

**Master Thesis**

**Cross sectional study comparing the Quality of Life, Academic stress, Ethnic identification and Alcohol use of Norwegian and international students and examining the relationship between these variables**

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## **Abstract**

**Background:** An important part of the Norwegian higher educational system is international students who provide benefits through cultural exchange but who also face many challenges. To continue to attract international students, Norway must provide an environment conducive to their high quality of life, but little is known about their quality of life.

**Aim:** The purpose of this study is to compare the quality of life, academic stress, ethnic identity and alcohol use of Norwegian and international students in Norway and to examine the relationships between these variables.

**Methods:** An online survey quantified and gathered details from 83 Norwegian students and 111 international students about their quality of life, academic stress, ethnic identity, alcohol use, examinations, study hours, working hours and demographics gender, age, country of birth, citizenship, employment and relationship status. The two groups' quality of life was compared and the relationships between their quality of life and the other variables were explored.

**Results:** This study has found out that both international and Norwegian students reported similarities in their quality of life, alcohol use and ethnic identification but their academic stress levels differed as International students reported higher cumulative academic stress levels than Norwegian students.

**Conclusion:** Academic stress may have an important negative effect on the quality of life of higher education students. This study highlights the need to compare the quality of life, academic stress, ethnic identification and alcohol use of domestic and international students across the world by conducting a longitudinal study on the quality of life, academic stress, ethnic identification and alcohol use of university students to suggest the factors responsible for causing changes in quality of life of university students.

## **Sammendrag på norsk**

**Bakgrunn:** Internasjonale studenter er viktige for det norske høyere utdanningsystemet. De gir mange fordeler til Norge gjennom kulturell utveksling, men mange opplever også utfordringer. For å fortsette å tiltrekke seg internasjonale studenter må Norge tilby et miljø som bidrar til deres høye livskvalitet, men lite er kjent om studentenes livskvalitet.

**Mål:** Denne studien har som hensikt å utforske livskvalitet, akademisk stress, etnisk identitet, og alkoholbruk blant internasjonale studenter i Norge ved å sammenligne dem med norske studenter, og å undersøke forholdet mellom disse variablene.

**Metoder:** En nettundersøkelse samlet informasjon fra 83 norske studenter og 111 internasjonale studenter om livskvalitet, akademisk stress, etnisk identitet, alkoholbruk, eksamener, timer brukt på studier, arbeid, økonomi, og demografiske variabler. Livskvalitet i de to gruppene ble sammenlignet og forholdene mellom disse og andre variabler ble utforsket.

**Resultater:** Studien fant at både internasjonale og norske studenter rapporterte lik livskvalitet, alkoholbruk, og etnisk identitet, men internasjonale studenter hadde mer akademisk stress.

**Konklusjon:** Akademisk stress kan ha negativ påvirkning på livskvalitet blant universitetsstudenter. Denne studien understreker at en longitudinell studie trenges for å kunne forstå faktorer som leder til bedre eller dårligere livskvalitet blant universitetsstudenter.

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## **1 Introduction**

### **1.1 International students pursuing higher education**

The United Nations Educational Scientific and Cultural organization Institute of Statistics defines international students as those students who have moved across a territorial or national border for seeking education and got enrolled in a country other than their country of birth(UNESCO Institute of Statistics,2018). In the case of this study, all students studying a Bachelor, Master or PHD program in Norway and are not Norwegian citizens are counted as international students.

Internationalization could be defined as the intentional procedure employed to integrate global, intercultural or international aspect into not only functions as well as purpose of post-secondary education but also in its provision for improving the quality of research and education for staff as well as all students and to meaningfully contribute to the society (De wit et al 2015,29).

Norway needs to sustain its knowledge nation. Therefore, it has a huge need for highly skilled professionals throughout a broad range of professional fields (Ministry of Education and Resarch,2017). It has an objective that every person must seek an education irrespective of his or her social background (Ministry of Education and Resarch,2017). A tool which can be employed for achieving this is that of running student welfare programs (Ministry of Education and Resarch,2017). These welfare programs include providing counselling, mental and dental health services and affordable housing to students together with running kindergartens for their children and arranging sports activities(BI,2016). The Government of Norway is interested in changing the tertiary education structure to not only build specialized solid research communities but also for providing high quality education to students studying in Norway (Ministry of Education and Resarch,2017).

This could be possibly because established as one of the best socioeconomic systems, Norway offers an exemplary as well as exceptional national situation(TNP,2012).

Maintaining this development level is dependent upon the research culture as well as high educational achievement level(TNP,2012). A report by the Research and Higher education minister of Norway agreed with this need. Therefore, Norway will face a rising need for highly educated people up till 2020(TNP,2012).

The report has shown that there is a need to boost growth in the training capabilities of colleges as well as universities (TNP,2012). Projection number for 2020 indicates that Norway will need 245,000 students(TNP,2012). Therefore, Norway needs to provide an environment conducive for a high quality of life (QoL) of university students in Norway and this need encourages me to compare the QoL of Norwegian and international students in Norway together with different factors relevant to it.

## **1.2 Benefits of international students**

In a traditional manner, the division of factors leading to internationalization has been done in 4 groups economic, academic, political as well as cultural or social. These broad categories continue to help explain the factors responsible for internationalization and highlight the benefits of international students to the host societies as well as economies of the host countries of international students(Knight 2015,3). Nevertheless, there are some newly emerging driving factors behind internationalization of higher education which are different from these 4 groups. These driving factors are discussed below

### **Development of Human Resources**

The labor force movements, demographic changes, the need to build a knowledge economy as well as increased services trade are the factors making countries give greater importance to the recruitment as well as development of brain power or human capital through global educational initiatives. Countries have shown the signs of grown interest as well as pressure to lure the best scholars as well as students from abroad to add to their economic, technological as well as scientific competitiveness (Knight 2015,3).

### **Strategic partnerships**

The international movement of academics and students together with cooperative research as well as educational measures are being viewed as productive means to build stronger economic relations and bring countries closer to each other geopolitically. The world has witnessed a definite change from partnerships built for meeting cultural purposes to strategic partnerships built for catering to their economic interests (Knight 2015,3).

### **Profitable trade**

In the past decade, a greater emphasis has been laid upon income earning as well as financial opportunities. Newly introduced satellite or foreign campuses, greater fee-paying student

recruitment as well as online delivery and franchises exemplify a more profitable approach towards internationalization. The consideration of education by the General Agreement on Trade and Services(GATS) is enough to prove that exporting as well as importing academic services as well as programs is a possibly profitable trade area (Knight 2015,3-4).

### **Building nation**

Some countries want to export education while other countries want to import educational institutions as well as programs for building their nations. This is because a skilled, qualified, educated as well as scholarly manpower and population capable of producing knowledge and researching are necessary to build the agenda needed to build a nation (Knight 2015,4).

### **International Reputation and Profile**

In a traditional manner, importance has been attached to the objective of securing international educational standards (irrespective of how they might be described). Nevertheless, the entire drive to build a brand name or global image as an internationally known high quality educational institution absorbs this motive. This drive is related to the struggle for getting an international acknowledgement to lure the best students as well as scholars, many international students as well as high profile training and research projects (Knight 2015,4).

### **Staff and Student development**

There appears to be a transformed emphasis upon internationalization to not only improve the intercultural as well as international skills of staff and students but also their intercultural as well as international understanding (Knight 2015,4). The growing number of cultural, global, regional as well as national disputes are making academics help students comprehend intercultural and global relationships and international issues (Knight 2015,4). The labor market mobility together with multiculturalism in workplaces as well as in communities require that both academics as well as students develop increased skills as well as understanding to live as well as work in a multicultural different environment (Knight 2015,4).

### **Income generation**

Apart from the development of human capital, a motive behind the internationalization of education is economic development. It can be undoubtedly said that a greater number of

institutions are searching increasingly for internationalization measures to generate alternate income sources (Knight 2015,4). Another crucial factor is the greater availability of new privately owned commercial education providers who mainly do business for earning income as well as making profits (Knight 2015,4).

### **Knowledge production and research**

Given the rising interdependence amongst countries, it can be clearly assumed that nations are unable to deal with all international challenges as well as issues by themselves. Interdisciplinary as well as global cooperation is crucial for finding solutions of many international problems such as crime, health or environmental problems (Knight 2015,4-5). Thereby, national governments as well as institutions have continued to primarily internationalize higher education for globalizing research as well as production of knowledge (Knight 2015, 4-5). However, the driving factors behind internationalization vary based on countries, stakeholders as well as institutions. These competing as well as different driving factors add to not only the complex nature of the global perspective of education but also to the important contributions made by internationalization to university education as well as the function performed by it in the society (Knight 2015,4-5).

#### **1.1.2 Challenges faced by International students**

Given the several benefits of international students, Norway must recognize and address the challenges faced by them in Norway. Previously, a survey was done to explore how international students coming from Russia to study in Norway deal with some cross-cultural learning and sociocultural as well as psychological adjustment challenges compared to the rest of international students (Wiers-Jennsen 2015,37). To do so, presentation of 6 possible challenges related with doing studies in Norway was done to international students from Russia, New Zealand, Australia, Eastern as well as Southern countries and Western countries in Africa, North America, Latin America and Europe (Wiers-Jennsen 2015, 17-18). These challenges were coping with demands made by academic factors, maintaining their active social life, knowing Norwegians, meeting the living costs, coping up with the Norwegian climate as well as adapting to the culture/lifestyle of Norwegians (Wiers-Jennsen 2015,37).

Important findings of that survey were that meeting the living costs and knowing other Norwegians were the most challenging for all international students (Wiers-Jennsen 2015,37)

Other findings of that survey were that compared to other international students, Russian students found coping with the demands made by academic factors more tough than they had expected and the contact of all international students including Russian students was limited with Norwegian students (Wiers-Jennsen 2015,38-39).

In that survey, two questions were asked to international students regarding their stay in Norway. One of those was that whether their impressions regarding Norway had changed during their stay while the other one was an open question asking students what made their impressions regarding Norway change (Wiers-Jennsen 2015,41). The responses of the students are given below

64% of the international students answered that their impressions had improved while 8% of the international students answered that their impressions had negatively changed and 26% of the international students answered that either their impression had remained the same or it had undergone a very little change (Wiers-Jennsen 2015,41).

International students who reported positive changes in their impression stated that these changes were significantly related to social networks as well as lifestyle and some of those students stated that they have adapted to the Norwegian culture while a minority of the international students whose impressions had negatively changed declared lack of social contact as the reason behind that (Wiers-Jennsen 2015,41). On the other hand, in that survey several students reported that the openness of Norwegians was more than they had expected, but they had struggled during the early phase of their stay in Norway (Wiers-Jennsen 2015,41)

In that survey, the participant international students were also asked that how many of them would be interested in staying in Norway, why would they be interested in staying in Norway and why would they want to work in Norway after their graduation (Wiers-Jennsen 2015,43-44).

The responses of that survey were that 8 in 10 international students attending full degree programs stated that they would like to stay in Norway after completing their degree, 6 in 10 international students attending a degree program as a part of their student exchange program stated that they would like to stay in Norway after completing their degree (Wiers-Jennsen 2015,43).

Other responses of that survey were that unsurprisingly, 90% of international students amongst those who were living already in Norway and attending a degree program responded that they would like to continue their stay in Norway and most of the international students interested in staying in Norway said that they would be interested in staying in Norway because they are interested in finding a job in Norway ( Wiers-Jennsen 2015,43).

In that survey, a question was only asked to those participant international students who either were already employed or interested in finding a job in Norway. That question was why are they interested in working in Norway(Wiers-Jennsen,2015). Most of the respondents stated they would want to do so because of greater incomes or good opportunities for career growth but some reported that they would like to keep staying in Norway because of the presence of their partner, family or friends in Norway (Wiers-Jennsen 2015,44).

### **1.1.3 Ethnic identity**

An obvious difference between Norwegian and international students in Norway is their ethnicity. The American Sociological Association refers to ethnicity as a collective culture like beliefs, ancestry, practices as well as language while it refers to race as those differences in physical characteristics which are considered socially important by cultures as well as groups(ASA,2018). In my study, Norwegian, German, Dutch, French and Lithuanians are all assumed as ethnicities as they speak their own languages. Ethnic identity can be defined as a degree to which a person is attached to his or her ethnic group which is established by his or her birth or given to a person based on her or his observable characteristics or ethnicity background (Phinney & Ong 2007,275).

Jean S Phinney has claimed that ethnic identity might be viewed as an acculturation aspect of people which is concerned with how people get themselves related to their own grouping as a bigger society's sub grouping (Phinney 1990,501). Therefore, JS Phinney has stated that ethnic identity is valuable only in those situations in which at least 2 ethnic groupings get into contact with each during a time-period (Phinney1990,501).

To a certain degree, ethnic identity is alike personal identity in the sense that both involve sense of identification but the difference between personal identification and ethnic identification is that ethnic identification involves sharing a sense of identification with other people who are members of the same ethnic grouping (Phinney & Ong 2007,275). Contrary to a personal identification, like occupation a person cannot chose an ethnicity, but instead

the determination of ethnicity is either done on birth or is based upon a person's ethnic background or genes (Phinney & Ong 2007,275).

Two different models have discussed the relationship between ethnic identity and acculturation. One of those is the bipolar linear model and the other one is bidimensional model (Phinney 1990,501). The bipolar linear model is based upon the assumption that one gets strengthened provided that the other one gets weakened i.e people who have involved themselves in the bigger society cannot strongly identify themselves with their ethnic group, and the deterioration of their ethnic identification is inescapably accompanied by their acculturation (Phinney 1990,501).

Contrary to that the bidimensional acculturation model assumes that acculturation could be described as a 2-dimensional process, in which two kinds of relationships should be taken into consideration. These include a person's relationship with her or her ethnic or conventional culture as well as a person's relationship with the new or mainstream culture and these 2 relationships might be independent (Phinney 1990,501). The view of the bidimensional acculturation process states that members of the minority group can either weakly or strongly identify with their mainstream culture as well as own culture and their strong ethnic identification does not build their identity (Phinney 1990,501). These models and arguments by Phinney have made it necessary to compare the ethnic identification of the two groups International students and Norwegian students because both university student groups study together and interact during their studies.

Research has discovered an association between numerous psychological variables and ethnic identity (Williams et al 2012,2). Most past research conducted regarding ethnic identity's psychological correlations has laid emphasis on adolescents as well as children as the ethnic identity development process is assumed to start typically in adolescence (Williams et al 2012,2).

A negative relationship has been discovered between the ethnic identity of adolescents as well as depression and loneliness suffered by them, conversely, a positive association has been found between ethnic identity of adolescents and their hopefulness, mastery sense, coping as well as self-esteem (Roberts et al 1999,314). Research conducted on the development of ethnic identity throughout the lifespan has shown that ethnic identity might also protect adults from psychological distress ((Lorenzo-Hernández and Ouellete 1998 quoted by Roberts et al 1999,314). For example, comparison between African American,

Puerto Rican and Dominican adults highlighted a positive association between self-esteem and ethnic identity in these 3 minority groups (Lorenzo-Hernández and Ouellete 1998,2015).

Similarly, Mossakowski argued that achieving a high ethnic identification with one's ethnic group can protect people from psychological health problems by reducing the stress caused by ethnic discrimination as it did for Filipino American adults (Mossakowski 2003, 325-326). The arguments by researchers and findings of researchers highlight the importance of building a strong ethnic identification for International students in Norway.

Previously, a study was done to examine the influence of the membership of an ethnic group on QoL, race-related stress and ethnic identity of three ethnic groups Latino American, Asian American as well as African American by administering WHOQOL BREF, the Multigroup Ethnic Identity Measure and the brief version of the Index of Race-Related Stress(IRSS-B) (Utsey et al 2002,369-370). The sample of that study consisted of 160 participants aged 17-72 (Utsey et al 2002, 369-370).

An important finding of that study was that the development of ethnic identity was linked to not only psychological indicators such as self-concept but also related with physical health domain covering physical health, social relationships domain covering satisfaction with a person's social networks as well as relationships and environment domain covering satisfaction with the lifestyle of a person (Utsey et al 2002,374-375). Therefore, the WHO's QoL construct draws a comprehensive picture of the well-being (Utsey et al 2002,375).

The results of that study revealed that ethnic identity predicts QoL in the best manner (Utsey et al 2002,374). This revelation forms the basis to study ethnic identity in relation to QoL of university students, which this study tries to do. Another study was previously done to explore the relationship between ill health, subjective wellbeing as well as ethnic identity of Brazilian, Polish as well as Portuguese college students found out that Polish as well as Portuguese students showed that their positive attitudes together with their ethnic belongingness was significantly associated with improved QoL as well as less ill health (Olivera et al 2012,39-40)

However ethnic identity can also have negative effects upon adults as suggested by the National Latino and Asian American study which systematically examined how the ethnic identity of 2047 Asians falling in the 18–75 years age group has an influence on the association between their distress and discrimination and tested ethnic identity as a worsening

or a protecting factor(Yip et al 2008,2–6). That study by Yip et al found out that ethnic identity worsened the negative influences of discrimination on the psychological health amongst US born people aged in 30s and above 51(Yip et al 2008,9).

### **Acculturation**

Ethnic identities of international students are quite likely to fall during the process of their acculturation. This is because a study conducted by Cuéllar, Nyberg, Roberts & Maldonada to explore the relationship between ethnic identity and acculturation of Mexican American, Mexican, White American, Anglo American, Hispanic, Native American as well as Black American university students found out that there was an inverse relationship between acculturation and ethnic identity in such a manner that with a rise in the acculturation of a person, there was a decline in his or her ethnic identification as the greater a person gets acculturated his or her feelings of sense of belongingness with her or his ethnicity falls (Cuéllar et al,1997,539).

Before discussing Acculturation, United Nations Educational, Scientific and Cultural organization defines “[Culture] as a complex whole which includes knowledge, beliefs, arts, morals, laws, customs, and any other capabilities and habits acquired by a [human] as a member of a society” (UNESCO, 2017).

John W.Berry describes Acculturation as a twofold process of mental as well as cultural change that results from a contact taking place between at least 2 cultural groups as well as their members as individuals (Berry 2005,698–699). At the level of a group, it features changes in institutions, cultural practices as well as social structures (Berry 2005,699). At the level of an individual, the behaviors of an individual changes with psychological as well as cultural changes taking place in the long term (Berry 2005,699).

In some cases, such changes can take years, while in other cases they can take centuries to occur. This psychological as well as cultural change process of acculturation involves different kinds of mutual accommodation, driving to sociocultural adaptations as well as mental changes in the longer term (Berry 2005,699). The occurrence of change as well as contact takes place for various reasons including migration, armed invasion sojourning like working abroad, studying abroad as well as tourism. Both change as well as contact continues for a long time after early contact in multicultural societies, where ethnocultural groups maintain their heritage cultural features (Berry 2005,699).

Whereas, acculturation continues for the duration of the contact between culturally diverse groups, some adaptation in the longer term to live in settings featuring culture contact takes different forms, which usually makes the groups accommodate each other in the long term (Berry 2005,699). This requires often for instance adopting types of social relations as well as dresses, learning languages of each other and sharing the eating preferences of one another that are every group characteristics (Berry 2005,700). In simple words, acculturation leads to adaptation and I assume that international students in Norway are likely to pass through acculturation and adapt as during their contact with Norwegians they are likely to learn the local language Norwegian and thereby do adaptation (Berry,2005). Berry has introduced four acculturation strategies which are discussed below

### **Integration**

Integration is an acculturation strategy pursued by a person when he or she is not only interested in maintaining his or her own heritage culture but also in maintaining his or her everyday contact with other ethnocultural groups (Berry 2005,705). In this situation, a person maintains a certain level of his or her cultural integrity and simultaneously as an ethnocultural group member tries to do participation as an essential component of the bigger social network (Berry 2005,705).

In certain situations where the larger dominating society becomes inclusive by opening itself to include cultural diversity, non-dominant smaller groups can “freely” chose as well as successfully pursue integration (Berry 2005,705). Therefore, for achieving integration both the larger dominant as well as the smaller non- dominant group need to accept every group’s right to reside as culturally diverse people (Berry 2005,706). A pre-requisite for pursuing this strategy is that smaller non-dominant groups should be ready to adopt the larger society’s basic values, whereas simultaneously the larger dominant group should be ready to make national institutions like labor, health as well as education adapted to fulfill the necessities of every group residing together now in the pluralistic society (Berry 2005,706).

