developed countries.

1.4.2 Pull factors

Pull factors are linked with the destination country, with prospects of a better life, better career opportunities, sense of comfort and hope. The decision to migrate is mostly personal and prone to changes in circumstances (6). The shortage of health care professional leads to active recruitment from other countries and add to the trend of migration (56). The developed countries relax immigration policies if they need more health care professionals (1). Difference in salaries and other economic benefits seem to be the major pull factor for the professionals (57). Moreover, the countries with a developed health care system, have implemented vaccination programs and protective measure for health care professionals to prevent infectious diseases. Highly educated individuals are relatively more enthusiastic to growth in career and education, and they prefer to move to countries which have better opportunities to excel their career. Some people are keen to explore the world and new travel destinations, and developed countries have more freedom to travel to other countries and more accessible visa regulations. Better travel opportunities can be a pull factor to move to a new country fulfilling dreams of travelling.

Family and friends network tell the people about a new country, and it helps them to be familiar with the opportunities in the destination country and inform about process of immigration. The networks of family, friends and community facilitate migration and can be considered a pull factor (58). In recent years, the social media has strengthened these networks and made it possible to connect. Several groups and pages on social media have been created to share positive experiences about the life abroad, providing inside information about the country. Social media is not only relatively new communication channel, but also facilitate migration in four different ways; enhance the ties with friends and family, strengthen weaker ties, establish new ties, and provide unofficial and discrete inside information about migration (59).

Developing countries have stronger push factors than developed countries. Contrary to this, developed countries have more attractive pull factors for the health care professionals than the developing countries (54). Table 3 presents the most common push and pull factors for migration of health care professionals.

Table 3- Push and pull factors for migration of health care professionals (3, 22, 54, 58)

Push factors	Pull factors
• Low wages • Political instability • Security problems • Fewer opportunities for higher education • Poor working environment and lack of facilities on workplace • Few opportunities for career development • Higher rate of communicable diseases; like HIV, TB, malaria • Economic instability • Unstable and dangerous working environment • Lack of technology	• High wages • Employment opportunities • Ease in migration policies • Political stability • Better opportunities for education and specialization • Good working environment • Many opportunities for career progress • Network of friends and community • Economic support to family in home country • Good vaccination programs and treatment for communicable diseases • High financing of health care system

	• Better travel opportunities • Job security • Good living standards • Active recruitment by agencies • Better technology in health care system

However, it is very difficult to generalize push and pull factors for individuals. It might also happen that a country has very strong push factors, but due to legislations and rules of migration, it becomes difficult for individuals to migrate to a desired destination. Countries with strong pull factors, might have many other prohibitive factors such as immigration policies which stop immigration (53).

A study conducted to evaluate factors affecting migration of Iranian health care professionals, classifies these factors into five categories: structural, occupational, personal, socio-political, and economic (60). Another study investigated migration intentions and factors among pharmacists and pharmacy students in nine countries. This study classifies migration factors into three different groups: professional status and environment in origin country, career opportunities abroad, and socio-political environment in origin country. This study shows significant difference in factors from different origin countries (61). A study conducted among pharmacy students in Ghana, highlights that pharmacy students don't feel as recognized health care professionals in their home country. They therefore prefer to migrate into a country where they can contribute to health care, with recognition of their role from society (62). Another study shows that substantial salary difference between origin countries and destination countries is the major factor for migration of Lithuanian pharmacists. Furthermore, shortage of pharmacists in destination countries leads to creation of jobs for foreign pharmacists (63). A research study to examine factors behind brain drain of pharmacy professionals from Pakistan, indicates that poor working environment, nepotism, security problems, lack of health infrastructure and lack of opportunities were main push factors. Pull factors in destination countries for Pakistani pharmacists were, higher salaries, better training for pharmacist, better lifestyle, good working conditions, religious freedom, more career opportunities and presence of relatives in the country (64).

The recent notable study on migration of health care professionals into Norway was published by Nortvedt et al. in 2020. This qualitative study explored push and pull factors of Philippine nurses and their experience with the process of registration in Norway as health care professionals. Findings show that Philippine authorities have more focus on pushing nurses to move out of the country. The country has poor working environment, lower salaries, lack job opportunities, and many nurses were dissatisfied with their role and working conditions. Furthermore, families also had a great influence on decisions to emigrate from the country. Norway as destination country was seen as more of a coincidence for many, although it had many pull factors for these nurses. These pull factors include family and friends settled in Norway, higher salaries, shortage of nurses, and easy initial approval as auxiliary nurse (33).

Several studies investigate factors of migration of physicians and nurses, but I have found a few such studies of pharmacists and pharmacy students, although they are considered valuable and underexploited health care professionals (61, 62). Policy makers and researchers focus on shortage of nurses and physicians, but shortage of pharmacists have received little attention.

I have not found any study in Norway of the migration of pharmacists. This master research project is thus, to our knowledge, the first study to investigate this trend of migration to Norway.

2 Aim of the study

The aim of this master project is to gain in-depth understanding of the migration trends of foreign pharmacists to Norway. This was done by determining "push and pull factors" which are involved in this migration.

3 Method

3.1 Selection of research methodology

This master project is an interview-based qualitative study. A qualitative research approach gives us a complex textual description of people experience about the research questions, and helps to better understand complexity of the phenomenon (65). Mack divides qualitative research into three methods, i.e., participants observations, in-depth interviews and focus group. In this master project, I used in-depth interviews method to collect data of personal history, experience, and perspective of individuals to explore this migration trend. In-depth interviews give a wide picture of the participant perspective. In these interviews, the participant is considered as the expert. In interviews, I asked questions in a neutral manner and listened to the participant response attentively (65). The data generated by this method consisted of personal notes taken during the interviews, audio recordings and transcripts.

The qualitative method gave more flexibility than a questionnaire and allowed me to adjust wording of my questions with each participant. I was able to tailor the subsequent questions and probes after the response from participants. Moreover, this method gave opportunity for participants to elaborate their answers in detail. The participants seemed to feel free to explain their experiences about migration in their own words.

3.2 Preconception

Preconception is defined as the researcher previous professional and personal knowledge and experience about the research topic (66). It is important to mention my preconception because I am also a foreign pharmacist who migrated into Norway in 2016. My personal experience might have an influence on different stages of this master project.

I graduated from a university in Pakistan in 2012 and worked as a pharmacist for almost 4 years before migrating to Norway. I faced different challenges in my professional and personal life right after graduation. Prior to emigrating from my home country, I had to consider different options to pursue my career as a pharmacist.

Poor working environment, low salaries, job insecurity and obligation to support family were major push factors for me, which led me to leave my home country. Despite these push factors, I tried hard to remain in the country with my family. I had never thought about Norway as a destination. I knew two fellow countrymen who came to Norway for studies and had contact with one of them on Facebook. He was one of the strong pull factors for me to

migrate into Norway. I got information from him about working environment, salary structure, quality of life and travelling opportunities. This whole package of information seemed very attractive to me, and I decided to migrate to Norway.

A great number of pharmacists are graduating from Pakistan each year. There are 17 public and 22 private sector universities, recognized by the Pharmacy Council and Higher Education Commission of Pakistan, which offer five years Doctor of Pharmacy degree program (67). After 17 years of education, these pharmacists face poor career perspective in the country. Many pharmacists migrate to other countries to explore new career opportunities.

After I reached Norway, many pharmacists from different countries contacted me on Facebook and LinkedIn to ask about the process of migrating to Norway. Most of their questions were regarding working environment, salaries, and rules about permanent residence and passport. I have helped many pharmacists to apply for the license in the Directorate of Health and visa latterly. There are many groups on social media for pharmacists, where information about migration process of different countries is shared by group members.

I have worked with many pharmacists on pharmacies in Norway, who have emigrated from different countries. They shared their personal experiences and history about migration with me during working hours and non-formal meetings. Thereby, I had knowledge about this migration before I started this master project. I will use this preconception of the research topic to investigate push and pull factors of foreign pharmacists' migration to Norway.

3.3 Consent form

A consent form to participate in the study, was developed based on the template from the Norwegian Centre for Research Data (NSD). Participants were informed about the purpose and background of the study, their participation and rights, privacy, anonymity, and confidentiality of the data through written consent form. Moreover, they were also informed about the recording and transcription of interviews through this written consent form. The written consent also included contact information of researcher, supervisor, data protection officer of UiT, and NSD. Consent form was sent to the participants by email well before conducting the interview, and they were provided with the copy of the signed form (Appendix-II).

3.4 Ethical review

On 15.10.2021, an application, with reference number 316976, was submitted to Norwegian Centre for Research Data to assess the collection of personal data for the study. The application was assessed and approved by NSD on 23.11.2021, and I was allowed to begin data collection for my master project (Appendix-I).

3.5 Recruitment of the participants

I did not want to recruit the whole community of foreign pharmacists, but rather to recruit a sample of participants that can provide in-depth understanding. Recruitment of participants for qualitative research is divided into three techniques, i.e., purposive sampling, quota sampling and snowball sampling (65). I used the most common technique of recruitment, which is purposive recruitment. In this sampling technique, the participants are selected based on the pre-defined criteria relevant to the research question. To participate in the study, key informants were approached, who had experience of migration, and were willing to speak about this. The goal of recruiting participants was to get broad and deep understanding of the phenomenon of migration, rather than representative recruitment.

The criteria for the recruitment for my research project were foreign pharmacists who received authorization in Norway in 2013 and later. The Directorate of Health database has the data for health care professional registration from 2013, thereby, I considered participants whose data was available in register. Moreover, my research question was related to recent migration trends of pharmacist, and I excluded those who migrated before 2013. However, gender, age or ethnic group are not inclusion or exclusion criteria for my research project.

As I have been working as a pharmacist in Norway for almost 4 years, I knew many foreign pharmacists. I had contact with some of them on Facebook and mobile before I started this project. I contacted these pharmacists on mobile and Facebook-messenger to get initial consent to participate in research project. After they had shown their interest to participate, I sent consent form and details of interview by email.

The size of the sample was not pre-determined, rather based on saturation. Saturation is defined as the point where the researcher does not get any additional information from new informants.

3.6 Pilot interview

Pilot interviews are important to test the interview guide, and to determine the flaws and limitations in the interview design. Pilot testing allows revision of the structure and refines the research question prior to conduct further interviews. Participant for a pilot interview should have the same background as the sample of the research study (68).

After developing my first interview guide, a pilot interview was conducted with a pharmacist of foreign background. The participant of the pilot interview had the same background as other participants of the study. He had push and pull factors which influenced him to migrate into Norway. My co-supervisor (AGG) was also present at the pilot interview, to give guidance on interview techniques.

