DET PSYKOLOGISKE FAKULTET

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Mental Health in Immigrant Adolescents
-An exploratory study of culture competence as a moderator in the
relationship between daily hassles and depression

HOVEDOPPGAVE

profesjonsstudiet i psykologi

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Autumn 2007

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Acknowledgements

Abstract

The aim of this study is to explore the role of immigration and culture change in adolescents' mental health and psychological development. This study explores the proposition of culture competence as a protective factor regarding mental health in immigrant adolescents. Our hypothesis is that culture competence moderates the effect of daily hassles on depression, measured as outcome on the depression scale CES-D. We investigate a sample consisting of 556 students from two junior high schools in Oslo where our main focus is on the group of 373 immigrant adolescents. We presumed that the group of immigrant adolescents would not differ in outcome of reported depression compared to their ethnic Norwegian peers. Nevertheless, our results show that the immigrant adolescents report more depression than the ethnic Norwegians. In accordance with our assumptions, analyses revealed high levels of both ethnic- and host culture competence and low levels of daily hassles and depression. However, we did not find culture competence to have any moderating effect on the relationship between daily hassles and ratings of depression. Future studies should include similar approaches in longitudinal studies to explore our findings and to possibly better detect developmental changes and variation in similar adolescent groups.

Sammendrag

Målet med dette studiet er å undersøke hvilken rolle immigrasjon og kultur har i forhold til å påvirke ungdoms psykiske helse og utvikling. Vi ser nærmere på et utvalg av 556 elever fra to ungdomsskoler i Oslo hvor vi spesielt fokuserer på gruppen med 373 innvandrerungdom. Dette studiet utforsker påstanden om at kulturkompetanse er en beskyttende faktor i forhold til innvandrerungdoms opplevelse av "daily hassles" (belastninger i dagliglivet). Videre ser vi på hvordan denne effekten kan beskytte mot psykiske problemer, i dette studiet målt ved utslag på depresjonsskalaen CES-D. Vi hadde en hypotese om at det ikke var noen forskjeller mellom nivå av depresjon mellom innvandrerungdommene og de etnisk norske ungdommene. Resultatene viser at det er variasjoner i henhold til rapportert depresjon mellom gruppene. I samsvar med våre antagelser hadde utvalget vårt høye skårer på både etnisk og norsk kulturkompetanse, men lave skårer på "daily hassles" og depresjon. Vi forventet at høyere nivå av kulturkompetanse ville være relatert til et svakere forhold mellom "daily hassles" og depresjon, men dette fant vi ikke støtte for. Videre forskning bør inkludere lignende tilnærming i longitudinelle studier for å utforske utviklingsendringer og variasjoner i tilsvarende grupper av ungdom.

Abbreviations

YCC- Youth Culture and Competence Study

ICSEY- International Comparative Study of Ethnocultural Youth

HSCL - Hopkin's Symptom Checklist- 25

CES-D - Center for Epidemiologic Studies Depression Scale

ECC- Ethnic Culture Competence

HCC- Host Culture Competence

DH- Daily Hassles

APPENDIX

1.0 Introduction

The traditionally homogenous Norwegian population is increasingly becoming a multiethnic society and the issue of mental health status of immigrants in Norway has with different purposes appeared on the public agenda. Today, the immigrant population in Norway consists of 415 000 persons. This group makes up a total of 8.9% of the general population (SSB, 2007b). Oslo is in a unique position when it comes to density of the immigrant population. In a cross-sectional study of adolescents between 14-17 years, the proportion of young people with immigrant background in Oslo was found to have increased from 21.5% to 28.5% between 1996-2006 (Øia, 2007). This increase encourages new research to shed light on the situation of the immigrant population at present date. This is a culturally plural group consisting of adolescents originating from a variety of family backgrounds and differing in their experiences and expectations to growing up in Norway in the 2000`s. Through history, mankind has travelled between countries, and contact between different cultures is therefore not a new phenomenon. The meeting of cultures and the resulting changes an individual experiences has been termed acculturation. For years, researchers have studied and approached children and adolescents from a perspective that focus on detecting problems and weaknesses rather than focusing on existing strengths. Advocates of the science of positive psychology stress the need for a focus on skills and competencies in individuals (Seligman & Csikszentmihalyi, 2000). We will point to the need of extending a more positive perspective to groups that have obtained positive outcomes, despite traditionally being pathologized. The understanding of immigrant adolescents' mental health is indistinct as it differs substantially between studies. Some research on international migration have reported higher rates of distress in the immigrant group compared to the host population

(Berry, 1997). A report from the Norwegian Institute of Public Health showed that adult immigrants from mainly Asia and Africa had a frequency of anxiety and depression symptoms of 24% while the number for the ethnic Norwegians on the other hand was 10%. The differences between the groups were equivalent for all age groups and both genders (Dalgard, 2006). Berry and Sam (1997) reported moderate relationships between stress and mental health, and findings from a recent large-scale comparative study of ethnocultural youth (ICSEY) show that immigrants report fewer psychological problems than their host peers (Sam, Vedder, Ward, & Horenczyk, 2006). In other research it has been found that children and adolescents having immigrant background adapt well (Fulgini, 1998; Phinney, 2003) and even report better mental health than their host peers (Sam, 2000, 2006; Sam & Virta, 2003). In an effort to get a clearer picture of this group, a multitude of research has brought attention to different factors in the everyday life of immigrants and host adolescents that may contribute to a better understanding of their challenges in adaptation.

Many challenges arise when introduced to a new culture and meeting a new culture is viewed as a stressful experience (Berry, 1970). Berry termed this acculturative stress, and researchers seek to find the underlying factors causing this effect. Although a single stressful event may not place great demands on the coping abilities of a person, it is when multiple problems accumulate that the potential for serious disorder occurs. Individuals learning a new culture may experience obstacles, which seemingly are normal challenges in everyday life, as events of strain due to adaptation to what might be a total new set of rules and habits (Berry, Kim, Minde, & Mok, 1987). These obstacles are viewed as daily hassles and may act as risk factors in developing mental health problems (Kanner, Coyne, Schaefer, & Lazarus, 1981). Part of the reasons for the

possible experienced stress is the accommodation to a second culture in regard of individuals' identity. Researchers argue that the psychological well-being of immigrants will be affected by their sense of feeling of belonging to a particular ethnic group (Phinney & Chavira, 1992; Phinney, Horenczyk, Liebkind, & Vedder, 2001). Ethnic identity is developed as individuals become aware of other groups and of the ethnic differences between themselves and others, and these last-mentioned studies have shown that the combination of a strong ethnic identity and a strong identification with the host culture promotes the best adaptation. The importance of learning culture-specific skills has been fronted as another challenge in the process of acculturation (Ward, 2001). These skills include learning the host language and the norms and values of this culture, and represents different challenges for the acculturating individual.

During acculturation, gaining competence within the ethnic and/or host culture is assumed to increase adaptation within the current cultural domain and in this way function as a protective factor in regard of mental health. Host- and ethnic culture competence are viewed as acculturation-specific protective factors that may be beneficial for a healthy adaptation (Oppedal, Røysamb, & Heyerdahl, 2005). Oppedal, Røysamb and Sam (2004) report that higher levels of ethnic culture competence have been related to lower levels of depression. Host culture competence has been found to increase the feeling of acceptance and acknowledgements as part of the mainstream society and in this sense strengthens adaptation. Having a sense of belonging to and understanding of, the different cultures in which one is part of can therefore be seen as strength for the youth. In a society becoming more and more culturally diverse, young peoples' competence in navigating in and between different cultures should be viewed as a

considerable resource for future working life in the Norwegian society and for decreasing cultural discrepancies and conflicts.

We seek to examine how theories dominating the field of acculturation research may explain the adaptive outcomes of acculturation for adolescents with ethnic minority background. An aspect that will be looked into is what role development plays in the adaptation of adolescents that undergo acculturation. This study will explore if culture competence has the potential to act as a moderator in the relationship between daily hassles and depression, and further look at the effects of acculturation on mental health. To our knowledge, this study is the first to investigate the relation between daily hassles and culture competence. To do this, our study will follow Grant et.al.`s (2006) recommendation to integrate moderator and mediator research for better understanding the complex ways in which stressful life experiences affect the well-being of children and adolescents. The two terms are often used interchangeably by researchers (Baron & Kenny, 1986), and we will therefore strive to make the distinction clear. We ask whether a presumed resource as culture competence may moderate the effects of daily hassles within the individuals own sociocultural domain or across domains. Investigating which sociocultural factors that affect mental health in youth can hopefully increase our knowledge about this group and form the basis of future interventions to ensure this group a good mental health.

1.0.1 The Youth, Culture and Competence study

This field study was administrated by the Norwegian Institute of Public Health, Division of Mental Health. The study is called "UngKul"(Ungdom, Kultur og Mestring, in the following referred to as YCC, Youth, Culture and Competence) and it investigates how social and cultural factors affect children and youth development, mastering,

competence and prosper. YCC follows children in Bergen and Oslo with different ethnic

backgrounds from the age of 10 until they have graduated from senior high school at the

age of 18-19. The study consists of three different groups of informants; a longitudinal

study following 4000 families from their children are 10 until they are 19 years old, a

group of unaccompanied minor asylum seekers and students from two different junior

high schools in Oslo; A & B. Our study is based on the latter group of informants, called

"School YCC". The co-operation with the two schools first started in 2005 and data

collection for our study was done during spring 2006. The composition of our sample is

described below. The goal of School YCC is to develop health profiles for each of the

schools which can be used to increase prosperity and solidarity, and further the study

serve the purpose of securing the quality of the research methods that are being used. The

superior aim in the YCC study is to acquire knowledge about the importance of the

schools sociocultural environment for the adolescent's mental health and prosperity, and

also the development of mastering and cultural competence within different ethnic

backgrounds.

1.1 Context and concepts of acculturation

　　　1.1.1 Immigrant.

　　　An immigrant is in the YCC study defined as a person who has permanent

residency in Norway, but with both parents born in another country independent of

national citizenship (SSB, 2007a). It is important to be aware of the possibility of

different delimitations of the term in the many studies referred to in this thesis. Our

sample includes adolescents having an ethnic minority background, defined as

respondents having two parents born in other countries than Norway, and in addition we

have included students having one foreign-born parent and three or four grandparents

born abroad. We will be using the term immigrant adolescents or adolescents having an

ethnic background to refer to this group.

1.1.2 Culture.

Essential to the study of acculturation is the concept of culture. Culture may be

understood as the economic, historical and political contexts we live in, but today there is

no single definition in which all scholars can agree. A common view, in which we can

agree, is that culture consists of those aspects of life that people construct and share

within a specific reference group (e.g., race, ethnic, social class, age cohort, gender and

nationality). The term is so widely used and multidimensional that its precise meaning

varies from one situation to another (MacLachlan, 1997). Culture is increasingly seen to

be more than a fixed set of guiding principles or structures affecting individual

behaviour. Erikson (1963) proposed a view of culture as an integrated and inseparable

part of the life of any person developing within any cultural context (cited in Valsiner &

Lawrence, 1997). He argued that culture was heterogeneous and that persons develop

under different conditions through a lifelong process of development. Bronfenbrenner

(1979) argued through his ecological systems theory that to understand human

development one needs to take into account the system or the societies the person

develops in. Following this, culture may be viewed as a pattern of meaning that shapes

human experiences and gives a framework for the understanding and belief that lies

behind human actions. Finally, Barth (1994) stressed the importance of viewing culture

as present in the interaction between people and as a dynamic construct. A culture-

inclusive life-span perspective on human development is a complex task cross-cultural

researchers through the years have recognized as being important (Berry & Sam, 1997).

