ACCULTURATION, ALIENATION, AND HIV RISK AMONG THE RUSSIAN-SPEAKING DRUG USERS IN ESTONIA

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ACCULTURATION, ALIENATION, AND HIV RISK AMONG THE RUSSIAN-SPEAKING DRUG USERS IN ESTONIA

A Dissertation
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy
International Family and Community Studies

by
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May 2010

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ABSTRACT

In 1991, dramatic socio-political changes transformed the Russian-speaking population in Estonia from the governing class to an immigrant minority virtually overnight absent of a relocation or emigration process. New citizenship and language policies, and associated socioeconomic hardships, drove many of the Russian-speaking population to the edges of the society. These processes were amplified by traditional acculturation challenges that led to increased psychological distress, rising indicators of social exclusion and social alienation, and poor health, including HIV/AIDS and substance abuse, in this linguistic group during the past two decades. Given the growing relevance of cultural issues in this group as well as the public health importance of drug abuse and HIV/AIDS epidemics in Estonia, this study aimed to: 1) develop an optimal group classification which adequately represents acculturation to Estonian culture among the Russian-speaking drug users in Estonia and to compare the defined groups in their demographic characteristics, acculturation stress, level of alienation, and HIV drug risk; 2) determine quality and nature of the relationship between acculturation stress, alienation, severity of drug abuse and their predictive strength on the level of HIV drug risk among the Russian-speaking drug users in Estonia.

A convenience sample comprised of 150 Russian-speaking IDUs living in Tallinn was recruited through “AIDS-i Tugikeskus” (AIDS Information and Support Center) in Tallinn. Participants completed a survey assessing acculturation to Estonian and Russian culture (Language, Identity, and Behavior Scale), acculturation stress (Social, Attitudinal,
Familial, and Environmental Acculturative Stress Scale), level of alienation (Alienation scale), HIV drug risk (Risk Assessment Battery), and socio-demographic data.

Univariate and bivariate statistics, cluster analysis, discriminant function and factors analyses, and structural equation modeling (SEM) were employed to test the research hypotheses.

The results revealed that two acculturation typologies exist among Russian-speaking drug users in Estonia: Russian and bicultural. Better able to navigate Estonian society, bicultural individuals had significantly higher legal incomes and were more likely to have health insurance. At the same time, this group experienced higher levels of acculturation stress and cultural estrangement, compared to the Russian orientation group. The tenable model, developed in the process of SEM revealed that acculturation stress had a significant positive effect on social alienation. Social alienation, duration of drug injection and polydrug use all predicted a higher level of HIV drug risk. The effect of acculturation stress on HIV drug risk was fully mediated by alienation. Overall, the model explained 25% variance in HIV drug risk. These findings supported the acculturation stress framework that guided the research and pointed to the importance of focusing on socio-cultural factors in developing interventions for immigrant minorities to reduce their vulnerability to HIV infection. The results highlighted the role of social alienation as a measure of adaptation among immigrant minorities and as an important mediator in the relationship between acculturation stress and vulnerability to HIV infection. In addition, significance and implications of the findings, study limitations and suggestions for future research were discussed.
DEDICATION

Dedicated to my mother and grandmother...the strongest women I know. You inspired me to believe that my future is whatever I choose to make of it. Your greatest gift to me is your confidence and belief in me. You taught me that no matter what comes my way, I can overcome it. I admire your strong spirit and I hope that I can show my children and grandchildren the unconditional love and support that you have always shown me. I never could have accomplished this without you, the calming force in my life.
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CHAPTER ONE

INTRODUCTION TO THE STUDY

This study examined acculturation, acculturative stress, alienation, and the HIV drug risk among Russian-speaking drug users living in Tallinn, Estonia. The sections of this chapter present the background of the study, the statement of the problem, definitions of terms, and give an overview of the research questions and hypotheses.

Background of the Study

Without relocation and formalities of an emigration process, massive socio-political changes in 1991 transformed the Russian-speaking population in Estonia to an immigrant minority. During the time of the Soviet Union and right after Estonia’s independence, the Soviet immigrant population in Estonia was characterized by low acculturation to the Estonian culture. They used Russian language in their everyday life, lived in relatively isolated societies and there was little, if any, mixture between Russian and Estonian cultures. Despite the fact that many Russian-speakers have lived in Estonia for generations, the overall knowledge of Estonian language among them remained as low as 15% (Statistical Office of Estonia, 1995).