This pilot interview was discussed with my co-supervisor, right after conducting the interview. Research questions were refined, and the interview guide was revised to gain deeper insight of the research questions. This interview was transcribed and discussed with the co-supervisor to accommodate the transcribing process.

3.7 Development of interview guide

The interview guide enables the interviewer to get answers relating to the research questions. The interview guide is a framework for guided conversation to conduct interviews, which consists of main questions and themes. According to the type of interview, an interview guide is divided into three types: unstructured, semi-structured and structured (69). I used semi-structured method to develop the interview guide, which is the most widely used approach. A semi-structured interview guide allows the interviewer to address all topics related to research question. Likewise, it gives freedom to the interviewee to express perceptions and experiences (69).

My interview guide mostly contained open and non-directive questions. However, I used some directive questions based on previous studies about push and pull factors, which enabled me to get answers about a particular theme. I adjusted questions during the interviews, depending upon the response of participant. Moreover, sequence and wording of questions was also changed during interviews. Furthermore, I diverged my questions sometimes, to an emergent idea from the participant, to peruse this in detail.

I divided my interview guide into four parts (Appendix-III). In the “introduction” I explained the purpose of the study, and introduced common understanding of push and pull factors, a

brief introduction of the participant and interviewer, and obtained written consent for participation and audio recording (Appendix-I).

The second and third parts were named as "push factors" and "pull factors", respectively. I started each part with some general and open questions, to give freedom to participants to express their opinion. To create the balance between interviewer and interviewee, themes were created in both parts. These themes were based on previous literature, as explained in chapter 1.4. During some interviews, the interviewee discussed something which was not relevant to my research questions or answered some questions in depth. These themes gave me opportunity to get back the interviewee on track. Moreover, it was important for me to check that I have covered all themes at the end of each interview.

The fourth and final part of interview guide was "conclusion". In this part, I gave the opportunity to participants to add anything which was not covered in the interview, according to participants perception. The participants were informed about the further processing of audio recording. The interview ended with thanking the interviewee for their time and participation in the research project.

Developing of interview guide was a long process, and I made several attempts to reach the final version (Appendix-III). I discussed each version of interview guide with my supervisors to get their inputs and guidance. The interview guide was written in English and translated into Norwegian.

3.8 Interview and recoding

Conducting interviews was the most important and comprehensive part of my project. Thereby, I prepared myself for interviews by memorizing structure and rehearsing the interview guide. I ensured that the participant has received complete information about the project, and consent form was signed, prior to conducting interviews. Participants living in Oslo, Viken and Vestfold-Telemark counties were provided with the choice of both physical and digital interviews. However, participants living outside these counties, had to participate digitally. Locations of interviews were participant's workplace or home, my home, or the university library, and left to the participant to decide. I ensured that all these locations were quiet and had minimum distraction. Physical interviews were audio recorded with smart phone.

Digital interviews were conducted by using Zoom or Microsoft Teams. The choice of software was decided by the participant, depending upon convenience. All digital interviews were recorded by using recording option in the software. These recordings were downloaded and transferred to my personal computer. Furthermore, time and date for interviews were chosen by participants to ensure that they feel comfortable and had dedicated time for the interview. All interviews were conducted in Norwegian. Recordings were deleted after transcription. The copies of transcripts ware shared with the supervisors.

3.9 Analysis of interviews

Researchers use different approaches to analyse qualitative data, but thematic analysis is most widely used general approach (70). I used inductive approach to identify codes and themes from my data. This method is driven by experience of participants and limits the possibility of preconceived results from the researcher. In this method, codes arise by interacting with data and reading transcripts line by line, without having predefined codes. Moreover, further reviewing data gives opportunity to identify new codes and redefine existing codes in the data (71).

I divided my analysis into five phases, which is derived from Robson´s guidelines for thematic analysis, and modified according my project (Figure 11) (70). These phases are shown in Figure 11.

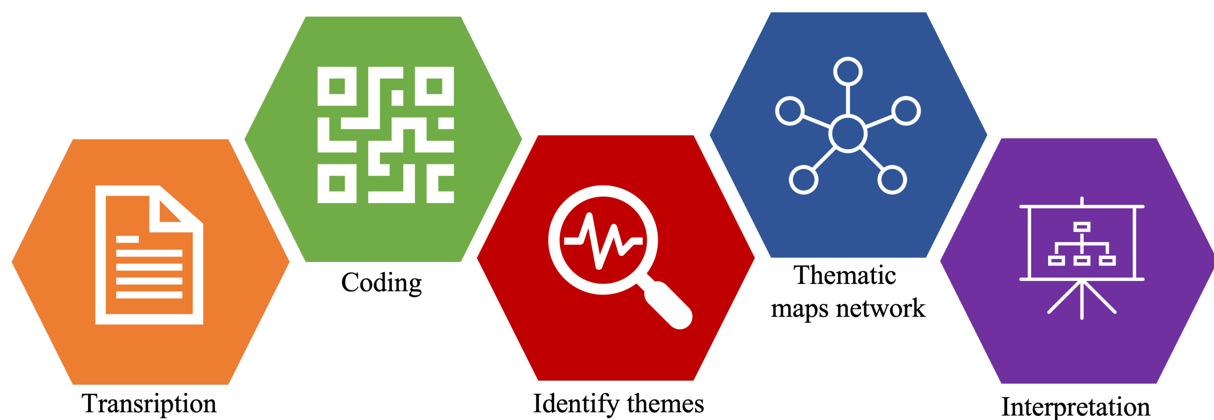

Figure 11- Thematic analysis as described by Robson (70)

Transcription of interview

Transcription is presentation of data for a qualitative interview study. This is classified into the two most common methods: naturalism, in which every detail is transcribed, and de-naturalism, in which pauses and expressions are removed (72). As in my research study, I was more interested in wording of participants, what they say about their experience of decision to migrate into Norway, so I used de-naturalized approach dominantly. Some expression and details in these interviews could not be ignored, therefore I used naturalism approach in some stages of transcribing process. This was neither pure naturalism nor pure de-naturalism, rather a combination of both approaches with dominance of naturalized approach.

Audio recordings were transcribed verbatim manually in Microsoft Word 365. Transcripts were anonymized with the word "speaker", where I was "speaker 1" and participant was "speaker 2". All the details, with which a participant could be recognized, were replaced with pseudonyms.

Coding

Codes are defined as "*words or short phrases that represent the essence and key attributes of narrative and verbal information"* (73). Codes are used to categorize and organize similar data into segments of data, called chunks. Coding is a lengthy and iterative process in analysis of qualitive data (71). It is an important phase in analysis of organizing the data and has the central role in analysis. My coding process was "data driven", as codes arose by approaching the transcripts by keeping the research question in mind. The coding process was performed with NVivo 1.5 software program (Appendix-V).

Identifying themes

Themes were developed based on these codes. Themes were a set of codes that emerged during analysis, which contained definitions and properties of codes. These themes guided me to use the codes properly during analysis. After initial coding, I sorted these codes into potential themes, and later sorted these accordingly.

Thematic maps network

Thematic maps and networks are useful tools for analysis (70). Maps were constructed based on these themes. Themes were organized and linked together, and a network was developed for further analysis. I had two major categories, "push factors" and "pull factors", according to my research question. Themes were linked to these major categories. Different themes were divided into subthemes to get precise interpretation of the data.

Interpretation

Thematic maps structured my data for interpretation of results. I used thematic network diagrams, NVivo code book and citations to interpret data in each category. Themes, sub-themes and codes were interpreted and explained in the result chapter.

4 Results

The aim of the project was to identify push and pull factors for migration of foreign pharmacists to Norway. As the result of thematic analysis, main themes were detected for push and pull factors. Some of main themes were common for both factors, however, few main themes were different. These were further categorized into sub-themes.

I conducted 14 interviews with foreign pharmacists from six different countries (Table 4). This included nine female and five male pharmacists, from age 30 to 48 years (Appendix-IV), who had moved to Norway after 2013. Eight interviews were conducted physically and six were digital. Table 4 gives an overview of participants of the study.

Table 4- Participants of the study

Country	Male	Female	Total
Pakistan	3	2	5
Serbia	0	3	3
Egypt	2	0	2
Poland	0	2	2
Bosnia	0	1	1
Portugal	0	1	1
Total	5	9	14

4.1 Themes

After analysis of 14 transcripts, four main themes for push factors and seven main themes for pull factors emerged. Three of these main themes were present in both push and pull factors, one main theme was specific to push factors and four main themes were only detected in pull factors. Furthermore, 21 subthemes were detected for push factors, and 23 sub-themes were identified for pull factors. Figure 12 summarizes the main themes and number of sub-themes for push and pull factors.

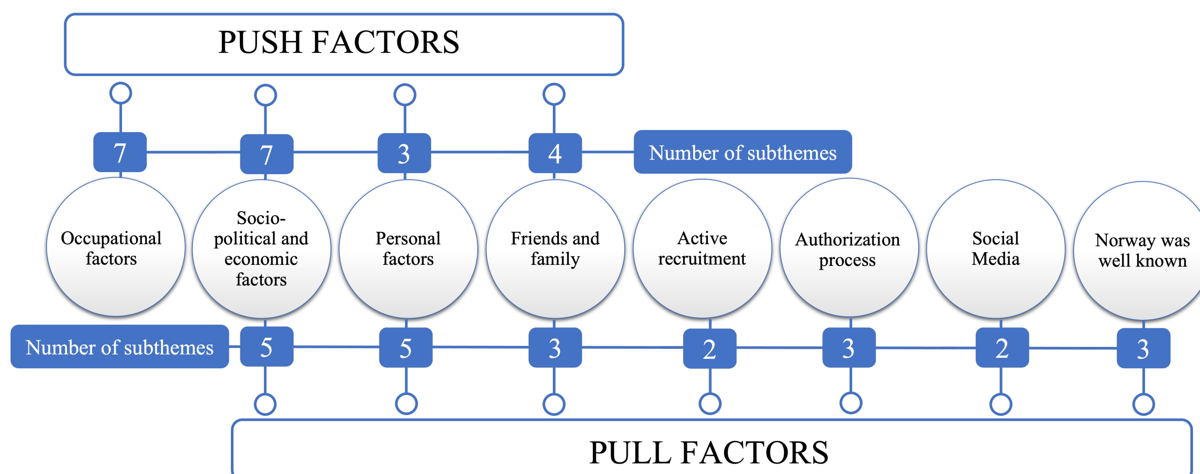

Figure 12- Main themes and number of sub-themes in each category

Table 5 summarizes the eight main themes of push and pull factors for migration of foreign pharmacists to Norway. A short description is provided and elaborated further in this result chapter with quotes and descriptions.