We will in our theoretical approach emphasise how cultural encounters affect mental

health.

1.1.3 Acculturation.

Acculturation has been a central research area for anthropologists for decades; in psychology articles reviewing and integrating literature on acculturation began appearing in the 1980s and 1990s corresponding with the increasing migration of people in the world. Redfield, Linton, & Herskovits proposed a definition of the concept in 1936: "Acculturation comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original culture patterns of either or both groups" (Berry, 1997, p.7). This definition is regarded as the classic definition of the concept and assumes that the result of two cultures coming together will be that one or both culture change. Today, there is a plural amount of understandings of acculturation.

Psychological researchers are referring to the term "psychological acculturation" as the changes an individual experiences as a result of being in contact with other cultures, or participating in the acculturation one's cultural or ethnic group is undergoing (Berry, 1989; Castro, 2003). Berry (1997) argues that acculturation implies changes at two different levels. At a group level, acculturation could be changes in the group's political organization or social structure, while at the individual level acculturation is a change in the psychology, for instance changes in the sense of self and ones cultural identity. At both levels, acculturation is a dynamic process between the individual and the environment (Berry, 1997). Psychological acculturation is argued to involve affective, behavioural and cognitive changes, and this has by Ward (2001) been termed the ABCs of acculturation. The process of acculturating to a new society has by many researchers been defined as a one-dimensional construct (Cuèllar, Nyberg, Maldonado,

& Roberts, 1997). This notion implies that adapting a new identity happens through a continuum from heritage to the identity of the mainstream, the two identities being negatively correlated so that when one is strong the other is necessarily weak. Criticism towards this notion have led to the idea that acquiring culture competence in a new culture can be independent of beholding ones heritage, looking at the development of heritage and mainstream identities as separate processes (Berry, 1997; Phinney, 2003). Following this, individuals may posses dual identities and engage in cultural frame switching, namely called biculturalism (Benet-Martínez, Leu, Lee, & Morris, 2002; Birman, 1998). This allows personal flexibility to draw upon different sets of skills depending on the specific cultural demands of different situations. Most researchers today have moved away from the assumption of the one-dimensional model of acculturation and acknowledge the independent effects of plural cultures on development. Acculturation studies primarily focus on changes with origins in "physical contact" between individuals and groups (Berry, 1989), whereas Sam and Oppedal stress that to get a satisfactory perspective on acculturation a life-span perspective should be embedded (Sam & Oppedal, 2002).

As changes in acculturation may occur over a very long period of time, long-term outcomes, termed adaptation, has become of great interest to researchers. There have been, and still are, ongoing debates around the definition and operative meaning of this term. It is argued that adaptation comes from gaining culture-specific skills necessary to thrive in a new culture (Ward, Bochner, & Furnham, 2001). Adaptation has been referred to as the level of "fit" between the acculturating individual and the majority cultural context (Castro, 2003). Further, researchers have suggested a distinction between psychological adaptation and sociocultural adaptation (Searle & Ward, 1990). These

have been described as complimentary domains of adaptation and Ward and Kennedy

(1999) have consistently found a positive relationship between the two, although they

might be argued to derive from different theoretical foundations and are predicted by

different variables (Ward & Kennedy, 1993). Sociocultural adaptation includes mastery

of culture appropriate skills needed to function and succeed in a particular culture, while

psychological adaptation refers to the psychological or emotional well-being and

satisfaction during the acculturation process (Searle & Ward, 1990).

Who experience acculturation? Research has traditionally described acculturation

as a process that involves changes in both the ethnic minority groups and in the host

population (Berry, 2006a). The difference between groups who experience acculturation,

and the effect this could have on the acculturation process, is distinguished by Berry and

Sam (1997) on at least three dimensions; mobility, permanence and voluntariness. As

opposed to for instance work immigrants who have voluntarily migrated, for refugees

and asylum seekers, migration is usually involuntary. The second group consists of

people who resettle in a different culture temporarily. Finally, Berry and Sam distinguish

the groups in a third dimension which is characterized by how voluntary their

engagement is in intercultural contact. This group consists of ethnocultural groups as

opposed to indigenous people. The ethnocultural group is described as a group who are

being drawn or pulled toward a new culture, usually in hopes of a better lifestyle. Berry

(1997) has argued that those who immigrate to a new society must find their way to

acculturate and adopt. They must work out how they wish to maintain own heritage

culture, how to make contact and how to participate with the host culture. These are

challenges that may result in different outcomes, which Berry has proposed in a

conceptual framework. His model consists of attitudes and behaviour and is divided into

four possible acculturation strategies: assimilation, integration, separation and

marginalization. When individuals do not wish to maintain their own culture, but seek

interaction and adopt customs of the dominant culture, then assimilation is defined. In

contrast, if an individual holds on to his heritage culture, and do not wish to have contact

with other cultures, then separation is defined. Integration is defined when a person seeks

to maintain contact with his own culture, but participates with people from other

cultures. Finally, an individual is characterized as marginalized if he/she is distancing

herself/himself from both cultures, and there is little possibility or interest in

participating in either culture (Berry et al., 1987). This approach advocate studying the

process of how individuals deal with acculturative problems on first encountering them,

and later over time (Sam, 2006). Negative outcomes from acculturation have through

research been reflected by anxiety, depression, psychosomatic symptoms and identity

diffusion (Aronowitz, 1984; Berry & Sam, 1997; LaFromboise, Coleman, & Gerton,

1993; Phinney, 1991). How each individual adapt is clearly a multifaceted area and of

interest to cross-cultural researchers. Variation in mental health will as a natural

consequence occur, and in our study we will look further into some of these aspects of

acculturation. We would like to do this by introducing theoretical approaches.

1.2 Theoretical approaches to the study of acculturation

Over the last 50 years the research field and knowledge about acculturative

processes has evolved. We will look closer at the three major theoretical approaches that

have dominated the field and give an account of Sam and Oppedal's (2002) more recent

approach where they regard acculturation as a developmental pathway. Together, these

contributions constitute the background for our hypotheses and will together make up

part of the framework for discussion in our study. We would like to stress the theoretical

foundation in our study of the population of immigrant youth, and in this regard we

would like to argue in accordance with Sam and Oppedal (2002) that changes occurring

during adolescence as a result of cultural encounters could be perceived as

developmental in nature.

     1.2.1 Stress and coping.

     The process of cultural learning and shedding may involve psychological conflict

when there are incompatible values held by members of the majority and minority

groups. Lazarus and Folkman (1994) proposed acculturation to be a stress reaction.

Immigrant health is often affected because of this process, and depression, anxiety and

psychosomatic problems have been identified as mental health consequences among

acculturating individuals (Berry & Sam, 1997). Berry proposed the concept of

acculturative stress (1970) to deal with this aspect of acculturation and further argues that

acculturative stress is a response to life events rooted in intercultural contact (Berry,

2006b). Some studies have indicated that it is not migration in itself which is a threat to

mental health, but rather it depends on the social and cultural context the individual is

part of (Dalgard, Thapa, Hauff, Mccubbin, & Syed, 2006). Others claim that the major

difficulties related to cultural changes may exceed this specific persons ability to cope

and may lead to serious psychological disturbances (Berry & Sam, 1997). It has been

claimed that the relationship between acculturative stressors and psychological

adjustment among immigrants is not deterministic, but rather depends on a number of

risk or protective factors (Aronowitz, 1984; Berry, 1989; Searle & Ward, 1990; Vega &

Rumbaut, 1991). Some of these protective factors being social support (negatively

correlated with psychiatric symptomatology) and locus of control (internal locus of

control facilitates cross-cultural adjustment) (Ward, 2001). In our research we will explore if culture competence could be included as one of these protective factors.

1.2.2 Culture learning.

The culture learning framework takes into account the significance of culture-specific variables in the adaptation process and is based on the assumption that adaptation problems arise due to difficulties with managing everyday social encounters (Masgoret & Ward, 2006). The culture learning approach has its roots in social and experimental psychology and has been strongly influenced by Argyle`s (1969) work on social skills and interpersonal behaviours. It is argued that adaptation comes in the form of learning the culture-specific skills necessary to thrive in a new culture (Ward, 2001). Different barriers have been identified, and cross-cultural differences in nonverbal communication along with rules and conventions, norms and values that govern interpersonal behaviour are among the factors giving rise to the understanding of intercultural variations and possible challenges.

At the fundamental level, culture-specific knowledge has been argued to predict sociocultural adaptation (Searle & Ward, 1990), implying that acculturation is embedded in the culture specific developmental tasks that influence mental health. However, knowledge must be accompanied by skills, and host language has been argued to be an important skill as it affects the quality of intercultural reactions (Ward, 2001). Language skills are associated with less adaptation problems (Ward & Kennedy, 1993), and increased interaction with members of the host culture, as cited in Ward (2001). This adaptation has been argued to be facilitated by contact with the host culture. Through contact, interaction with peers from the host culture is assumed to increase. In studies of cultural contact, Bochner has suggested culture learning to be a direct function of the

number of friends from the host culture an individual has (Bochner, 1982). The

acculturation process is suggested to be harder the more distance there is between the

host and ethnic culture (Ward & Kennedy, 1999). Longitudinal research data has

confirmed sociocultural adaptation problems to be greatest during the early stages of

transition and then decrease significantly over time (Ward & Kennedy, 1999). This

suggests a learning curve to adaptation. Recent research has acknowledged the

importance of these variables as predictors of the sociocultural adaptation (Berry, 1997;

Ward, 2001).

1.2.3 Social identification.

Both Tajfel (1978) and Erikson (1968) have through their theories of identity

development focused on the importance of social categorization and comparison. Their

studies show how being part of a minority group may affect the group members' identity

development making them internalize possible negative views from the dominant

society. Tajfel (1978) claims that members of the minority group have the choice of

accepting conceivable negative views from the dominant society or search for their own

identity regardless of the dominant society's view. He claims that social categorization

can be considered as a system of orientation which helps the individual in defining its

identity. As changes occur in many areas during acculturation, one of the most important

changes relate to ethnic identity involving the recognition or self-identification of oneself

as belonging to an ethnocultural group (Ward, 2001). Aboud (1987) has shown that

children learn their ethnic self-label between the ages of four and seven, this age varies

between ethnic groups and the amount of contact with other groups. He further claims

that by eight or ten years of age, children develop an understanding of ethnic constancy

(that their ethnicity does not change over time or superficial changes). The processes

involved in developing, changing and maintaining ethnic identity are of some concern.

Results provided show that the longer the residency in a new culture, the greater is the

immigrants' involvement with this culture. An implication of this is that adolescents are

more likely to be bicultural and integrated, but still have a strong ethnic identification

with their ethnic group (Phinney, Berry, Vedder, & Liebkind, 2006).

Several studies have shown that bicultural adolescents might be expected to be

well adjusted (Birman, 1998; LaFromboise et al., 1993) and that ethnic minorities who

develop skills within different cultural domains will have better physical and

psychological health than those who do not. Belonging to one or more cultural groups

constitutes an aspect of one's social identity as well as it is an aspect of acculturation

(Phinney, Berry, Vedder et al., 2006). Identity and acculturation are both predictors of

migrant adaptation to new environments and particularly in regard of psychological

adjustment (Phinney, 1989; Ward, 2001). In this regard, social identification is of

concern when studying acculturation and its effect on mental health.