### **Assimilation**

Assimilation is an acculturation strategy pursued by people when they are interested in forgetting their own heritage culture and become a part of the larger dominant society (Berry 2005,705). It involves unlearning culture (although it might be voluntary) and is likely to have two outcomes one of that is of Melting pot while the other one is that of a Pressure

cooker(Berry 1997,10). The outcome “Melting pot” arises when people opt themselves to do assimilation, while the outcome “Pressure Cooker” arises when the larger dominant group forces the smaller non-dominant group to do assimilation (Berry 1997,10).

### **Separation**

Separation is an acculturation strategy pursued by people when they withdraw from their interactions with other ethnocultural groups and start following their own heritage culture (Berry 2005,705). According to John W Berry when the dominant group forces separation then this separation is known as “segregation” (Berry 2005,706).

### **Marginalization**

Marginalization is an acculturation strategy pursued by people when their experiences of acculturation negatively influence them in such a manner that they not only shed their culture i.e forget their culture but also withdraw from interacting with members of other ethnocultural groups(Berry 1997,19)

Bielenia-Grajewska has described that there are two types of acculturation. These include forced acculturation as well as voluntary acculturation(Bielenia-Grajewska,2017). Forced acculturation could be described as an imposed acculturation. It occurs when the imposition of cultural norms is done on invaded or colonized communities, who resist adopting them(Bielenia-Grajewska,2017).

Contrary to that, unforced acculturation or voluntary acculturation occurs when its target groups can freely choose to adopt the cultural norms of other communities or reject them. This kind of acculturation is linked with people going abroad voluntarily(Bielenia-Grajewska,2017). Examples of such people are job seekers as well as students. Voluntary acculturation relates to fashion or prestige. For example, a cultural group might be successful. Therefore, other cultural groups might imitate its behaviors to get prestige.

International students are most likely to pass through unforced acculturation as they need to learn the local language for joining the dominant local cultural groups otherwise they are likely to be not only isolated but also embarrassed. As reported by a study done on the acculturation experiences of international students in China by Leong(Leong,2015).

Both forced or voluntary acculturation processes require an interaction between culturally different communities of people and makes the minority community do assimilation of

language, beliefs, customs as well as cultural values inside the majority group (Becker & Bhugra 2005,21). During the process of acculturation, both host as well as immigrant cultures might change, the occurrence of changes in generational status, familial values, social affiliations as well as attitudes can take place with the interaction of the two groups; nevertheless, usually one of those cultures dominates (Becker & Bhugra 2005,21).

Cultural changes taking place in the identification of people can make them stressed and negatively affect their mental health as well as self-esteem (Becker & Bhugra,2005).

Communication taking place between the minority or immigrant community and host or dominant community might lead to deculturation, integration, rejection or assimilation (Becker & Bhugra 2005,21). Deculturation features a cultural identity loss, acculturative stress as well as alienation (Becker & Bhugra 2005,21).

Rejection refers to the withdrawal by the minority group or an individual from the dominant group i.e the majority group (Becker & Bhugra 2005,21). This can lead to segregation or apartheid in extreme situations (Becker & Bhugra 2005,21). Stresses of post migration include conflict as well as culture shock, which in turn might result in depression, feeling isolated as well as alienated and cultural confusion (Becker & Bhugra 2005,21).

The attitudes showed by host societies including racism supplemented by stresses caused by legal issues, differences between their expectations and achievements, economic problems, unemployment, lack of opportunities for progress in general as well poor accommodation within their host society can make vulnerable people suffer from psychological health problems (Becker & Bhugra 2005,21).

Several studies suggest that international students pass through the acculturation process (Smith & Khawaja,2011; Gazzoli & Meza,2013; Campbell,2015;;Leong, 2015). One of those studies was conducted to explore the adaptation and acculturation process of native students from Panama studying a 2 years diploma in hotel management in Switzerland (Gazolli & Meza 2013,20).

An important finding of that study was that the exposure of those international students to the academics related expectations, policies, guidelines as well as rules of the new academic environment and societies as well as cultures of other students made them do new knowledge development and better their skills, attitudes as well as awareness which helped them effectively perform in their new educational setting (Gazolli & Meza 2013,20). Because of

which they experienced a process of change in their identity, dominated by maturity as well as cultural understanding development (Gazolli & Meza 2013,20). This finding indicates the change of identity of international students with acculturation.

Similarly, a study was done to explore the acculturation issues experienced by international students studying at a university in United States of America(USA) and compare the experiences of international students there by interviewing 11 students (Leong 2015,459). An important finding of that study was that every international student visiting USA irrespective of their country of birth experienced discomfort either due to food, climate, weather, language, customs or anything else (Leong 2015,471-472). Nevertheless, students from East Asia faced many difficulties while adjusting to both the academic environment in US colleges as well as to life outside it due to significant cultural as well as language barriers (Leong 2015,472). A reason behind these many difficulties is that compared to European, African, South American as well as South Asian languages as well as cultures, the language and culture of East Asian people is very much different from the English language as well as the culture of USA (Leong 2015,472).

During this study, international students from China reported that instead of attending classes, they would prefer to be silent as they felt embarrassed because of their limited English language proficiency (Leong 2015,472). The study reported that Chinese students might become isolated both at a group as well as individual level because of their inability to fluently speak English and their failure to talk to Americans as well as to the rest of the English-speaking people because of which the Chinese students might segregate themselves and this segregation might make the Chinese people feel anxious as well as lonely. It further reported that Americans might discriminate against Chinese people because of their limited English language proficiency (Leong 2015,472).

An important finding of that study was that apart from the language difficulties, differences exist between the US culture and the culture followed by the international students but these differences are significant for students coming from East Asia to USA (Leong 2015,472). Compared to East Asian cultures, the US cultures features much more permissiveness which not only provides freedom to students coming to USA from East Asian countries but also proves challenging for them, especially with regards to their explicit sexual expressions as well as sexual displays. The cultural values as well as orientations differ a lot between the cultures of USA and East Asia (Leong 2015,472). The American culture emphasizes upon

individualistic interests as well as individualism. Contrary to that, in several East Asian countries including China, preference is given to collectivism. Such big differences might be irresistible for international students from China pursuing their higher education in the United States of America (Leong 2015,472).

Whereas, individualistic coping mechanisms as well as language proficiency shape the living experiences of the international students in the environment of the host country, environment related factors appear to play bigger roles (Leong 2015,472). Especially, the reception provided by the host members as well as host university to the international students and their respective support levels inescapably shape the interactions of international students. Particularly, cooperative social relations with their hosts help international students feel more better integrated into their new environment, developing a feeling of membership in the new societies (Leong 2015,472).

In Germany, a study was done to explore the acculturation strategies preferred by Chinese students in Germany and point out the psychosocial as well as social adaptation factors featuring their acculturation by administering a self-reported questionnaire with the permission of John W Berry (Yu & Wang 2011,190–194). In this study the acculturation strategies were separation, marginalization, integration and assimilation (Yu & Wang 2011,190).

Important findings of that study were that the Chinese students preferred to use separation as well as integration acculturation strategies (Yu & Wang 2011,202–203). Male Chinese students preferred to use the separation acculturation strategy while female Chinese students predominantly preferred to use the integration acculturation strategy (Yu & Wang 2011,205).

A study was also done in Australia to examine the relations between acculturation of international students and their social networks which they build in their host society (Kashima & Loh 2006,481). Findings of that study were that the greater the international relationships the international students had built in the host country the better they had mentally adjusted and in general the students with greater international relationships were not only likely to identify with their Australian host university but also with their heritage culture (Kashima & Loh 2006,481). Therefore, their relationships with the rest of the international students seem useful for not only the mental adjustment of international students but also for developing their new identities (Kashima & Loh 2006,481-482).

The study by Kashima and Loh also found out compared to international students with low cognitive closure need, international students with a high cognitive closure need had done lesser sociocultural adjustment and lesser mental adjustment (Kashima & Loh 2006,482). Similarly, Kashima and Loh also found out that students with a high cognitive closure need had found ambiguity as well as uncertainty involved in their new cultural setting more stressful (Kashima & Loh 2006,482). Kashima and Loh have defined cognitive closure need as the extent to which a person wishes to clearly as well as firmly solve ambiguity, confusion as well as uncertainty (Kashima & Loh 2006,473).

Previously, a study aimed to explore the pressure put by communities, families as well as sponsors on international students to succeed in Jordanian universities by identifying their possible adjustment problems (Alazzi & Al-Jarrah 2016,730).

That study further aimed to find out solutions of these problems (Alazzi & Al-Jarrah 2016,730). In that study, the researchers interviewed 20 undergraduate students from Indonesia as well as Malaysia studying in north Jordan. The main finding of that study is that international students from the Southeast Asian region experience anxiety as well as stress from studying overseas for many years because of leaving their family obligations, fearing about achieving their academic objectives and loss of their culture, food, friends as well as language after coming overseas to study (Alazzi & Al-Jarrah 2016,739).

Some findings of that study are that students reported that they experienced pressure to get high grades to receive funding and for not wasting the limited money that their families had forgone for their education and that they were pressurized by constantly feeling that they must give a performance like local students in Jordan, which forced them to use their time only for studying (Alazzi & Al-Jarrah 2016,735).

Other findings of that study are that students reported missing their country, food as well as family but they did not felt lonely and were of the view that their professor plays a decision-making role in helping them successfully complete their programs (Alazzi & Al-Jarrah 2016,735). This view caused problems as Jordanian professors held an expectation from Asian students to be responsible for their academic programs. Fear of getting victimized and therefore not doing program completion made the students scared of challenging their own professors (Alazzi & Al-Jarrah 2016,735).

Similarly, in that study Southeast Asian students reported that their interaction with Jordanians was limited for fulfilling their academic objectives and that they lacked cultural understanding which together with differences in their cultural beliefs did not let both them and Jordanian students engage in positive interaction (Alazzi & Al-Jarrah 2016,736).

In that study, Southeast Asian students also reported that interaction with their co-nationals and people holding the same beliefs provided them emotional help and that cultural support system loss made it problematic for Southeast Asian students to do identification or even avail the facilities offered by their host university (Alazzi & Al-Jarrah 2016,736-737).

#### **1.1.4 Academic Stress**

The theme of Academic stress reported by many previous studies is necessary to discuss. Academic stress could be described by discussing two words. One of those is Academic while the other one is stress (Kaur & Puar 2017,40). The word Academic has emerged from the word “Academy”. The meaning of the word Academy is an institute in which special kinds of instructions are given (Kaur & Puar 2017,40).

Stress in general could be defined as the responses given by the human body to those stressors, which it perceives as possibly distressful or harmful (Brady & Sonne 1999,264). Here the term stressors refer to those events or stimulus which induce stress (Brady & Sonne 1999,264). These stressors can be both psychological like familial or job related problems as well as physiological like physical attack as well as environmental problems (Brady & Sonne 1999,264). Different people give different responses to different stressors (Brady & Sonne 1999,264).

An event viewed as highly stressful by an individual human being might be viewed as harmless by other people (Brady & Sonne 1999,264). Whenever a creature perceives that he or she is facing a stressful situation, he or she starts to react to that stress i.e engages in complex avoidance or escape behavior; physiological responses like a rise in their heart rate, sweating or blood pressure as well as emotional responses in humans like feeling anxiety (Brady & Sonne 1999,264). Stress plays an important role in initiating and continuing alcohol addiction as well as relapse (Brady & Sonne 1999,263).

Students face huge levels of stress as they are burdened by competition as well as studies themselves (Kaur & Puar 2017,40). In the competitive age, parents expect good grades from their children (Kuar & Puar 2017,40). This expectation makes students face stress (Kaur &

Puar 2017,40). Academic problems have been known to be a very common human life stress source for students (Sarita & Soni 2015,386).

In its World happiness report, the United Nations ranked Norway as the happiest country in the world because it scored well on the variables examined by a happiness survey. These include social support, gross domestic product per capita, healthy life expectancy, trust i.e corruption perceptions, freedom to make choices in lives as well as generosity (Helliwell et al 2017,3). In that report, Helliwell, Layard and Sachs have claimed that social support helps people live healthily by cutting down the negative effects of stressful events on health (Helliwell et al 2017,30-31). Here social support refers to the availability to have someone to help in troubling times (Helliwell et al 2017,31).

Previously, an experimental study was conducted to understand the social support's usefulness in managing academic stress of matriculation students at the International Islamic University Malaysia by equally dividing 120 students into a control and experimental group (Baqutayan 2011,29).

During that study, only the students who made up the experimental group got classes on using social support to cope up with academic stress(Baqutayan 2011,29).That study found out that compared to the students' control group, the students' experimental group coped up with their academic stress in a better manner(Baqutayan 2011,29).Similarly, the study by Baqutayan also found out the students who got lower social support faced more stress (Baqutayan 2011,33).

Therefore, that study suggested that students should be encouraged to avail social support for stress coping (Baqutayan 2011,33) These findings together with this suggestion of that study indicates that Norwegian students are less likely to face academic stress than International students studying with them in Norway because they are equipped with high levels of social support for coping with academic stress.

Contrary to that, international students in Norway are quite less likely to get social support because in a previous study done by Wiers-Jennsen they have reported that their contacts with Norwegians are limited and according to Helliwell et al a source of social support is social networks of people (Wiers-Jennsen 2015,38-39; Helliwell et al 2017,31)

Several studies have reported that academic factors including the fear to fail compose a very large source of stress for university students across the world which makes it necessary to

measure academic stress of both International students and Norwegian students in Norway (Timmins,2002; Msengi,2007; Yumba,2008; Elias et al,2011; Bataineh,2013).

Demands to get good grades in exams and stress do not let students enjoy their lives during studies and studies burden students a lot (Kumari & Jain 2014,31-32). The stress signs during as well as before exams are sleeping irregularly, tiredness, sadness, isolation, experiencing an upset stomach, having pain all over the body, feeling restlessness, inability to remember the studied content, panicking during examination period because of inability to answer questions (Kumari & Jain 2014,32).

Previously, a study was conducted in University of Botswana to explore the stressors, signs as well as effects experienced by undergraduate students studying in Universities. During that study, an exploration of the stressors linked to academic environments, academic pressure as well as time was done (Agolla & Ongori,2009). Important findings of that study were that 56% of the participant students viewed constant poor academic performance caused stress for them,66% of the participant students viewed insufficient resources for doing their assignments like books as well as computers as stressful and 81% of the participant students declared academic workload as stressful (Agolla & Ongori 2009,67) .

Other important findings of that study are that 88% of the undergraduate students had suffered from nervousness or indigestion or anxiety greater than one time in the university where they study while three fourth of the undergraduate students had experienced anxiety due to the presence of people at their university or homes and 77% of the undergraduate students had faced tension at least sometimes or frequently and suffered from pain in their shoulders or neck, breathing problems as well as migraine headaches (Agolla & Ongori 2009,66).

Previously, a study was conducted to compare the experiences of Russian and International students in Russia and assess the adjustment of international students to their lives in Russian universities by examining the crucial stress factors influencing the academic performances of Russian and international students (Koshelva et al 2015,461-462). For which a questionnaire on stress was administrated to students, in which questions emphasized on issues like friendship, family, financial issues, confidence, workload, organization, sleep, self-discipline, language used to study, inability to do prioritization, pressure of deadline, cultural differences, perfectionism, living away from family, climate, health problems as well as satisfaction with accommodation (Koshelva et al 2015,465).

Findings of that study are that International students had inadequate knowledge of Russian which was used as the academic language and their lack of proficiency in Russian language was a factor which had not let them compete them with Russian students and most of the stressful factors were same for both Russian and international students(Koshelva et al 2015,464). These factors include lacking sleep, deadline pressure, high workload, perfectionism as well as experiencing health problems.

A systematic review was conducted to explore the relationship between the levels of stress and QoL amongst university students and the possible variables responsible for influencing this relationship on papers published from 2011 onwards to 2015 in five databases (Ribeiro et al 2017,2).

During that review, identification of 142 scientific articles was done out of which the classification of just 13 articles meeting the previously developed standard were done as eligible, which indicates the insufficient number of studies exploring the relationships between QoL and stress levels of university students (Ribeiro et al 2017,5-6).

Important findings of that systematic review were that a negative association was found between QoL and stress levels amongst university students because different aspects of mental as well as physiological health had got deteriorated and that the variables depression, sleep disorders as well burnout can worsen the QoL, which could in turn strengthen this negative relationship to a maximum level (Ribeiro et al 2017,5).

Apart from this systematic review, other studies have also highlighted the harmful effects of stress on the physical as well as mental health of university students. One of those was a study done for testing how stress faced by Thai nursing students effects their physical health, psychological health and coping plays its role in protecting their health from the harmful effects of stress (Klainin-Yobas et al,2013).

An important finding of that study by Klainin-Yobas et al was that nursing students facing greater stress levels reported that they had faced greater levels of psychological distress together with bad physical health(Klainin-Yobas et al 2013,1288).Similarly, that study also found out stress had predicted the bad physical health of nursing students, which in turn had predicted their psychological distress in a significant manner (Klainin-Yobas et al 2013,1293-1294).

Similarly, a study was conducted to do investigation of perceived stress, subjective and psychological health problems faced by older adolescents in the northern region of Sweden on a sample falling in the age group of 16-18 (Wiklund et al,2012). An important finding of that study is that subjective and psychological health problems highly prevailed during adolescence particularly in girls and that demands as well as perceived stress can explain these problems (Wiklund et al 2012,8-11)

Previous, a study was done to investigate the academic problems faced by Saudi female students while adapting to the United Kingdom and the coping strategies employed by them to cope up with these problems by combining qualitative as well as quantitative analysis of interviews and questionnaires with twenty-five Saudi female PHD students (Alqahtani & Pfeffer 201,6).

Findings of that study are that most of the Saudi female PHD students at 52% reported that language problems were not only a barrier for them but also a factor contributing to their communication problems with an influence on their own academic achievement. Similarly, respondents reported that language problems not only caused academic writing problems for them but also made them slow (Alqahtani & Pfeffer 2017,10).Even when they understood the local language well, the local language accent in some situations made communication difficult for them (Alqahtani & Pfeffer 2017,10).In addition to that, the respondents reported that communication with their supervisor was a problem for them which was related sometimes to the differences in their expected roles as well as academic systems of the student as well as the supervisor(Alqahtani & Pfeffer 2017,10).

Other findings of that study were that a big majority of the Saudi Female PHD students at 80% reported that they faced challenges in acculturation as well as adaptation to differences in their academic systems (Alqahtani & Pfeffer 2017,10). These include academic skills like academic background differences like content in their degree program, researching skills, critical thinking skills and interpreting scientific or technical terms as well as equipment (Alqahtani & Pfeffer 2017,10).

Similarly, another finding of that study is that Saudi female PHD students who had done the completion of their MA study program in Australia, United States of America and United Kingdom found it less problematic to do academic adaptation to their PHD(Alqahtani & Pfeffer 2017,10).That study by Alqahtani & Pfeffer also found out that one fifth of the Saudi

female PHD students considered wellbeing as well as health a problem for their academic adaptation by one fifth of the respondents in the study (Alqahtani & Pfeffer 2017,10).

Similarly, two Saudi female PHD students reported that physiological illness had an impact on their academic achievement and three female PHD students reported that they faced mental disorders during their studies in the United Kingdom (Alqahtani & Pfeffer 2017,10).

A study was done to examine stress faced by university students while pursuing further education. In this study, the participants were either studying a foundation degree or were part time or full time six year top up BSc students and worked full time while studying by measuring stress with the Perceived stress scale designed by Cohen et al (Shaw et al 2017,444).

Findings of that study are that both male and female students reported they faced perceived stress levels with female students suffering from more perceived stress (Shaw et al 2017,446). Employed and unemployed students reported that they faced similar perceived stress levels (Shaw et al 2017,446). Another finding of that study was that time spent on studies did not affect perceived stress of the students significantly (Shaw et al 2017,446).

A comparative study was done to explore the differences between the causes and prevalence of academic stress and changes in lifestyle and mental, emotional, psychological as well as physical health amongst female non-medical and medical undergraduate university students at Dammam university in the Kingdom of Saudi Arabia by employing a cross sectional research design (Al-Dabal et al 2017,232). In that study, 319 female medical students as well as 297 nonmedical students participated(Al-Dabal et al 2017,233).

An important finding of that study was that compared to nonmedical students, a greater percentage of medical students at 48.6% reported that their studies had stressed them frequently because of academics i.e they faced academic stress more than non-medical students (Al-Dabal et al 2017,233).

Other findings of that study were that compared to nonmedical students, medical students mentioned fear of failing in examinations, substandard study environment as well as inappropriate teaching methods more frequently as causes of their academic stress more (Al-Dabal et al 2017,233).