Table 5- Main themes extracted from 14 interviews with pharmacists

Main themes	Description
Occupational factors	Occupational factors are related to job of an individual. This includes career opportunities, working environment, structural limitations in health care system, professional development, and workers' rights. Occupational factors were identified as a main theme in **push factors**.
Friends and family	This theme is related to influence of friends and family in migration into Norway. This includes support and help from friends and family members, their influence on decision of migration, seeking better opportunities for children. This factor was detected in both **push and pull factors.**
Socio-political and economic factors	This theme is related to a country's political situation, their point of view about politics, political influence to get job, security in the country, social and cultural norms, and social security. I also classified economic factors under same theme, as they are also strongly influenced by country´s political situation. Economic factors are related to financial condition of

	an individual and economic situation in origin and destination countries. This factor was also identified in both **push and pull factors.**
Personal factors	These factors are attributable to personal reasons, goals, and experiences of an individual. This theme was also identified in both **push and pull factors.**
Authorization process	Health care professional require to be authorized by professional bodies to work in a country. Authorization process is different in different countries for foreign health care professionals. Level of complexity and length of authorization process has an impact on migration of health care professionals. Authorization process was also identified as a main theme for **pull factors.**
Active recruitment	Employers actively recruit persons from other countries to fill vacancies in pharmacies located in rural areas. They have a specific section for recruitment of foreign skilled workers in their organization. Active recruitment is done by collaborating with authorities, organizations, and schools in other countries. This active recruitment was also a strong theme in **pull factors.**
Social media	Social media is a modern way to communicate with people. This can be achieved through contacting people in the friend list on social media platforms or through common groups and discussion forums. Social media was detected as main theme in **pull factors**.
Norway was well known	Travelling to a country makes it easy to be familiar with the country. Many pharmacists visited Norway before migration, and they liked the country. Moreover, media is also important tool to know a country. Some pharmacists heard good thing about Norway through media. This theme was also one of the main themes in **pull factors**.

4.2 Push factors

"Occupational factors", "friends and family", "socio-political and economic factors", and "personal factors" were identified as main themes in push factors. Figure 13 shows the thematic map network for pull factors, which has four main themes and 21 sub-themes.

Figure 13- Thematic map network for push factors describing four main themes and 21 sub-themes

Below, I have explained main themes and sub-themes for push factors in sub-sequent section, with citations from the interviews.

4.2.1 Occupational factors

Dissatisfactory pharmacist´s role in home country

Most of the participants were not satisfied with their role as a pharmacist in the origin country. They considered themselves not a health care professional, rather a salesperson in a store. They felt that pharmacist just worked to fill prescription on the counter, and they did not have any collaboration with physicians about patient treatment. Only the best students

could get admission in pharmacy studies, but after graduation they did not find a good job, compatible with the education.

"Pharmacies in my country are like health food stores with no pharmacy services. There is nothing related to pharmacy services, have I really studied 5 years to be cashier on a store?" (Female from Poland)

"Our role was just filling the prescription, no collaboration with doctor. They might not consider us as health care professionals" (Male from Egypt)

Several of pharmacists said that there was no difference between role of a pharmacist and a pharmacy technician, despite considerable difference in education level. Pharmacy technicians could dispense medicines independently, and it was not necessary for the pharmacist to be present on a pharmacy all the time. Pharmacy technicians had relatively lower salaries, and employers preferred to hire them, instead of pharmacists who demanded higher salaries.

"Pharmacy technician does not need pharmacist control to dispense medicines, pharmacies prefer to hire pharmacy technicians as they are less costly." (Female from Poland)

Saturated job market for pharmacists

Many pharmacists had difficulties in finding a job in their home countries after graduation. This was primarily due to over-production of pharmacists from educational institutes and less opportunities in job market.

"Firstly, it is not easy to find job as a pharmacist, because many universities are over producing pharmacists. I got a weekend job just on Saturdays and Sundays, and it was not sufficient for me. Job market is very saturated for pharmacists" (Female from Portugal)

"We are very populated country; many universities have pharmacy education programs. But there is huge competition in the job market." (Male from Pakistan)

Newly graduated pharmacists were ready to work for lower salaries, therefore experienced pharmacists found it difficult to maintain their current job. They were at risk of salary reduction and job loss.

"Till 2014, it was better for pharmacists. But due to over production of pharmacists, salaries reduced. I thought, it is better to prevent myself for reduction of salaries in future, and I might lose the job." (Female from Serbia)

"In the start, I had high salary, but it reduced after some years, due to newly graduated pharmacists." (Female from Serbia)

Long working hours

An overwhelming majority of pharmacists mentioned that they had to work many hours in a week, and they did not have a proper work routine. Most of the pharmacists had to work extra hours to earn more and sufficient money to live. They would work up to 70-80 hours per week to cover the expenses and save money to buy their own apartment.

"In my home country, I had to work 12 to 16 hours per day. I think it was inhumane. Later, I migrated to another country, which had also 12 hours working day. Just a summary of a working day for me, many working hours, and poor salaries." (Male from Egypt)

"For night shifts, I worked 12 hours in hospital, and never got over time. Some days I had to work whole the day, if someone was sick." (Female from Pakistan)

Poor working environment

Pharmacists had stressful working environment due to less staff. They felt over-burdened, as they had many tasks to complete on the pharmacy at the same time. Pharmacy owners saved money by not hiring sufficient staff.

"I was alone at job in pharmacy and did not like stress. I could not go to the toilet; I had to run back quickly to see customers. It was a huge pharmacy, and telephone rang all the time… I must ring the suppliers for booking of products. I should submit cash in bank" (Female from Serbia)

There were some unethical practices on different workplaces. Pharmaceutical companies had an overview on the sale in pharmacies and forced pharmacists to sell their products. Pharmacists would visit other pharmacies (competitors) to compare prices of the products, and then prices were adjusted accordingly.

"Pharmaceutical companies visited pharmacies and pushed pharmacists to sell their products. They had overview of sales of their products on a pharmacy" (Female from Serbia)

It was the responsibility of pharmacists to pay any loss in pharmacy, if there was any difference in cashbox, or if products were expired. The pharmacists lost a considerable amount of earned money to compensate this loss. The products which were pushed by pharmaceutical companies were often expired more.

"If some products expired on pharmacy, so I must pay this loss. If there is difference in cashbox, I should pay the loss. I lost so much of my earned money on these things." (Female from Serbia)

It was difficult to take sick leaves because employers did not have enough staff to cover leaves of employees. They were asked to delay sick leaves due to shortage of workforce in the pharmacy. It was very strange for employer that someone was sick, and they were not prepared for this.

"One time I was sick on a Sunday and took sick leave from physician just for one day. I sent application to my boss, and he said, take this leave on Wednesday. I don't have enough staff and must close pharmacy if you don't come. You are a human, but you have no right to be sick. If you are sick for one day, so it is very strange for them" (Male from Egypt)

Job insecurity

Some pharmacists talked about job insecurity. They were afraid of losing their job due to competition and lack of their rights.

"I was afraid of losing my job due competition with new graduates. I was at the age that, it could become difficult for me to find a new job after some years." (Female from Serbia)

No professional development

It was difficult for pharmacists to develop professional knowledge. The country did not have any data base for searching information about medicines. The pharmacists had less opportunities to participate in courses and conferences to update their knowledge about medicines. They did not know the correct use medication, due to lack of updated knowledge.

"In my home country, I never knew about use of inhalators. There were no courses for use of medication for pharmacists." (Female from Serbia)

“Pharmacists should develop their professional knowledge, what they had learnt during studies. I did not have opportunity to participate in conferences and courses.” (Male from Egypt)

Health and safety risks

Pharmacists were at risk of getting contaminated with cytostatic and intravenous drugs, as there was no proper routine for handling of these medicines. Hospitals did not follow the protocols for administration and waste of cytostatic and infectious drugs.

“Used intravenous medicines and cytostatic, were returned to hospital pharmacy to discard. It was very risky. I have experienced very poor situation in government hospitals. Nurses did not follow any protocol for cytostatic drugs. They opened a vial before you, administer dose to patient, and remains discarded before you without protocol.” (Female from Pakistan)

4.2.2 Socio-political and economic factors

Low salaries

Almost all participants mentioned low salaries for pharmacists in their home country. Some also discussed minimum raise in salary over time. Furthermore, some of the participants faced drop in salaries over the years.

“It is difficult to live with this salary, when single. To have afford all, you must work extra hours. Salary, we got was not compatible with the level of education of a pharmacist. I was not satisfied with salary structure of a pharmacist. (Female from Poland)

“Newly graduated pharmacists were employs of pharmacies via country´s welfare organization. They got economic help from organization, which was not sufficient.” (Female from Portugal)

Economic problems in the origin country

Inflation and economic problems in the country had an impact on these pharmacists, as they decided to emigrate from the home country. It was mentioned by the participants that prices of utilities increased, but salaries remained almost same.

“Every year there an increase in prices of food, petrol, home rents, but salaries are the same” (Female from Pakistan)

"There is high inflation in Poland, thereby many Poles are working in Norway" (Female from Poland)

Political instability

Many pharmacists mentioned political instability. The country did not have a proper democracy, and those in the power, had right to do anything. Political instability had impact on economy of the country and workplaces. Those who were actively involved in the country´s politics, had an even stronger influence on decision of migration.

"Political instability had an influence on education, job, and private life. Personal life is unstable when there is political instability. I think it is the main reason that many people emigrate from the country." (Male from Pakistan)

"Political situation was more important for me than salary. It was very unsafe to have political views against regime, they did not accept different opinion. Suddenly you are missing in the country, due to your political views against regime. You can be jailed at any time and might be murdered " (Male from Egypt)

Disagreement with policies in the country

Some of the pharmacists disagreed with some policies in the country. They said that the policy makers had more focus on unnecessary details. These policies directly affected their daily working life or personally. The authorities had more focus on minor unnecessary details for refunding of medicines.

"One thing which was very irritating for me, morning after pill in my home country is on prescription, but Viagra is an OTC. These things were very strange, but very much bureaucracy and politics was involved." (Female from Poland)

"They have more focus on unnecessary details, for example, if there is a prescription on eye drops and dosage is one time a day (not one drops a day) from physician, pharmacy will not get refund from the authorities due to this minor thing." (Female from Poland)

Nepotism

Nepotism or political influence to get a good job was also indicated in the interviews with pharmacists. People who had certain political backgrounds were prioritized for higher level jobs. Pharmacists with ordinary background faced discrimination despite high competencies

and education. This was a disappointment for pharmacists, who got rejection in jobs due to this reason.