1.2.4 Acculturation Development.

In the so far presented theoretical approaches; affect, behaviour and cognition have been

distinguished as three central components in the process of acculturation. The

determinants, effects and correlates of culture contact have mostly been referred to as

interactions that may be difficult and stressful for the individual. In Sam and Oppedals'

contribution to the understanding of acculturation, they argue that there is a missing link

in Wards review (2001) of acculturation to take into account the developmental

perspective on the psychological adaptation of ethnic minorities (Oppedal, 2006; Sam &

Oppedal, 2002). Sam and Oppedal (2002) argue that ambiguities in the final outcome of

acculturation and differences in acculturation experiences of adults and children make it

necessary to bring developmental perspectives closer into this line of research. Development is often described in the literature as a process of continuity/discontinuity and stability/instability. Developmental change can occur along either or both of these two dimensions. Some parts of development may be continuous within a person, for example personality traits, while other may be changing and altered and are regarded as discontinuous.

Adolescence is assumed to be a time of storm and stress (Erikson, 1968) and adolescents often change both in behaviour and in their dependence of others in this particular period. According to Eriksons theory of ego identity development (1950), ego identity formation is the central task at the "Identity vs. Role Confusion" stage (13-19 years). As operationalized by Marcia (1980) this stage provides a useful starting point for studying ethnic identity development in adolescence. An individual in the process of exploration without having made a commitment is in the moratorium stage. Phinney (1989) claims that for adolescents, the moratorium period begins as a result of the youths increasing cognitive ability, their growing understanding of social and historical processes and personal experiences related to being a member of an ethnic group. As ethnic identity becomes a more salient issue, many adolescents question the meaning of their ethnicity and its place in the larger context.

The concept of acculturation development was proposed to encompass the circumstances that children and adolescents with immigrant background might experience (Berry & Sam, 1997). Most of the research on acculturation has so far focused on adult migrants and older studies have been criticised for implementing paradigms for adult subjects on children and adolescents (Sam, 1995). In their article, Sam & Oppedal (2002) stress that neither developmental nor acculturation theories

address in a large enough extent the challenges encountered by children growing up in

two cultures, and have thus suggested a model of acculturation development to study the

acculturation of children and youth. In their model they have included perspectives from

ecologically based developmental theories and acculturation approaches in psychology.

Different definitions of development point to a systematic organized process of enduring

changes that are successive and take place throughout one's life (Lerner, 2002), and that

are based on the idea of a continuous and reciprocal interaction between environment

and organism. In the same way, acculturation and developmental processes occur

simultaneously throughout the life-span, and in close interaction with each other, making

it difficult to identify their independent roles. According to Sam and Oppedal (2002),

acculturation may be defined as a developmental process towards adaptation that

includes gaining competence within more than one cultural setting. They stress that

rather than being two separate processes, acculturation is part of the child's development.

Other researchers argue that human development and acculturation of immigrants both

involve change, but can best be understood by being considered separately (Phinney,

1989; Ward, 2001). Culture is a main ingredient in the life of every person, and is

situated in everyday activities where it guides developmental processes (Oppedal, 2006).

Gaining competence within ethnic and/or host culture is assumed to increase adaptation

within the current cultural domain. Sam and Oppedal (2002) argue that socio-cultural

skills in terms of developmental tasks differ in content depending on age and setting.

Arguing that immigration is not necessarily a risk for mental health problems, we seek to

investigate the individual factors that protect against the potential stress during

acculturation and other developmental challenges.

Researchers have related the adaptation problems (including school problems, behavioural problems, identity and generational conflicts) immigrant adolescents experience to their immigrant status and therefore often to the gap between child-rearing styles and educational values of family and those of the host society (Sam & Berry, 1995). It is obvious that all individuals undergo development, involving biological and maturational changes and the learning of behaviours. We may then question the accuracy of conceptualizing immigrant adolescents' adaptation outcomes as arising only from an acculturation process without the developmental component. On the contrary, it is assumed that for adolescents who do not belong to an ethnic minority group, developmental transitions and possible challenges constitute the basis of their adaptation problems and has not usually been viewed as possible difficulties with acculturation (Sam & Oppedal, 2002). In regard of this, we would like to argue that development should be of interest when studying the process of acculturation.

In this study we view acculturation as a form of adaptation. We strive to theoretically follow a dynamic way of including development with the particular circumstances of immigrants growing up in a new society. We argue in line with Oppedal and Sam (2002), that acculturation is part of development and that achieving culture competence is one of the developmental tasks necessary to thrive in a new culture. So far, research has reported inconclusive answers to the relation between immigration and mental health, but despite this, the theoretical framework serve as advantageous in the search for an understanding of how individuals are affected and changed by the acculturation process. In the following, we will give definitions and clarifications of central concepts used in our analyses.

1.3 Definitions and clarifications of theoretical concepts

     1.3.1 Culture Competence.

     Basing their definition of culture on Bandura's (1978) concept of reciprocal determinism, Hammer, Gudykunst, & Wiseman (1978), suggest that behaviour is influenced by and influences a person's cognition and social environment and this further results in the achievement of a multilevel continuum of social skills and personality development, viewed as culture competence (LaFromboise et al., 1993). Second-culture acquisition represents challenges for the individual, but researchers claim that in more domains in which one is competent, the fewer problems an individual will have functioning effectively within both cultures.

     Oppedal and colleagues (2004) argue that culture competence is required as a result of participation and interaction within a culture, through motivation to gain acceptance from that culture. They consist of knowledge and skills about communication, interpersonal patterns of interaction embedded in cultural context. Skills like behaviour patterns, interpersonal relationships and communication are all central markers of the competence necessary to take part in a particular group's activities and obtain a sense of belonging (Oppedal, 2006). These skills have, according to D'Andrade (1995), been developed in children through hierarchically organized cultural scripts or working models based on their knowledge of each specific cultural system. These working models may guide them to comprehend culture-specific skills and communication and form the basis for developing culture competence.

     Oppedal regards culture competence as two distinct abilities (ethnic- and host culture competence) making immigrants able to engage in cultural switching between culture-specific working models. Having abilities in each arena facilitates interaction,

close relations and achievement of important goals within the relevant sociocultural

settings, and is assumed to be associated with positive developmental processes

(Oppedal, 2006). Oppedal, Røysamb and Sam (2004) have found ethnic culture

competence to be associated with social support from the family. While ethnic culture

competence mostly is acquired through the interaction with parents, host culture

competence has its most important origin in interaction with peers in the school setting

(Oppedal, 2006). Ethnic and host culture competence are considered to develop at

different paces. As ethnic culture competence is often well developed in early childhood,

host culture competence is seen to increase the most in adolescence. Oppedal et al.

(2004) points out that normative identity formation and social and cognitive development

during adolescence are associated with changes of social support in culture competence

within both ethnic and host domains. Host culture competence is a necessary resource for

social integration into the host society network according to the assumption that culture

competence facilitates social support; host culture competence through social support

from classmates and ethnic competence trough social support from family (Oppedal,

2006). The development of ethnic culture competence has resemblance to the

development of ethnic identity. Phinney (1989) describe that the development of ethnic

identity may have its origins in the immediate family as it provides the initial base for

feelings about what is normal and comfortable, and these feelings are generally

supported in the immediate community. Once children encounter others who are

different in appearance, language, behaviours, or attitudes, they begin to categorize

themselves and others.

       The achievement of culture competence is seen as a protective resource regarding

outcomes in mental health, because it is argued to act as a facilitator of social support. As

research on social support shows clear connections between the latter and positive mental health outcomes (Bryant, 1994; Bö, 1994; S. Cohen & Wills, 1985; Oppedal, 2006), culture competence is argued to facilitate good mental health. Through looking at culture competence and how this may act as a buffer against the experience of daily hassles, we will explore closer in what way culture competence affect mental health.

1.3.2 Daily hassles.

The study of the relationship between emotion and physical health has to a large degree focused on the influence of stress and the psychological experience of this. Research on stress, coping resources, and adjustment has suggested that daily hassles reflect how well individuals adjust (Hee-og, 2000). Hassles are the irritating, frustrating, and distressing experiences that to some extent characterize everyday transactions with the environment (Kanner et al., 1981). Most often they are related to life domains like family, work, school, social environment and peers. They are in comparison to major life events (e.g. parents divorce, change of school) hassles we meet on a more frequent basis. Research has established that daily hassles are cumulative and may affect mental health in a larger degree than major life events (Cassidy, 2000; Kanner et al., 1981; R. Williams, Zyzanski, & Wright, 1992). Among adolescents, daily hassles have been shown to be more powerful predictors than major life events when it comes to psychological symptoms (R. Williams et al., 1992). Kanner et.al.(1981) argue that there is a significant relationship between the frequency of daily hassles and psychological symptoms.

Daily hassles have been suggested to have an impact on health through the shattering of social relationships, habits and patterns of activity, but also through daily hassles' affective significance for each individual person (Cassidy, 2000). Through this

function, daily hassles may be a predictor of health status, and may for immigrants stand

as a key mediating factor in the explanation of adjustment (Gaudet, Clèment, &

Deuzeman, 2005). A large amount of research has risen around acculturative stress.

Early views emphasized that culture contact and change inevitably led to stress, but

today there's an understanding of the level of stress as depending on a number of

acculturative factors (Berry, 1989), and many of its aspects are related to the nature of

daily hassles. Language, status, expectations, contact discrepancy and societal attitudes

are all factors that may be experienced as daily hassles in accordance to adaptation. An

example of this is that children may experience conflict between their parents' cultural

values and expectations from the host culture (Lay & Nguyen, 1998). Gaudet et.al.

(2005) argue that while host individuals experience a variety of daily hassles, in addition

to this, immigrants face acculturation specific hassles.

1.3.3 Depression in adolescents.

A lot of research exists in the field about how adolescence is a time of vulnerability to

mental health. More recently, studies have focused on the mental health of adolescent

immigrants and looked at the combined effects of ethnicity and acculturation in relation to

mental health (Oppedal et al., 2004). Previous research have typically examined mental

health in terms of symptoms of depression and anxiety (Liebkind & Jasinskaja-Lahti,

2000). Common symptoms of depression are among others, reduced concentration and

attention, reduced self-esteem and self-confidence, and in general a lowered mood. Wight

et.al (2004) found the risk for adolescent depression to be especially pronounced among

economically disadvantaged ethnic minority adolescents. The findings from the Oslo

Health Study showed that girls in 1st generation and boys in 2nd generation seem to be

particularly vulnerable in developing mental health problems (Oppedal et al., 2005).

Fulgini (1998) and Phinney (2003) found that children and adolescents having immigrant background adapt well, and other studies report that they have better mental health than their host peers (Sam, 2000, 2006; Sam & Virta, 2003). Daily hassles have through many studies been found to have a close link to depression. Several studies indicate that adolescent females report more negative life events than their male peers (Siddique & D'Arcy, 1984). The authors found the results to indicate that female adolescents are highly susceptible to both family and peer-group stress and this contributes to greater depression, anxiety, and other symptoms of distress. In terms of school stress, the gender differences in symptoms tend to disappear. The trajectory of girls' depressed mood after 13 years of age was significantly related to changes in the number of life stressors they experienced, whereas the slope in depression trajectory for boys was not affected by the rate of change in life stress. We seek to find further knowledge about the possible effects of acculturation on mental health and for this purpose use depression as an outcome measure on mental health.