Medical students reported they faced more academic stress, depression, anxiety, social problems, a poorer psychological and physical health status than nonmedical students because of inappropriate teaching methods, fear of failing in exams, social problems as well as unsatisfactory academic environment (Al-Dabal et al 2017,233-237).

Academic stress is not only harmful for university students as discussed above but it can also be helpful for them as a study conducted by Jangho Park and his colleagues to highlight factors that might impact academic stress faced by medical students and do investigation of causal relations amongst these factors through a path analysis found out that academic stress caused by lower grades, might increase the motivation of students, which consequently could improve their grades (Park et al 2012,147-148).

The results of that study by Park et al implied that actions which do promotion of motivation might benefit a lot from interventions done to deal with depression or stress. Moreover, proper management of stress might add to motivation (Park et al 2012,148). So, one could simply say that a certain level of academic stress is necessary for motivating university students to work hard and get academic success but greater levels of academic stress could be dangerous for both their mental health, physical health as well as QoL.

### **1.1.5 Alcohol use**

University life might encourage university students to drink alcohol. Drinking alcohol has been defined as internal part of the culture of university students and more describing feature of university studies than their studies themselves (Towl 2004,2). During university life, stories regarding drinking play an important role in making student groups dynamic and students positively view them (Towl 2004,2). Drinking games also prevail during this time with the objectives of socializing, making other people drunk and controlling other students (Towl 2004,2). Consuming a lot of alcohol together with risky drinking of alcohol at one occasion are the largest causes of death as well as injury of young adults as well as university students (Wicki et al 2010,914).

The harmful alcohol consumption leads to nearly two and a half million deaths annually, with a net life loss of 2.25 million considering the approximate positive effect of low consumption of alcohol of certain diseases in certain groups of the population (WHO 2011,10). Alcohol is attributed for nearly 4.5% of the worldwide injury as well disease (WHO 2011,20).

Consumption of alcohol is expected to not only cause 20% -50% of driving accidents,

violence as well as poisonings but also viewed as a likely cause of chronic diseases liver cirrhosis as well as epilepsy and many kinds of cancers (WHO 2011,20).

Alcohol consumption itself is the 3<sup>rd</sup> largest factor which makes people likely to suffer from disability as well as disease, after unsafe sexual intercourse and being underweight during childhood (WHO 2011,20). Alcohol adds to disturbing outcomes that disable or leads to deaths of human beings at a comparatively young age, leading to huge number of years lost to disability as well as disease. Alcohol is related to both disease prevalence and its course from diagnosis onwards(WHO 2011,20).

Baan et al have identified consumption of alcohol as cancer causing substance for various types of cancer(Baan et al,2007)These include colorectum cancer, oesophagus cancer, liver cancer, phyrax cancer, female breast cancer, oral cavity cancer as well as larynx cancer.

The harmful as well as hazardous consumption of alcohol contributes to the injuries, deaths as well as diseases by adversely affecting the health of the alcohol consumer in the form of cirrhosis of liver, injuries, cancers as well as their dependence upon alcohol(WHO 2011,10). Similarly, alcohol consumption of drinkers also harms other people through their aggressive actions like violence, drink driving or by adversely affecting the development of child as well sa fetus(WHO 2011,10).

A review was conducted to explore the characterstics of university students consuming alcohol in Europe by identifying 65 relevant studies published in the past 2 decades since 1989 onwards by searching from literature databases (Wicki et al 2010,915).

The findings of that review were that compared to female studennts, male university students do alcohol consumption not only more frequently but also in larger quantities, including doing risking drinking at one occasion even though in the Nordic region as well as United Kingdom researches could not find gender differences in alcohol consumption (Wicki et al 2010,918). Similarly, compared to female students male students are less likely to abstain from drinking alcohol (Wicki et al 2010,918).

That review also found out that students do alcohol consumption for improvement motives as well as social reasons while attending social meetings (Wicki et al 2010,919). Another finding of that review were that students residing in a less regulated “prototypical” situation and without familial responsibilities have a greater likelihood to frequently drink alcohol in larger quantities or do risky drinking on a single occasion more frequently (Wicki et al

2010,921). Similarly, that study further found out that students are likely to do an overestimation of the degree to which their fellow students consume alcohol, a bias which high alcohol consuming students do more (Wicki et al 2010,921).

A study was done to do an assessment of the prevalence of problem drinking, consumption of alcohol and the attitudes of students towards prohibiting on campus alcohol sale (Stock et al 2009,123). In that study 5826 students studying in universities of 7 European countries participated (Stock et al 2009,123). These countries include Spain, Germany, Denmark, Turkey, Bulgaria, Poland as well as Lithuania. An important finding of that study was that alcohol dependence is a problem for students studying in many countries of Europe and is concerning for them (Stock et al 2009,126-128). Another finding of that study was that the support from students to ban the on-campus alcohol sale differs from country to country but most of the students in countries where students do less frequent alcohol consumption favor banning on-campus alcohol sale (Stock et al 2009,128). That study by Stock et al suggests that opinion of students regarding banning on campus alcohol sale must be considered in formulating European Union alcohol policy (Stock et al 2009,128).

Myrtveit et al conducted a study on risky drinking of Norwegian students with a few aims (Myrtveit,2016). That study aimed to determine whether there is an association between risky drinking and the participation of Norwegian students in an introductory week organized by Norwegian universities (Myrtveit 2016,361). The sub aims of that study were to determine whether there is an association between academic performance and risky drinking of Norwegian students and whether there is an association between the student attitudes related to drinking alcohol and their participation in the introductory week and risky drinking (Myrtveit 2016,361).

The target population of that study consisted of every full-time student with an age of less than 35 holding citizenship of Norway (Myrtveit 2016,363). A sample of 6012 women as well as 3062 men was chosen for that study (Myrtveit 2016,366). Some participants were asked questions regarding how frequently they had consumed alcohol with categorical response options “never”, “monthly or less”, “2-4 times a month”, “2-3 times a week” and “4 times a week or more” while the assessment of the rest of the participants was done by using the Alcohol Use Disorder Identification Test (AUDIT)(Myrtveit 2016,363).

Findings of that study are that a high consumption of alcohol is commonly done by Norwegian students and students who participated in an introductory week organized by

Norwegian universities had greater chances of doing risky drinking (Myrtveit 2016,370). That study highlighted that this association remained even after adjustment was done for marital status, gender as well as age and was valid amongst both students who had studied for several years as well as new students (Myrtveit 2016,368-369).

Other findings of that study are that students who reported risky drinking were not only more likely to fail exams greater than one time but also report lower self-efficacy related to their studies (Myrtveit 2016,369). That study also found that students who had more liberal alcohol related attitudes were not only more likely to report doing risky drinking but also take part in an introductory week organized by their university (Myrtveit 2016,370).

Like Norwegian universities, a huge consumption of alcohol is a characteristic of the introductory week at the University of Southern Denmark, where a study was done to explore the views of students regarding on campus alcohol policies related to alcohol consumption practices as well as attitudes (Larsen et al 2016). In that study, 6 focus group interviews of students were done. 2 of those focus groups were consisted of international students (Larsen et al 2016,2-3). During those interviews, discussion of topics like attitudes as well as experiences regarding consumption of alcohol by students, alcohol consumption norms as well as rules were done with students (Larsen et al 2016,7-11).

In that study, recruitment of students was done from 2 different campuses Esbjerg and Odense and to determine whether there were national background related differences 2 of the 6 focus groups consisted of international students (Larsen et al 2016,2-3). Although a small number of students participated in that study and thus no fixed differences could be stated, this permitted the researchers to compare the views given by international and Danish students (Larsen et al 2016,3). A limitation of that study was that most of the participants were females and this could have influenced the findings as males and female university students might have different opinion regarding on campus alcohol use (Larsen et al 2016,3).

Findings of that study are that generally, students gave the opinion that their alcohol consumption was high, but necessarily not a problem as they perceived drinking as an essential part of the culture of the Danish people (Larsen et al 2016,6). Another finding of that study is that students reported that their consumption of alcohol was not especially different from most of the Danish people and students considered alcohol consumption as a behavior which they begin in their initial teenage years by socialization (Larsen et al 2016,6-7).

Other findings of that study are that the opinion of the international students differed from that of Danish students as some of the international students stated that the perceived alcohol consumption was too much and differentiated between circumstances where drinking was not usual for them (Larsen et al 2016,7) However both international student focus groups stated that the integrated alcohol consumption practice on their host university campus without any rules surprised them and consumption of alcohol was greater than the alcohol consumption they were familiar with and some students did socialization to adapt such alcohol consumption behavior (Larsen et al 2016,7).

In that study, Larsen et al also found out that majority of the students reported that there was no need of imposing major restrictions on the consumption of alcohol by university students as university students were adults and therefore responsible for the actions they take in the world (Larsen et al 2016,7). That study by Larsen et al also found out that students showed open mindedness towards limiting the sale of alcohol by suggesting that alcohol sale through vending machines must be banned and consumption of alcohol during the introductory week should be limited to avoid socially excluding students who do not drink (Larsen et al 2016,8-10).

Drinking alcohol has been found to be closely related to purchasing power of people as in high income countries people with high purchasing power drink much more than people with low purchasing power in low income countries (WHO 2007, 13-14). Inaccessibility of treatment for alcohol abuse, crowded accommodation as well as low incomes are some of the factors responsible for lesser alcohol consumption by people living in low income countries because these factors make families impose informal social controls on drinking by their members (Raitasalo 2008,42)

People living in Europe consume have the biggest alcohol consumption rate as their per capita is 100% greater than the average alcohol consumption by the people living in other parts of the world (WHO 2006,1). During 2002, alcohol consumption was amongst the topmost risk factors for causing diseases amongst the youth with a third position after tobacco as well as hypertension (WHO 2006,1). People living in the particular regions of Eastern Europe as well as Central Asia drink the most alcohol overall with people living in other European regions also consuming a lot of alcohol (WHO 2007, 14 ). The people living in the region Americas consume the second most amount of alcohol with people residing in wealthier countries in Americas consuming more alcohol than people living in lesser

wealthier countries. These people living in Americas are followed by people living in most of the Caribbean as well as Latin American region in alcohol consumption (WHO 2007,14 ).

The Expert Committee of WHO on alcohol consumption problems found out religious belief was amongst the social as well as cultural factors responsible for making people abstain from drinking alcohol and influenced the distribution of alcohol consumed by people (WHO 2007,15). The economic problem poverty also makes people abstain from drinking alcohol. Nevertheless, if a poor person as well as rich person do heavy drinking of the same level than that drinking level of the poor person is more likely to be harmful than that heavy drinking level of the richer person(WHO 2007,15).

Researches done in many countries have found out that the consumption of alcohol is distributed unequally amongst the alcohol consumers (WHO 2007,15). A usual finding is that almost one tenth of the population consisting of heavy drinkers consumes half of the total alcohol consumed by populations (WHO 2007,15). Both social as well as health problems disturbing the people residing near an alcohol consumer hold the same importance as held by the problems harming the alcohol consumer him or herself (WHO 2006,1).

Previously, a study was done to explore the mental health, personality as well as demographic correlates of various drinking patterns of Norwegian higher education students (Erevik et al 2017,417). A finding of that study was that a large proportion of the participating students at 53% were doing harmful drinking of alcohol (Erevik et al 2017,416).

Other findings of that study are that 72.7% of the participating students reported that they had drunk 2 to 4 times on at least a monthly basis,60.8% of the participating students reported that they had drunk at least 5 to 6 units of alcohol on an usual drinking day and 48.8% of the participant students reported that they had drunk at least 6 units on at least a monthly basis (Erevik et al 2017,419).

Similarly, that study by Erevik et al has found out that age of Norwegian students had a negative association with harmful consumption of alcohol and drinking five to six units or more and consuming at least six units at a single occasion at least monthly while it had a positive association with drinking alcohol at least 2 to 4 times per month (Erevik et al 2017,419).

That study also found out that time of Norwegian students spent with a student status had a positive association with drinking alcohol at least 2 to 4 times per month and negative

association with usually consuming five to six units or greater and consuming at least six units on a single occasion at least monthly (Erevik et al 2017,419).

Gender related finding of the study done by Erevik et al is that males were more likely to do problematic alcohol drinking ( i.e doing harmful, dependent as well hazardous consumption of alcohol), drinking alcohol at least 2 to 4 times per month, usually consuming at least five to six units of alcohol and consuming at least six units on a monthly basis than females(Erevik et al 2017,419)

Other findings of that study by Erevik et al were that students reporting a childhood harmed by parental drug or alcohol use had a greater likelihood of doing dependent, harmful or hazardous drinking of alcohol and drinking five to six units of alcohol usually. Nevertheless, these students did not show a more significant likelihood to often drink (Erevik et al 2017,419).

Similarly, that study found out that students born in Norway were more likely to do hazardous drinking of alcohol, drinking alcohol 2 to 4 times at least monthly, drinking five to six units of alcohol usually and consuming 6 units of alcohol on at least a monthly basis(Erevik et al 2017,419). Other findings of that study were that religiosity of the students lowered their chances of belonging to a harmful alcohol drinking group and that single students had a greater likelihood to belong to every harmful alcohol drinking group (Erevik et al 2017,419).

Erevik et al also found out that in that study that students having kids were less likely to do dangerous or hazardous drinking of alcohol and had a negative association with frequency of drinking, frequently done binge drinking as well as binge drinking itself and extroversion added to the likelihood of students to belong to any harmful alcohol drinking group (Erevik et al, 2017,419-420).In that study, Erevik et al have measured binge drinking by referring to binge drinking as drinking over 5-6 alcohol units on a particular occasion(Erevik et al, 2017,416).

However, it can be assumed that that there is no standard definition of binge drinking. This is because Mark Bellis has claimed that the standard drink size as well as binge drinking definition widely varies not only between countries but also within countries in the bulletin of the WHO but drinking more than 6 alcoholic drinks is a common definition (Bellis 2010,644).

Initial employment of the behavioral economics theory pointed out the presence of a logical relationship between behavioral economic indicators and drug use in laboratory. This relationship prepared the stage to do more recent “translational” research on drug use and alcohol use by humans within a natural environment (Murphy et al 2007,2574).

Behavioral economics theory describes price extensively as the personal costs ( i.e. health, social or legal effects), time as well as monetary costs related with alcohol consumption(Murphy et al 2007,2575). In the environment where college students consume a lot of alcohol, unsurprisingly the monetary as well as behavioral price of consuming alcohol is usually very low in as well as near college campuses (Murphy et al 2007,2575).

Package-shops as well as bars are often located near college campuses, which make alcohol both accessible as well as cheap for students (Murphy et al 2007,2575). Behavioral economics theory claims that the high income earned by people together low costs creates an environment fostering high consumption of alcohol (Murphy et al 2007,2576).

Therefore, it is necessary to emphasize on the alcohol affordability of Norwegian and international students before comparing their alcohol use levels. This need makes me discuss the Eurostudent V survey which highlights the funding available to Norwegian students and students studying in other European countries.

A Eurostudent V survey was conducted in 2013 to explore the economic as well as social conditions of students studying in 29 Euro student participant countries which include Croatia, Ukraine, Sweden, Ireland, Russia, Germany, Hungary, Italy, France, Estonia, the Netherlands, Croatia, Czech Republic, Austria, Romania, Malta, Montenegro, Georgia, Armenia, Switzerland, Slovakia, Latvia, Slovenia, Lithuania, Finland, Serbia, Malta, Bosnia and Herzegovina as well as Denmark (Steffensen et al 2015,10)

An important finding of that survey is that Norway is a country where the largest percentage of students receives loans or public grants (Statistics sentralbyrå,2015). Apart from that, this publicly funded student support makes up a greater percentage of the total income earned by receivers residing in Norway than receivers residing in the rest of the countries (Statistics sentralbyrå,2015). In general, Public loans as well as grants contribute to a greater percentage of incomes earned by students studying in the countries located in the Nordic region than in any other region in Europe (Statistics sentralbyrå,2015).

Compared to that, funds transferred by family and similar transfers to students residing in countries in the Nordic region are of lesser importance as they make up to 20% of the total income earned by students living away from their parents in the countries located in the Nordic region (Statistics sentralbyrå,2015).

In almost 50% of the Euro student participant countries such funds transferred from family contributes to more than half of the total earnings of the students living away from their parents (Statitics sentralbyrå,2015). The above information on the economic situation of university students studying in Europe indicates that students studying in Norway receive the most money amongst all the students studying in many European countries.

Therefore, Norwegian students are likely to afford drinking much more alcohol than many international students. This greater alcohol affordability of Norwegian students makes it interesting for me to compare the alcohol drinking frequencies of Norwegian and International students studying in Norwegian universities for exploring their alcohol use levels. Although alcohol is more expensive to buy in Norway than in many other Eurostudent participating countries but still an increase in smuggling of alcohol from Sweden to Norway indicates that Norwegians can buy alcohol at a cheaper price as well (Statistics sentralbyrå,2017; The Local Norway,2017).

Therefore, the ability of Norwegians to buy alcohol at a cheaper price than its price in Norway provides both Norwegian and international students similar access to alcohol and makes it more necessary and interesting to compare the alcohol consumption frequencies of both international and Norwegian students.

## **1.2 Quality of Life**

World Health Organization describes QoL as the persons' understanding of their position in life in not only the context of their value systems but also in the context of the culture in which they are living related to their standards, concerns, expectations as well as objectives (WHO,1996). This definition highlights the subjective nature of QoL by referring to it as a subjective assessment rooted in the environmental, social as well as cultural background. As this definition emphasizes upon the "perceived" QoL of respondents, it expectedly does not offer a method to measure any conditions, diseases or fashion symptoms broadly, but instead of it measures the impacts of health interventions as well as disease on QoL. Therefore QoL

cannot be simply known as “well-being”, “mental state”, “life satisfaction” or “health status” (WHO 1996,6).

The initiative taken by WHO to develop WHOQOL 100 arose due to three main reasons. One of those is that before its development, the focus of health assessment got broadened beyond conventional health indicators like morbidity as well as mortality to consider measures of influence of disease as well as the weakening of everyday behavior and activities, perceived measures of health as well as functional or disability measures (WHO 1996).

Another one of those reasons is that the highly mechanistic medicine model only concerned with eliminating diseases as well as symptoms, promotes the need to introduce the humanistic aspect into healthcare (WHO 1996). Thirdly, the need to conduct research on QoL cooperatively in various cultures as well as directly compare the results achieved in these various settings (The WHOQOL Group 1995,1403). Therefore, the WHOQOL is an effort made by the WHO to continuously promote an all-inclusive approach to healthcare and health as well as to fulfill the need for an international genuine QoL measure.

The World Health Organization Group proposed 6 different QoL domains: personal beliefs/spirituality/religion, level of independence, environment, social relationships, physical health and psychological but WHOQOL BREF only included 4 of those QoL domains which include social relationships, environment, physical health and psychological (WHO,1996; WHO,1998).

The physical health domain measures the concern of people with horrible feelings that might not only cause harm but also interfere with the everyday routines in the lives of people together with their energy levels and sleep (WHO 1998,57-58). The psychological domain measures the extent to which a person feels content, balanced as well as happy and about him or herself, views his thinking ability, body and how he or she experiences negative feelings like depression and anxiety (WHO 1998,58-60).

The social relationships domain measures the degree to which a person feels loved, supported as well as accompanied. This domain explores the quality of different relationships (WHO 1998,61-62). These include marriages, deep friendships as well as both homosexual and heterosexual relationships (WHO 1998,62). Lastly, the environment domain of QoL emphasizes upon economic resources of people by measuring that whether people have

sufficient finances to fulfill their needs, which they need to fulfill for living a satisfactory life (WHO 1998,63-66).

In addition to that, environment QoL domain also measures the degree to which a person is satisfied with his or her access to social as well as health services, accommodation, protection from physical damage, clean physical environment, new skills and information, transport as well as recreational activities (WHO1998,63-66).

European Commission has discussed nine dimensions of QoL. These include overall life experience, basic rights and governance, health, education, physical and economic safety, material standards of living, social relations & leisure, living material conditions and natural as well as living environment(Eurostat,2015). The focus of my study would be on the dimension the overall life experience (Eurostat,2015). Overall experience of life covers three sub dimensions. These include satisfaction with life (cognitive admiration), affect i.e negative and positive feelings of a person as well as eudaemonics i.e good mental functioning, purpose as well as meaningfulness in the life of a person(Eurostat,2015).