"You have high education and very smart, but it does not decide that you will get a better job. You must have political party background, or at least, know someone in a political party, to get a desired job." (Female from Bosnia)

"Ruling political party has influence on every sector, schools, education, and health. I had to report persons who did not have any competency, rather had a strong political background." (Female from Serbia)

Gender discrimination

Female pharmacist from some countries mentioned gender discrimination. In some countries, they were unable to work in pharmacies due to social reasons. They felt unsecure in retail pharmacies while handling the customers. Some of them had experienced opposition from family to work in pharmacies. However, they felt much safer in office jobs or in hospitals.

"I think, pharmacies in my home country are not a place to work for female pharmacists. Customers used to come on pharmacies and would talk to you unnecessarily. If I see office job, it is much more comfortable" (Female from Pakistan)

Moreover, female pharmacists from some countries mentioned that they were paid lower salaries than a male pharmacist. Employers preferred to hire a male pharmacist on pharmacies. The female pharmacists from Poland and Portugal talked about lower salaries for female, despite high number of females in pharmacy profession.

"It is very normal in my home country that females get lower salaries than males. I have an example, that one of my female friends and a male pharmacist started job at the same time in the same pharmacy chain. The male pharmacist got almost 30 percent higher salary that the female pharmacist." (Female from Poland)

Poor security situation the country

Some pharmacists discussed low security situation in their home country as one of the push factors for migration. Security turmoil and threats made it very unsafe to live in the country. War and terrorist attacks in some countries also had a great impact on their lives.

"During my education, there were terrorist attacks all the time, but now it is much better… But still there is a feeling of insecurity. When you read newspapers, there is always feeling of insecurity in back of the mind for you and your close family. I think pharmacists emigrate from other countries due to war." (Male from Pakistan)

Some pharmacists mentioned that customers were threatening, and it was sometimes very challenging to handle situation. They felt themselves unsafe at the workplace due to these threats from customers.

"One time a pharmacist refused to sell syringes to a customer due to any reason, who used these syringes to administer illegal drugs. The customer had a weapon and threatened the pharmacist." (Male from Egypt)

4.2.3 Friends and family

Cultural obligation to support family

Some pharmacists discussed their responsibility to support family member after their graduation. Males had relatively more responsibility in some cultures. These pharmacists send remittances to their parents, siblings, and other close family members in home country.

"It is the main reason for males to emigrate from home country, not only pharmacists but also doctors and engineers. They wish to have better life for their family back home." (Male from Pakistan)

Family supporting to get further education

A pharmacist received full economic support from family to get further education abroad, as he emigrated from the home country.

"I was so lucky that my family gave me economic support to get further education in England. They bore whole expenses of my study in England." (Male from Pakistan)

Group of friends trying to emigrate from country

Some friends graduated at the same time, decided to emigrate from the country collectively. Everyone searched information about many countries by their own sources and shared with each other. They started the process for emigration simultaneously. Those who migrated to Norway, started to learn Norwegian language together.

"We friends searched process together about all countries, for example UAE, Canada, and Norway. After gathering information, we discussed which country had better opportunities. We had also discussed whole process of registration in Norway, before coming here." (Female from Pakistan)

Insecurity for children´s future

Due to political and economic instability, future of children seemed not very secure in the home country. It could become difficult for them to get jobs despite good education. The education system in the country was also very challenging for their children, and they had to think about grades in schools all the time. Competition in the schools with other classmate, which did not have a good effect on children´s development and wellbeing.

"Due to politics in the country, I did not see bright future for my children. It was very challenging for children in schools because they think about grades all the time. If they do not get a job after education, then me and my husband would earn for them in old age. My children were a strong push factor for me." (Female from Serbia)

4.2.4 Personal factors

Failed family life

A pharmacist mentioned that she had planned to marry as soon as possible after her graduation. This marriage was ended after some time, and she decided to pursue her career abroad. She got permission from her family to emigrate from the home country.

To get foreign education and experience

A pharmacist did not have any plan to move and wanted to remain with family. However, he wanted to get further education and foreign experience, and planned to settle back in home country after some years. This education and experience could be helpful for his career growth in the home country. He mentioned this as the first push factor to emigrate.

Unable to fulfil personal dreams

One pharmacist had a dream to do something good for the society, regardless in home country or any other country. It was difficult for him to fulfil this dream in the home country. Therefore, he decided to emigrate from the country.

"I will not say that my home country was bad, but I wanted to do something good for my society…. I had a gut feeling that I will not get opportunity to fulfil my dream and wish in home country." (Male from Egypt)

4.3 Pull factors

For most of the pharmacists, Norway was more like a co-incidence and was not a first choice as destination country. “Active recruitment”, “authorization process”, “social media”, “socio-political and economic factors”, “friends and family”, “Norway was well known”, and “personal factors” were main themes for pull factors. Figure 14 shows the thematic map network for pull factors, which has seven main themes and 24 sub-themes.

Figure 14- Thematic map network for pull factors describing 7 main themes and 24 sub-themes

These main themes and sub-themes are explained in subsequent sections with citations from the interviews.

4.3.1 Active recruitment

Active recruitment by pharmacy chains

This main theme was most prominent pull factor in Serbian and Portuguese pharmacists and mentioned by almost all pharmacists from these countries. Recruitment teams of Norwegian pharmacy chains travel to the countries and interview pharmacists. They have several rounds of interviews with candidates in these countries. Most of the pharmacists mentioned Vitusapotek as the most active pharmacy chain for foreign pharmacist´s recruitment. Many have been recruited through this process by Vitusapotek in their respective countries. One pharmacist was recruited by Boots from Serbia, and she was interviewed on Skype. Some have also named Apotek1, however, none of the participants had gone through recruitment process of this chain.

"Pharmacy chains, Vitusapotek and Apotek1 travelled to Belgrade, which is the capital of Serbia, and hired pharmacists. In recent years they could not travel due of corona restrictions, but they continued digital process. Before this, they used to travel twice a year to Belgrade for recruitment. I think they have same process for other countries like Poland and Portugal" (Female from Serbia)

"In 2015, there were teams from Apotek1 and Vitusapotek in Portugal, who interviewed many pharmacists from there." (Female from Portugal)

The recruitment process was conducted in home countries by pharmacy chain representatives. The recruitment team also have Serbian members who are working in Norway to assist them in communicating into Serbian language. Some pharmacists thought that pharmacy chains preferred those who were singles and were relatively young with minimum two years of experience from the home country. Most of the pharmacists were hired for vacancies in Norwegian districts, and a minimum one other pharmacist was recruited for same area to keep each other company.

"One day I received a phone call from a Norwegian number. I was very stressed to speak in Norwegian. But fortunately, there was a Serbian from Boots Norway who talked to me, and it was my first interview." (Female from Serbia)

After the recruitment, pharmacy chains took responsibility of all expenses and process in Norway. They helped these pharmacists in application for Norwegian work permit with the Norwegian Directorate of Immigration (UDI) and paid for air tickets to Norway. They were

welcomed by their respective employers at the airport and were provided with hotel stay for some days. The employers found an apartment for employee to live in, and paid deposit and the rent for first month, which was later deducted from salary.

"I felt myself as a princess, after the protocol I received from my employer." (Female from Bosnia)

All expenses for Norwegian language tests and course for national subjects were covered by the pharmacy chains, including exam fees, books, and other reading material.

Norwegian pharmacy chains collaborate with other countries for recruitment

They had collaboration with schools or local authorities in these countries, who provided them potential candidates for interviews. A Norwegian language school in Belgrade, named SAGA, was mentioned by most of the Serbian pharmacists. This school helped pharmacists with application of the initial license in Norway. All pharmacists at Norwegian language level B-2 in this school, were invited for interviews by Vitusapotek.

"This school helped me to apply for license as pharmacist. All those who were in B2 class, were invited for interviews by Vitusapotek." (Female from Bosnia)

Furthermore, pharmacy chains also had collaboration with other partners for recruitment in some countries.

"I had to learn a new language (Norwegian). It was supported by Vitusapotek and Portuguese authorities, so I said why not?" (Female from Portugal)

Advertisement on job portal

Some pharmacists found pharmacist's jobs on different job portals and applied for these vacancies. One female Portuguese pharmacist searched job in different European countries through European cooperation network of employment services (EURES) and applied also for jobs in Norway. After she got a job offer in Norway, she searched information about the country.

"I have applied through EURES in many countries including Norway. After I got offer letter, I began to search and know about Norway. For me it was opposite process, first I got job offer than I searched about Norway." (Female from Portugal)

Moreover, some pharmacists also applied directly on Norwegian job portals after they have been rejected in recruiting process from Norwegian pharmacy chains.

"I was rejected in recruitment process from Vitusapotek in 2015. I was very depressed and upset, I started to apply jobs on Norwegian pharmacy chain´s job portal." (Female from Serbia)

Need of pharmacists in Norway

Foreign pharmacists stated that there is need of pharmacists in Norway, especially in districts and North-Norway. Many new pharmacies are opening in Norway. It is easy to find a pharmacist job, therefore, Norway became an attractive destination for foreign pharmacists.

"I think there is still need for pharmacists in Norway. Many new pharmacies are opening, and they need pharmacists, I think pharmacists see better opportunities here." (Female from Portugal)

4.3.2 Authorization process

Easy authorization process in Norway

Majority of pharmacists stated that the authorization process was easy in Norway. For European pharmacists it was just an application and submission of documents to the Directorate of Health. They received authorization within two months without any additional requirements.

"Authorization process was very easy, it was just translating documents into English and applying to the Directorate of Health for authorization. Maximum processing time was two months." (Female from Poland)

Pharmacists outside EU or EEA countries also said that the authorization process was easy. They needed Norwegian language and some courses to get authorization. Almost all pharmacists compared with other countries when they were asked about the difficulty level of authorization process.

"It was not a difficult process, we had to learn language to B2 level, and then an exam for national subjects. We had many attempts to pass these exams." (Male from Egypt)

Furthermore, help from schools and pharmacy chains made this process even easier.

Easily accessible information from Norwegian authorities

Many pharmacists said that the process was easy because of easily accessible information from Norwegian authorities on their websites. It was also easy for them to search any information about the process on search engines. Norwegian authorities were very responsive in case of queries from applicants. Application process for authorization was clearly elaborated by the Directorate of Health on its website. Furthermore, visa applications process and its requirements were very clearly mentioned on UDI website.