1.3.4 Distinctions in the relationship between daily hassles, depression and culture competence.

Within the literature, there is a distinction between two forms of relationship which have been identified; namely a moderating and a mediating relationship, but the terms are often used synonymously. In general terms, a moderator is a variable that affects the direction of the relation between an independent and a dependent variable (Baron & Kenny, 1986). A variable is said to be a mediator if it accounts for the relationship between the independent and the dependent variable. Statistical criteria and procedures have been presented to test whether a variable is a moderator or a mediator. A variable is a *moderator* if the interaction between the independent variable and the

moderator is significant when the other relationships are controlled for. For culture competence to qualify as a moderator in the relationship between daily hassles and depression, it is important to demonstrate a significant interaction between daily hassles and culture competence. To establish *mediation*, Baron and Kenny suggest a series of multiple regression models where three conditions must be met; first, the independent variable must significantly affect the mediator. Then, the independent variable needs to significantly affect the dependent variable. Third, when the dependent variable is regressed on both the independent and the mediator, the mediator must be shown to affect the dependent variable. For the mediation model to hold, a previously significant relationship between the independent and the dependent variable must be less once the mediator is controlled for. We will do analyses of the possible role of culture competence as a moderator or mediator in the relationship between daily hassles and depression. We do not assume mediation, but we will still explore this approach on the background of the earlier reported imprecise use of the moderator and mediator terms (Baron & Kenny, 1986). These two models will be used to explore the relationship between daily hassles, culture competence, and depression in our sample.
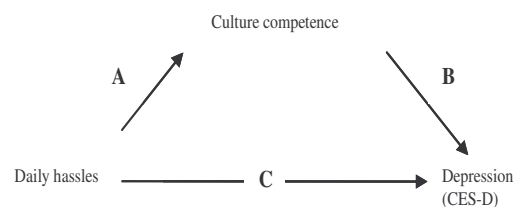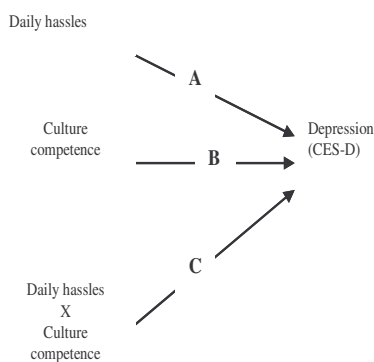

Figure 1: Moderation model of culture competence   Figure 2: Mediation model of culture competence

1.3.5 Research questions.

Seeking to understand which factors contribute to the adaptation in a new culture, we would like to propose a relationship between daily hassles and mental health, and assume that culture competence may function as a moderator in this relationship. According to theory and empirical findings, gender differences in depression are generally found, with girls reporting higher levels of depression. Further, adolescents with ethnic minority background have been found to be more vulnerable to depression than their host national peers, but these assumptions are not conclusive. These assertions will first be investigated.

Extensive research has found that stressors may represent a context that function as a risk that might lead to psychological problems in children and adolescents (L. H. Cohen, Burt, & Bjorck, 1987). Further, immigrant youth have been found to be in possession of high levels of culture competence (Oppedal et al., 2004), and we assume our sample to report similar levels. Culture competence will be measured as both ethnic- and host competence to see in which degree each of them affects the relationship between the independent and the dependent variable. Moderators play a key role in helping us to understand the role culture plays in shaping behaviour. We seek to find a significant effect between the interaction of the predictor and the moderator on the outcome variable that will support our hypothesis of culture competence as a central factor to adolescents' mental health.

Based on theory and recent empirical findings the following hypotheses were formulated:

- H1: There are no difference between the level of depression in immigrant adolescence and Norwegian peers.

- H2: Ethnic- and host culture competence is assumed to be negatively related to the outcome of depression.

- H3: It is expected that ethnic- and host culture competence will moderate the relationship between daily hassles and ratings of depression. Specifically, it is predicted that higher levels of culture competence will relate to weaker relationships between daily hassles and depression.

2.0 Method

This field study was administered by the Norwegian Institute of Public Health, Division of Mental Health. The study investigates how social and cultural factors affect children and youth development, coping, competence and prosper. The institute examines through the project "Youth, Culture and Competence" how youth in two different schools in Oslo, A & B, are coping in their daily lives. The co-operation with the two schools first started in 2005 and data collection for our study was done during spring 2006. This is a cross-sectional study, and will therefore be studying individuals at only one point in time.

2.1 Sample

The two junior high schools in this study constitute a convenience sample based on voluntary participation. The study was introduced in these schools because of the schools high share of students having minority background. The informants were students in 8th, 9th, or 10th grade, the standard age for these grades being 13-16 years. School A is situated in the inner city and School B is situated in a suburban area.

In the study, 556 students participated; 209 from School A and 347 from School B giving a response rate of 80% from School A and 83% from School B. At the inner city school (A), 84% of the participants had ethnic minority background, and corresponding numbers from the suburban school (B) was 57%. The gender distribution in the sample was 54% girls and 46% boys and this reflect the gender distribution in the two schools.

2.2 The sample used in our study

Our sample includes all students having an ethnic minority background, defined as respondents having two parents born in other countries than Norway, plus students

having one foreign-born parent and three or four grandparents born abroad. This resulted in a sample of 373 valid respondents.

A summary of the different nationalities represented in the study is presented here:

Table 1: Summary of nationalities

Nationality	Number	Nationality	Number
Pakistan	134	Vietnam	19
Morocco	35	Lebanon	16
Turkey	26	Iran	13
Somalia	24	Others	86
Iraq	20		

Of all the students in this sample, 69% had lived in Norway all their life. The rest had lived in Norway on average 8 years (SD 4.3). The gender distribution among the minority students did not differ from the total amount of respondents.

In addition to the target group, as comparison group we included participants having an ethnic Norwegian background. This sample consisted of 171 valid respondents with an even gender distribution.

2.3 Procedure

Prior to the data collection, principals and teachers were invited to an information meeting about how the study would be carried out and what were the projects goals. The schools received booklets about YCC in Norwegian and seven other languages (English, Arabic, Hindi, Kurdish, Tamil, Turkish and Somali). During the data collection in February 2006, the students responded in writing on paper questionnaires. The students filled out the questionnaire during two school hours where a break was included, and students who didn't finish on time were offered to complete the questionnaire the following week. 2-3 assistants from School YCC were present during the whole session to answer questions and helping those students who for some reason (difficulties in

understanding Norwegian, learning disabilities, dyslexia, hyperactivity or other) had problems filling out the questionnaire. Due to geographical distance, and that the data collection was completed in Oslo at the time we were introduced to YCC, we participated with data collection for School YCC in Bergen as assistants. We chose to use the data from Oslo because the data collection from the Bergen School YCC was not finished at the onset of our data analyses.

2.4 Ethical Research Considerations

Before the study was conducted, all students received a scheme of consent to be signed by their parents or guardians, or by themselves if the student was above 15 years of age. The consent scheme was translated to the same seven languages as the questionnaires. The information was anonymized by giving each student his own code for use when filling out the questionnaire. The students name was not stored with the questionnaire, but could be connected using key-files kept separately. The project has a concession from the The Data Inspectorate, is approved by The National Committees for Research Ethics in Norway, and is carried out in accordance with the Declaration of Helsinki (1964).

2.5 Demographics

Demographics included the variables of gender and country of birth. The student was also asked if his or her parents were born in Norway, if not born in Norway the respondent was asked to specify which country. The demographic questions concerned length of residency in Norway, the alternatives being "all my life" or how many years the respondent had been living in Norway. The questionnaire did not ask for the respondents' age, as this would correspond with the standard age for students in the particular grades.

2.6 Measures

2.6.1 Ethnic and host culture competence.

The indices consisted of 18 items, 9 for ethnic- (α =.82) and 9 for host- (α = .77) culture competence related to interpersonal skills and communication (Oppedal et al., 2005; Oppedal et al., 2004). Examples of items for ethnic culture competence were "how easy is it for you to feel that you have a lot in common with bilingual children/adolescents?" and "how easy is it for you to speak your mother tongue?" Corresponding items for host culture competence were "how easy is it for you to feel that you have a lot in common with Norwegian children/adolescents?" and "how easy is it for you to speak Norwegian?" Answers were given on a 4-point Likert-type scale ranging from "very difficult" (1) to "very easy" (4). The culture competence indices are included in the Appendix.

2.6.2 Daily hassles.

The life stress checklist of daily hassles was constructed on the basis of similar indices of long time strain related to important developmental tasks in school, home and in relation to peers. Oppedal developed this scale for School YCC inspired by Rowlinson and Felners (1988) work, and the scale includes long term strain related to school (5 items) and parents (5 items). It also includes 8 items concerning worrying about friends and family, etc. "I`m worried because someone I care about use too much alcohol" and "I` am no longer friends with someone I used to be friends with".

The scale is introduced with a statement as follows: "This is a list of problems most people have. Think about the last 12 months (year) and answer how often you have experienced these problems". Answers were given on a 4-point Likert-type scale ranging from "no, never" (1) to "yes, very often" (4). The total scale had Chronbach's alpha (α =

.83), which signifies a strong relationship between the factors, and we use the scale as a

unifactorial scale. The daily hassles indices are included in the Appendix.

    2.6.3 Depression.

    Depression was measured using the Center for Epidemiologic Studies Depression

Scale (Radloff, 1977). The CES-D Scale is a 20-item self-report scale designed to

measure depressive symptomatology in the general population. The items of the scale are

symptoms associated with depression that were chosen from previously validated scales

(α=.88). The scale is introduced with a statement as follows; "Below is a list of ways you

might have felt or behaved. Please tell me how often you have felt this way during the

past week". Items on the CES-D are rated with a 4-point Likert scale to indicate how

frequently in the past week each symptom occurred (0 = rarely or none of the time (less

than one day); 3 = Most or all of the time (5-7 days). Examples of items are "I was

bothered by things that usually don't bother me", or "I had trouble keeping my mind on

what I was doing" etc. The usual scoring is a simple sum of the item weights (with

positive items reversed). Possible range of scores is zero to 60, with the higher scores

indicating the presence of more symptoms. A score beyond 17 has been found to indicate

a symptom level in the clinical range. The CES-D scale is included in the Appendix.

2.7 Statistical analyses

    All statistics were calculated using the SPSS version 15.0 statistical package.

In the initial phase of analysis, bivariate correlations were carried out for all variables.

We also examined the internal reliabilities of measures using Cronbach's alpha and found

them all to be adequate. Independent t-tests were run to compare mean values between

the ethnic minority and Norwegian majority group and between the genders on

depression, culture competence and daily hassles scales. We also ran independent t-tests

to compare the students in each school, school grade and generation level on the same

scales. One-way ANOVA analyses were made to see if there was any difference in the

level of culture competence between students in different school grades. To examine the

direct relationships between predictor variables and depression, the simple correlations

were examined. A standard multiple regression analysis was applied for the examination

of the main effects of daily hassles and culture competence variables on depression. This

was preferred because it treats the variables as continuous. The moderation model was

tested using Baron and Kennys (1986) recommended procedure to see if the moderation

is indicated by an interaction. The mediation model was tested still following Baron and

Kennys recommendations and the significance of the model was finally tested using the

Sobel test calculator based on Goodman's approach (Soper, 2007) .

3.0 Results

3.1 Descriptive statistics

The descriptive statistics of all the variables are presented in Table 2. Mean and

standard deviation (SD) are presented separately for the total sample and for each gender.

Table 2. Descriptive statistics for the sample.