European Commission has classified some broad variables that impact QoL. One of those is that of health. Health not only fundamentally determines the quality as well as the longevity of the lives of the people, but it also plays a significant role in determining the rest of the functional capacities of a person that consequently determine their QoL in general(Eurostat,2018).

Ill health, mental as well as physical problems adversely affect the QoL and reduce the duration of lives of people(Eurostat,2018). They also restrict socioeconomic development, by eliminating the important human capital of countries. Poor conditions of health means that a huge part of a population fails to take advantage of a society's overall progress or participate actively in public activities(Eurostat,2018). Thus, healthy as well as long lives are not only an overarching personal objective for many people but also an approximately universally recognized acceptable social well-being measure, incorporated by the United Nations in its relevant QoL indices like the UN "Human Development Index" (Eurostat,2018). Therefore, the satisfaction of people with their health is necessary to explore for measuring their QoL(Eurostat,2018).

Another one of those is that of environment(Eurostat,2018). The Environment has an influence on the people's QoL enjoyed or not enjoyed by them(Eurostat,2018). Conditions of

the environment influence well-being as well as health of human beings both indirectly and directly through negative effects on biodiversity, ecological systems or even industrial accidents as well as natural calamities (Eurostat,2018).

Most European people give high importance to their rights to benefit from the environmental services as well as resources(Eurostat,2018). These include like the supply of clean water to bigger needs like noise free work as well as residential environments as well green areas. Environment related factors indirectly influence other aspects of QoL (Eurostat,2018). For example, pollution influences prices of properties, which affects the financial prosperity of people.

According to the Organization for Economic Co-operation and Development(OECD), compared to other member countries of the OECD Norway has performed very good across the various dimensions as well as indicators of wellbeing, which indicates that its citizens and residents have a better QoL than the residents and citizens of other OECD member states(OECD,2017).These include housing, status of health, wealth together with income, earnings as well as jobs, personal safety, civic engagement, subjective wellbeing, environmental quality, skills as well as education, social connections as well as work life balance(OECD,2017).

Although due to the availability of universal healthcare and tuition free higher education and the universal nature of certain indicators of QoL such as environment and personal safety one might assume that both international and Norwegian students are quite likely to experience similar QoL (SIU 2016,20; European Union 2017,16; NAV,2017)

Still, Norwegian students may be likely to have a higher QoL than International students as a previous study done by Wiers-Jennsen in Norway found out international students reported that their contact with Norwegian students is limited (Wiers-Jennsen 2015,38-39). This finding indicates that international students would probably have rated the QoL indicator social connections lower than the Norwegian students if they would have been asked to rate this QoL indicator. This makes me assume that Norwegian students would enjoy a higher QoL than International students.

Social relationships seem to be an important determinant of QoL. This is because many countries seem to give importance to social relationships such as friendships. A French

research study found out that the absence of social connections with the neighboring people has a big negative influence on QoL of women as well as men (Esrc,2013).

A previous study was done on QoL and happiness of Norwegian, Cuban, South African as well as Indian university students across their sexual orientation from University of Tromsø in Tromsø, Norway, University of Havana in Havana, Cuba, University of the Western Cape in Cape Town, South Africa, Guru Jambheshwar University in Hisa, India (Træen et al 2009,655). One of the findings of that study was that Norwegian and Indian female university students scored highly on the scale “satisfaction with life”, while South African students from Cape Town reported lowest scores on this scale(Træen et al 2009,662). An interesting finding of that study was that Norwegian male university students reported the lowest score on the subjective happiness scale while the Indian male university students achieved the highest score on the subjective happiness scale (Træen et al 2009,662).

By administrating WHO QOL BREF Australian version, a study by Chai et al found out those international students studying at different faculties in a university in New Zealand reported an environment as well as physical health QoL lower than the environment as well as physical health QoL reported by local students but found that they reported similar social relationships and psychological domains of quality with no statistically significant differences between them (Chai et al 2012,270).

By administrating WHOQOL-BREF Australian version, a study was conducted by Mark Henning and his colleagues in the University of Auckland ,which accommodates two New Zealand medical schools by doing an examination of the responses given by 548 medical university students who were undergoing initial clinical training in Years 4 as well as 5 from 2 different periods of time (2011 and 2009)( Henning et al 2012,132). That study found out that in the QoL social relationship domain, compared to their international peers, local students rated sex and personal relations more positively (Henning et al 2012,135). Another finding of that study was that local students graded “physical safety and security”, “information and skills”, “home environment”, “access to health services”, “transport” and “leisure” better than international medical students studying with them ( Henning et al 2012,136).

An important finding of that study was that local students in that New Zealand university reported a higher environment QoL and a higher social relationships QoL than the

environment QoL and social relationship QoL reported by international students studying there (Henning et al 2012,137).

Hsu et al conducted a study by conducted at the Auckland University of Technology located in New Zealand (Hsu et al,2008). In that study, 164 international students and 218 local students participated (Hsu et al 2008,389). Like the other 2 studies discussed above WHOQOL BREF Australian version was administrated in that study as well. An important finding of that study by Hsu et al was that international students reported a lower environment QoL and physical QoL than the physical QoL and environment QoL reported by domestic students (Hsu et al 2008,389-389).

Reduced or lower QoL has proved to be a challenge for International students. This is because previously a study conducted in the University of Minnesota in the United States of America found out that 18% of the international students reported that reduced QoL discouraged them to go back to their home countries (Alberts & Hazen 2006,210-211)

In that study, international students from various regions were studied. These include Europe, Asia, North America, Latin America as well as Australasia ( Alberts & Hazen 2006,206). Similarly, that study found out that a significant percentage of the total respondents which included only international students at 39% reported that higher QoL in their home countries to be factor encouraging them to go back to their homeland (Alberts & Hazen 2006,211). The findings of this study point out the value of QoL for International students.

### **1.2.1 QoL Conceptual framework**

There is no universally agreed definition of QoL concept. Numerous models of QoL exist and the definition which this thesis operationalizes comes from World Health Organization because there is definition is widespread. However, many conceptual models are more similar than different and particularly well described models come from the University of Toronto's Center for Health promotion, which considers fine health a main personal ,economic as well as social development resource and essential QoL dimension as done by the Ottawa Charter for Health promotion arranged by the WHO in 1986 (WHO 1986,1; Renwick & Brown 1996,80). The University of Toronto's Center for Health promotion framework conceptualized QoL into its 3 QoL domains named becoming, belonging as well as being by making 7 assumptions (Renwick & Brown 1996,79). These 7 assumptions are not unique to

the Center for Health Promotion but are either implied or made explicit in most conceptualization of QoL and are given below

Firstly, giving equal respect to people, whether they have disabilities or not is an inherent part of the CHP QoL conceptualization. Therefore, the fundamental determinants as well as constituents of QoL are perceived as same for every person without as well as with disabilities (Renwick & Brown 1996,79).

Secondly, any important view on QoL should consider the persons' holistic nature i.e it will do recognition of their social, spiritual, mental as well as physical aspects and the main needs of humans linked with these aspects. Thirdly, QoL is viewed as phenomenon with multiple dimensions (Renwick & Brown 1996,79).

Fourthly, QoL is a complicated as well as dynamic construct of interacting aspects. Therefore, it can undergo change for people throughout their lives in terms of every or some of its aspects. Fifthly, the experiences of people regarding their QoL arise out of their continuous interaction with the environment in which they are living (Renwick & Brown 1996,79).

Sixthly, though the QoL's components are homogenous for every person, it's experiences will differ from person to person (Renwick & Brown 1996,80). For example, the level of QoL will differ across its different dimensions as no 2 persons will experience the same situations in their lives and seventhly QoL considers a person's health (Renwick & Brown 1996,80).

Being, Belongingness and Becoming domains were introduced by the University of Toronto's Centre for Health Promotion(Renwick & Brown 1996,82).These domains hold importance because their subdomains correspond to different WHO QoL domains.

### **Being domain**

Being includes the very fundamental aspects of what persons experience as individuals (Renwick & Brown 1996,82). It can be divided into three subcomponents physical being, psychological being as well as spiritual being. Here Physical being refers to physical health including fitness as well as nutrition. It also has a concern with liveliness, physical movement, grooming as well as physical hygiene (Renwick & Brown 1996,82). Here Psychological being is concerned with the assessments, cognitions as well as feelings of people regarding themselves (Renwick & Brown 1996,82). Spiritual being is made up of

personal standards as well as values to do living by, spiritual beliefs. The nature of such spiritual beliefs might or might not be religious, surpassing everyday experiences of life i.e through music or nature and special life event celebrations i.e Thanksgiving, birthdays and other religious or cultural holidays(Renwick & Brown 1996,82).

### **Belongingness domain**

Belonging has a concern with the relationships between different environments and persons (Renwick & Brown 1996,82). It can also be divided into three subcomponents physical belonging, social belonging as well as community belonging (Renwick & Brown 1996,83). Physical belonging is a term used to refer to the connections that persons have with their own physical environments i.e workplace, neighborhood, bigger community and their home(Renwick & Brown 1996,83). It encompasses the feelings of people to be in their homes in these physical environments and the freedom to show the personal possessions of people together with their security as well as privacy in such environments (Renwick & Brown 1996,83). Social belonging refers to the connections between people and their own social environments. It emphasizes on their important relationships with other people i.e friends, coworkers, neighbors, partner and ethnic or cultural group members. Community belonging refers to the connections between people and the resources usually available to their society as well as community members(Renwick & Brown 1996,83). This encompasses details about as well as access to sources of sufficient income, social services, health, communal activities and events, recreational as well as academic programs(Renwick & Brown 1996,83).

### **Becoming domain**

Practical becoming refers to purposeful as well as practical activities that are done usually on a regular or everyday basis. Such activities include voluntary or salaried work, household tasks, participation in academic programs or school, self-care and accessing helpful services like social or healthcare services (Renwick & Brown 1996,83). Leisure becoming is a term used to refer to recreational as well as leisure activities that necessarily do not have a clear instrumental importance. Such activities do promotion of relaxation, reduction in stress as well as “recreation” of the balance of play as well as work during their lives(Renwick & Brown 1996,84). It encompasses comparatively short duration activities i.e socialization with their friends, playing tennis or a walk in a park and groups of lengthier duration activities i.e enjoying a vacation (Renwick & Brown 1996,84). Growth becoming includes activities that do promotion of the establishment of the own knowledge as well as skills of people, whether

it involves informal or formal learning as well as education. Such activities include learning new details, learning new skills or improving the already learned skills and doing adaptation to change during their lives (Renwick & Brown 1996,84).

The four domains of the WHOQOL BREF environment QoL, social relationships QoL, physical health QoL and psychological QoL to a huge extent stands parallel with the subcomponents of the three domains from the Center for Health Promotion (Renwick & Brown,1996). The Physical being subcomponent of the Being domain of the Center for Health Promotion corresponds to the WHOQOL BREF physical QoL domain and the leisure becoming subcomponent and the practical becoming subcomponent of the Becoming domain of the Center for Health promotion corresponds to the WHOQOL BREF environment QoL domain (Renwick & Brown,1996). Similarly, the social being subcomponent of the Belongingness domain of the Center for Health promotion corresponds to the WHOQOL BREF social relationship QoL domain and the psychological being subcomponent of the Being domain of the Center for Health promotion corresponds to the WHOQOL BREF psychological domain.

### **1.3 Setting**

Internationalization of Norwegian higher education has helped develop English language programs in Norway(SIU,2005). Till 2005, 170 English language master programs covering many areas were offered to students in Norway(SIU,2005). Some Norwegian educational institutions are also teaching English language Bachelor programs(SIU,2005). The basis of the Norwegian degree system is its Master, PHD as well as Bachelor structure which together with its European Credit Transfer systems helps students get their qualifications recognized in various countries(SIU,2005).

### **1.4 Knowledge gaps**

A study was conducted to explore the relationships possible between QoL, mental distress and drinking patterns of the Norwegian general population (Mathiesen et al,2012). This study did not explore the QoL, alcohol use as well as mental distress of specific groups of the Norwegian population like that of Norwegian students (Mathiesen et al,2012). Thus, it has left a knowledge gap of not gathering knowledge regarding the QoL, mental distress and alcohol consumption of Norwegian students studying in Norwegian universities which make up an important subgroup of the Norwegian population as they are a necessary source of

highly skilled professionals for it. My quantitative study has made an effort to fill this knowledge gap by exploring the QoL and alcohol consumption of this valuable important subgroup of the Norwegian population i.e Norwegian students studying in Norwegian universities.

Previously, qualitative study was conducted as a part of a Master thesis to extensively explore the causal factors behind the stress faced by 17 to 18 years old Norwegian International Baccalaureate Diploma Programme (IBDP) female students (i.e perceived stimulus responsible for making them feel stressed) by questions regarding their experiences with academic stressors including grades, exam, assignment and essays (Tokheim 2017,1-33). To extend understanding of the stressful experience of the female Norwegian IBDP students, the study explored also how these female students faced stress and coped with it (Tokheim,2017,1). This study only explored the stressful experiences of the Norwegian students enrolled in the IBDP program and didn't explore the stressful experiences of the other students pursuing general education in Norway and the causal factors behind those stressful experiences (Tokheim 2017,62). Therefore, it left a knowledge gap by not gathering knowledge about the stressful experiences of students pursuing general education in Norway.

This knowledge gap is necessary to fulfill because a significant proportion of students at 35% falling in the age group of 19 to 24 years old studying in Norway pursue higher education and therefore they cannot be ignored if a comprehensive assessment of stress faced by students studying in Norway has to be done (SSB,2017). My quantitative study has compared the academic stress of Norwegian students and International students studying in Bachelor, Master and PHD programs in Norwegian universities by exploring their stressful experiences in general and also by pointing out the causal factors behind those stressful experiences.

For doing so, it has also asked questions regarding the stressful experiences of the University students with the academic stressors exams, grades, assignments and essays but in a different manner as it try to quantify the academic stress faced by students. So one could say that contrary to the narrow focus of the previous study done on the stress levels of Norwegian IBDP female students, my study has a broader focus and is more likely to add to draw a comprehensive picture of the stress levels faced by students pursuing education in Norway.

Previously, a thesis was done to highlight the role played by friendships in helping international students do social adjustment in their host country, especially to point out how co-culturals i.e. people who do not necessarily share a particular citizenship but are culturally

similar to each other's religious or language background prefer to make people following their own culture their friends in opposition to making friends following a different culture (Iversen 2009, 9-11). In this manner one could say that this study to a certain extent tried to explore an aspect of the ethnic identification of those international students especially for the purpose of building friendship with people following other cultures (Iversen, 2009). The problem with that study was that it only explored an aspect of ethnic identification of Norwegian students as it chose a sample in which majority of the students were Norwegians with only 4 respondents out of 265 students saying that they were foreign citizens (Iversen 2009, 26).

By doing this this study has left a knowledge gap by not gathering knowledge regarding the ethnic identification of the important subgroup of students studying in Norwegian universities i.e. international students and lost the point of studying ethnic identification as Phinney has claimed that ethnic identification is useful only when people following at least two different cultures get in contact with each other ((Phinney 1990, 501; Iversen, 2009). My quantitative study has tried to fill this knowledge gap by comparing the ethnic identification of Norwegian students with the ethnic identification of International students who have arrived from different countries to study in Norway. Although researches have been done to explore the QoL, ethnic identification, academic stress and alcohol use of Norwegians in general but to my knowledge no study has been done to compare the QoL, ethnic identification, academic stress and alcohol use of Norwegian students and International students studying in Norwegian universities.

### **1.5 Theoretical framework**

Positivism theory is based on the belief of the positivist researchers in the existence of an objective reality which can be fully measured and understood through value free objective scientific methods like observations and experiments (Ryan 2006, 13). A classical example of a positivist is a researcher who believes in the presence of an objective measurable reality. Positivism claims that verified hypotheses are a source of knowledge themselves and they can be regarded as laws or facts (Guba & Lincoln 1994, 112). It assumes that even new researchers have enough technical knowledge regarding quantitative methods, design as well as measurement with significant but less focus upon the proper theories of the phenomena being studied which equips them with sufficient ability to study reality in the best possible

manner (Guba & Lincoln 1994,115). In simple worlds, positivism theory claims that the use of objective methods helps researchers discover the real reality.

At the other end of the spectrum, constructivists believe that no objective measurable reality exists as knowledge is constructed by relative consensus amongst the trusted as well as competent people but not by absolute consensus (Guba & Lincoln 1994,116). Therefore, knowledge cannot be considered as universally accepted facts or laws. It assumes that the coexistence of multiple knowledge can take place when trusted as well as competent people disagree amongst themselves due to their different point of views or gender, ethnic, social, political as well as economic factors (Guba & Lincoln 1994,116). In simple words, constructivism theory believes in the existence of different realities and no universal reality because of different approaches of studying the same phenomena employed by different researchers.

Post positivism theory tries to answer the social sciences question that whether a reality exists or not by making some assumptions (Ryan 2006,12). Those assumptions are given below

Firstly, a Research is not specialized but a broad field in which many various things can be viewed as a part of research and secondly practice as well as theory can be not separated as theory has own its importance. Therefore, it cannot be ignored for emphasizing upon facts only (Ryan 2006,12).

Thirdly, a researcher cannot find out extrinsic as well as objective reality(Tekin & Kotaman 2013,84). This is because objective scientific methodology does not exist because a scientist him or herself is a part of his or her research methodology (Tekin & Kotaman 2013,84). A researcher loses objectivity because he or she gets born in her or his culture in which he or she has got certain political views, acquired education and some cultural values, these extrinsic factors influences the development of scientists as humans. Consequently, researchers assess their own attitudes, values, interests as well as assumptions. (Tekin & Kotaman 2013,84). Thus, they will influence all steps of their scientific research

Fourthly, Post positivism theory does not exclude quantitative methodology, but it tries to use it with a more complicated research design. This is because it is more concerned with developing one sided as well as robust interpretations and restricted regarding excessively using the quantitative methodology a well as data (Adam 2014,5).

However, post positivism differentiates itself from various types of positivism by its view that only quantification as well as employment of mathematical models and sophisticated statistical methods are not enough to measure scientific reality (Adam 2014,6). This is because these models as well as methods are valuable research tools, but they cannot be viewed as necessary as well as sufficient basis for producing empirical valid evidence as well as a relevant theoretical interpretation of the gathered evidence (Adam 2014,6). The social scientists require a more deliberative as well as integrative methodological approach (Adam 2014,6).

In simple words post positivism claims that a researcher can measure a reality which exists but in the process of measuring it he or she influences the methodology, theories as well as questions prepared to measure it with his or her experiences and expectations. Therefore, he or she is unable to measure the perfect reality.

In my study to compare the QoL, academic stress, ethnic identity and alcohol use of International students and Norwegian students studying in Norwegian universities, I have applied the post positivism theory discussed above. This is because I am an international student who has studied for more than year in Norway during which I have built my own experiences and attitudes towards studying in Norway as an international student and made assumptions about other students including both International and Norwegian students. Therefore, during the process of deciding my research topic and doing my research on it I could not prevent my experiences and expectations from influencing my questions, theories and methodology for my thesis project.

If a constructivist would have compared the QoL, academic stress, ethnic identification and alcohol use of Norwegian and International students studying in Norwegian universities then he or she would not use any quantitative methods but would have instead done in-depth interviews of two groups of International and Norwegian students studying in different Norwegian universities and asked them questions to explore how they view different aspects of their standard of living, studies, ethnic identification and alcohol use to understand their constructed realities regarding these factors.

On the other hand, if a positivist would have compared the QoL, academic stress, ethnic identification and alcohol use of Norwegian and international students then although he or she would also have done a survey but he or she would have been less likely to consider theoretical limitations as well as limitations arising from her or his position as a researcher.

Instead a post positivist would have compared the QoL, academic stress, ethnic identification and alcohol use of Norwegian and International students studying in Norwegian universities by exploring these factors through a survey because of her or his belief that reality is imperfectly measurable. A post positivist would discuss the role of his or her expectations, assumptions, experiences and values in getting the results and the limitations caused by them (Tekin & Kotaman 2013,84).

My assumptions regarding the differences between the QoL, academic stress, ethnic identification and alcohol use of International students and Norwegian students have made me think like a post positivist that although QoL, academic stress, ethnic identification and alcohol use are subjective. Still, their realities can be measured to a certain extent by employing the quantitative methodology of surveying students provided that the limitations of these quantitative methods are discussed to give an idea about the degree to which these results can be believed as true and useful for building recommendations.