"Now internet is available everywhere. It was very easy to find information on websites of Norwegian authorities. Everything is open and can be searched on these websites. If something was unclear so I sent email to the authority and got detailed response. It is not the same in other countries like Germany." (Male from Pakistan)

Complex process of authorization in other countries

Many participants considered other countries, i.e., USA, Canada, Australia, England, Germany, Denmark etc. before migrating to Norway and searched for information about authorization in those countries. Almost all of them said that the authorization process for pharmacists in many countries was very long and complex. English speaking countries required very high score in IELTS or TOEFL exams for foreign pharmacists. It was very time consuming to get the required scores in English language exams, according to these pharmacists. Furthermore, licensing exam in these countries was very complex and required revision of whole syllabus, which was challenging for many pharmacists. Some countries required apprenticeship in pharmacies for a period of six to twelve months to be eligible for authorization, and it was difficult to get a trainee position in pharmacies. A pharmacist concluded, after searching migration process in Canada and Australia, that it was almost impossible for him to migrate to these countries.

"It is required seven bands in each part of IELTS exam, which is very high requirement. I heard that it is required pre-reg training for pharmacists. The process in Canada is very long and difficult. I have some friend who have been living in Canada for almost 3-4 years and they did not get authorization yet." (Male from Pakistan)

Large countries did not have a uniform process in all regions, and they lacked centralized authority for recognition of foreign pharmacy education. Authorizing authorities in many countries were not responsive to queries on email or telephone.

"I have also considered Germany, but it had different process for authorization in different regions. They were very weak in responding to emails." (Female from Bosnia)

Some pharmacists have failed attempts for authorization in other countries, before migrating to Norway. Almost all these pharmacists compared authorization process of other countries with Norway in the interviews.

4.3.3 Social media

Contacts with friends on social media

Most of the pharmacists mentioned that they had contact with friends who lived in Norway on social media. However, some of them contacted people living in Norway, without knowing them beforehand. Many knew each other because they came from the same country and educational institute. Posts and stories on social media by friends living in Norway, fascinated some of the participants. Social media made it easy to get first-hand information about a country. Furthermore, it has become easy to contact someone through social media, according to these pharmacists.

"I think posts and photos on social media were very fascinating, and I though, it is a very good opportunity, just move to Norway. Most of pharmacists who came to Norway were because of social media, I think." (Male from Pakistan)

"Social media had a very huge impact on recent migration. Many years back, some Pakistani pharmacists came to Norway, no one knew where they were living. After some years, they became friends on Facebook, and shared information with others" (Male from Pakistan)

"I got 100% information from social media friends. I know some Egyptian pharmacists who got information from a Pakistani pharmacist. How can a pharmacist from Egypt can contact a Pakistani without social media?" (Male from Egypt)

Groups on social media

Some pharmacists created groups on different social media platforms to share information about authorization processes and life in Norway. Most of these groups were restricted to one country background, where all information about Norway was shared in the native language with group members. Almost all pharmacists from different countries living in Norway, have their own group on Facebook. Egyptian, Serbian, Pakistani and Polish pharmacists have very

large groups on social media platforms, which consist of pharmacist living in Norway and home country.

"It was difficult for me to find information; I sent many questions to Norwegian Directorate of Health. So, I created a group on Facebook to share this information about whole procedure in Arabic language. Now we have a group for Egyptian pharmacists which have 200-300 member, and one group for Arabic pharmacists which has more than 1000 members." (Male from Egypt)

"We have a group for Serbian pharmacists on Facebook, where information is shared about Norway." (Female from Serbia)

4.3.4 Friends and family

Help and feedback from friends and family members living in Norway

Most of the participants had friends or family members in Norway, who helped them in migrating to Norway. Some had school or university friends, who moved to Norway a few years ago. They gave them feedback about Norway and helped them in applying initial license to the Directorate of Health, and the visa process latterly. Some of the participants were also contacted by their friends living in the home country for information and feedback about Norway.

"I had a friend who came to Norway for studies, two years before me. I had contact with him, and he helped a lot in whole process. He also helped me to find an apartment when I moved to Norway" (Male from Pakistan)

"Many friends ask me all the time. How have you migrated to Norway? What is the immigration procedure in Norway? Why Norway is better than other countries?" (Male from Egypt)

Some had family members and relatives in Norway, who helped and gave them positive feedback about life in Norway. They received information that there is need for pharmacists in Norway. This first-hand information from close family members made them decide migration to Norway.

"My brother came to Norway few years back. He talked to me about working environment and worker´s rights in Norway. He told me that Norway had better opportunities for pharmacists" (Female from Pakistan)

"I discussed with my cousin, who was living in Norway, that there was need for pharmacists in Norway. He talked to a regional manager in Vitusapotek and told my background. The regional manager said that I could get job in North-Norway." (Female from Bosnia)

Wanted to move near to home country to visit family often

Due to many push factors in the home country, pharmacists decided to emigrate. However, they wanted to migrate near to home country, to visit family more often. Norway was relatively closer to the home country, therefore, they decided to migrate to Norway.

"When my father died, so I had my mother back home. My husband has also only mother alive. It is just 2.5 hours flight from Norway to my home country, so we could visit them often." (Female from Serbia)

Moreover, the time difference was minimum between Norway and home country, so they could talk to family without disturbing circadian rhythm.

"My brother lived in Australia; it was very difficult to talk to him because of time difference. But Norway has same time as my home country, so I can talk with my family every day." (Female from Bosnia)

No friends and family members in other countries

Some pharmacists mentioned that they had also started an authorization process in other countries. However, they did not know anyone in other countries, and it was difficult to get information.

"Me and my husband started process for Denmark at the same time, but we did not have friend and family member in the country. So, it was difficult to get information." (Female from Pakistan)

4.3.5 Socio-political and economic factors

Higher salaries

Many pharmacists stated that they decided to migrate to Norway due to attractive higher salaries than home country. Most of them got information about salaries from friends and

family members living in Norway. Almost all of them compared their salaries with home country. Higher salaries were a pull factor for many pharmacists.

"First of all, salaries were much higher in Norway as compared to my home country. I wanted to earn more and wanted to live a life which my parents did not have." (Female from Portugal)

Social structure in Norway as welfare state

Social welfare structure was a pull factor for many pharmacists. They thought that Norway was a very happy country, and all people have their rights protected by the state. 40 working hours a week were very reasonable for a person to manage other activities than job.

"For me Norway was a happy county, where you have your rights protected. The system has many benefits, it is equality for all people." (Female from Poland)

Gender equality in Norway

Female pharmacists mentioned that Norway has more gender equality, therefore, they decided to migrate to Norway. There is less gender discrimination is Norway, and they were satisfied with their rights in Norway.

"I am thankful to Norwegian system. Here you are not a male or female pharmacist, you are just a pharmacist, I am very satisfied." (Female from Pakistan)

Higher living standards

Some participants said that they wished for a better living standard than their home country. Norway had higher living standards and better living facilities for them and their families.

Political stability in Norway

Democracy and political stability in Norway were pull factors for some pharmacists. These factors were prominent in those pharmacists who experienced political instability in their home country.

"There is democracy and stability in Norway. Specially for us, who experienced political instability and war in home country." (Female from Serbia)

4.3.6 Norway was well known

Visited Norway before migration

Many pharmacists, mostly from European countries, visited Norway before migrating to Norway to meet their family members and relatives. They became familiar with the country´s environment, nature, culture, and lifestyle. They started their migration procedure to Norway after returning to home country. Some of them started to learn Norwegian language.

"I was on holidays to my aunt, who lived in Norway. I liked the country very much, the environment, nature. I thought it was a perfect country for me" (Female from Poland)

"I liked Scandinavian countries in general, but why I preferred Norway? Because I was invited by family friend to meet them in holidays, I liked the county very much and decided to migrate." (Female from Serbia)

Media presents a good picture about Norway

It was stated by a female Serbian pharmacist that she heard just good things about Norway in the media. It was the richest country in the Europe with stable life. This influence of media motivated her to migrate to Norway.

Got opportunity for master thesis in Norway

One female Polish pharmacist got the opportunity to write her master thesis in an exchange student program in Norway. She began to search about the country and found much good things about Norway. Therefore, she decided to migrate to Norway and started to learn Norwegian language in home country.

4.3.7 Personal factors

Travelling opportunities

Some of the pharmacists had personal travelling goals to visit many countries. They thought that Schengen visa in Norway provided them with opportunities to visit many countries without any additional requirements. They required visa to visit many countries from their home country, however, this was not a main pull factor for them.

"If you have a job in Norway, so you have chance to visit many countries. For me it was a dream come true. You do not need to apply for visa to visit many countries in Europe. I think it very attractive for many who are interested in tourism." (Male from Egypt)

Business opportunity to open pharmacy

The pharmacists who had interest in setting up a business decided to migrate because of better opportunities to open their own pharmacy.

"I worked in England as pharmacist, and it was not easy to open own pharmacy. My family had own business in home country, and no family member worked as an employee for others. So, I had always back in the mind about own business. My friend told me that Norway has better opportunity for pharmacy business." (Male from Pakistan)

Found partner in Norway

Two pharmacists found a Norwegian life partner, therefore they decided to migrate to Norway.

"In the meantime, I met my Norwegian boyfriend, it has a long history. And it pushed me to resign early from my job." (Female from Poland)

Wanted experience in Norway

A pharmacist stated that she had plan to work in Norway for some years and move back to home country. This experience would help her to find a better job in the home country.

"After I visited to Norway, I decided to migrate to Norway and work here for some years and move back to home country. I was sure that after this experience I would get better job opportunities in the home country." (Female from Poland)

Norwegian passport

One pharmacist said that permanent residence and Norwegian passport were pull factor for him in decision of migration to Norway.

"One of the reasons I moved to Norway was permanent residence and Norwegian passport, later on." (Male from Egypt)

4.4 Other inputs from participants

In this part of the chapter, I present inputs from the participants which were either not recorded or not relevant to the research question.

- The pharmacists outside EU/EEA countries said that they had higher language requirements than the pharmacists from EU/EEA countries. European pharmacists

without knowledge of Norwegian language could work in pharmacies, which might lead to inadequate and poor pharmacy services.

- The participants discussed that they had difficulty to find training in Norwegian pharmacies. They did not have proper training program managed by the Norwegian Pharmacy Association or pharmacy chains.
- Some pharmacists said that they were offered lower salaries than Norwegian pharmacists. They came to know this salary difference when they got a position as pharmacy managers. One Egyptian male pharmacists stated that *"we should stand for our rights, because we do not get similar treatment."*
- The major concern for many pharmacists outside EU/EEA countries, was recognition of their master education in Norway. Almost all participants who had authorization as prescriptionist, had applied for master's degree program in different universities of Norway. An Egyptian male pharmacist stated in the interview that, *"The Norwegian authorities want to stop our progress by not giving us an opportunity for master".*

5 Discussion

The aim of the study was to learn about push and pull factors involved in migration of foreign pharmacists to Norway. Foreign pharmacists have a considerable role in Norway to fill vacancies, especially in rural areas (74). To my knowledge, this is the first study conducted on migration of foreign pharmacists to Norway.