	Total sample n=277[a]		Girls n=144		Boys n=122		Gender differences
	Mean	SD	Mean	SD	Mean	SD	t-values
Ethnic culture competence	3.35	0.50	3.39	.46	3.34	.50	-.79
Host culture competence	3.32	0.57	3.31	.58	3.34	.51	.45
Daily hassles	1.72	0.41	1.74	.43	1.76	.41	.36
Depression	0.71	0.50	0.75	.57	0.64	.45	-1.76

[a] *Variables excluded listwise*

As can be seen in the table, the participants scored high on ethnic culture

competence and host culture competence on a 4 point likert-scale with 4 being the

highest score. We will use the theoretical midpoint, score 2.5, to divide between

low/high scores on the scale in the further descriptions of reported levels in this study.

The participants reported experiencing little daily hassles, and even less depression. Due

to the absence of significant gender differences, the subsequent analyses were conducted

for the combined sample.

For dealing with missing values we chose to exclude cases listwise. This

approach was chosen due to Acocks (2005) recommendations for handling missing

values based on assumptions that missing values are "missing completely at random".

Acock claims that giving such an extensive questionnaire to young people could lead to

serious fatigue, and therefore lead to values missing totally at random. Using this approach, the total sample was reduced to 277 students (87% of target sample).

We compared our sample of participants with the participants having an ethnic Norwegian background to investigate if the reported level of depression differed between the two groups. An independent samples t-test was conducted to compare the depression (CES-D) scores for students having minority (n=317) and majority (n=171) background. There was a significant difference in scores for minority (M=.71, SD=.50) and majority (M=.60, SD=.46) groups. This indicates that students with minority background are having more symptoms of depression than students with a Norwegian background [t(426) = 2.05, p<0.05]. The magnitude of the differences in the means was very small (eta squared=.0047), indicating that only 0.5% of the variance in depression is explained by the minority/majority distinction.

We further explored whether there was any difference in the level of culture competence between the ethnic minority students in the three different school grades. The number of students in each grade was 106 on average. Results showed that the students in 8th grade (M=3.39, SD=0.57) reported more ethnic culture competence than the students in the 10th grade (M=3.25, SD=0.48), but less than students in the 9th grade (M=3.40, SD=0.43). The differences were not significant, p>.05. In regard of reported host culture competence, the results were similar; 8th grade (M=3.35, SD=0.60) reporting more host culture competence than the 10th grade (M=3.24, SD=0.61) students, but less than the students in 9th grade (M=3.37, SD=0.50), the differences show no significant difference between the groups p>.05. The results give no clear indications of any linear increase in perceived culture competence.

In the results from the independent t-tests comparing the students from the two different schools we found that there were no significant differences on either culture competence or depression. In regard of daily hassles, students (n=181) in School B (suburban area) reported significantly (p>.001) more stress (M=1.81, SD= 0.41) than the students (n=152) in School A (inner city), (M=1.62, SD=0.39). Comparing 1st (n=112) and 2nd (n=215) generation adolescents on culture competence, daily hassles and depression, results showed there were no variation between the groups (p>.05).

3.2 Correlations between predictor and outcome variables

Pearsons product-moment correlation coefficient was estimated between depression and daily hassles. A summary of the relationship between these variables are shown in Table 3. The results show a significant relationship and this strong correlation suggests that the more reported daily hassles the higher the degree of depression (p<.01) The relationship between ethnic culture competence and depression was investigated, and the relationship was found to be a significant, medium strong, negative correlation (p<.01), suggesting that high ethnic culture competence is associated with low scores on the depression scale, indicating less depression. Ethnic culture competence was further significantly correlated with daily hassles (p<.01). The relationship between host culture competence and depression was investigated by the same procedure, and the association was found to be negative, with medium strength of correlation (p<.01). Host culture competence was significantly associated with daily hassles (p<.01). Further, the two culture competence measures were associated suggesting that the more of either, supports heightened degree of the other.

The results of the correlation analyses showing relationships between culture competence, daily hassles and the outcome variable depression signals that there may be a possible moderation and/or mediation effect between the variables.

Table 3. Correlations between all variables [a]

	Daily Hassles	Ethnic competence	Host competence	Depression
Daily Hassles	1			
Ethnic competence	-.20	1		
Host competence	-.16	.38	1	
Depression	.47	-.33	-.32	1

[a] Listwise N=277

All Correlations are significant at the 0.01 level (2-tailed).

3.3 Ethnic Culture Competence as Moderator/Mediator in the Relation between Daily Hassles and Depression

To verify if ethnic culture competence moderates the relationship between daily hassles and depression, we did a series of multiple regression analyses. A standard multiple regression analysis was conducted between degree of depression as the dependent variable and daily hassles and ethnic culture competence as independent variables. Ethnic culture competence and daily hassles were first entered into the regression model as predictors of depression (Step 1), then the same two variables were entered into the model as a third variable together with the interaction between them (Step 2). According to Baron and Kenny (1986), a variable may be a moderator if during step 2, the explained variance increases significantly, that is, when the interaction between the two predictor variables are entered into the model. Table 4 displays the standardized regression coefficients (β), multipleR^2 and R^2 change. Results of the analysis showed significant correlations between the predictor variable, the moderator

and the dependent variable (depression) during step 1, [R^2=.30, F(2, 274) = 59.17, p<.001]. During step 2, [R^2 change= .005, F(1, 273) = 1.86, p>.05] we did not find support for the presence of a moderating effect on the dependent variable as the effect explained only 0.5% of the variance in depression above and beyond the variance explained by ethnic culture competence and daily hassles. Generally, the interaction effect did not change the explained variance.

Table 4. Regressions Predicting Depression from Ethnic Culture Competence, Host Culture Competence and Daily Hassles, and their interactions.[a]

	Step 1		Step2		
	Beta	MultipleR²	Beta	MultipleR²	ΩR²
Ethnic Culture Competence	-.334*[b]	.108*[b]	-.248*		
Daily Hassles	.474*[b]	.222*[b]	.441*		
Interaction			-.528 Ns	.299Ns	.005
Host Culture Competence	-.296*[b]	.085*[b]	-.259*		
Daily Hassles	.474*[b]	.222*[b]	.452*		
Interaction			-.170Ns.	.290Ns	.001

Notes: [a]Multiple R^2 reported under Step 1 is for both predictors (ECC and DH, and HCC and DH), and that reported under step 2 is for both predictors and the interaction effect.
[b]P=0.001;*

   In our analysis we were interested in comparing the contribution of each independent variable. In the step 1 analysis, daily hassles made the largest contribution to the explanation of the variance in depression. When checking for moderating effect, we found that the contribution of ethnic culture competence did not make a significant effect, indicating that there are no moderating effect of ethnic culture competence on the relationship between daily hassles and depression. This means that culture competence does not significantly reduce the impact of daily hassles on depression.

Multiple regression analyses were once again used to check for mediating effects of ethnic culture competence in the relationship between daily hassles and depression. To comply with Baron and Kenny's demands for a mediating relationship, in our study daily hassles must first be able to affect ethnic culture competence. In addition, daily hassles must predict depression. Finally, the relationship between daily hassles and depression should be greatly weakened if ethnic culture competence and daily hassles are regressed on depression.

To test for the mediating role of ethnic culture competence between daily hassles and depression, depression was regressed upon daily hassles and ethnic culture competence. The standardized regression coefficients can be seen in figure 5. Results of the regression revealed that approximately one third of the variance in depression is predicted by daily hassles and ethnic culture competence, $[R^2 = .30, F(2, 274) = 59.17, p<.001]$. Daily hassles alone contributed significantly to the regression ($\beta = .47$, p=<.001). Although the correlation between ethnic culture competence and depression was statistically significant (p<.001), ethnic culture competence contributed little to the variance in depression and did not contribute significantly to regression (p=.84) when the other variable was controlled for. Conditions for mediation were not satisfied. The regression coefficient for daily hassles was reduced once the ethnic culture competence variable was included in the regression model. Both daily hassles and ethnic culture competence contributed significantly to the explained variance in depression, p=<.001.

The significance of the mediation model was tested using Sobels approximate significance test for the indirect effect of the independent variable on the dependent variable via the mediator. We tested the mediation model using the online Sobel test calculator (Soper, 2007).

Culture competence

A (SE $_A$)　　　　　　　B (SE $_B$)

Daily hassles ──────────────→ Depression
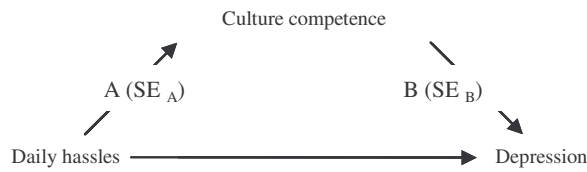
Figure 4. Sobels test. A and B: The regression weight between the variables. SE$_A$ and SE$_B$: Standard Error measures.

This test showed a significance value of p>.05, and the Sobels Test Statistic value was 0.35. These results indicate that there are no mediation effect of ethnic culture competence on the relationship between daily hassles and depression.

Ethnic culture competence

-.20*　　　　　　　　　-.33* (-.25*)

Daily hassles ────── .47* (.44*) ──────→ Depression

*Figure 5. Mediation model Ethnic Culture Competence that shows the standardized regression coefficients (β) between the variables. Numbers in brackets show the (β) scores once depression has been regressed on both the independent variable and the mediator. P=.001;**

3.4 Host Culture Competence as Moderator/Mediator in the Relation between Daily hassles and Depression

We did the same analysis for host culture competence as for ethnic culture competence. The moderator hypothesis was carried out by regressing host culture competence on daily hassles and depression. Results from the analysis showed significant correlations between the predictor variable, moderator and dependent variable (depression). Table 4 displays the standardized regression coefficient (β), multiple R^2 and R^2 change, and as can be seen from table 4, both host culture competence (β=-.24) and daily hassles (β=.44) contributed significantly to regression. Host culture competence is negatively related to depression, which indicates that the more host culture competence,

the less depression experienced. When checking for moderating effect, we found that the contribution of host culture competence did not make a significant effect (p=.46), indicating that daily hassles are not moderated by host competence and therefore do not reduce the impact of daily hassles on depression.

We checked for mediating effects of host culture competence on the relationship between daily hassles and depression. The regression analysis showed that one third of the variance is explained by these variables, $F(2, 272) = 57.53$, p=0.001, adjusted R^2=.29. Figure 6 shows the standardized regression coefficient (β). Daily hassles did not contribute significantly to regression (β=.60. p=.058). Neither of the variables correlated significantly and the mediation model was not supported. Sobel test calculator showed p>.05, and the Sobels Test Statistics value was 0.23.

The results of the mediating model show that host culture competence did not reduce the effect of daily hassles on depression enough (the beta coefficient dropped only from .47 to .45 when host culture competence was introduced) to make a significant contribution to the understanding of the relationship between the variables.

Host culture competence

-.13*   -.30** (-.26**)
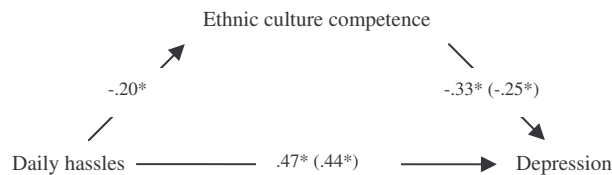
Daily hassles ——— .47** (.45**) ———→ Depression
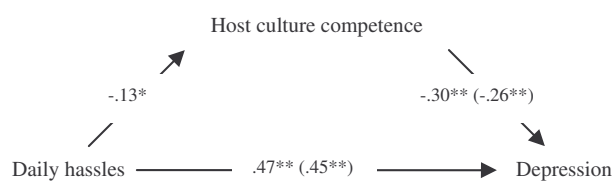
Figure 6. Mediation model Host Culture Competence that shows the standardized regression coefficients (β) between the variables. Numbers in brackets show the β scores once depression has been regressed on both the independent variable and the mediator.

p=0.05;, p=0.001;***

In the prediction of depression, daily hassles consistently contribute in each model, and culture competence also consequently had significant effect on depression.