After Estonia acquired independence, a new citizenship law was implemented. As a result, 32% of the Estonian population became stateless (Riigikogu Press Service, 2009); the vast majority of whom where Russian Soviet era migrants and their offspring. With limited hope, a lack of rights accorded to Estonian citizens, opportunities, resources, and a poor command of Estonian language, which was required for most jobs, many from
the Russian-speaking minority were left to suffer from low living standards, unemployment, criminal behavior, poor health, and substance abuse.

The Russian-speaking minority in Estonia has been the hardest hit by the spread of substance abuse and of HIV/AIDS. This situation has generated a widespread societal attitude in Estonia of blaming Russians for these co-occurring epidemics, and is often referred to as the “Russian problem.” The vast majority of people who inject drugs in Estonia are of non-ethnic Estonian origin (86%), predominantly ethnic Russians (Talu et al., in press; Uusküla et al., 2005; Uusküla, Heimer, Dehovitz, Fischer, & McNutt, 2006; Uusküla, Kals, Rajaleid, Abel, & Talu, 2008). Approximately 80% of all HIV positive people are Russian speakers (Council of Europe, 2004).

The question of why a substantial number of injecting drug users (IDUs) and higher rates of HIV infection are concentrated among racial/ethnic minorities is a critical question in the international epidemiology of HIV among IDUs. Understanding of the fundamental roots of co-occurring epidemics of drug abuse and HIV, among the Russian-speaking population in Estonia, cannot be achieved without looking at the socio-cultural contextual factors of their social marginalization. Marginalized groups are more affected by barriers to HIV prevention and care.

A low level of interaction and involvement of this group with the larger society could be responsible for the social marginalization among the Russian-speaking minority. Acculturation and alienation are dimensions that contribute to this interaction and involvement can be seen as measures of adaptation among the immigrant minority.
Hardships relating to acculturation and the associated conflicts can be very stressful, and culture change itself produces psychosocial stresses of extended duration (Vega, Hough, & Miranda, 1985). Inability to cope with cultural and social realities, which confront the individual on the day-to-day basis, can manifest itself through alienation. Social alienation and acculturation stress arising from acculturation processes, thus, could be responsible for the non-adaptive attitudes and behaviors of immigrants that put them at risk for HIV infection, and social alienation could act as an important mediator of these relationships.

Although, knowledge about how acculturation stress and alienation impacts vulnerability to drug abuse and HIV risk remains hypothetical and under-researched, a great bulk of the research literature consistently relates the disparities in drug use and its associated adverse behavioral and health outcomes in an immigrant minority population to alienation and the stress arising from acculturation (e.g. Berry & Kim, 1988; Berry, Kim, Minde, & Mok, 1987; Horman, 1973; Myers & Rodriguez, 2003; Organista, Organista, & Kurasaki, 2003; Reyes et al., 2007; Sam, 2006; Sam, Vedder, Ward, & Horenczyk, 2006; Vega, Zimmerman, Warheit, & Gil, 2002). Despite this apparent link, the research literature has few empirical studies exploring the relationship between acculturative stress, alienation, and vulnerability to HIV infection. Therefore, this study aims to fill this critical knowledge gap by investigating how the immigrant minority’s perception of and participation with the mainstream society, as expressed through the level of acculturation, acculturation stress and alienation, are related to vulnerability to HIV infection.
Statement of the Problem

The studies that attempted to examine the links between HIV risk behaviors and acculturation focused on immigrant minorities from non-Western cultures coming to Western societies where immigrants adopt the behavioral patterns of the host society. Few studies have examined the impact of acculturative stress and alienation on health related behaviors. Virtually nothing is known about experiences of post-Soviet Russian immigrants living in Eastern Europe, for whom the Soviet Union pre- and post-collapse experiences may have created different patterns of adjustment and health risks compared to the immigrants in the Western countries.

The magnitude of the devastating consequences of drug abuse, on the Russian-speaking minority in Estonia, suggests both a scientific and an ethical imperative for etiological research on the factors which place this population of drug users at high risk for HIV transmission. Social alienation and psychological stress, arising from acculturation and adjustment processes, could be responsible for the non-adaptive attitudes and behaviors of immigrants that put them at risk for HIV infection. Thus, it is important to investigate the complex relationships between acculturation, acculturative stress, and alienation and HIV risk behaviors among the Russian-speaking drug users in Estonia. There is a critical knowledge gap on this topic and the findings from this study will contribute to the scientific understanding of the socio-cultural factors that increase vulnerability to the HIV epidemic among immigrant minority groups.