The results of this study indicate four main themes for push factors and seven main themes for pull factors. Three of seven main themes were common in both push and pull factors, one was present just in push factors and four were confined only to pull factors.

5.1 Occupational factors

Occupational factors were the most prominent push factors for many foreign pharmacists. The results of the study suggest that many countries lacked proper job infrastructure for pharmacists. Role of the pharmacists was not defined and recognized by the society. These findings were supported by the study conducted for pharmacy students in Ghana, who did not feel recognized health care professionals (61). Furthermore, Azhar et al. (2009) also support the findings of my study that pharmacists lack their potential role in developing countries, therefore, they emigrated from their home countries (75). My results further show that pharmacists faced stress, long working hours, poor working environment, and lack of job opportunities. Similar findings were presented for Philippine nurses, who have migrated to Norway, by Nortvedt et al. (2020), where they also faced stressful working conditions and difficulty in finding paid jobs in Philippines (33). Kingma (2001) discussed occupational factors as main reason for migration of nurses from many home countries (58). Moreover, over-production of pharmacists by educational institutions in many countries i.e., Pakistan, Serbia, Portugal, Poland, and Egypt, led to saturation in the job market.

Occupational dissatisfaction leads to extensive emigration of pharmacists from their home countries. On contrary to that, pharmacists play their active role in Norway as health care professionals. Community pharmacists are involved in patient care by ensuring correct use of medication, and this role is well recognized by the public. Hospital and clinical pharmacists collaborate with physicians and nurses in clinical settings. Furthermore, their rights are protected by laws and regulations in the country and trade unions ensure that they are followed at workplaces.

5.2 Active recruitment

Data from the Directorate of Health about authorization of foreign pharmacists show that there is high demand of pharmacists in Norway. This is supported by the number of announced pharmacist vacancies on job portal of pharmacy chains. For instance, on 10th April 2022, 184 vacant positions were available for pharmacists in three major Norwegian pharmacy chains (76-78).

Active recruitment by Norwegian pharmacy chains is a strong pull factor for Serbian and Portuguese pharmacists. In recent years, the data from the Directorate of Health shows high number of Serbian pharmacists authorized in Norway (31). Results of my study suggest that this high number is mainly due to active recruitment from Serbia, and supported by the report of the Norwegian Pharmacy Association published in February 2017, which stated that 75 foreign pharmacists, mainly from Serbia and Portugal, were recruited by three Norwegian pharmacy chain in year 2016 (74). The results also show that Norwegian pharmacy chains are desperate in recruiting pharmacists for rural areas, thereby, they give preferential and extraordinary treatment to foreign pharmacists. Vitusapotek and Boots have information pages for foreign pharmacist´s recruitment in their job portal. Vitusapotek claims that it has the longest experience of foreign recruitment, and this also supports the findings of this study, in which most of the pharmacists were familiar with recruitment process of Vitusapotek. Moreover, Apotek1 mentions in its job portal that it recruits many foreign pharmacists every year for pharmacies in rural districts (76-78). Dvergsdal et. al (2011) have also presented that active recruitment of health care professionals from middle and low-income countries is taking place in Norway for many years. "Aggressive" recruiting agencies in Norway recruit health care professionals from Poland and the Baltic states to satisfy the need of health care system (54).

Norway, as WHO member state, has responsibility to follow "The Global Code of Practice on the International Recruitment of Health Personnel". Therefore, the Directorate of Health directs employers and recruiting agencies must follow and respect the guidelines of this code of practice (18). However, it was beyond the scope of my study to analyse ethical active recruitment as per WHO code of practice. Moreover, this study could not evaluate any shortage of pharmacists in origin countries due to active recruitment in Norway.

5.3 Authorization process

The participants of the study said that the authorization process for foreign pharmacists in Norway was easier and relatively shorter than for other countries. It was also pointed out by Nortvedt et. al (2020) for Philippine nurses who receive approval as auxiliary nurse with student visa in Norway (33). Thereby, many foreign pharmacists preferred to migrate to Norway. As per the Directorate of Health, pharmacists from EU/EEA countries apply for authorization without any additional requirements, as described in section 1.3.3.1 which is a very straightforward process. Pharmacists from outside EU/EEA countries must pass Norwegian language exam and courses in national subjects to get authorization in Norway. Learning a new language is not a short process. At the University of Oslo, the language courses up to required B2 level take almost one year. Moreover, course in Folkeuniversitetet lasts for 13 weeks. However, it is possible that desperate employers in rural areas offer jobs to pharmacists only on license, and not authorization. Foreign pharmacists (outside EU/EEA countries) receive a preliminary license for the period of three years, and they are allowed to work as pharmacist in pharmacies. It is the responsibility of the employers to ensure that these pharmacists meet the job requirements.

Furthermore, results show that the information about the whole process is easily accessible on the websites of Norwegian authorities, and this process is uniform in the whole country. As per Government Information Policy, every department of the government has a responsibility to provide information in their respective subject area in accordance with the guidelines (79). The Directorate of Health has responsibility to issue license and authorization to all health care professionals in Norway. The website of the Directorate of Health clearly demonstrates all steps of authorization for both EU/EEA and outside EU/EEA countries (47, 50). The Norwegian Directorate of Immigration (UDI) is responsible for processing visa application for foreign nationals. The UDI website provides clear and detailed information about migration and visa process (80). In year 2008, Agency for Public Management and eGovernment (Difi) received a project from UDI to assess the need of communication to attract skilled workers to Norway. Difi presented its recommendations to update website to make the information more accessible and targeted to specific audience (81).

Due to lack of information from other countries, this study is constrained to Norway, and this pull factor may not be comparable with other countries.

5.4 Friends and family

Friends and family had a great influence in decision of migration, which was identified in both push and pull factors. In some cultures, it is an obligation to give economic support to whole family. Thereby, many immigrants send remittances to home countries. My results show that pharmacists emigrate to fulfil this cultural obligation, as they have lesser opportunities in home countries. Davda et. al (2018) did a systematic review and meta-synthesis of migration motives of health care professional to United Kingdom, and also found that financial gains for family was a factor for migration (20). According to the World Bank, estimated remittances in 2020 were 702 billion USD, where 540 billion USD were in low- and middle-income countries (82).

Furthermore, friends and family members living in Norway was a strong pull factor. The persons living in Norway shared their experiences and feedback about the country with their relatives and friends. Many of the participants received help from friends and family members in migration to Norway. Nortvedt et. al (2020) also support results of my study, as Philippines nurses got help from friends in Norway (33). This factor was more prominent in Pakistani, Serbian and Egyptian pharmacists. These pharmacists got help from their friends, and they helped other friends, thereby, this factor can be described as "domino effect", as these immigrants knew each other. The recent high surge in Pakistani pharmacists in Norway, seemed to be the result of this domino effect.

Migration to a new country is challenging for an individual. It is difficult to adapt to new climate, culture, food, and behaviour of people. Some may experience uncomfortable events due to unfamiliarity with the country. In my experience, initial days in Norway were not very pleasant. Although presence of friends and family members in a country gives the feeling of easiness and comfort, it does not solve all the problems and challenges in a new place. Many pharmacists decided to migrate to Norway as they knew their friends and family members in the country. These results are supported by the Kingma (2001), who discussed that network of family and friends facilitate migration and considered it as a strong pull factor for migration of nurses (58).

The results of this study also show that seeking better future for the children was an important reason for migration for some pharmacists. Davda et. al (2018) support my study, as better education and life style for the children was one of the motive of health care professionals to migrate to UK (20). Several migration studies categorized this as a personal factor, but my

study consider it an independent main themes due to its significant influence on decision of migration of pharmacists to Norway.

5.5 Social Media

The results of my study show that social media play a vital role on aspirations (desire to migrate) and intentions (migration preparation) of migration. Social media influenced decision of migration in three different ways. Firstly, posts and stories on different social media platforms by friends living in Norway, fascinated those living in home countries. These posts about landscape, travelling and lifestyle were among the pull factors for some of the pharmacists. Secondly, virtual ties with friends and family living in Norway facilitated migration. Moreover, these ties were not limited to just friends and families, rather social media provided opportunity to establish new ties with the persons living in Norway with the help of common groups and pages. Thirdly, social media was an unofficial, discreet, and rich source of information and insight knowledge. Despite limitations of lower trustworthiness of this information, the results revealed that this has facilitated the migration.

The findings of my study are further supported by Dekker and Engbersen (2014), who have describe influence of social media on migration in four ways i.e., enhance ties with friends and family member, strengthen weak ties, establish new connections and provide unofficial information (59). However, our study additionally shows the influence of social media on aspirations of migration, as the result of fascination by posts and stories of friends. Despite its strong influence on migration, social media is neglected in other migration studies.

5.6 Socio-political and economic factors

Socio-political and economic factors are the most important push and pull factors for migration of health care professional. These factors are largely associated with political systems; therefore, this was categorized as one factor.

The results show that the political instability in origin countries had impact on country’s social and economic system. This influenced the pharmacists in three different ways; firstly, economy of the country was largely affected due to uncertain policies. This led to high inflation and lower salaries in the country. Secondly, social structure in the country was disturbed due to poor law and order implementation by the state. Many faced gender discrimination, and security threats. Thirdly, political involvement in every sector of the country irritated these pharmacists and caused discomfort to them. Nepotism enabled the

incompetent persons to lead important institutions. Furthermore, the pharmacists disagreed with the government policies which were related to them.

This factor is discussed in many migration studies conducted on health care professionals (60, 61). Economic reasons are related to personal economic problems and countries overall economic system. My study is supported by findings of Šmigelskas et. al (2007), that the difference in salaries between origin country and destination countries is one of the major factors for pharmacists migration from Lithuania (63). Nouri Hekmat et al. (2010) also concluded that socio-political and ecomomic factors were major reasons for brain drain of Iranian health care professionals (83). Results of the study by Abbas and Khan (2015) showed that nepotism and other socio-political factors were one of the reasons for emmigration of pharmacists from Pakistan (64).