However, we did not find support for neither a moderating nor mediating effect of ethnic nor host culture competence on the relationship between daily hassles and depression.

4.0 Discussion

This was an exploratory study of the effects of acculturation on mental health. We wanted to investigate the possible moderating effect of culture competence on the relationship between daily hassles and depression. We now consider our results in the light of presented theory and in relation to our hypotheses posed under the headline of research questions. Subsequently, a methodological assessment in the form of presenting the strengths and limitations will be discussed before we finally debate the implications of our results.

4.1 Effects of gender and ethnicity on the outcome of depression

Earlier research has found that gender is a significant variable of interest when investigating variations to identify groups at specific risk for developing mental health problems. Gender differences have been found on stress (Jasinskaja-Lahti & Liebkind, 2001), depression (Berry, Phinney, Sam, & Vedder, 2006; Oppedal et al., 2005), ethnic identity crisis and discrimination (Oppedal et al., 2004). These studies argue that it may seem as if females may be more at psychological risk for acculturation problems than males. In our examination of possible gender differences, the result however showed no significant gender differences on any of our variables. Some earlier studies have found insignificant differences between immigrant boys and girls in regard of frequency of depression (NAKMI, 2005), but still our result stands out from most other research reporting gender differences. Although the result indicates that there are found no significant variation between the groups, still it may be argued to reflect a trend indicating that adolescent girls experience more depression than boys, which is consistent with most research in the field (Sherrill et al., 1997; Wight et al., 2004; Aalto-

Setälä, Marttunen, Tuulio-Henriksson, Poikolainen, & Lönnqvist, 2001) and earlier

findings on similar immigrant populations (Oppedal, 2003).

Regarding differences between the ethnic minority group and the group with

ethnic Norwegian background, we found that students with ethnic minority background

had significantly more symptoms of depression than students with a Norwegian

background. This has earlier been reported by Oppedal and Røysamb (2004) who in a

similar sample of immigrant adolescents found them to report a significantly higher

prevalence of psychological problems, measured by the HSCL scale (Hopkin's Symptom

Checklist-25), than did hosts. However, the reported level of depression was very low

suggesting that this result is not necessarily to be regarded as a symptom that reflects the

overall mental health status of the immigrant group. As Phinney et.al. (2006) claim in

their article based on the ICSEY study; younger adolescents are more satisfied with their

lives than their older peers. This may apply to our sample and explain the low scores on

depression as they are in the youngest range of adolescence. The magnitude of the

differences in the means in our study was very small, indicating that the variance in

depression may be better explained by other variables than the minority/majority

distinction.

As claimed in earlier theory, cultural changes may exceed a specific persons

ability to cope and may lead to acculturative stress (Berry & Sam, 1997). According to

theory, it's reasonable to believe that our group of students experience obstacles related

to cultural differences and that this further affects their mental health. Aspects of social

identification may apply to our results, research showing how being part of a minority

group may affect the group member's identity development in a destructive way, possibly

through discrimination and other negative views from the dominant society. Following

this, research has shown that perceived discrimination are associated with less willingness to adopt host culture identity (Ward, 2001). Our results do however not indicate, in regard of the low reports of depression, that the immigrant adolescents have a more complicated time developing than their host peers. The results showed that 17% of the responses were missing on the CES-D questionnaire and this may be argued to have affected our results. We will be careful in suggesting that our results represent the immigrants overall mental health.

4.2 Daily hassles and culture competence reported in the sample

Through the culture learning approach, it has been assumed that cross-cultural problems arise because cultural newcomers have difficulties learning everyday norms, values and attitudes in the country they encounter. Immigrants have been argued to face hassles that are related to their status as newcomers (Gaudet et al., 2005) and are therefore assumed to experience extra strain compared to their host peers (Berry, 2006b). The students in our sample reported low levels of daily hassles, and we would therefore believe that this is not supported in our sample. Still, the results showed that the students in School B reported significantly higher scores on daily hassles than the students in School A. School B had a percentage of 57% immigrants compared to 84% in School A. These results are hard to explain, but we may understand the reported strain to possibly reflect a stronger feeling of belonging to a minority group or that the group possibly experience more perceived discrimination. The results may also reflect that the students compare themselves to the larger ethnic Norwegian student group in their hold of host competence. There might also be a number of factors influencing the reported daily hassles related to this specific school environment that have not been investigated. It

would be interesting to see whether these results are representative for a similar group of students to get a clearer picture of the importance of cultural belonging.

It has been suggested that hassles in some life domains are more important or central than others in regard of adapting to a new culture (Berry, 1989). Ward and Kennedy (1999) have shown that the risks for immigrants to experience acculturative stress and to develop mental health problems increase the more home and host country culture differ. Also, a fall in socioeconomic status puts immigrants at risk for mental health problems (C. L. Williams & Berry, 1991). Øia reported (2007) that in the inner city Oslo, 26.9% of immigrant families are characterized as poor, and as one of our schools belongs to this area, this would probably apply to some of our respondents. Daily hassles have claimed to have an impact on social relationships, habits and patterns of activity (Cassidy, 2000), and should therefore be of interest to researchers investigating factors affecting mental health.

The daily hassles scale in our study is developed to measure hassles related to school, friends and parents in general. In our statistical analyses, we did a factor analysis to investigate the dimensionality of the scale, and the analysis revealed that there were three different categories (school-, peer-, parent hassles). Yet, we chose to use the daily hassle scale as a unifactorial measure because the three categories are not merely acculturative in nature and therefore do not connect precisely to acculturation. Choosing three categories would have made us do plural analyses that would not be connected to our hypotheses. We wished to explore the moderating effect of culture competence, as part of acculturation, on the established relationship between stress and depression (Cassidy, 2000; Kanner et al., 1981) and therefore wished to see the scales as unified measures. If we had chosen to use three categories we would have to do plural analyses

that anyway were not connected to possible acculturative stress in particular. We chose

to use the daily hassles scale primarily as a predictor of health status. Another reason was

the need to adjust the extension of the study not to exceed the work load expected for

master thesis in psychology. In our study we did for these latter reasons not differentiate

between the hassles, and therefore cannot distinguish whether some hassles in particular

had a greater impact on the experience of stress than the others. Still, other findings from

a similar population of adolescents, Oppedal and Røysamb (2004) found that daily

hassles related to school hassles were most frequently reported. They found that 36% of

the sample reported pressure to succeed with school work and 33% reported heavy work

press. In a study of 5th and 6th graders in Korea, Hee-og (2000) studied the relationship

between daily hassles and social support to depression finding that hassles alone affected

the level of maladjustment. Additionally, hassles with friends and parents were the best

predictors of depression. Based on our findings we assume that the sample do not

experience extra strain from daily hassles. The typical environment for the adolescents in

our study is a multicultural school environment not distinct for any ethnic group in

particular. As most of our sample daily navigate in a multicultural society where the

distinction between what is Norwegian, what is multicultural and what is exclusive for

one ethnic group might be vague, the adolescents perhaps do not experience this as

challenging as in a society where the ethnic groups are more segregated.

Earlier studies have found between-ethnic-group variations in psychological

adaptation within different countries (Liebkind & Jasinskaja-Lahti, 2000; Phinney,

Horenczyk et al., 2001). Since our sample have origins from very different cultures (e.g.

Vietnamese, Somali, and Swedish), there could possibly be differences in both school

and parent hassles between the groups. Oppedal and colleagues (2005) found significant

differences in mental health status between different nationalities. This might be due to differing attitudes towards ethnic and immigrant groups, with groups of European origin being more positively valuated than those of non-European origin (Berry & Kalin, 1995). Another study by Oppedal and Røysamb (2004) found no culture-group differences in their study. Due to the small sample of each ethnic group in our study, we did however not divide between the immigrants country of origin and therefore can just impart these earlier findings to the reader and recommend this approach integrated in future research.

We assume that the daily hassles experienced by the immigrant adolescents would be both specific to their immigrant status, adaptation and to the developmental process they share with their peers. Thus they will be experiencing both acculturation specific hassles and non-specific hassles that will have implications for their psychological health. Research has clearly stated that psychological and sociocultural adaptations are related dimensions with great importance for the outcomes of adaptation (Ward & Kennedy, 1999). While acculturation is basically conceived as a learning phenomenon, development entails both learning and maturation. In the absence of acculturation, all individuals undergo development. It may therefore be inaccurate to conceptualize immigrant adolescents' adaptation outcomes as arising only from an acculturation process without the developmental component. Likewise it may be inaccurate to study the development of children and adolescents without including an acculturation perspective.

Dalgaard (2006) claims in a report from the Norwegian Institute of Public Health that cultural competence, in the shape of mastering ways of interacting and communicating both with the minority culture and the Norwegian culture, is important for the adolescents' adjustment and mental health. His argument is that a reinforcement

of ethnic belonging and cultural competence will remove some of the adolescents' experience of rootlessness and therefore have a positive effect. Other studies on similar samples have found higher scores on ethnic culture competence than host culture competence (Oppedal, 2006; Oppedal et al., 2005; Oppedal et al., 2004).

Drawing on these previous studies, we would assume that the reported ethnic culture competence may strengthen and protect the sample from experiencing distress symptoms from daily hassles. The high level of ethnic culture competence reported in our sample may be partly explained by the participant's attendance in schools where there is a large amount of students with minority background. This ethnic social network may be argued to increase ethnic culture competence, as have been shown in earlier studies (Phinney, Romero, Nava, & Huang, 2001). In a study of ethnic communities, Berry et.al. (2006) found that ethnic friends were the most important source of ethnic culture competence. The development of ethnic culture competence may be achieved in different ways, because ethnic socialization can be argued to differ among ethnic groups. According to Phinney and Chavira (1995), their study showed that Asian American parents compared to African American and Mexican American parents were least likely to ethnically socialize their children. Fulgini (1998) draws from his findings that children of immigrant families do well with the help of a collection of values and traditions that give the children a clear and strong sense of cultural identity that guide their behaviour. Sam (1995) found that immigrant youth from societies culturally different from their present host society were reluctant to give up their traditional cultural norms and values to replace them with the norms of the host society. It seems reasonable to propose that the maintenance of traditional values may assist immigrant youth to cope with the acculturation process, and that parents may encourage their children to adopt the cultural

norms of the society without being afraid that they will give up their traditions. In regard of our sample reporting high levels of ethnic culture competence, we would assume that this functions as a protective factor during their development.

Our sample scored relatively high on host culture competence. Host culture competence is also seen as a resource, and is presumably developed to gain acceptance within the sociocultural domains of the host society and to succeed within these. Equal to ethnic culture competence, host culture competence may be protective for our studied group of adolescents in regard of distress symptoms. The high reports of host culture competence in our sample could be due to the fact that most of our sample have been living in Norway large parts of their life and might have attended both pre-school and school in Norway (Oppedal, 2006). School is an important arena for acquiring host culture competence (Vedder & Horenczyk, 2006; Wilkinson, 2002), through interaction with host peers and adults (i.e.,teachers). In regard of school attendance, it has been found that host culture competence facilitates feelings of self-worth based on relations with classmates and teachers (Oppedal et al., 2004). In our study, the high degree of host culture competence was found likely to be a reflection of the network of Norwegian friends.