## **2 Methodology**

### **2.1 Research questions**

1. How does the QoL of International students differ from or is similar to the QoL of Norwegian students in Norway?
2. How does the academic stress of International students studying in Norwegian universities differ from or is similar to the academic stress of Norwegian students in Norway?
3. How does ethnic identification of International students studying in Norwegian universities differ from or is similar to the ethnic identification of Norwegian students in Norway?
4. Do Norwegian students studying in Norwegian universities drink more alcohol than International students studying in Norwegian universities in Norway?
5. How is academic stress of both Norwegian and International students correlated with their QoL in Norway?
6. How is alcohol use of both Norwegian and International students correlated with their QoL in Norway?

### **2.2 Aims**

- Aim: To compare the QoL of International and Norwegian students.

- Subaim: To compare the academic stress reported by International and Norwegian students.
- Subaim: To compare the ethnic identification levels achieved by Norwegian and International students.
- Subaim: To compare the alcohol consumption of Norwegian and International students.
- Subaim: To explore the correlates between QoL and academic stress of both International and Norwegian students in Norway.
- Subaim: To explore the correlates between alcohol use and QoL of both International and Norwegian students in Norway.

### **2.3 Hypotheses**

- Norwegian students will have a higher QoL than International students.
- International students will face higher cumulative academic stress levels than Norwegian students.
- International students will have a lower ethnic identification level than Norwegian students.
- Norwegian students drink more alcohol than International students.

### **2.4 Ethical considerations**

During my study, I took care of ethical considerations by carrying out my data collection only after getting ethical clearance from the Norwegian Data protection official Norwegian Centre for Research Data. In addition to that, I also took care of ethical considerations by collecting only unidentifiable, anonymous data of my students anonymous and solely using data for the academic purpose of comparing the QoL, academic stress, ethnic identity and alcohol use of Norwegian and international students.

### **2.5 Participants and procedures**

A cross sectional research design was employed in this research study for quantifying and gathering details regarding different variables of university students in Norway through a survey. These include alcohol use, QoL, ethnic identity, academic stress, examinations, study hours, working hours and demographics age, gender, country of birth, citizenship, employment status and relationship status of the respondents.

The respondents were Norwegian and international students studying in Norwegian universities. I designed the survey myself by including two validated instruments in it as well as several other instruments that have been used in Norway and among other studies of international students but not yet validated.

The validated instruments include WHOQOL BREF and multigroup ethnic identity instrument. The survey was online for 26 days from 14<sup>th</sup> November 2017 to 26<sup>th</sup> November 2017. Questioning of these respondents was done after informing them that their participation in this survey is voluntary and explaining them the purpose of this study through a consent form. The consent form required the subjects to read and sign it before participating in this study.

A sample of 194 university students consisting of 111 international university students and 83 Norwegian university students responded to this study by answering the questions in this survey in a time period of 26 days from 14<sup>th</sup> November 2017 to 10<sup>th</sup> December 2017. Both female and male university students gave 194 responses in Norway. We had initially aimed to get at least 150 responses from university students studying in Norwegian universities. At least 100 responses from International students and 50 responses from Norwegian students but fortunately we got more responses than anticipated.

The online survey creation instrument “Nettskjema” was employed to conduct this survey for gathering data from University students studying in Norwegian universities. The purpose and uniform resource locator link of this survey was shared on 82 online Facebook groups from 14<sup>th</sup> November 2017 onwards to the first week of December 2017. In addition to sharing the uniform resource locator link and purpose of our online survey to different Facebook groups, we emailed them to our university friends, colleagues, Norsk studentorganisasjon and International Student Union in Norway and asked them to answer the survey and share it with University students studying in Norwegian universities.

In this manner, we not only carried out snowball sampling and convenience sampling to find out respondents which were difficult to find out because they made up a very small subgroup of only 288,989 university students studying in Norway out of around 5 million people residing in Norway but also did chain referral (SSB,2017).

## **2.6 Variables**

### **2.6.1 QoL variable**

The overall QoL is a continuous variable measured through the WHOQOL BREF in my study on a continuous range “Very Poor” to “Very good” on a scale of 1-5. Similarly, the satisfaction with health and domains of the WHOQOL BREF physical health QoL, psychological QoL, environment QoL and social relationships QoL are also continuous variables but they are measured on continuous ranges “Very dissatisfied” to “Very satisfied”, “Not at all” to “An extreme amount”, “Not at all” to “Extremely” and “Not at all” to “Completely” on a scale of 1-5(WHO,1996).

### **2.6.2 Academic stress variable**

The cumulative academic stress and the stress caused by the 8 academic factors “Increased class workload”, “Examinations”, “Many Essays”, “Lack of university support”, “Language difficulties”, “Many Hours of studies”, “Lower grade” and “Staying late writing paper” are also continuous variables measured on a continuous range “Strongly disagree” to “Strongly agree” on a scale of 1-5(Yumba,2010).

### **2.6.3 Ethnic identification variable**

The ethnic identification is a continuous variable measured through the Multigroup ethnic identity measure in my study on a continuous range “Strongly disagree” to “Strongly agree” measured on a continuous range on a scale of 1-4(Phinney,1992).

### **2.6.4 Alcohol consumption frequency variable**

Although Alcohol consumption frequency is a continuous variable as drinking frequency can be measured on a continuous range never drinking to 20 times in a month but in the Alcohol use questionnaire this continuous variable alcohol consumption frequency has been turned into a categorical variable by denoting 1 to the category “Never”, 2 to the category “once a month or less often”, 3 to the category “2-4 times a month”, 4 to the category “2-3 times a week” and 5 to the category “4 times a week or more often”.

## **2.7 Instruments**

### **2.7.1 WHOQOL BREF**

WHOQOL BREF questionnaire was employed in this online survey to measure the QoL of University students in Norway(WHO,1996). This questionnaire is an abbreviated twenty-six item version of World Health Organization’s WHOQOL- 100 assessment(WHO,1996). The

questions in this questionnaire quantified four QoL domains(WHO,1996). These include psychological domain, physical health domain, environment domain and social relationships domain (WHO,1996).

Psychological domain covers many facets (WHO,1996). These include bodily appearance as well as image, positive feelings, negative feelings, spirituality, personal beliefs or religion, thinking, concentration, memory and learning and self-esteem. Physical health domain covers many facets (WHO,1996). These include daily living activities, reliance on medical aids as well as medical substances, fatigue as well as energy, discomfort as well as pain, mobility, rest as well as sleep and work capacity.

Environment domain covers many facets (WHO, 1996). These include financial resources, freedom, security and physical safety, social and health care: quality as well accessibility of social as well as healthcare, home environment, opportunities to acquire new skills as well as information, participation in leisure or recreational activities and opportunities to participate in them, transport and climate, traffic, noise and pollution of physical environment (WHO, 1996). Social relationships domain covers many facets. These include sexual activity, social support as well as personal relationships (WHO, 1996).

26 questions make up the WHOQOL-BREF for doing a comprehensive as well as extensive assessment, 1 item from all of the 24 facets was mentioned in the WHOQOL 100 and 2 items from the facets of general health as well as overall QoL are included in the WHOQOL-BREF (WHO,1996).

The WHOQOL BREF has achieved internal consistency by producing acceptable Cronbach alpha values of over 0.70 for environment, psychological and physical health domains of QoL. This is because it produced Cronbach alpha values of 0.82 for its physical health domain of QoL, 0.81 for its psychological QoL and 0.80 for its environment QoL domain (Skevington et al,2004,303). However, the WHOQOL BREF produced a marginal Cronbach alpha value of 0.68 for its social relationship domain of QoL (Skevington et al 2004,303).

Skevington et al reported that across sites, the results of the WHOQOL BREF were high constantly with many alpha values of over 0.75 in its physical health and psychological QoL domains (Skevington et al 2004,303). Similarly, the WHOQOL BREF produced Cronbach alpha values falling in the 0.51 to 0.77 range for social relationship QoL domain and 0.65 to 0.77 for environment QoL domain (Skevington et al 2004,303).

The Norwegian version of the WHOQOL BREF is also highly reliable as it produced Cronbach's alpha values of 0.84 in the domain physical health QoL, 0.82 in the domain psychological QoL, 0.60 in the domain social relationships QoL and 0.79 in the Environment domain QoL (Hanestad et al 2004,152). Skevington et al reported that the WHOQOL BREF has high psychometric reliability and validity and is cross culturally valid. Hence, indicating that this instrument can be administered to participants in different cultural settings (Skevington et al 2004,299).

Skevington and Epton have recommended that the domains of the WHOQOL BREF discover relevant QoL changes in the aftermath of interventions, treatments as well as main life events like abuse as well as calamities like earthquakes (Skevington and Epton 2018,2).

Their recommendation together with the high cross-cultural validity of the WHOQOL BREF have me explore and compare the QoL of Norwegian and International students studying in Norwegian universities by administering the WHOQOL BREF to them. This is because the WHOQOL BREF will measure the QoL of these university student groups after considering the effect of events in their lives in the Norwegian cultural setting (Skevington and Epton 2018,2).

Means of the scores of the overall QoL, satisfaction with health, negative mental health feelings and QOL domains environment, social relationships, physical health and psychological were calculated (WHO,1996). A conversion of the scores of each of the four QOL domains was done to a range from 4 to 20 (WHO 1996,10). The higher QOL score denoted higher QoL as in WHOQOL BREF the scaling of the domain scores has been done in the positive direction (WHO 1996,10).

### **2.7.2 Academic stress scale**

An Academic stress scale was employed in this online survey to measure the stress faced by University students in Norway because of certain academic factors (Yumba,2010). In the Academic stress scale, we mentioned eight academic factors as possible academic stressors for University students studying in universities in Norway (Yumba,2010). These include “Language difficulties”, “Many Hours of Studies”, “Many Essays”, “Staying late writing paper”, “Lower grade”, “Examinations”, “Lack of university support” and “Increased class workload”.

I not only calculated the mean scores of the stress levels caused by each of the 8 academic factors for University students studying in Norwegian universities but also added themselves up to calculate the cumulative academic stress score to explore the academic stress levels faced by University students in Norway. In this manner, I estimated the stress levels caused by the entire studies and aspects of those studies for University students in Norway.

### **2.7.3 Multigroup ethnic identity measure**

A twelve item Multi group ethnic identity measurement scale made by Phinney was employed to measure the ethnic identification of every participant with his or her ethnic group and not with more than one ethnicity(Phinney,1992). Subjects responded on a four point scale with a range from 1 denoting strongly disagree to 4 denoting strongly agree on this scale as the scoring range of this scale is from 1 to 4(Phinney,1992). Phinney has claimed that two factors can be found on the twelve item scale(Phinney,1992). These include Ethnic identity search denoted by items 10,8,1,2 and 4 and commitment, affirmation and belonging denoted by items 12,11,9,7,6,5 and 3(Reversal of none of these items can be done). Items 13,14,15 can be added to this scale but only to identify as well as categorize participants by their ethnicity(Phinney,1992).

This twelve item Multi group ethnic identity measurement scale has been subsequently employed in dozens of researches and has shown good reliability constantly, usually with alpha values of greater than 0.80 across an extensive range of ages as well as ethnicities(Phinney,1992). Phinney has also claimed that the 14 item multigroup ethnic identity measurement scale produced Cronbach alpha value of 0.90 after getting administrated on a college sample(Phinney,1992). Therefore, I have administrated the 14 item multigroup ethnic identity measurement scale in my study.

The recommended scoring method for this multi group ethnic identity measurement scale is using the mean scores of its 12 items (Phinney,1992). Therefore, I have used the mean scores of the twelve items on this scale for measuring the ethnic identity levels of respondents. High scores calculated on this scale indicate higher levels of achievement of ethnic identity by people with their ethnic groups(Phinney,1992).Therefore, I have assumed that higher mean scores obtained through this measurement scale indicate higher levels of ethnic identification by university students with their respective ethnicities and lower mean scores obtained through this measurement scale indicate lower levels of ethnic identification by university students with their respective ethnicities.

### 2.7.4 Alcohol use questionnaire

A questionnaire developed by the Norwegian Centre for Addiction Research was used to explore the alcohol use of University students studying in Norway by measuring their alcohol drinking frequencies through a range of categorical variables.

## 2.8 Statistical analyses

I used descriptive statistics to explain the levels of participation in work, QoL, ethnic identification, academic stress and alcohol consumption of the sample of university students in Norway as means of the scores of working hours, QoL, academic stress, ethnic identification levels and alcohol consumption of the respondents were calculated for measuring and explaining them. Independent samples t-tests and chi square tests were used to find out the differences between QoL, academic stress, ethnic identification, working hours, funding sources and alcohol consumption of 83 Norwegian students and 111 International students making up the sample according to the type of variable and p-value of less than 0.05 was considered significant. Similarly, a bivariate correlation was done to examine the relationships of academic stress, ethnic identity and alcohol consumption with quality of life and p-value of less than 0.05 was considered significant.

## 3 Results

### 3.1 Participant characteristics

The Table No 1 below and on the next page shows that International students and Norwegian students were mainly similar regarding their sociodemographic and educational characteristics. Majority of the Norwegian students were Bachelor and majority of the international students were Master. However, there were no differences in their relationship status, educational level and average age but there were differences in the proportion of gender of the sample together with percentages of the sample of international and Norwegian students working and availing study grants or loans.

The table No 1 below and on the next page further shows that Norwegian and international students worked for a similar number of hours with a small minority of these university student groups working more than 20 hours per week.

<b>Table No 1: Participant characteristics</b>			
	<b>Norwegian</b>	<b>International</b>	<b>P-value</b>

	students (N= 83)	students (N = 111)	
	% (N)	% (N)	
Age (mean, SD)	25.06 (5.67)	25.29 (4.64)	0.765
Gender			<b>0.023</b>
Female	49.4%(41)	65.8%(73)	
Male	50.6%(42)	34.2%(38)	
Relationship status			0.467
Single	56.6%(47)	54.1%(60)	
Living together	24.1%(20)	21.6%(24)	
Married	7.2%(6)	14.4%(16)	
Education			
Bachelor students	61.4%(51)	60.4%(67)	<b>&lt;0.001</b>
Master students	28.9%(24)	31.5%(35)	
PHD students	7.2%(6)	6.3%(7)	
Both employment and student grant or loan	57.8%(48)	42.2%(47)	<b>0.007</b>
Working Hours			0.778
More than 20 hours per week	7.2%(6)	7.2%(8)	
About 20 hours per week	7.2%(6)	11.7% (13)	
Less than 20 hours per week	28.9%(24)	27.9%(31)	

### 3.1.1 Country of birth of participants

The Table No 2 below shows that out of 194 students, 186 students reported their country of birth. Out of which 58.6% were international students while 41.3% were Norwegian students. Amongst the international students who reported their country of birth, 53.2% of the international students reported that they were born in the European Economic Area and Switzerland. Similarly, 50.4% of the international students reported that they were born in a member state of the European Union while 49.6% of the international students reported that they were not born in any EU member state.

<b>Table No 2 Nationality characteristics</b>	
	% (N)
Norwegian students	41.3%(77)
International students	58.6%(109)
International students born in a EU member state	50.4%(55)
International students not born in any EU member state	49.6%(54)
International students born in a member state of European Economic Area or Switzerland	53.2%(58)
International students born outside the European Economic Area member state or Switzerland	46.7%(51)

## 2 QoL results

The Table No 3 below shows that international students and Norwegian students reported mainly similar overall QoL, similar satisfaction with health on a scale of 1–5, similar physical health QoL, similar psychological QoL, similar social relationships QoL and similar environment QoL on a scale of 4–20.

<b>Table No 3 QoL differences between International and Norwegian students</b>			
	<b>Norwegian students (N= 83)</b>	<b>International students (N = 111)</b>	<b>P-value</b>
	<b>Mean (SD)</b>	<b>Mean (SD)</b>	
QoL	4.09 (0.83)	4.08(0.81)	0.898
Satisfaction with Health	3.78(1.16)	3.82(0.98)	0.774
Physical health QoL	15.40(2.44)	15.06(2.36)	0.333
Psychological QoL	14.37(2.94)	14.13(2.67)	0.569
Social relationships QoL	15.72(2.11)	15.33(2.40)	0.235
Environment QoL	14.04(3.28)	14.38(3.53)	0.505

### 3.3 Academic stress results

The Table No 4 below and on the next page shows that international students and Norwegian students reported that they faced mainly similar stress levels caused by the academic factors increased class workload, lower grade, many hours of studies, language difficulties, lack of university support, examinations and staying late writing paper on an academic stress scale of 1–5 i.e academic stress levels. However, statistically significant differences were observed between their cumulative academic stress levels and the stress level caused by the academic factor “Many Essays” i.e academic stress. This indicates that compared to Norwegian students, international students were more stressed by the academic factor “Many Essays” and cumulatively more stressed by academic factors given in the table below.

<b>Table No 4 Academic stress differences between International and Norwegian students</b>			
	<b>Norwegian students (N= 83)</b>	<b>International students (N = 111)</b>	<b>P-value</b>
	<b>Mean (SD)</b>	<b>Mean (SD)</b>	
Increased class workload	3.27(1.27)	3.56(1.15)	0.110
Lower grade	3.20(1.36)	3.04(1.42)	0.467
Many Hours of Studies	3.15(1.30)	3.31(1.19)	0.408
Language difficulties	1.97(1.33)	2.21(1.25)	0.219
Lack of University Support	2.36(1.33)	1.27(2.40)	0.335
Examinations	3.45(1.28)	3.78(1.21)	0.074
Many Essays	2.80(1.42)	3.33(1.48)	<b>0.015</b>
Staying Late Writing Paper	2.96(1.36)	3.33(1.43)	0.069

Cumulative Academic stress	2.81(0.88)	3.07(0.75)	<b>0.038</b>
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### 3.4 Ethnic identity results

The Table No 5 below shows that international students and Norwegian students reported mainly similar ethnic identification levels on a multigroup ethnic identity measure scale of 1–4.

	<b>Norwegian students (N= 83)</b>	<b>International students (N = 111)</b>	<b>P-value</b>
	<b>Mean (SD)</b>	<b>Mean (SD)</b>	
Ethnic identification	2.50(0.66)	2.53(0.59)	0.769

### 3.5 Alcohol use results

The Table No 6 below shows that international students and Norwegian students reported similar alcohol drinking frequencies. This table further shows that 17.3% of the Norwegian students and 16.5% of the international students reported that they never drank alcohol in the previous year i.e they were past year abstainers as the WHO defines past year abstainers as adults who did not drink alcohol in the previous 12 months(WHO,2018).

Similarly, the Table No 6 below also shows that 30.9% of the Norwegian students and 28.4% might have abstained from consuming alcohol at least in one month in the past year because they drank once a month or less often in the last year. These figures indicate that a significant proportion of Norwegian students at 51.8% and a significant proportion of international students at 55% do not abstain from drinking alcohol for even a month.

	<b>Norwegian students (N= 83)</b>	<b>International students (N =111)</b>	<b>P value</b>
<b>Drinking Frequencies</b>			0.778
Never	17.3%(14)	16.5%(18)	
Once a month or less often	30.9%(25)	28.4%(32)	
2-4 times a month	34.6%(29)	37.6%(42)	
2-3 times a week	16.0%(13)	16.5%(18)	
4 times a week or more often	1.2%(1)	0.9%(1)	

### 3.7 Relationship between academic stress and QoL results

The table No 7 below shows the presence of a weak negative correlation between the academic stress and QoL of both International and Norwegian students but without statistical significance. It further shows that social relationships QoL and environment QoL of these two university student groups are very weakly negatively correlated with their academic stress but without statistical significance.

However, the satisfaction with health, physical health QoL and psychological QoL of both international and Norwegian students are very weakly positively related with their academic stress.

	Correlation with Cumulative academic stress	P Value
Overall QoL	-0.121	0.999
Satisfaction with health	0.042	0.571
Physical health QoL	0.030	0.685
Psychological QoL	0.010	0.894
Social relationships QoL	-0.052	0.117
Environment QoL	-0.069	0.353

### **3.8 Relationship between ethnic identity and QoL results**

The table No 8 below and on the next page shows the presence of a very weak positive correlation between the ethnic identity and overall QoL of both international and Norwegian students but without statistical significance. Similarly, it further shows that satisfaction with health and physical health QoL of these two university student groups are also very weakly positively correlated with the ethnic identity but without statistical significance.

However, this table further shows that psychological QoL and environment QoL of both international and Norwegian students are very weakly negatively correlated with ethnic identity but without statistical significance while social relationships QoL of these two university student groups are weakly negatively correlated with overall QoL but without statistical significance.