5.7 Personal factors

Personal factors are key factors for migration of some individuals, which are related to personal goals and experiences. These factors can be unpleasant experiences in the home country related to personal life, or personal goals to achieve in destination country. Humphries (2015) has also presented personal motives that contribute to decision of doctors migration to Ireland (84). Asadi et. al (2018) also showed in their study that one reason of Iranian doctors' emigration was to achieve personal goals for themselves and family (60).

5.8 Norway was well known

Good image about a country is a pull factor for many people. Visiting a country enables an individual to familiarize with the culture, climate, and landscape. Moreover, Norway is one of the richest countries in Europe by 2020 GDP per capita (85). As per World Happiness Reports from 2012 to 2021, Norway was among the happiest countries in the worlds (86). In modern world, media and social media have also a big role in building positive or negative images about a country. All these positive reports about a country attracts individuals to migrate to the country.

5.9 Other inputs from informants

This part of the chapter consists of comments and informal discussion by the participants, which were either outside my research questions or were not recorded. The participants of the study were very open to discuss their point of view, before and after the formal interviews. Furthermore, this also includes my preconception.

Many pharmacists from different nationalities are working in the country, thereby Norwegian pharmacy community is multicultural. Data from the Directorate of Health shows that 44 percent of pharmacists who received authorization from 2013 to 2021 had foreign background (32). Some Norwegian pharmacists, who study two years master program after bachelor's degree, receive authorization twice which is not differentiated in the data from the Directorate of Health. Moreover, those foreign pharmacists who have bachelor's degrees from the home country, study master program in Norway, are also counted as Norwegian pharmacists. Thereby, this percentage is even higher than shown in the data. These foreign pharmacists are spread in the whole country and work mainly in community pharmacies. They are the main workforce in rural areas, where Norwegian pharmacists are reluctant to work. These pharmacists try to move to cities after some time due to harsh weather and loneliness, which are "push factors" in districts.

The first challenge for a foreign pharmacist in Norway is to get full command on Norwegian language, regardless of if they are from European or non-European background. However, pharmacists from Scandinavian countries can communicate in their native language, which is understandable for most of the Norwegian population. Language is a major requirement for pharmacists outside EU/EEA countries to receive authorization in Norway, but EU/EEA nationals do not require language for authorization. Communication in pharmacies with patients and customers takes place in Norwegian language, therefore, I argue that there should be an equal language requirement for all pharmacists. The pharmacy chains usually mention language requirements up to a certain level in their vacancy announcement, but a desperate employer in rural districts does not bother a lot about language. Over and above that, learning medical terminologies in Norwegian language is important for communication in pharmacies, but I could not find a Norwegian to English medical dictionary.

The second challenge for foreign pharmacists is to learn the pharmacy system, rules and regulations, customers behaviour, and job culture in Norway. These pharmacists learn these skills by their own, which is largely dependent on the ability of an individual. This leads to non-uniform pharmacy services and distrust to pharmacies in Norway. This can be overcome through structured training in Norwegian pharmacies supported by the Norwegian Association of Pharmacists (NFF) and the Norwegian Pharmacy Association. A pharmacy training program should be introduced for foreign pharmacists, like Norwegian pharmacists to strengthen the pharmacy services in the country. Furthermore, the Directorate of Health

should revise the syllabus for course in national subjects for foreign pharmacists. This syllabus should have more focus for pharmacists, like doctors and nurses.

Despite a considerable majority and contribution in Norwegian pharmacy community, foreign pharmacists at times feel weak. Some of the participants of my study talked about lower salaries than Norwegian pharmacists. They do not dare to negotiate salaries with the employers before accepting a job offer. This is due to unfamiliarity with Norwegian job culture. Foreign pharmacists should participate in employees' unions to organize themselves. NFF should also take responsibility to attract foreign pharmacists for membership through different campaigns. Salary statics published by NFF each year should also consider to include the data from foreign pharmacists to get better overview of the salary structure.

One of the major concerns for foreign pharmacists in recent years, is recognition of their master's degree in Norway. Many pharmacists have master's degree from their home country (outside EU/EEA), which is recognized as bachelor in Norway. In most recent times, posts regarding this issue were added on Facebook in different groups and pages, which mentioned discrimination for foreign pharmacists. These posts were the result of frustration after failed attempts of admission in different Norwegian universities. In 2020, University of Oslo ended the special program for foreign pharmacists for recognition of their master education. Furthermore, Norwegian universities do not have a uniform criterion for admission of foreign pharmacists in master's program. A course or special program should be introduced for foreign pharmacists to give them opportunity to fulfil requirement for recognition of their master's degree in Norway.

5.10 Limitations and strengths

Migration is a very diversified and complex phenomenon. The In-depth interview method provided detailed, deep, and insightful knowledge about the migration motives. It offered long speaking time to the participants, and they did not have any influence from others during the interviews unlike focus group interviews.

Analysis of qualitative data is prone to human deficiencies and bias. I used a systematic, documented approach of thematic analysis to minimize these problems. Thematic analysis permitted me to organize and categorize my data into themes and sub-themes which assisted me in interpretation of the results. I did not have codes and themes beforehand, and they emerged on interaction with the data, which enabled me to minimize bias.

The participants of the study had emigrated from six different countries, which represent the largest origin countries for foreign pharmacists in Norway. This sampling was a broad representation of foreign pharmacists from EU, non-EU, and eastern countries.

All the interviews were conducted in Norwegian language, which was not the first language for the participants and the researcher. Although all participants had minimum language B2 level, and majority of them had good enough command of the language to respond the researcher's questions. However, it should be noted that some of the participants had difficulty to elaborate their answers due to a somewhat limited vocabulary.

6 Conclusion

The study aimed to determine push and pull factors in migration of foreign pharmacists to Norway. Based on qualitative analysis of interviews with foreign pharmacists from six different countries, it was found that “occupational factors”, “socio-political and economic factors”, “family and friends”, and “personal factors” were push factors for migration of pharmacists. Further findings showed that, “active recruitment”, “authorization process”, “social media”, “friends and family”, “socio-political and economic factors”, “personal factors”, and “Norway was well known” were pull factors which attracted foreign pharmacists to Norway.

This study identified active recruitment, authorization process and social media as stronger pull factors which are not discussed much in previous migration studies. All three Norwegian pharmacy chains have sections in their HR departments for recruitment of foreign pharmacists. Serbian and Portuguese pharmacist had been recruited by the Norwegian pharmacy chains directly from their home countries. Authorization process for foreign pharmacist in Norway was perceived easy as compared to other countries. The information provided by the Directorate of Health and UDI on their websites about authorization and immigration is comprehensive and clearly demonstrated. The recent increase in pharmacists’ migration to Norway is the result of social media friends, groups and pages. Pakistani and Egyptian pharmacists have social media as one of the strongest pull factors in Norway. Moreover, friends who migrated to Norway beforehand, helped their friends in the home country, and a “domino effect” is started. This domino effect was particularly prominent among Pakistani pharmacists.

Occupational factors emerged as an important push factor for emigration of pharmacists from their home countries. Undefined pharmacists’ role, no recognition from the society, and poor working environment resulted in dissatisfaction of pharmacists. Country’s poor socio-political and economic situation was also one of the reasons of emigration.

This study elaborated push and pull factors involved in pharmacist migration to Norway, however a quantitative study based on these findings would further strengthen the findings of this study.

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Appendix

Appendix-I: Consent to take part in research project

CONSENT TO TAKE PART IN RESEARCH PROJECT

"MIGRATION TRENDS FOR PHARMACISTS IN NORWAY"

Contact person: Saleem Iqbal
Mobile: +47 939 49 782
Email: siq001@uit.no
Supervisors: Associate Professor Kristian Svendsen
Department of Pharmacy, University of Tromsø

Professor Anne Gerd Granås
Department of Pharmacy, University of Oslo

This is an inquiry about your participation in a research project. In this letter we will give you information about the purpose of the project and what your participation will involve.

Background and purpose of the project

In the recent years, migration of pharmacists to Norway has increased considerably. Almost 4 in 10 pharmacists that were authorized as health personnel by the Department of Health in 2020 have a pharmacy education from abroad. International studies of migration trends describe two important factors which are for people to migrate. "Push factors" force the people to migrate from the home country such as war, famine, political unrest, or environmental factors. "Pull factors" are when people are attracted by the prospects of a better life, better job opportunities, and a sense of comfort and hope.

The main purpose is to study the factors which influence the migration trends of pharmacists in Norway. This includes so called "push and pull factors" involved in migration of pharmacists into Norway.

Who is responsible for the research project?

University of Tromsø is the institution responsible for the project, in collaboration with University of Oslo.

What does participation involve for you?

You are invited for an interview because of your background as an immigrant pharmacist, and because you have been granted Norwegian authorisation as a pharmacist by the Department of Health (Helsedirektoratet). We are interested in your motivation and experiences in leaving a pharmacist career in your home country and seeking new opportunities in Norway; your experience with the authorisation process; your experiences with university courses in Norway; and other experiences with migration you would like to share. This interview will take approximately 30-60 minutes and will be recorded.

Your personal privacy – how we will store and use your personal data?

Your personal data will be used for this study only (age, gender, country of origin). Your personal data will be processed confidentially and in accordance with data protection legislation (GDPR). Recordings will be deleted after the project is

completed. Transcribed interviews will be anonymized. It will not be possible to identify the participants when publishing the study.

Your rights

So long as you can be identified in the collected data, you have the right to:

- access the personal data that is being processed about you
- request that your personal data is deleted
- request that incorrect personal data about you is corrected/rectified
- receive a copy of your personal data (data portability), and
- send a complaint to the Data Protection Officer or The Norwegian Data Protection Authority regarding the processing of your personal data

What gives us the right to process your personal data?

We will process your personal data based on your consent.

Based on an agreement with University of Tromsø, NSD – The Norwegian Centre for Research Data AS has assessed that the processing of personal data in this project is in accordance with data protection legislation.

Where can I find out more?

If you have questions about the project, or want to exercise your rights, contact:

- University of Tromsø via Associate Professor Kristian Svendsen by email kristian.svendsen@uit.no or by telephone +47 776 44 185
- Our Data Protection Officer: Joakim Bakkevold by email: personvernombud@uit.no or by telephone: +47 776 46 322
- NSD – The Norwegian Centre for Research Data AS, by email: personverntjenester@nsd.no or by telephone: +47 53 21 15 00

Participation is voluntary

Your participation in this study is voluntary. After choosing to participate, you can withdraw you participation at any time without giving a reason. Your withdrawal from the study will not have any negative consequences for you.

Please contact master student Mr. Saleem Iqbal by email siq001@uit.no or by telephone +47 939 49 782, if you have any questions regarding this project.