We explored the difference in the level of culture competence between the ethnic minority students in the three different school grades. The results gave no clear indications of any linear increase in culture competence. This makes us question how fast culture competence change, and if it increase linearly at all. A possible reason why we do not see any linear change in the measures of the groups in our sample may reflect a discontinuous development of culture competence skills, and may explain why we did not find any significant differences between the grades. Cross-age correlations of culture

competence for the same sample may reflect the degree of stability of individual differences in the expression of the behaviour. Estimates of stability require, just as continuity estimates, longitudinal data. It would be interesting to study in what degree culture competence may give continued protection into adulthood. Developmental contextual theories that seek to identify relations between individual and context should be explored in longitudinal studies in order to understand how these processes function across life. The lack of significant differences in reported host and ethnic culture competencies from 8th to 10th grade may indicate that the changes or increase in level of competence goes at a slower pace and therefore measuring groups with only two years apart would not yield a visible increase in competence. Change in the form of increase in culture competencies might arise at a later age. In Norway the transition from junior to senior high school raise important questions for all adolescents about the direction their life is taking. Now the adolescent will have to make important decisions about future plans and whether to choose something in line with their parents' wishes and expectations or something that might be outside of what is expected for adolescents in their particular ethnic group. Especially for the adolescents who have received their education in a school dominated by ethnic minorities, the transition to senior high school and an environment now consisting of different students and teaching that may be more vocationally oriented and more oriented in the Norwegian society. The outcome of this transition might lead to an increased level of host culture competence during senior high school as the adolescents now in a larger degree learns about Norwegian norms and customs. When older, they are most likely more aware about the distinction between ethnic and host culture and become more conscious about their role as cultural bearers.

When regarding these factors, it may be reasonable to think that culture competence develops discontinuously.

Among a sample of Vietnamese students in Canada, Lay and Nguyen (1998) found more recent immigrants to report more out-group hassles and higher levels of depression compared with those immigrants who had resided in Canada for a longer period of time. Our sample had an average length of residence in Norway of 8 years. In a developmental perspective one could argue that for a young sample like ours, the high share of years spent in Norway for most respondents would indicate that they had much of their sociocultural development in contact with the Norwegian culture. Attending Norwegian school from an early age will clearly increase the ease for immigrants of learning the habits of the culture and further affect positive adaptation. One suggestion for future research is to distinguish more clearly between those adolescents who have lived all their life in Norway and those who have recently migrated. As less than 0.5% of the variation in depression could be explained by minority or majority variable in our study, there are other factors which should be taken into consideration when doing research on adolescents' mental health. Looking closer at family status, socioeconomic status and other factors that are not directly related to immigrant status might explain more of this variation.

The culture competence scale used in the School YCC study was based on questionnaires from the earlier Health study and School study developed by Oppedal and colleagues (Oppedal et al., 2005; Oppedal et al., 2004). To get a better understanding of the effect of acculturation on mental health, Oppedal elaborated the scales of culture competence to better reflect age-relevant developmental tasks. The questionnaire was therefore revised for use in the YCC project, and our study in this sense function as a test

of the reliability of the scale. Our results found the internal reliability of the culture competence scale to be adequate. Further research is needed to test the scales consistency of reliability. When judging the content of the items in the scale, it appears to have good face validity. We cannot conclude on the validity of the scale; for this, one need repetitive use of the scale in future research. Also, parents' and teachers' reports on the adolescent's culture competence in different domains would have contributed to the validity of the scale. However, this information was not available in this study.

A remark is that culture competence does have a similar resemblance to other concepts central in acculturation theory. Among these are ethnic identity and cultural learning. Where culture competence focuses on the multitude of skills and knowledge the individual posses, ethnic identity is the manifestation of how the individual internalise this knowledge into an expression and experience of his own identity. Culture learning has its base in learning of the culture-specific skills necessary to thrive in a new culture, and as culture competence is defined as level of fit in the new culture through gaining competence in skills specific to the host culture, these two terms seems intertwined. As an extension of this one could question the usefulness of distinguishing between terms seemingly using the same measures.

4.3 Moderating and mediating effects of culture competence

Culture competence is regarded to facilitate social support through close interaction and participation in relation with family and friends (Oppedal et al., 2004). As mentioned, social support has been found to influence mental health and psychological adaptation in a positive way, acting as a protective moderator (S. Cohen & Wills, 1985). We sought to explore the factors that may contribute to adaptation during adolescence, and looked into the social and cultural context where culture competence plays an

important part in these youths' lives. This effect is embedded in the framework termed "the buffering model" because it posits that a resource variable protects persons from the potentially pathogenic influence of stressful events. The mediation model, on the other hand, proposes that social resources have a beneficial effect irrespective of whether persons are under stress or not. In this regard, and to distinguish between the models, the mediation model was explored as a possible model to explain the relationship between daily hassles and depression, testing if culture competence may act as the capacity an individual is in hold of and that may account for the relation between daily hassles and depression. This capacity may be argued to account for the effect on depression so that the outcome would be less negative.

Results from our study suggest that there exist a strong correlation between daily hassles and depression. Due to the few experiences of daily hassles reported by our sample, we find this result in line with our hypotheses, and we would suggest that they do not experience particularly poor mental health. Still, daily hassles seem to be strongly associated with adaptation outcomes due to its strong correlation with depression. This finding has earlier been supported by a large amount of research 1995 (Berry, 1989; Searle & Ward, 1990; Thomas, 1995), and it has further been claimed that for adolescents, long-lasting daily hassles might act as a source of risk for emotional problems (Compas, 1987). The relationship between culture competence and respectively daily hassles and depression was strongly correlated in our study; suggesting that culture competence is related to the two concepts. The relationship between culture competence and depression has as mentioned earlier been supported (Oppedal et al., 2005) with culture competence affecting depression negatively.

The relationship between ethnic culture competence and depression was negatively related, suggesting that having a strong bond between the individual and his/her cultural traditions, values and norms reduce the experience of depression. Ethnic culture competence is assumed to increase adaptation within ones own ethnic cultural domain (Oppedal et al., 2004). It is also claimed to be beneficial for adaptation within the local community, and other settings where one may practice ethnic values, beliefs and traditions. It has been found that family relations have an influential effect in preventing acculturation problems among young immigrants (Liebkind, 1996) and that these relations mediate the effects of changes in ethnic culture competence (Oppedal et al., 2004). We assume that the adolescents in our sample experience family support. This kind of support has been found to influence mental health and psychological adaptation (DuBois, Feiner, Sherman, & Bull, 1994). Our results show that there are no moderating or mediating effects of ethnic culture competence on daily hassles. The effect of daily hassles on depression is therefore not significantly reduced. Still, our results show that ethnic culture competence reduces the experience of depression. In accordance with this, we assume that our sample have a great share of protective factors in their level of reported ethnic culture competence explaining this finding.

The relationship between host culture competence and depression was investigated by the same procedure, and the association was found to be negative. In line with earlier research, this result can be understood much in the same way as ethnic culture competence reduces the experience of depression. Having skills and competencies in each arena enhance social support from friends and in school and is assumed to be associated with positive developmental processes (Oppedal, 2006). Our results show that there are no moderating or mediating effects of host culture competence

on daily hassles. This means that the effect of daily hassles on depression is therefore not significantly reduced. Arguing that cultural skills and competence may protect adolescents with immigrant background in the process of acculturation, the low level of reported depression and the high level of culture competence may reflect this particular point. Our finding of the two culture competence measures being associated suggests that the more of either supports heightened degree of the other. The disregard for the possible debilitating role of developmental transitions makes us argue that the antecedent of psychological problems not necessarily is that of acculturation. Acculturation researchers may overlook some aspects of acculturation that might be unique to children and adolescents, and perhaps it would be more advantageous to keep in mind that in the absence of acculturation, all individuals undergo development.

The adolescents are as mentioned in a stage of identity development where they experience a possible identity crisis while exploring alternative commitments. Our study show a tendency to support that immigrants report more distress symptoms than their host peers, but the level of depression in the sample is overall too low to draw similar conclusions as latter reports (e.g C. L. Williams & Berry, 1991). Instead, we would like to stress that research should keep focusing on factors that are regarded as skills and protectors instead of approaching immigrant adolescents with a problem focused agenda perhaps pathologizing this group unnecessarily.

4.5 Is it empirically useful to view culture competence as a moderator/mediator?

Testing culture competence as a moderator/mediator is a continuation of research focusing on this factor as a sufficient and important term in immigrant adolescents' mental health. In relation to earlier research, our results may be argued to represent a possible extended study of the reliability of the culture competence scale. Daily hassles

were found to correlate in a strong positive direction with depression and culture competence was negatively related to depression, but still, culture competence does not appear to moderate the relationship between daily hassles and depression. However, the sample report low levels of both daily hassles and depression and we would for this reason conclude that the effect of culture competence might be hard to find. In a sample with a larger variation in reported daily hassles and/or depression, the effect of culture competence would perhaps be easier to detect.

Finding the position of the term culture competence in acculturation research is challenging, because it is hard to see what new aspects culture competence brings in. In the culture competence scale, some of the questions concern interracial friendships (see Appendix). Hunter and Elias (2000) showed in their study that fifth-grade girls with high-quality interracial friendships indicated less minority rejection, more diverse social networks, and more sociability and leadership characteristics than their peers with no or low-quality interracial friendships. Similar results were not found for boys in the study. This is an example of a result indicating that one of the building blocks of the culture competence concept yield differing results, pointing to the possibility that some of the aspects of culture competence might be more important than others. Still the gender aspect in this and other studies may indicate that one would need to specify and adjust the concept to different demographic groups and one might need to test the different building blocks of the concept individually, because the concept as a whole does not apply as globally as one could hope for.

Still the scale of culture competence illustrates important developmental tasks the adolescents are being confronted with and need to proceed in the phase they are in. We have argued that acculturation and developmental processes occur simultaneously

throughout the life-span making it difficult to identify their independent roles. Culture competence includes both aspects and may therefore be valuable in the understanding of immigrant adolescents' challenges. We would therefore argue that culture competence should be regarded as a possible moderator on the outcome of mental health.

4.6 Methodological limitations

This has been a cross-sectional study that does not form the basis for making conclusions about causalities; all connections are on an empirically observed level. In this sense this study may be regarded as an exploratory study of possible connections. Culture change can only be noted and assessed when sets of data collected at different points in time are compared. A disadvantage with cross-sectional methods is that the researcher must infer that the differences between the groups are due to the developmental variable of age. The developmental change is not observed directly among the same group of people, but is rather based on comparisons among different cohorts of individuals. Cross-sectional research is a common used alternative to longitudinal research, employing a time-related variable as length of residency or generational status. Since the data was cross-sectional, we could not address any developmental changes or causalities in each individual. However, by comparing the different school grades, we explored aspects of the development of culture competence, but found no linear development. On the background of this result, we will assume that the increase in culture competence perhaps follow trajectories that are unstable over time. Through longitudinal studies the progress of culture competence may disclose the possible stability/instability of the individual's capability in either of the domains.