	Correlation with Ethnic identity	P Value
Overall QoL	0.049	0.502
Satisfaction with health	0.024	0.740
Physical health QoL	0.059	0.421
Psychological QoL	-0.094	0.200

Social relationships QoL	-0.115	0.117
Environment QoL	-0.005	0.942

### 3.8 Relationship between alcohol use and QoL results

The Table No 9 below shows that alcohol consumption frequency of both international and Norwegian students is weakly positively correlated with their overall QoL and environment QoL with statistical significance. However, the table below further shows that the satisfaction with health, physical health QoL and psychological QoL of these two university student groups are very weakly positively correlated with their alcohol consumption frequency but without statistical significance.

The table No 9 below also shows that social relationships QoL of both international and Norwegian students is weakly positively correlated with their overall QoL but without statistical significance.

	Correlation with Alcohol consumption frequency	P Value
QoL	0.224	<b>0.020</b>
Satisfaction with health	0.017	0.813
Physical health QoL	0.031	0.670
Psychological QoL	0.089	0.222
Social relationships QoL	0.134	0.065
Environment QoL	0.251	<b>0.001</b>

## 4 Discussion

The purpose of my study was to compare the QoL, academics stress, ethnic identification and alcohol use by International students and Norwegian students in Norway and to explore the relationship between these variables. I designed my online survey with four instruments. These include the well-known and validated instruments WHOQOL-BREF and Multigroup ethnic identity measure. In addition to these instruments, I also included the academic stress scale and the alcohol use questionnaire developed by the Norwegian Centre for Addiction Research to design my survey. I used the statistical analytical methods Independent Samples T-test, Chi square test and bivariate correlation to get the results from which I have drawn the findings which I have discussed below.

Overall, both Norwegian and International students reported similar levels of QoL and similar satisfaction with their overall health together with similar environment QoL, similar social relationships QoL, similar psychological QoL and similar physical health QoL. An interesting finding of my study is that Norwegian students face lower cumulative academic stress than International students. Other findings of my study are that both Norwegian and International students reported similarly low ethnic identification levels and similarly low alcohol drinking frequencies.

#### **4.1 QoL discussion**

An important finding of my study is that both Norwegian and International students reported a similar overall QoL by giving it almost the same score on WHOQOL BREF with no statistically significant differences. This finding nullifies my hypothesis that Norwegian students have a higher QoL than international students. Reasons behind the similarly high QoL of these two university student groups could be their interaction with the same environment characterized by peacefulness, safety, unspoiled nature, availability of part time employment opportunities as well as tuition free English language degree programs as they both live in Norway (SIU 2016,20).

Like similar overall QoL Norwegian students and International students have reported similarly high environment QoL, similarly high physical health QoL, similarly high psychological QoL and similar social relationships QoL with no statistically significant differences. In addition to that, both Norwegian and International students reported that they were similarly satisfied with their health.

A reason behind such similarly high satisfaction with health and similarly high physical health and psychological QoL ratings of both international and Norwegian students studying in Norwegian universities in Norway could be the provision of high quality universal healthcare in Norway to both International students and Norwegian students Institute ranked Norway as the seventh best performing country in the health field amongst 149 countries (Legatum Institute Foundation,2017).

This ranking was done by measuring the performance of 149 countries in three extensive areas which include health infrastructure, preventive care, basic psychological as well as physical health (Legatum Institute Foundation,2017).

In Norway, universal healthcare coverage is provided to all authorized residents in Norway including Norwegian and international students through European health insurance card, voluntary and involuntary membership of the Norwegian national insurance scheme (European Union 2017,16; NAV,2017).

Previously, a study was done by Hanestad et al to do an analysis of the WHOQOL BREF's psychometric properties in Norway when its application is done to the general population of Norway. In that the WHOQOL BREF was sent to 4000 citizens of Norway falling in the 19 to 81 years age group (Hanestad et al 2004,147).

Both international and Norwegian students in my study reported higher social relationships QoL than the Norwegian general population means of social relationships QoL(Hanestad et al 2004,152). Reasons behind the higher social relationship QoL of university students may be lack of cultural diversity and language differences in the Norwegian general population and in in sample gathered by Hanestad and his colleagues in their study.

This is because Norwegian general population does not have much to exchange with each other because of their same language for building their social relationships. However, both international and Norwegian students reported a lower psychological QoL than the Norwegian general population mean (Hanestad et al 2004,152). A major reason behind the lower psychological QoL of these two university student groups could be the high academic stress levels faced by international students as exam stress can cause anxiety (Kumari & Jain 2014,32).

However, both these university student groups in Norway reported a lower environment QoL than the Norwegian general population mean of environment QoL (Hanestad et al 2004,152). A reason behind this difference might be the inclusion of full time working adults in the sample of the Norwegian general population who are likely to afford living in Norway much better than part time or unemployed international and Norwegian students.

Both Norwegian and international students reported a physical health QoL similar to the physical health QoL mean of Norwegian general population(Hanestad et al 2004,152). A reason behind this similarity in the physical health QoL of Norwegian and international students and Norwegian general population physical health QoL mean might be the provision of universal healthcare to all residents of Norway irrespective of their citizenship and age.

To my knowledge, no studies have been done to compare the variable overall QoL itself of Norwegian and international students or between international and domestic students studying in universities in other parts of the world. Instead comparative studies have been done to compare the domains of WHOQOL domains of QoL.

The finding that both international students and Norwegian students are highly satisfied with their health and have given high ranking to both their physical health as well as psychological QoL indicates that both these university student groups are highly satisfied with all aspects of their health.

However, this finding does not corroborate with the finding of previous survey done on the health of 300 international students studying in University around 27 years ago (Sam & Eide, 1991). This is because the finding of that survey was that students reported that they faced a decrease in their overall state of health together and suffered more from health problems such as depression, paranoia, physical health problems as well as anxiety and health and the health of Scandinavian students was better than the health of international students (Sam & Eide 1991,22).

That study further found out the average prevalence of the health problems depression, anxiety, somatic as well as paranoia complaints of Scandinavian and North American students was lower than the prevalence of these health problems reported by African, African and international students in Norway (Sam & Eide 1991,28).

The difference between the finding of the survey on mental health of foreign students in Norway in 1991 and the indication of the finding of my study that both international and Norwegian students are similarly highly satisfied with their health indicates improvements in healthcare of international students in Norway. These improvements in healthcare could be because of the introduction of a national plan to make improvements in the social services as well as healthcare in Norway (TFHC Market Study 2017,10). However, it may not be appropriate to compare the findings of my study and of Sam and Eide because we used different instruments.

The finding of my study that both international and Norwegian students reported a similarly high physical health QoL and similarly high psychological QoL also does not corroborate with one of the findings of a study by Chai et al comparing the QoL of International students and Norwegian students in New Zealand.

This is because Chai et al found out that international students reported a lower physical health QoL than domestic students in New Zealand but it does corroborate with another finding by Chai et al that both International and domestic students studying in New Zealand reported similar psychological QoL (Chai et al 2012,270).

Similarly, my study found out that both International students and Norwegian students reported similarly high environment QoL. Environment QoL domain is to a huge extent is concerned with their access to finances and affordability of different aspects of the environment(WHO 1998,63). A reason behind such similarly high environmental QoL of the two university student groups could be their access to funds as one of the findings of this study is that a significant proportion of International students at 42.1% and Norwegian students and 57.9% are employed and availing student grants or scholarship.

However, this finding that both Norwegian students and International students have similarly high levels of environmental QoL and thereby indicating that both these university student groups are satisfied with their finances does not corroborate with the finding of a previous study conducted by Wiers-Jennsen in 2015. This is because that study found out that meeting the living costs of Norway is viewed as more difficult than expected by around 50% of the international students in Norway (Wiers-Jennsen 2015,37).

Similarly, this finding that both International and Norwegian students enjoy a similar environment QoL also does not corroborate with the findings of studies done by Henning et al in University of Auckland and Hsu et al in Auckland University of Technology New Zealand to compare the QoL of international and domestic students.

This is because both of those studies found out that domestic students reported a higher environment QoL than International students studying in New Zealand (Hsu et al 2008,389; Henning et al 2012,137).

This could be because Environment QoL domain of the WHOQOL- BREF measures access to healthcare of its respondents and international students and student visa holders in New Zealand need to make greater copayments for availing healthcare from pharmacies and primary healthcare physicians than domestic students in New Zealand(Education in New Zealand, 2015).Therefore, it is likely that domestic students in New Zealand would have got better access to healthcare than international students studying there in 2008 as well as 2012.

International students and Norwegian students studying in Norwegian universities in Norway also reported similar social relationships QoL. A reason behind that could be the running of social activities Language café and Language Tandem done by Norwegian universities as these social activities provide Norwegian students and International students an opportunity to build friendships with each other by teaching their mother tongues to each other (HiOA,2018; UIO, 2018).

Social relationships QoL domain is to a large extent concerned with how well people build their social relationships with others and in context of my study it is concerned with how well both Norwegian and International students build social relationships with each other and know each other. The finding that both International and Norwegian students have similarly high social relationships QoL does not corroborate with finding of a previous study carried out by Wiers-Jenssen in 2015 as that study pointed out that knowing Norwegians is viewed as more problematic than expected by about 50% of international students in Norway(Wiers-Jenssen,2015).

This finding also does not corroborate with a finding of a study by Henning et al at the University of Auckland as that study found out domestic students rated their social relationships QoL better than the social relationships QoL of international students in New Zealand (Henning et al 2012,137).

An important finding of my study is that Europeans including Norwegians have similarly levels of overall QoL, satisfaction with health, physical health QoL, environment QoL, social relationships QoL and environment QoL. The Eurobarometer survey done on the QoL in European Cities in 2015 tries to explain the similarities in the overall QoL, satisfaction with health, environment QoL, physical health QoL, psychological QoL and social relationships QoL (European Union,2016).

#### **4.2 Physical health and Psychological QoL similarities discussion**

This is because its findings also indicate similarities in the satisfaction of people with QoL domains of the WHOQOL BREF such as in the case of health that survey found that people living in 34 European cities are satisfied with their healthcare facilities(European Union 2016,9).These cities include Norwegian capital Oslo, French, German, Spanish, Italian, Finnish, Swedish , Danish, Austrian, Swiss and British cities. 53.2% of my respondents are

also from these countries as their countries of birth are Italy, Finland, Denmark, Sweden, Austria, United Kingdom and Switzerland.

This finding of the survey indicates that the similarly high satisfaction with health and similarly high ratings of their physical health QoL and psychological QoL domains of Norwegian and International students could be because of their access to similar healthcare services in their European hometowns. As in the cases of some of them it is likely that they would have filled the questionnaires a few days after availing healthcare facilities in their countries of birth because they do not live that very far from Norway. So the finding that students reported similarity in their satisfaction with health, physical health and psychological QoL could be to a certain extent be because most of them had access to similar healthcare services in their countries of birth.

A significant proportion of the international students in my sample are from the European Union, which helps its member states improve the health status of its citizens by helping governments of the EU member states fulfill shared objectives, bring healthcare cost down by pooling resources and solve shared challenges like chronic diseases, pandemics as well as deal with the effect of bigger life expectancy on their healthcare systems(European Union,2018).

Norway has implemented several directives of the EU, most of which are food safety and has cooperated with the EU in different areas including rights of patients to avail health care overseas, pharmaceuticals, medical devices as well as health preparedness (Norwegian Directorate of Health 2009,4). Therefore, the similar health related policies of Norway and EU seem to be the most likely reason behind the health similarities reported by Norwegian and International students.

#### **4.3 Environment QoL similarities discussion**

A finding of my study is that both Norwegian and International students reported similarly high environment QoL indicates that both these university student groups similarly afford to meet their basic needs for living a satisfactory life in Norway. One of the reasons behind this similarity could be that a significant percentage of both these university students group work in Norway for fulfilling their basic needs and avail scholarships or grants. Other factors could be the provision of affordable housing to both Norwegian and International students at costs lower than that of private housing by student welfare associations in Norway together with

the provision of student discounts on transportation and low cost healthcare to both these university student groups(UIB,2017).

Still, as some of the respondents might be exchange students and staying in other European countries apart from Norway recently before answering the questions in my study other factors might explain these similarities. One of those factors is the provision of similar state funded and affordable student housing and dormitories to university students in some European countries where a significant proportion of the respondents are quite likely to be living and studying because of their birth in those countries as reported by them (JII 2017,12-22). These countries include Germany, France, Italy as well as Spain. Similarly, most probably a similar access to healthcare services provided to many of the international students because of their birth in a member state of the European union could also be factor which can explain the similarity in their Environment QoL.

Another factor which could also explain the similarity in the environment QoL of International and Norwegian students in Norway could be the availability of the similar student discounts to international students in other European countries. This is because a significant proportion of the respondents in my study were born in those other European countries and therefore are quite likely to avail these discounts especially if they have recently lived in these countries before filling the questionnaire of my study(VR,2016; DAAD,2017; Schiller International University,2018; Ministry of Higher Education and Science,2018). Those European countries include Germany, France, Finland and Denmark

Similarly, the discounts provided to Norwegian and International students for participating in the recreational as well as leisure activities such as bowling, visiting opera houses, museums as well as concerts in Norway explain the similarity in their environment QoL(UIS,2018; Norwegian Maritime Museum,2018). Together with these discounts in Norway, similar discounts provided for helping university students participate in recreational and leisure activities such as watching shows, visiting theaters, cinemas, opera houses and gymnasiums in other European countries also explains this similarity (DAAD,2017; KTH,2017; Haag Helia,2018). Those other European countries include Germany, Finland and Sweden

This is because a significant proportion of the respondents in my study were born in those other European countries and therefore are quite likely to avail these discounts especially if they have recently lived in these countries before filling the questionnaire of my study.

The provision of the best protection by the EU to European citizens from chemicals as well as pollution is the factor that also helps explain a similarity in Environment QoL of both International and Norwegian students in Norway (Greer et al 2014,13).

The possible similarities in the physical security and safety of both Norwegian and International students in Norway could be simply explained by their presence in Norway as the Legatum Institute rated the security and safety of people in Norway higher than the safety and security of people in other countries (Legatum Institute Foundation,2017).

Still this ranking alone is not enough to explain the similarities in the physical safety and security of Norwegian and International students in Norway. This is because at least some of the students might have filled the WHOQOL BREF questionnaire after visiting their hometowns, a significant proportion of which are likely to be in the European union as a significant proportion of the international students reported that they were born in EU member states. Therefore, the role of the European union might have brought similarities in the physical security and safety of Norwegian and International students.

The role played by the EU in bringing similarities in the physical safety and security of Norwegian and International students takes the form of its emphasis on helping its member states exchange best practices as well as experiences to lessen factors promoting reoffending and crime. Similarly, the European Union also helps its member states to not only exchange practices for making people less vulnerable but also to prevent the infiltration of the society and economy by criminals as well as corruption (European Commission,2018). In the past 17 years, the European Crime Prevention Network has provided a platform for all EU member states to exchange best crime prevention practices, research as well as information regarding various local crime aspects(European Commission,2018).

Although, the network covers every crime, it pays special attention to drug related, urban and youth crime(Europa,2018). It's website consists of an enriched database on different national projects as well as strategic orientations carried out in various crime areas such as business crime, theft, violence in schools(European Commission,2018).

Apart from that, although Norway is not a EU member state but still it has agreed to cooperate with the European Police office to exchange strategic intelligence, details regarding crime investigative procedures, specialized knowledge and details regarding crime prevention procedures. In addition to that, Norway has also agreed to participate in training with the

Europol and offer support as well as advice during individual investigations. These efforts by Norway indicate that it is quite likely that Norway also employs similar best crime prevention as well as investigative procedures as done by the EU member states (Europol 2018,3).

Therefore, I assume that the employment of similar crime prevention and crime investigation practices have played their role in bringing similarities in the physical safety and security of Norwegian and international students and contributed towards similarity in their Environment QoL.

#### **4.4 Social relationships QoL discussion**

A finding of my study is that both International and Norwegian students reported similarly high social relationships QoL in Norway which builds my opinion that these university groups have similar social connections with each other in the sense that at least most students had similar friendships with each other with similar closeness.

This might be because their motives might have made them build those friendships and these motives might have come to their mind because of their cultural differences, cultural similarities, past cultural experience as well as targeted socializing as suggested previously by a study done by Sias et al (Sias et al 2008,6).

A qualitative study was done to examine the development of cross cultural friendships by analyzing in-depth interviews of 30 people, consisting of college students at a big western university and residents of the nearby locality (Sias et al 2008,1-4).

These people represented various ethnic backgrounds as well as various countries including Armenia, United States of America, Uzbekistan, Uruguay, Taiwan, Scotland, Russia, Philippines, Korea, Poland, Chile, India, Colombia, Japan and England with 1 participant from every country apart from 7 participants from Japan, 6 participants from USA and 3 participants from Korea (Sias et al 2008,4). The respondents of that study were 18-75 years age group but most of them were aged 18-25 years old. Ten of those respondents were men while 20 respondents were women ( Sias et al 2008,4).

The findings of that study were 10 of the participants reported that cultural similarities i.e the similarities amongst the national cultures of their friends influenced the development of their friendship with them by helping them become friends of each other. As 1 respondent

explained “We are both from Asian cultures and that is similar, the culture is similar so there are less difficulties” (Sias et al 2008,6).

Therefore, I assume that for a significant proportion of both Norwegian and international students cultural similarities might have helped both these university student groups have similar levels of social relationship QoL(Sias et al 2008,6).This is because a significant proportion of the international students were from the European countries Italy, Spain, Netherlands, Germany, France, Sweden, Denmark, Finland, Iceland and United Kingdom where majority of the people follow European cultures and therefore their cultural similarities to a certain extent can explain their similar social relationship QoL levels.

Another finding of that study was that 11 participants reported that cultural differences brought them closer and made them friends with each other(Sias et al 2008,6).These respondents claimed that they found that the differences between their cultures were exciting as well as interesting thus these differences brought them close to each other(Sias et al 2008,6).

Therefore, cultural differences played a special role in beginning their friendships. The cultural differences also played the role of “conversation starters” that began their friendships (Sias et al 2008,6). As a respondent explained “It was like we came from different cultures so had to exchange all this information” (Sias et al 2008,6) In the case of my study, my sample is quite culturally diverse as some students have also been born in Pakistan, Ghana, Zambia, Zimbabwe, Kenya, Ethiopia, India and Nepal while others have been born in Norway, Germany, France, Italy, Spain and Netherlands so they are quite likely to have very different cultures(Sias et al,2008).Therefore, i assume that cultural differences would have played a role in bringing them closer and in turn having similar social relationships QoL because they have a lot to exchange with each other (Sias et al 2008,6).

Another finding of that study was that 13 participants reported that their past intercultural experiences played an important role in the development of their friendships(Sias et al 2008,9).Such experiences tended to make participants more willingly friends and in certain cases such experiences made participants more keen to make followers of another culture there friends (Sias et al 2008,9).Respondents elaborated that their such experiences helped them learn the importance of getting an experience of other cultures (Sias et al 2008,9).

In the context of my study, past intercultural experiences of Norwegian and international students might be a reason behind the similarity in the social relationship QoL as most of the Norwegian students are quite likely to experience other European cultures because a significant proportion of Norwegians spend their holidays in different European countries where a significant proportion of the respondents were born. These countries include Spain, Sweden, Denmark, United Kingdom, Germany and France(SSB,2018).

Another finding of that study was that 4 participants reported that the contextual factor targeted socializing helped them build their friendships, especially during the initial stage of becoming a friend from acquaintance. Targeted socializing could be defined as socializing chances aimed towards either cross cultural meetings or cultural groups like an orientation arranged for welcoming international students on university campus or “Chinese student party” (Sias et al,2008). In the context of my study, some Norwegian students are quite likely to build friendship with international students because of targeted socializing as Norwegian universities arrange buddy groups and on campus orientation for international students in Norway (HiOA,2017; UIO,2018).

Another finding of that study was that somehow language differences between its respondents helped them develop intercultural friendships with each other in many ways(Sias et al 2008,10). This is because language differences would often encourage 4 of those respondents to speak often more with each other (Sias et al 2008,10). They observed that that the language differences between them were challenging and not making hostile against each other. Besides that , those 4 respondents noticed that their language differences turned into a source of play as well as humor for their friends (Sias et al 2008,10).

Similarly, for many respondents, their language differences helped develop their unique language, comprising of jargon, grammar as well as vocabulary special for their friendship. This mainly took place when friendships had become deeper (Sias et al 2008,10).