I hereby voluntarily give the consent to participate in this study.

(Signed by participant, date)

Appendix-II: NSD assessment

NSD's assessment

Project title

Migration Trends for Pharmacists in Norway

Reference number

316976

Registered

17.10.2021 av Saleem Iqbal - siq001@post.uit.no

Data controller (institution responsible for the project)

UiT Norges Arktiske Universitet / Det helsevitenskapelige fakultet / Institutt for farmasi

Project leader (academic employee/supervisor or PhD candidate)

Kristian Svendsen, kristian.svendsen@uit.no, tlf: 77644185

Type of project

Student project, Master's thesis

Contact information, student

Saleem Iqbal, siq001@uit.no, tlf: 93949782

Project period

16.08.2021 - 16.05.2022

Status

23.11.2021 - Assessed

Assessment (1)

23.11.2021 - Assessed

Our assessment is that the processing of personal data in this project will comply with data protection legislation, so long as it is carried out in accordance with what is documented in the Notification Form and attachments, dated 23.11.2021, as well as in correspondence with NSD. Everything is in place for the processing to begin.

TYPE OF DATA AND DURATION
The project will process general categories of personal data, special categories of personal data about ethnic origin until 16.05.2022.

LEGAL BASIS
The project will gain consent from data subjects to process their personal data. We find that consent will meet the necessary requirements under art. 4 (11) and 7, in that it will be a freely given, specific, informed and unambiguous statement or action, which will be documented and can be withdrawn.

The legal basis for processing general categories of personal data is therefore consent given by the data subject, cf. the General Data Protection Regulation art. 6.1 a).

The legal basis for processing special categories of personal data is explicit consent given by the data subject, cf. art. 9.2 a), cf. the Personal Data Act § 10, cf. § 9 (2).

PRINCIPLES RELATING TO PROCESSING PERSONAL DATA
NSD finds that the planned processing of personal data will be in accordance with the principles under the General Data Protection Regulation regarding:

- lawfulness, fairness and transparency (art. 5.1 a), in that data subjects will receive sufficient information about the processing and will give their consent
- purpose limitation (art. 5.1 b), in that personal data will be collected for specified, explicit and legitimate purposes, and will not be processed for new, incompatible purposes
- data minimisation (art. 5.1 c), in that only personal data which are adequate, relevant and necessary for the purpose of the project will be processed
- storage limitation (art. 5.1 e), in that personal data will not be stored for longer than is necessary to fulfil the project's purpose

THE RIGHTS OF DATA SUBJECTS
NSD finds that the information that will be given to data subjects about the processing of their personal data will meet the legal requirements for form and content, cf. art. 12.1 and art. 13.

Data subjects will have the following rights in this project: access (art. 15), rectification (art. 16), erasure (art. 17), restriction of processing (art. 18), notification (art. 19) and data portability (art. 20). These rights apply so long as the data subject can be identified in the collected data.

We remind you that if a data subject contacts you about their rights, the data controller has a duty to reply within a month.

FOLLOW YOUR INSTITUTION'S GUIDELINES
NSD presupposes that the project will meet the requirements of accuracy (art. 5.1 d), integrity and confidentiality (art. 5.1 f) and security (art. 32) when processing personal data.

NSD presupposes that processing meets the requirements for processing personal data outside the EU under the General Data Protection Regulation Chapter 5.

To ensure that these requirements are met you must follow your institution's internal guidelines and/or consult with your institution (i.e. the institution responsible for the project).

NOTIFY CHANGES
If you intend to make changes to the processing of personal data in this project it may be necessary to notify NSD. This is done by updating the information registered in the Notification Form. On our website we explain which changes must be notified. Wait until you receive an answer from us before you carry out the changes.

FOLLOW-UP OF THE PROJECT
NSD will follow up the progress of the project at the planned end date in order to determine whether the processing of personal data has been concluded.

Good luck with the project!

Appendix-III: Interview guide

INTERVIEW GUIDE

Introduction

- My introduction
- Introduction of the study and purpose
- Explanation of push and pull factors
- Inform about the confidentiality and anonymity
- Consent for the recording of the interview, notes
- Introduction of the participant
- Name, Age, country, year of coming to Norway

Push factors

Career and educational opportunities

1. There are many universities which are producing pharmacy graduates each year, what do you think about the career opportunities for pharmacists in your home country? How was your own experience after graduation?
2. Can you tell me about the career growth and further education opportunities in your country? How much you were satisfied with these opportunities?

Salary and economic benefits

3. How is the salary structure for the pharmacists in your country? How satisfactory it was for you?

Working environment

4. How are working conditions for a pharmacist on different workplaces (pharmacy, hospital, industry etc.) in your home country?
5. What do you think about the role of a pharmacist in health care system of your home country?
6. How female pharmacists think about the working environment and opportunities as compared to male pharmacists in your home country?

Family pressure or support

7. How had your family influence on your decision making to immigrate from your home country?
8. How much pressure you had to support your family economically?

Living standard

9. What do you think about the living standard in your home country? Did it had any impact on your decision to move out of the country?

Health hazards

10. How prone is a pharmacist to be infected by communicable diseases (e.g., TB, HBV, HIV, malaria) as other health persons (doctors and nurses) due to higher prevalence in your home country?

Political or security situation

11. How is the political situation in your home country? What impact it had on you personally?
12. What do you think about the security situation in your country? How had it had impact on your decision to immigrate from your country?

Pull factors

1. How Norway became you destination?
2. Many people prefer to move to an English-speaking country because of better opportunities and lesser language barrier. Why you chose Norway not an English-speaking country?

Family, friends, or community

3. Did you know someone before you came to Norway? Did you have your friends or family members in Norway?
4. How have you got information about the pharmacist authorization process in Norway?

Easiness of authorization process as pharmacist and immigration

5. What do you think the whole process of application for license, visa and authorization was easy or difficult? Why?

Recruiting agency or any pharmacy chain support

6. Are there any recruiting agency or any other organization which are hiring pharmacists for Norwegian market? How are they helping for pharmacist immigration? Did you get any help from them?

Career and educational opportunities

7. What information you had about career growth opportunities before you came to Norway?
8. Can you tell me about the working environment for a pharmacist in Norway? How is it different from your home country?
9. Many pharmacists are opening their own pharmacies in Norway, did you had information about this before coming to Norway? What is your take on business opportunities for the pharmacists in Norway?

Salaries and other economic benefits

10. What do you think about the salary structure for pharmacists in Norway? Did you have complete picture of salary structure before you came to Norway?
11. Can you tell me about the working environment for a pharmacist in Norway? How is it different from your home country?

Working environment

12. How will you compare opportunities for female pharmacists in Norway and your home country?
13. Can you tell me about the working environment for a pharmacist in Norway? How is it different from your home country?

Living standard

14. What do you think about the living standard in Norway as compared to your home country? Was it also a pull factor for you while deciding to move to Norway?

Travel opportunities

15. Many people are keen to explore the world by travelling which becomes easy in Norway due to Schengen visa. How did it had impact on your decision to move to Norway?

General perception

16. What is your general perception about the recent pharmacist migration into Norway? What are the main reasons that Norway became so attractive for the pharmacists?

Closing

- Any additional comments
- Thanking the participants for time and comments
- Inform the participant what will happen next with recording

Appendix-IV: Interview list

Date	Code	Gender	Age	Country of origin	Years in Norway	Location	Physical/ digital	Comments
15.10.2021	1	Male	42	Pakistan	12	Askim	Physical	Pilot interview
16.12.2021	2	Female	33	Pakistan	2.5	Fagerstand	Physical	
19.12.2021	3a	Female	34	Pakistan	5	Moss	Physical	Group interview with a couple
19.12.2021	3b	Male	34	Pakistan	3	Moss	Physical	
24.12.2021	4	Male	38	Egypt	2.5	Frogner	Physical	
27.01.2022	5	Female	38	Bosnia	8	Moss	Physical	
01.02.2022	6	Female	35	Serbia	5	Narvik	Digital	
02.02.2022	7	Female	32	Serbia	4	Ski	Digital	
06.02.2022	8	Male	36	Pakistan	4	Moss	Physical	
10.02.2022	9	Female	30	Poland	3	Drøbak	Digital	
17.02.2022	10	Female	32	Poland	5	Tromsø	Digital	
20.02.2022	11	Female	48	Serbian	8	Sannidal	Digital	
22.02.2022	12	Male	36	Pakistan	6	Porsgrunn	Physical	
25.02.2022	13	Egypt	31	Egyptian	2.5	Stavanger	Digital	
01.03.2022	14	Female	32	Portugal	7	Skien	Physical	

Appendix-V: Code book

Main Themes	Sub-themes	Files	References
PULL FACTORS			
Active recruitment	Active recruitment of pharmacy chains	6	13
	Need of health care professionals in Norway	2	3
Authorization process	Easy authorization process in Norway	8	20
	Easily accessible information from Norwegian authorities	5	11
	Complex process of authorization in other countries	8	15
Friends and family	Help and feedback from friends and family members living in Norway	12	38
	No friends and family members in other countries	1	1
	Wanted to move near to home country to visit family more often	3	3
Norway was well known	Got opportunity for master thesis in Norway	1	1
	Media presents a good picture about Norway	1	1
	Visited Norway before migration	5	9
Personal factors	Business opportunities to open pharmacy	2	4
	Found partner in Norway	2	3
	Norwegian passport	1	1
	Traveling opportunities	4	4
	Wanted experience in Norway	1	1
Social media	Contact with friends on social media	8	8
	Groups on social media	4	5
Socio-political and economic factors	Gender equality in Norway	2	2
	Higher living standards	3	3
	Higher salaries	5	9
	Political stability in Norway	3	3
	Social structure in Norway as welfare state	5	7

Main Themes	Sub-themes	Files	References
PUSH FACTORS			
Friends and family	Cultural obligation to support family	3	6
	Family supporting to get further education	1	1
	Group of friends trying to emigrate from the home country	2	3
	Insecurity for children´s future	1	4
Occupational Factors	Dissatisfactory pharmacist´s role in home country	10	26
	Health and safety risks	1	2
	Job insecurity	3	4
	Long working hours	10	18
	No professional development	3	4
	Poor working environment	4	11
	Saturated job market for pharmacists	5	8
Personal factors	Failed family life	1	1
	To get foreign education and experience	1	1
	Was unable to fulfill my dreams	1	1
Socio-political and economic factors	Economic problems in origin country	4	4
	Gender discrimination	7	12
	Irritated on political policies	4	9
	Lower salaries	13	32
	Nepotism	2	4
	Political instability	5	10
	Poor security situation in home country	5	5