Cohen and Wills (1985) found both moderation and mediation models to contribute to understanding the relation between social support and mental health. In our

study, we did not find these effects of culture competence as a resource, but we do not have the groundwork to conclude on a general level about the lack of buffering effects in our study. Cohen and Wills (1985) have shown that it is hard to conceptually prove buffering effects, because it is partly methodologically conditioned. They claim that studies using longitudinal prospective designs would be crucial in ruling out specific explanations for social support effects, and that it is difficult to find these effects even in controlled laboratory settings.

It has to be mentioned that the daily hassles scale used in our study was not originally designed to cover specifically acculturative hassles. As Vinokurov and colleagues (2002) elucidate, common problems when investigating acculturative stress regards the need for researchers to be more specific in the wording when supposed to distinguish between acculturative and non-acculturative hassles. The wording of the items in the instrument used in this study does not clearly discriminate between acculturative and non-acculturative hassles. Such items as "I have difficulties understanding the teacher during class" or" pressure from the surroundings to succeed" may be argued to apply to both non-acculturative and acculturative hassles. Not understanding the teacher may be due to poor teaching or that the student does not understand the Norwegian language well enough. Using a hassle scale that makes clear distinctions between what is daily hassles and what is acculturative hassles would give a better picture of what causes immigrant youth to experience hassles and if it is related to their immigrant status. Future studies should strive to improve the psychometrical quality of the differing concept measures.

Culture competence is measured by self-report, and thus is a subjective perception of level of culture competence. This could result in a mismatch between

perceived and objective level of host culture competence. One could question in what degree students at a school in which approximately 90% of the students are having an immigrant background are able to distinguish what are Norwegian norms and culture and what are this specific schools norms and culture. It is also important to be aware of the possibility that social desirability may have affected the results. Grimm and Church (1999) found that acculturation seems to modify response bias in the direction of the hosting culture (cited in Oppedal & Røysamb, 2004). Oppedal and Røysamb (2004) argue that this illustrates how immigrant adolescents will tend to accommodate their responses to the context in which it is elicited. As our study was conducted in the school setting and in the Norwegian language, the results may for these reasons partly be biased. Doing the same study in the adolescents' ethnocultural environment and in their first language may have yielded a slightly different result.

It is a methodological objection to our study that we have had a lack of consideration regarding the different cultural groups in our sample. Knowing that one third of the first generation population of immigrants in Norway are from other western countries (SSB, 2007b), and a large group of these include immigrants from Nordic countries, this group would hypothetically be highly represented in the "others" group (see Table 1) in our sample. As research has found daily hassles to increase with the increase of difference between the ethnic culture of origin and the host culture (Ward & Kennedy, 1999), we would assume that the group of immigrants from western countries would easier acculturate and adapt than immigrants from cultures unlike (e.g. collectivist cultures) the Norwegian culture. We lack information about our samples reasons for immigrating to Norway. As mentioned, Berry (1997) argue that the reasons for groups to settle in a new society have an impact on how their acculturation will take place.

Refugees will face different challenges than those that have voluntarily migrated to a new country, and this might be reflected in the responses on daily hassles and depression. Further, the immigrant's choice of acculturation strategy will have an impact on mental health, for example in the outcome of anxiety and depression (Berry & Sam, 1997). In our study the immigrant group is seen as a whole and not divided into groups regarding their background and this might have influenced the result. Future studies should strive to include these distinctions.

Finally, our data comes from an extensive questionnaire, the CES-D items did have more (17%) missing values than the other two scales (11-13%) in this study, and this might be due to its position as one of the last scales in the YCC questionnaire. As illustrated in the methodological section of this thesis; giving such an extensive questionnaire to young people could lead to exhaustion, and therefore lead to missing values (Acock, 2005). Our selection of variables do not represent all of the variables contributing to immigrant adolescents adjustment and of course there could be an extensive set of variables in society, personality etc. that contributes to these results.

4.7 The implications for preventive interventions of this study

In regard of the low levels of reported depression and daily hassles, our results add to the recent findings suggesting that children and adolescents having immigrant background adapt well (Fulgini, 1998; Phinney, 2003; Sam, 2000), and that they hardly experience depression. Still, there are some areas where there might be advantageous to be aware of the protective effects of possessing culture competence; both in the ethnic and host domain. Research findings should be passed on to those working in direct contact with adolescents and further lay the groundwork for recommendations of specific action initiatives.

In public health centres and in the school psychology service, an increase of awareness about the protective role of ethnic culture competence might support the parents' belief in their own parenting skills. This emphasises the important role of the parents presence and is an acknowledgement about the important knowledge they carry on to their children. As claimed by Oppedal (2003) a solid anchorage within ones own ethnic group is a necessary platform for the acquisition and construction of host culture competence. In situations where the child has problems in school or preschool, helping the parents to increase their Norwegian culture competence may guide the parents in understanding the nature of their children's problems.

Prevention programs encountering bullying and increasing mental health have not traditionally had their focus on increasing culture competence, but viewing culture competence as a protective factor against poor mental health, including this can strengthen the effect of the programs. There have been made different efforts that initially were not made to improve mental health, but have proved to have effects in this direction. Examples of this is youth clubs having "girls only" nights allowing girls who usually are not allowed to attend to mixed gender social gatherings to join. These nights can also be used to present important information about health issues, social rights and education about Norwegian society that some parents are not familiar with and therefore do not provide to their children. Youth clubs can also play an important role in helping delinquent adolescents off the streets.

In the United States, specific programs for immigrants have been a research field for some time. The evaluations generally show that these programs are not having better effects than programs and interventions made for the general population (Dalgard, 2006). This supports the notion of not treating immigrant adolescents as a particularly

vulnerable group. In line with our results, we would suggest intervention programs addressed to the general group of adolescents in their local environments, focused on developmental challenges in a multicultural society. As Langaard (2002) points to in her report, when doing therapeutic work, it is important to be aware that sometimes immigrant adolescents problems are acculturative in nature, at other times they might reflect common developmental challenges. When working with this group, it is necessary to have a theoretical perspective on culture that is in accordance with central goals and values. When the aim is to help the youth to find his own way in life, it is important that those working with the adolescent have a dynamic view on culture.

4.8 Concluding remarks

The findings in this study expand on prior knowledge in the understanding of immigrant adolescent mental health. The study can be seen as a contribution to the study of acculturation risks and protective factors, which emphasise the importance of culture competence as a protective factor in regard of positive mental health. Even if this particular study yielded few findings directly showing an effect of acculturation, earlier research clearly support the view that acculturation plays an important role, because how immigrant adolescents handle the intercultural situation contribute to their adaptation in the society of settlement (Berry, 1997; Oppedal et al., 2005; Phinney, Berry, Vedder et al., 2006).

Culture competence was not found to moderate the relationship between daily hassles and depression. Nevertheless, our sample had in general high levels of competence in both ethnic and host domains and low levels of depression and daily hassles. A natural interpretation of this is that culture competence functions as a protective factor and gives resilience in the development of young immigrants.

According to the measures studied, our sample seems well-adjusted. This is supporting the more positive view on immigrant adolescents posed in the introduction of this thesis, viewing them as a rather resourceful group that have been unnecessarily pathologized. We would claim that acculturation should be regarded as an integrated part of development and that research should strive to integrate developmental theories with theories of acculturation. This study has brought some implications for future research concerning the adolescent's positive development and the question is now if this will consist into adulthood. Doing longitudinal studies will possibly yield more knowledge about the developmental pace of culture competence through a person's life. Along with reviewed literature, culture competence may be argued to develop discontinuously. Increasing the awareness of the important role of culture competence in the school system, health services and therapeutic work would be of great importance when it comes to facilitating a healthy development for the adolescents.

We will be cautious in drawing any general conclusions from the findings of this study, but would like to stress that hopefully, groups of acculturating youth will be of interest to researchers, as similar research needs to be conducted to explore the findings mentioned so far in the literature. In our opinion the work on acculturating adolescents, will contribute in many ways to the well-being of individuals, families, and the larger society.

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APPENDIX

1. Daily Hassles Scale
This is a list of problems most people have. Think through the last 12 months (year) and put in one cross for each line for how often you have experiences these problems.

	1.No, never	2.Yes, sometimes	3.Yes, several times	4. Yes, very often
155. My parents spend a lot of time away from home (due to work or other)				
156. I have too much responsibility at home (for my younger siblings, doing housework or similar)				
157. I hear my parents argue				
158. My parents fight				
159. I am no longer a friend with someone I used to be friends with				
160. I am worried because someone a care about use too much alcohol				
161. Worries because one of the people to whom I am closest is sad or resigned (depressed)				
162. Arguing or having conflicts with mom				
163. Great difficulties understanding the teacher when he/she teach				
164. Arguing or having conflicts with dad				
165. Worries because someone close to me is anxious or scared				
166. Worries because one of my siblings is in serious trouble				
167. Worries because one of my friends is in serious trouble				
168. Arguments or other problems in relation to friends				
169. Huge pressure from surroundings to succeed and do well in school				
170. Problems in relation to one or more teachers				
171. Huge work pressure in school				
171. Huge problems with concentrating in class				

2. Culture competence scale

CULTURE AND CONTACT

How easy is it for you

	1.Very Difficult	2.Quite Difficult	3.Quite Easy	4.Very Easy
300.... to speak Norwegian				
301... to write in Norwegian				
302... to get new friends among Norwegian speaking students at school?				
303...to get new friends among bilingual students at school?				
304...to spend time with Norwegian children /adolescents?				
306...to spend time with bilingual children /adolescents?				
307...enjoy being together with Norwegian children/ adolescents?				
308...enjoy being together with Norwegian children/ adolescents?				
309....feel you have a lot in common with Norwegian children / adolescents?				
310....feel you have a lot in common with bilingual children / adolescents?				
311...have dinner at Norwegian friends house?				
312...joining Norwegian friends to their house after school?				

These questions are for bilingual students

312...speak your mother tongue?				
313...write in your mother tongue?				
314…to feel that you have a lot in common with children / adolescents from your culture?				
315...to feel that children/ adolescents from your culture understand you?				
316...joining friends from your culture to their house after school?				
317...have dinner at friends from your cultures' house?				

The Daily Hassles Scale and the Culture Competence scale, including their introductions, have been translated by us. The two scales were developed by Brit Oppedal, Norwegian Institute of Public Health.

3. Center for Epidemiologic Studies Depression Scale (CES-D)

Below is a list of thoughts and feelings everyone can have. PLEASE TELL ME HOW OFTEN YOU HAVE FELT THIS WAY DURING THE PAST WEEK.

	1. Rarely or none of the time	2. Some or a little of the time	3. Occasionally or a moderate amount of time	4. Most or all of the time
450. I was bothered by things that usually don't bother me.				
451. I did not feel like eating; my appetite was poor.				
452. I felt that I could not shake off the blues even with help from my family or friends.				
453. I felt I was just as good as other people.				
454. I had trouble keeping my mind on what I was doing				
455. I felt depressed.				
456. I felt that everything I did was an effort.				
457. I felt hopeful about the future.				
458. I thought my life had been a failure.				
459. I felt fearful.				
460. My sleep was restless.				
461. I was happy.				
462. I talked less than usual.				
463. I felt lonely.				
464. People were unfriendly.				
465. I enjoyed life.				
466. I had crying spells.				
467. I felt sad.				
468. I felt that people dislike me.				
469. I could not get "going."				

The CES-D scale was copied from http://www.chcr.brown.edu/pcoc/cesdscale.pdf, whereas the introduction to it was translated by us, because the introduction used in YCC differed from the original introduction.