I assume that the factor “cultural differences” could have played a very important role in bringing about similarities in the friendships of the respondents of my study and in turn similarities in their social relationships(Sias et al 2008,6).

This is because even though a lot of respondents in my study are most probably followers of European cultures but still there are differences which get revealed by their different

communication styles as in Denmark words are carefully assessed in circumstances where the French may seem to be using their vocabulary aggressively (Tixier 1994,16).

Similarly, cultural differences can be observed between Scandinavians and southern Europeans as both these groups have different attitudes towards disputes(Tixier 1994,16).Within Nordic countries dispute avoidance is done because disputes are perceived as unproductive while in the South European Latin environment features conflicts and thus it is tough for Swedish or Danish people to understand it(Tixier 1994,16)

Therefore, due to the cultural diversity of the sample of my study a large proportion of my respondents have a lot of information to exchange with each other and therefore it is quite likely that their cultural differences would have brought them closer for the sole purpose of exchanging information which could have resulted in their similar friendships and in turn them having similar social relationships QoL in Norway.

Similarly, I assume that the language differences between the Norwegian and International students could be a factor helping build similar friendships between these two university groups especially through activities like Language café and Language Tandem(HiOA,2018; UIO, 2018). This is because in Language café international students with various cultural backgrounds get aware of all the things they need to know about Norway but simultaneously get an opportunity to learn Norwegian (HiOA,2018; UIO, 2018). Similarly, in Language Tandem university students teach their different mother tongues to each other by speaking those languages with them (HiOA,2018; UIO, 2018).

#### **4.5 Academic stress discussion**

To my knowledge, the academic stress scale employed in this study has not been previously used to compare the academic stress levels of International and domestic students nor in Norway and nor in other parts of the world and nor any comparative study has been done compare the academic stress levels of Norwegian and International students. An important finding of my study is that Norwegian students reported lower cumulative academic stress than International students with statistically significant differences between their cumulative academic stress levels. This finding verifies my hypothesis that Norwegian students face lower levels of academic stress than International students.

The finding that Norwegian students face lower cumulative academic stress than international students does to a certain extent corroborate with the findings of a study done by Wiers-

Jennsen in Norway as that study found out that International students and especially those international students who came from Russia to Norway found coping with demands made by academic factors more problematic than expected(Wiers-Jennsen 2015,37).

Another finding of this study is that Norwegian students reported that they faced lower stress from the academic factor “Many Essays”. To my knowledge, no comparative study has been done to compare the stress levels caused by the academic factor “Many Essays” of Norwegian and International students.

Both Norwegian and International students studying in Norwegian universities have ranked that Examinations as the most stressful academic factors with no statistically significant differences. This finding corroborates with the finding of a previous study that performance as well as grades of examinations were the most stressful factors for dental as well as medical students in the north eastern United States of America (Murphy et al 2009,334). Similarly, this finding also corroborates with the finding of the previously done study on the stress levels of medical students that Tests or Examinations caused moderate to huge levels of stress for medical students in Malaysia (Yusoff et al 2010,33).

A surprising finding of my study is that both international students and Norwegian students studying in Norwegian universities reported that language difficulties were not a stressful academic factor for them. This is because in a previous thesis done by Anis ur Rahman to highlight the problems hindering the electronic resources at the Oslo University College library found out that some international students from China, Uganda, Taiwan, Indonesia, Vietnam, Austria, Brazil and Nepal reported that they faced language difficulties in filling forms, seeking help from the librarian, book searching and asking questions because they could not understand Norwegian (Rahman 2011,50-54). However, the least stressfulness of the academic factor “Language difficulties” could possibly be because of enrollment of most international students in English language degree programs and enrollment of most Norwegian students in Norwegian language degree programs and Norwegian language learning by international students at universities.

Another reason behind the least stressfulness of “Language difficulties” could also be because the majority or all the respondents of my study could be those who could proficiently read, speak and understand English while those who were not proficient in reading, speaking and understanding English either did not respond to my study or a few of them only responded to it.

Both International and Norwegian students reported that increased class workload was an academic stressful factor for them. This finding corroborates with finding of a previous study that heavy workload causes moderate to huge stress levels for university students (Yusoff et al 2010,33). Similarly, both Norwegian and International students reported that lower grades was an academic stressful factor for them. This finding corroborates with a finding of a previous study done on the stress levels of medical students that getting poor marks causes moderate to huge levels of stress for medical students in Malaysia (Yusoff et al 2010,33).

#### **4.6 Ethnic identification discussion**

Ethnic identification is a term used to refer to the sharing of a sense of identification with an ethnic group in which a person has membership by her or his birth and this membership cannot be changed (Phinney & Ong 2007,275). Another important finding of my study is that both Norwegian and International students reported similarly low levels of ethnic identification by giving it almost the same ethnic identification score on the Multigroup ethnic identity measure. This finding nullifies my hypothesis that International students will have lower ethnic identification levels than Norwegian students. This finding does not corroborate with the finding of a previous thesis done to compare the ethnic identification levels of International and domestic students in the United States of America as international students scored higher than domestic students on the Multigroup ethnic identity measure with a mean higher ethnic identity score (Batterton 2015,46).

A possible reason behind the low ethnic identification level of international students in Norway could be acculturation as Cuéllar et al found that with a rise in acculturation, the loss of ethnic identity is faced and international students pass through acculturation as suggested by several studies (Cuéllar et al 1997,539). As far as the low ethnic identification of Norwegian students is concerned, a possible reason could be because they might be passing through ethnocide i.e a loss of their ethnic identity because of acculturation (David Y et al 2005,2).

#### **4.7 Alcohol use discussion**

To my knowledge, previously no study has been done to compare the alcohol drinking frequencies of Norwegian and International students. Another important finding of my study is that both International students and Norwegian students reported similarly low alcohol drinking frequencies as more than half of the sample of both Norwegian and International

students have reported they drink alcohol on a range from 2-4 times a month to 2-3 times in a week.

This finding nullifies my hypothesis that Norwegian students drink alcohol more frequently than International students in Norway. However, this finding supports the claim made by Hnilicová et al that in general, Norway features low consumption of alcohol with a little fall in the past five years (Hnilicová et al 2017,146). According to the Behavioral economics theory, a reason behind these similar low alcohol drinking frequencies of international and Norwegian students could be because that both these university student groups are living in an environment not conducive for drinking alcohol in Norway (Murphy et al 2007,2576).

This is not only because the price of alcohol in Norway is 250% greater than the EU average alcohol price but also because high taxes on alcohol, limited access to consuming alcohol as well as monopolization of off premises sale of spirits as well as wine in Norway by the state with changes has discouraged students from consuming alcohol more frequently (Rossow & Storvoll 2014,222; Hnilicová et al 2017,150).

The finding of my study that Norwegian and International students have similarly low alcohol drinking frequencies does not corroborate with a finding of previous study conducted to investigate how the drinking frequency as well as quantity of alcohol consumed varies across Europe, and how both these drinking variables relate to their demographic characteristics education, gender as well as age by using the data provided by the European Social Survey(ESS7) (Wuyts et al 2016,1).

This is because that a study found out that in Nordic region including Norway but apart from Denmark 2.5% of the population drinks daily while in other European countries Portugal, France as well as Spain 16% to 34% of the population drinks daily. The rate of drinking daily in Denmark is quite close to the rate of drinking daily in Czech Republic as well as Belgium at around 12%(Wuyts et al 2016,8).

The important findings of my study on alcohol use of both international and Norwegian students are that 51.8% of the Norwegian students and 55% of international students did not abstain from consuming alcohol even for a month. Similarly, my study has also found out that the other university students kept drinking alcohol for a longer period as my study also found out 82.7% of the Norwegian students and 83.4% of the international students did not abstain from consuming alcohol in the past year but a proportion of them might have

abstained for at least at a month. This is because they include those university students as well who drank “once a month or less often”

The other finding of my study is that some students reported that they abstained from drinking alcohol as 17.3% of the Norwegian students and 16.5% of the international students reported that they abstained from drinking in the past year.

These findings indicate that majority of the Norwegian and international students drink alcohol every year at least once and that there are fewer alcohol abstainers than alcohol consumers amongst university students in Norway.

Another finding of my study is the presence of a significant positive correlation between the environment QoL and alcohol consumption of both Norwegian and international students. Since, the environment QoL domain of the WHOQOL BREF measures the financial resources of its respondents. It seems to me that both international and Norwegian students had got money to buy alcohol and with the increase in that money they were able to buy more alcohol and therefore their environment QoL and alcohol consumption frequency increased together. Therefore the correlational relationship between the environment QoL and alcohol consumption frequency was positive.

This possible reason behind the positive correlation between alcohol drinking frequency and environment QoL of both Norwegian and international students confirms the claim of the Behavioral economics theory that high incomes and low costs provides a drinking environment to students which increases their alcohol consumption (Murphy et al 2007,2576).

My study has also found out that a weak but statistically significant positive correlation exists between alcohol consumption frequency and overall quality of both Norwegian and international students in Norway. This finding does not corroborate with finding of a study done to reproduce as well as extend the past alcohol-life satisfaction findings by assessing the relationships between problems related to alcohol consumption faced by people, gender, QoL’s multidimensional measure and consumption of alcohol of undergraduate students of a North eastern private US university (Murphy et al 2006,112).

This is because that study found out that no relationship existed between the alcohol consumption frequency of students and their total QoL(Murphy et al 2006,114). Similarly,

that study also found out competency or academic satisfaction, satisfaction in general as well as independence of students were not related with total QoL (Murphy et al 2006,114).

However, it does not seem appropriate to compare the findings of my study with that of the study by Murphy and his colleagues. This is because they have measured QoL with a different instrument Quality of Student life questionnaire which measures satisfaction of students with their school, independence i.e generally are you free to do whatever you are interested in doing in your life or you cannot do what you are interesting in doing, social belongingness i.e the number of times students talk with others as well as satisfaction in general i.e the degree to which the students feel better than others(Murphy et al 2006,113).

#### **4.8 Relationship of the variables Academic stress and QoL discussion**

Another finding of my study is the existence of a statistically insignificant negative weak correlation between the variables academic stress and QoL of both Norwegian and international students in Norway. This finding nullifies my hypothesis that the academic stress is negatively correlated with QoL because a statistically insignificant negative correlation exists between academic stress and QoL of both Norwegian and international students. A reason behind that could be that Norwegian students have lower academic stress than international students.

#### **4.9 Methodological discussion, limitations and strengths**

I have designed the methodology of my study by considering my pre-conceptions and expectations regarding academic stress and QoL of Norwegian and International students as I as an international student experienced acculturation for adapting to the Norwegian culture and felt losing my ethnic identity and high levels of academic stress.

Similarly, I assumed that Norwegian students would have a higher QoL and higher alcohol consumption frequency than international students because they get loans from Lånekassen to pay for their housing and other expenses during their studies (Lånekassen,2017). Therefore, I hypothesized that all international students in Norway would have also experienced greater academic stress, lower QoL, lower ethnic identity and drank alcohol less frequently than Norwegian students studying with them.

In my study, I could have also measured other variables to draw a comprehensive picture of the living conditions of the international and Norwegian students in Norway. These include

their self-esteem, acculturation, language proficiency, their independence and satisfaction with academics. Similarly, I could have asked the alcohol use questions: how many alcoholic drinks did you consumed in an average day, from which country did they buy alcohol and did they found alcohol expensive or cheap in Norway to the two university student groups.

I need to discuss the limitations of my study to discuss the degree to which the findings of my study represent reality. Firstly, one of those limitations is that due to the cross-sectional nature of my study I cannot suggest the cause and effect relationships between academic stress, ethnic identity, alcohol use, physical health QoL, psychological QoL, environment QoL and social relationships QoL. This is because by conducting a cross sectional study i cannot establish causality i.e I cannot claim that any of the variables I measured effected or caused the QoL.

Instead, if I would have done a longitudinal study then I could have established causality between academic stress, alcohol use and QoL of Norwegian and international students. This is because academic stress can lower QoL of both these university student groups as students facing academic stress are likely to experience restlessness as well as upset stomach(Kumari & Jain 2014,31-32). On the other had lower QoL of both Norwegian and international students can cause academic stress for them. This is because university students experiencing lower QoL might be working for long hours to earn money for improving their QoL. Therefore, they might be studying less which might have lowered their grades, which in turn would have caused academic stress for them.

Similarly, alcohol consumption by Norwegian and international students can lower their QoL by making them suffer from injuries as the WHO reported alcohol use is a major cause of injuries(WHO 2011,20). While, lower QoL can increase alcohol use of these two university student groups as students with a low QoL might be facing stress, which can increase their consumption of alcohol as it plays an important role in initiating alcohol addiction as well as relapse(Brady & Sonne,1999).

In the same manner, high ethnic identity of Norwegian and international students can improve their QoL by protecting them from psychological health problems (Mossakowski 2003, 325-326). Similarly, an improved or a high QoL can improve ethnic identity of both these university student groups as it is likely that university students with a high QoL might have enough money to afford celebrating their cultural events.

However, I could neither prove that academic stress lowered QoL or a low QoL increased academic stress of international and Norwegian students nor I could prove that alcohol use lowered QoL or low QoL increased alcohol use of these two university student groups. Similarly, I could also not prove that ethnic identity improved QoL or a high QoL improved ethnic identity of both Norwegian and international students.

This is because I measured the four variables i.e academic stress, ethnic identity, alcohol use and QoL of the university students at the same time. Therefore, I cannot rule out the explanation that QoL played its role first to affect the variables academic stress, ethnic identification and alcohol consumption of Norwegian and international students. A bidirectional relationship might exist between QoL and these variables, and a longitudinal study that repeatedly gathers data over a time is needed to understand these complex causal relationships.

Secondly, another limitation of my study is that my sample might lack representativeness. This is because I have done convenient sampling and a convenient sample might result in a non-representative sample if the students who received my survey were different from those who did not receive my survey.

For instance, PHD students most probably did not receive my survey because they did not check Facebook student groups often. Therefore, their lack of participation might result in a non-representative sample of both international and Norwegian students which may not represent the entire student community in Norway and my findings may not draw a comprehensive picture of the QoL, academic stress, ethnic identity and alcohol use of that entire student community.

This lack of participation by PHD students makes me suspect that selection bias may be present in my study as there may be other reasons because of which some students did not respond to my survey and therefore my sample is non-representative of the entire student community in Norway. Another reason leading to a lack of participation of the university student community could be that it is most likely that people who are not proficient in understanding and reading English might not have responded to my survey. This means that those who responded may have reportedly particularly low language related academic stress, compared to an average university student.

Thirdly, since I had not offered any financial incentive to both international and Norwegian students to fill my survey. Therefore, some of Norwegian and international students who may be in poorer financial situations may not have filled my survey and poorer students may have been more likely to have reported poorer quality of life. A lack of participation by such university students did not let me measure their QoL, academic stress, ethnic identity and alcohol use.

Fourthly, since my survey was open for three weeks and not for a single day it might be that students who responded to my survey initially were facing less academic stress because they had to study less because they had to give exams later and the people who later responded to my survey were facing higher academic stress because their exams were about to take place. Therefore, time also influenced their academic stress levels.

Fifthly, since my study did not only measure the QoL, academic stress, ethnic identity and alcohol use of students studying in the same semester of their bachelor, master or PHD program. Therefore, it is quite likely that some of them might be experiencing higher academic stress levels because they were approaching their deadlines of assignments or giving exams in their final year while others would be studying in their first or second semester and therefore be experiencing lower levels of academic stress because they have greater amount of residual time available to complete their study program.

Sixthly, another limitation of my study is I suspect that information bias may be present in my study. This is because my survey was online and questions in it did not ask respondents to tell about their experiences of their QoL, academic stress, ethnic identity and alcohol use in Norway only. Therefore, it is likely that students might have answered questions regarding their QoL, academic stress, ethnic identification and alcohol use in their home countries instead of Norway or based on their experiences in their home countries. Compared to non-European students, this is quite likely to happen with European students because it is easier for them to travel to their home countries because of shorter distances.

Seventhly, a big limitation of my study which did not let me measure and compare the realities of the alcohol consumption done by both Norwegian and international students is the poor wordings used by the alcohol use questionnaire employed to measure alcohol consumption. This is because in that alcohol use questionnaire instead of asking the number of glasses of alcohol university students have been drinking on a typical day and the number of times university students drank alcohol in the past month. In my survey, both Norwegian

and international students were asked how many “times” they drank alcohol in the last year and these university students reported that they did not drink very many times. However, if each of these “times” was a binge drinking episode or even if most of these “times” then even their low alcohol consumption frequency may be very worrying and alarming.

The purpose of discussing strengths of my study is to discuss the degree to which its methodology can be employed in other studies to measure the QoL, ethnic identity, academic stress and alcohol use of international and domestic students or other university student groups. The strengths of my study are given below.

A strength of my sample is the cultural diversity of my sample with 43 countries which helps it assess the QoL, academic stress, ethnic identity and alcohol use of followers of different cultures across the world as my sample consists of European, North American, Asian and African students following European, American, Asian and African cultures respectively.

Another strength of my study is that it to a certain degree comprehensively measures the QoL, academic stress, ethnic identity and alcohol use of the student community in Norway as my participants include both international and Norwegian students. Therefore, it measures the QoL, academic stress, ethnic identity and alcohol use of both these university student groups and highlights the measures that need to be taken for both these groups.

Another strength of my study is the ethnic diversity of my sample which makes it useful for studying their ethnic identification as participants of my study have reported their various interesting ethnicities. Some of those widely reported and interesting ethnicities include Dutch, Lithuanian, German, French, British, South Asian, Russian, Pakistani, Korean, Persian, Asian, Icelandic, ethnic Norwegian, Vietnamese Norwegian, and Pakistani Norwegian.

The participation of international students and Norwegian students in my study by a ratio of approximately 4 to 3 is another strength of my study as it helps me compare the QoL, academic stress, ethnic identification and alcohol use of these two university student groups by conducting statistically robust independent samples T test and Chi square tests.

## **5 Policy recommendations**

The findings of my study are that both international and Norwegian students similar QoL in Norway, low ethnic identification levels and low alcohol drinking frequencies. As far as the

differences between International and Norwegian students are concerned. These differences have been found between the academic stress levels of these two university student groups as international students have reported higher academic stress levels than Norwegian students.

These findings indicate the need to lower down the academic stress of international students, increase the ethnic identification and alcohol abstinence levels of both international and Norwegian students in Norway for maintaining as well as improving their QoL. Therefore, Norwegian universities and educational policy makers need to take certain measures to lower down the academic stress of international students and increase their ethnic identification and alcohol abstinence levels.

### **5.1 Ethnic identification policy recommendations**

An important finding of my study is that both Norwegian and international students reported a low ethnic identification which is not good for them as low ethnic identification do not indicate their positive attitudes towards their belongingness towards their ethnic identity, which are associated with improved QoL. Therefore, I recommend that Norwegian universities should help both Norwegian and international students improve their ethnic identity by carrying out these measures with the voluntary cooperation and participation of students

These measures include building organizations that embrace Norwegian cultures and the cultures of international students (Guardia & Evans 2008,177). Examples of such organizations are the Albanian students association and American cultural exchange society(UIO,2017). Other measures to improve the ethnic identification of the university students could be celebrating Norwegian and cultures of international students on specific cultural days by promoting and participating in their cultures in various ways such as by serving their fast foods (Guardia & Evans 2008,177-178). Students can be asked to bring their foods themselves and eat them with others.

### **5.2 Academic stress policy recommendations**

An important finding of my study is that examinations are the most stressful academic factor for both international and Norwegian students in Norway. Therefore, the Norwegian universities need to take certain steps immediately to lower down the academic stress levels caused by examinations as examination stress can be highly detrimental for the health and overall QoL of both these university student groups.

Several normal students experience academic stress and managing it is not difficult as academic stress management can be easily done by following some useful suggestions (Kumari & Jain, 2014). Therefore, the universities must provide awareness about these suggestions to students and advise them to follow these suggestions given by Archana Kumari and Jagrati Jain which are given below.

Basically, 4 major factors are responsible for causing anxiety or pre-exam stress. One of those are some lifestyle problems (Kumari & Jain 2014,33). These include poor nutrition, insufficient rest as well as inefficient time management (Kumari & Jain 2014,33). If any student is unable to properly schedule the time available to him for studying the syllabus in a timely manner, he or she will face stress. Even if she or he reads the full content but does not get time for revising that content then she or he might forget everything he or she has learned because she or he might get confused (Kumari & Jain 2014,33). Therefore, allocating time for revision as well can help students do academic stress coping (Kumari & Jain 2014,33).

Another way of coping up with academic stress is to have some information like content of the course to be studied, exam dates, exam venue and the documents needed to give the exam available before giving the exam. Unavailability of any such information can lead to academic stress before giving the exam (Kumari & Jain 2014,33). Therefore, such information should be gathered well before giving the exam for avoiding academic stress. Several students adopt a studying style which causes academic stress like making efforts to memorize textbook content, studying the entire night before the exam and inconsistently and improperly covering course content by not making notes for revising content. Therefore, students should not adopt this studying style for avoiding academic stress (Kumari & Jain 2014,33).

Similarly, students should also avoid believing that they would fail irrespective of their hard work and failure will make them useless for avoiding academic stress (Kumari & Jain 2014,33).

In addition to that, Norwegian universities should offer optional high-quality counselling service to both International and Norwegian students for helping these university student groups decrease their depression as well as anxiety and thus build their adjustment capacity as well as self-confidence (Velaydhun et al 2010,1). This is because previously counselling helped medical students build their self-confidence as well as adjustment capacity by reducing their anxiety as well as depression (Velaydhun et al 2010,1).

The provision of that high-quality counselling service should help both International and Norwegian students build relationships and its objective should be to help both these university student groups solve most of their upcoming problems (Velayudhun et al 2010,3). That high quality counselling service must consist of a follow up facility, which may help these university students avail education as well as continuing support for occupational as well as personal adjustments (Velayudhun et al 2010,3). The rights, worth, dignity as well as freedom of both International and Norwegian students should be respected by the counsellors while providing the counselling service and even after providing it to them. In the context of academics, counselling makes up very essential as well as significant part of academic activities (Velayudhun et al 2010,3). It would help improve the lives of many young people certainly by making them emotionally mature, self-responsible, creative as well as capable of solving their problems (Velayudhun et al 2010,3).

Similarly, Norwegian universities can also offer stress management courses to both students international and Norwegian students and provide extra stress management course offers to their international students (Morgan, 2017). Other stress management offers could include mindfulness hiking as well as yoga exercises should be arranged for the participant students (Morgan 2017,279). In mindfulness hiking, the instructor should tell the participant students to emphasize on their senses i.e touch, sounds, smells and sights as well as breathing during their first hike (Morgan 2017,281).

This hike must be followed with a second hike in which an instructor must ask students to emphasize on thoughts that came in their mind throughout their hike and to point out themes within their patterns of thinking (Morgan 2017,281).

Then, the instructor must follow this second hike with a third hike in which he or she should ask students to get a metaphor from the natural environment which represents anything regarding them or their own lives (Morgan 2017,281). During this mindfulness hiking process, the instructor should encourage participant students to practice deep breathing and follow that up by throwing their negative thoughts out into the atmosphere (Morgan 2017,281). After this mindful hiking exercise, the instructor must ask the participant students to write journal notes and these participants should follow his instructions throughout this exercise (Morgan 2017,281).

Similarly, three 45 minutes long yoga exercises could be offered to the participant students. During these exercises participants must carry out ten stress cutting movements including gentle poses developed for meditation as well as relaxation (Morgan 2017,281).

Norwegian and international students must carry out the mindfulness hiking as well as yoga exercises discussed above because a quasi-experimental study by Barbara Morgan has previously found out that these exercises have done well in reducing stress faced by students (Morgan 2017,282). Summing up, I recommend that the Norwegian Ministry of Education and Research should make a stress management policy for university students, and that policy could include different options such as optional counselling, stress management courses, yoga as well as mindfulness hiking.

### **5.3 Alcohol use policy recommendations**

Although my study has found that a statistically significant weak positive correlation exists between alcohol consumption frequency and overall QoL of both Norwegian and international students. Still I would not recommend university students to increase their alcohol consumption in Norway. This is because this positive correlational relationship only suggests that both alcohol consumption frequency and QoL improve together but it does not suggest that alcohol consumption frequency has itself caused any improvement in QoL because this is not a longitudinal study.

A study by Erevik et al has reported that binge drinking is a norm followed by the most of the Norwegian university students (Erevik et al 2017,423). The mean age of the sample of that study was 24.9(Erevik et al 2017,419). The WHO has reported that people living in central eastern as well as eastern European countries do harmful alcohol consumption as they got a score 2.9 on a scale of 1-5 on a range where 1 is least harmful while 5 is most harmful(WHO,2012).

Similarly, deaths caused by injuries as well as cardiovascular diseases apart from ischaemic heart disease are greater proportionally in eastern and Central European countries due to heavy irregular as well as high consumption of alcohol(WHO,2012). The sample of my study consists of both Norwegian students and a significant proportion of international students who were born in countries located in eastern Europe and Central eastern Europe.

These two reports make me assume that a significant proportion of both Norwegian and international students might be doing binge drinking in the past year before responding to my

survey. This means that it may be that these two university student groups have drunk 5 to 6 glasses or drinks of alcohol at one time or even more than that which the alcohol use questionnaire in my survey counts as one, two, three or four times.

Therefore, the findings of my study that 51.8% of the Norwegian students and 55% of international students who do not abstain from consuming alcohol even for a month suggests that a significant proportion of this majority might be doing binge drinking, which highlights the need to encourage both international and Norwegian university students to do voluntary alcohol abstinence for a month.

This is because the daily mail reported that scientists have found out that binge drinking increases the risk of liver damage by 13 times by accumulating around the liver (Daily mail, 2015).

As a study done by the scientists at New Staff found out that voluntary abstinence from consuming alcohol in “Dry January” provided health benefits to people in the form of reducing their liver fat by 15% to 20% and thereby making them less likely to suffer from liver damage as the accumulation of fat in the liver can cause liver damage (Coghlan, 2014).

Therefore, I would recommend that both Norwegian and international students should voluntarily abstain from consuming alcohol for a month on an annual basis and the Norwegian authorities and the universities should help them do that by educating them about the benefits of voluntary one-month abstinence from consuming alcohol.

In addition to that I will also recommend that the Norwegian government should continue the implementation of Norway’s restrictive alcohol policies by keeping taxes high on alcohol, keeping the state monopoly over the off premises sale of alcoholic drinks wine as well as spirits and limiting access to alcohol as it has done for decades (Rossow & Storvoll 2014,222).

#### **5.4 QoL policy recommendations**

For the sake of improving the QoL of both Norwegian and international students, the Norwegian authorities must keep providing tuition free education, universal health care, discounts on public transportation and recreational facilities to both Norwegian and international students (SIU 2016,20; UIB,2017; UIS,2018; Norwegian Maritime Museum,2018).In addition to that, the Norwegian universities must keep running the

activities buddy week, Language Café and Language Tandem to bring international and Norwegian students closer to each other for helping them build friendship ties by exchanging information about their cultures and countries with each other i.e with the help of their cultural differences (HiOA,2018; UIO, 2018).

I also recommend that Norwegian universities and government should ask the participants of the activities Language Café, Language Tandem and Buddy week to provide them feedback regarding these activities for improving them in the best possible manner(HiOA,2018; UIO, 2018).

The Norwegian government and Norwegian universities can make some improvements in the lives of the international students in Norway by helping them get part time jobs together with the scholarships at the same level as Norwegian students are getting. This is because a statistically significant difference was found in the percentages of Norwegian and international students getting both scholarships or grants and employment in Norway.

The Norwegian government could eliminate this difference or at least reduce it by reviving and extending the mobility program Quota scheme by offering scholarships to students with citizenships of less developed Central Asian, African and East European countries studying Bachelor, Master and PHD programs in Norwegian universities (Study in Norway, 2007).

### **Directions for Future Research**

My cross-sectional study compared the QoL, academic stress, ethnic identification and alcohol use of Norwegian and international students and examined the relationships between these variables. A finding of my study is that both Norwegian and international students have mainly similar QoL, similar satisfaction with health, similar psychological QoL, similar physical health QoL, similar social relationships QoL and similar environment QoL.

Firstly, this finding indicates the need to compare the QoL of three university student groups in Norway instead of two groups by administrating the WHOQOL- BREF scale. These groups include Norwegian students, International students holding a citizenship of the one of the Nordic states Denmark, Finland, Iceland, Sweden, Latvia, Lithuania, Estonia and other International students with an equal number of students in the three groups.

This is because only international students from Denmark, Finland, Iceland, Sweden, Latvia, Estonia and Lithuania are eligible to get travel grants as well as scholarships for their

education from the Nordplus, which is a very important lifelong education program run and funded by the official intergovernmental collaboration body Nordic Council of Ministers (Nordplus, 2014; Lund University, 2018). Therefore it is likely that overall QoL and especially the environment QoL of Danish, Finnish, Swedish, Icelandic, Estonian, Lithuanian and Latvian students might be greater than other international students.

Secondly, the cross-sectional nature of my study points the need to carry out a longitudinal study to compare the QoL, academic stress, ethnic identity and alcohol use of Norwegian and international students for finding out cause and effect relationships between academic stress, ethnic identity, alcohol use and QoL of these university student groups in Norway.

Thirdly, my study points out the need to avoid selection bias in future studies comparing the QoL, academic stress, ethnic identification and alcohol use of Norwegian and international students by only letting those international and Norwegian students participate in those studies who are studying their English language Master, Bachelor and PHD programs in Norway. The only method of choosing a perfectly representative sample is by choosing a random sample of Norwegian and international students.

Fourthly, my study points out the need to do future studies to compare the QoL, academic stress, ethnic identity and alcohol use of Norwegian and international students by ensuring that confounding variables do not influence their results. This could be done by only letting those international and Norwegian students participate in those studies who are studying in the same semester of their Bachelor, Master or PHD program.

Fifthly, the poor wordings of the alcohol use questionnaire in my study highlights the need to use a better designed alcohol use questionnaire to measure and compare the realities of the alcohol consumption of university student groups across the world and for making better recommendations based on the findings derived from its results.

Sixthly, before carrying out future studies to compare the QoL, academic stress, ethnic identification and alcohol use of Norwegian and international students it would be better to gather information about their population measures. For example, information regarding the percentages of International students studying in Norwegian and international students studying in specific Bachelor, Master or PHD program.

## **Conclusion**

My study aimed to compare the quality of life (QoL), academic stress, ethnic identification and alcohol use of Norwegian and international students by employing a quantitative methodology to gather information about these variables through WHOQOL BREF, Academic stress scale, Multigroup ethnic identity measure and an alcohol use questionnaire. I found out similarities in the QoL, ethnic identification and alcohol drinking frequencies of the two university student groups Norwegian and international students. However, International students reported higher academic stress levels than Norwegian students. This study highlights the academic stress problem faced by international students in Norway and tries to help Norwegian universities and policy makers solve the academic stress problem faced by international students and improve their QoL, ethnic identification and reduce the potentially harmful effects of alcohol consumption of these two university students on their QoL.

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## Appendix: Questionnaire I

### **Request for participation in research project**

#### **Background and Purpose**

International students contribute a lot to Norway's vibrant student life. At the same time, some research suggests that international students suffer from more anxiety and depression and have lower quality of life than native students. This could be due to difficulties learning Norwegian, integrating into Norwegian student life, and identity conflicts. For this study, part of my master's thesis project at Oslo and Akershus University College of Applied Sciences, I'm interested in how you report your quality of life, as well as the academic stress you are under and how well you feel you are integrated into Norwegian student life.

#### **Justification for the particular sample inclusion for the study**

I'm interested in hearing from all international students studying at colleges and university in Norway in the academic year 2017-2018.

#### **What does participation in the project imply?**

The survey should take about 15-30 minutes to complete. Questions will ask about your sociodemographics, quality of life, language skills, academic stress and self-efficacy, ethnic group identity, and alcohol use, as alcohol use is a rather visible part of Norwegian student life. You can skip over any questions that you do not wish to answer.

#### **What will happen to the information about you?**

All personal data will be treated confidentially. Your responses to the survey are 100% anonymous: not even your computer's ISP address will be saved, so there is no way that I will know who has answered the survey.

You will be providing data about your gender, country of birth and citizenship, age, and place of study, so it is theoretically possible that this combination of information could make you identifiable to me. However, I will not be looking at individual responses, but at aggregated responses. When I write my master's project, individual responses will not be presented, and I will ensure that individuals will be in no way identifiable.

I hope to finish data collection by February 2017, and will submit my master's thesis in the spring. I will stop collecting data when I reach 100 respondents or when I submit my master's thesis, whichever comes first.

#### **Voluntary participation**



**SERAF – Norwegian Centre for  
Addiction Research**

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PO Box 1039, Blindern, 0315 Oslo  
Visiting addr.:  
Ullevål sykehus, Kirkeveien 166, building 45

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www.med.uio.no/english  
Org. no.: 971 035 854



Lack of university support	<input type="checkbox"/>					
Examinations	<input type="checkbox"/>					
Many essays	<input type="checkbox"/>					
Staying late writing paper	<input type="checkbox"/>					

**WHOQOL-BREF**

\*\*\* Removed as per WHO reproduction laws.

**Alcohol use**

1. Have you ever drunk alcohol?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Prefer not to answer <input type="checkbox"/>
2. How old were you when you first drank alcohol?		
Age: _ _ _ _	Prefer not to answer <input type="checkbox"/>	
3. How old were you when you first got drunk?		
Age: _ _ _ _	I have never been drunk <input type="checkbox"/>	Prefer not to answer <input type="checkbox"/>
4. Have you ever done anything illegal as a result of drinking, such as being arrested or had to pay a fine?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Prefer not to answer <input type="checkbox"/>
5. Have you ever had treatment for problems due to alcohol, narcotic substance or medicinal drug use? What kind of treatment?		
Place a cross against your answer	Alcohol	Other substances
I have never had treatment	<input type="checkbox"/>	<input type="checkbox"/>
Detoxification in an institution	<input type="checkbox"/>	<input type="checkbox"/>
Other form of treatment	<input type="checkbox"/>	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>	<input type="checkbox"/>
6. How often did you drink alcohol during the year last year?		
Never	<input type="checkbox"/>	
Once a month or less often	<input type="checkbox"/>	
2-4 times a month	<input type="checkbox"/>	
2-3 times a week	<input type="checkbox"/>	
4 times a week or more often	<input type="checkbox"/>	
Prefer not to answer	<input type="checkbox"/>	
7. What is positive for you about drinking alcohol?		
It makes it easier to socialize	<input type="checkbox"/>	
It helps me fit in with other students	<input type="checkbox"/>	
It helps me get to know Norwegians	<input type="checkbox"/>	
Other	<input type="checkbox"/>	
None of the above	<input type="checkbox"/>	
Prefer not to answer	<input type="checkbox"/>	
8. Has there been anything negative for you about other students' drinking?		
I have been hurt or assaulted, physically or sexually	<input type="checkbox"/>	
I have been socially excluded because I do not drink	<input type="checkbox"/>	
I started drinking more myself.	<input type="checkbox"/>	
Other	<input type="checkbox"/>	

None of the above	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>
9. How often did you use drugs other than alcohol during the year last year?	
Never	<input type="checkbox"/>
Once a month or less often	<input type="checkbox"/>
2-4 times a month	<input type="checkbox"/>
2-3 times a week	<input type="checkbox"/>
4 times a week or more often	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

What is negative for you about using drugs or alcohol?						
	Never	Less often than once a month	Every month	Every week	Daily or almost daily	Prefer not to answer
Over the past year I have had trouble at work, in school or at home because of drugs/alcohol.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Over the past year I have sought medical or hospital care or had medical problems (for example memory loss or hepatitis) because of drugs/alcohol.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Over the past year I have been in quarrels or used violence under the influence of drugs/alcohol.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Over the past year I have had trouble with the police because of drugs/alcohol.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Multigroup Ethnic Identity Measurement**

In terms of ethnic group, I consider myself to be _____.					
	Strongly agree 4	Agree 3	Disagree 2	Strongly disagree 1	Prefer not to answer
I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs.	<input type="checkbox"/>				
I am active in organizations or social groups that include mostly members of my own ethnic group.	<input type="checkbox"/>				
I have clear sense of my ethnic background and what it means for me.	<input type="checkbox"/>				
I think a lot about my how my life will be affected by my ethnic group membership.	<input type="checkbox"/>				

I am happy that I am a member of the group I belong to.	<input type="checkbox"/>				
I have a strong sense of belonging of my own ethnic group	<input type="checkbox"/>				
I understand pretty well what my ethnic group membership means to me.	<input type="checkbox"/>				
In order to learn more about my ethnic background, I have often talked to other people about my ethnic group.	<input type="checkbox"/>				
I have a lot of pride in my ethnic group	<input type="checkbox"/>				
I participate in cultural practices of my own group, such as special food, music, or customs.	<input type="checkbox"/>				
I feel a strong attachment towards my own ethnic group	<input type="checkbox"/>				
I feel good about my cultural or ethnic background.	<input type="checkbox"/>				

Erika Kathleen Gubrium  
Postboks 4 St. Olavs plass  
0130 OSLO

Vår dato: 07.11.2017

Vår ref: 56198 / 3 / OASR

Deres dato:

Deres ref:

## Tilråkning fra NSD Personvernombudet for forskning § 7-27

Personvernombudet for forskning viser til meldeskjema mottatt 26.09.2017 for prosjektet:

56198	<i>Academic and Nonacademic factors influencing life satisfaction and academic performance of International students studying in Norwegian universities</i>
Behandlingsansvarlig	<i>Høgskolen i Oslo og Akershus, ved institusjonens øverste leder</i>
Daglig ansvarlig	<i>Erika Kathleen Gubrium</i>
Student	<i>Mohammad Owais Hadi</i>

### Vurdering

Etter gjennomgang av opplysningene i meldeskjemaet og øvrig dokumentasjon finner vi at prosjektet er unntatt konsesjonsplikt og at personopplysningene som blir samlet inn i dette prosjektet er regulert av § 7-27 i personopplysningsforskriften. På den neste siden er vår vurdering av prosjektopplegget slik det er meldt til oss. Du kan nå gå i gang med å behandle personopplysninger.

### Vilkår for vår anbefaling

Vår anbefaling forutsetter at du gjennomfører prosjektet i tråd med:

- opplysningene gitt i meldeskjemaet og øvrig dokumentasjon
- vår prosjektvurdering, se side 2
- eventuell korrespondanse med oss

### Meld fra hvis du gjør vesentlige endringer i prosjektet

Dersom prosjektet endrer seg, kan det være nødvendig å sende inn endringsmelding. På våre nettsider finner du svar på hvilke [endringer](#) du må melde, samt endringskjema.

### Opplysninger om prosjektet blir lagt ut på våre nettsider og i Meldingsarkivet

Vi har lagt ut opplysninger om prosjektet på nettsidene våre. Alle våre institusjoner har også tilgang til egne prosjekter i [Meldingsarkivet](#).

### Vi tar kontakt om status for behandling av personopplysninger ved prosjektslutt

Ved prosjektslutt 01.05.2018 vil vi ta kontakt for å avklare status for behandlingen av personopplysninger.

*Dokumentet er elektronisk produsert og godkjent ved NSDs rutiner for elektronisk godkjenning.*

Se våre nettsider eller ta kontakt dersom du har spørsmål. Vi ønsker lykke til med prosjektet!

Vennlig hilsen

Marianne Høgetveit Myhren

Øivind Armando Reinertsen

Kontaktperson: Øivind Armando Reinertsen tlf: 55 58 29 94 / [Oivind.Reinertsen@nsd.no](mailto:Oivind.Reinertsen@nsd.no)

Vedlegg: Prosjektvurdering

Kopi: Mohammad Owais Hadi, [s310239@stud.hioa.no](mailto:s310239@stud.hioa.no)



## Prosjektvurdering - Kommentar

---

Prosjektnr: 56198

The purpose of the project is to explore how non-academic factors and academic factors have an influence on the life satisfaction of international students studying in Norwegian universities, as well as academic performance during their studies.

The sample will receive written information about the project, and give their consent to participate. The letter of information is well formulated. However, we ask that you clearly state when you will terminate data processing.

There will be registered sensitive information relating to ethnic origin and health.

The Data Protection Official presupposes that the researcher follows internal routines of Oslo and Akershus University College of Applied Sciences regarding data security. If personal data is to be stored on a private computer, the information should be adequately encrypted.

Estimated end date of the project is 01.05.2018. According to the notification form all collected data will be made anonymous by this date.

Making the data anonymous entails processing it in such a way that no individuals can be recognised. This is done by:

- deleting all direct personal data (such as names/lists of reference numbers)
- deleting/rewriting indirectly identifiable data (i.e. an identifying combination of background variables, such as residence/work place, age and gender).