This study seeks to: (a) determine an optimal group classification which adequately represents acculturation to Estonian culture among the Russian-speaking
IDUs in Estonia, and to validate these findings by comparing the defined groups on selected demographic characteristics, acculturation stress, level of alienation, and HIV drug risk; (b) explore the quality and nature of the relationship between acculturation stress, alienation, and their predictive strength on the level of HIV drug risk, among Russian-speaking drug users in Estonia, by testing a tenable model based on theoretical considerations and previous research findings.

Significance of the Study

HIV in Estonia is mainly spreading in the risk group of injecting drug users, and HIV in the Estonian context is largely an ethnic minority issue. To fully understand the depth and scope of the problem of drug abuse and HIV among the Russian-speaking population in Estonia, it is necessary to look at the socio-cultural contextual factors that contribute to their marginalization and social exclusion. A low level of interaction and involvement of this group to the host society could be responsible for social marginalization among this minority group. Acculturation to and alienation from the mainstream culture and society are dimensions that contribute to this interaction and involvement.

In the “Estonian Integration Program 2000-2007”, integration is defined as the “social harmonization of society around a strong common national core based on knowledge of the Estonian language and Estonian citizenship” (Government of Estonia, 2000, p. 1). The desired outcomes are listed as: a strong common national core, cultural pluralism, and the development of Estonian culture (Government of Estonia, 2000). Development of a common Estonian culture refers to the pursuit of not only civic, but a
cultural form of social integration. For the Russian-speaking minority, it means acculturation to Estonian culture and formation of a new identity that will serve as the cultural substrate of the Estonian nation. Acculturation involves a long process of change in the values, affiliations, and language from that of the original culture.

A slow-moving process of integration of Russian-speakers to mainstream Estonian society indicates that many of them will continue to cope with the psychological stresses arising in the process of acculturation. Inability to cope with cultural and social realities among them will create feelings of alienation to the dominant society. There is a need for policy makers, program planners, and scientific and prevention communities to start paying closer attention to the needs of the Russian-speaking minority in order to help them cope with the changing health and social issues that they will face.

Given the growing relevance of cultural issues and the public health importance of drug abuse and HIV/AIDS in Estonia, there is an urgent need to broaden the limited literature on the impact of acculturation stress and alienation on HIV drug risk through etiological research, integrating state of the art knowledge on social alienation and features of the acculturation process, which may influence HIV risk behavior. In the public health arena, extra leverage may be gained via interdisciplinary research, where the contribution of "non-health" disciplines, may be crucial for developing effective health policies. Studying the relationship between acculturation stress, alienation, and HIV drug risk behavior, in the context of a pending HIV epidemic among the Russian-speaking minority in Estonia, can help discern the significance of these factors when developing interventions for engaging this vulnerable population group toward reducing
their HIV risk behaviors. Understanding the processes that impede positive adaptation to Estonian culture among this minority will prevent further marginalization. Without effective management and prevention of social alienation and exclusion, HIV and drug policies will not reach marginalized groups.

Science-based information from this study will help policy makers address extreme health disparities existing in Estonia today, and design and implement effective preventive interventions that seek to curb the HIV epidemic among the Russian-speaking population. On a broader scale, the results from this study will facilitate development of policies that will ensure adequate and fair treatment of individuals of all cultural groups in the Estonian society, and programs and projects that aim to the integration of Estonian society.

Definitions of Terms

The term “Russian-speaking population” (Russian-speaking minority, Russian-speakers) will be used as an umbrella term to denote former Soviet citizens of various nationalities who predominantly use Russian language in their everyday life and who have been living in Estonia since the dissolution of the Soviet Union (ECMI, 1999). Importantly, the term is not used to define the ethnic origin, mother tongue, or current citizenship, but is used to embrace the population residing in Estonia that share Russian language and culture, have similar identity problems, official language, and adaptation problems. In addition, the term “non-Estonian” refers to any individual who is not ethnic Estonian, regardless of his or her citizenship, to emphasize the ethnic origin, which is perceived as different from that of the ethnic Estonians (ECMI, 1999). Since an
overwhelming majority of non-Estonians is represented by the Russian-speaking population, both terms will be used interchangeably.

Acculturation is defined as a range of “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” (Redfield, Linton, & Herskovits, 1936, p.149). While changes occur in both cultural groups, it is usually the minority or non-dominant group that experiences the most change to adapt to a dominant, host culture. The concept of acculturation is operationalized as a bidimensional process where the process of acculturation is seen as occurring along two dimensions: the culture of origin and the host culture (Berry, 1980, 1990; Berry & Sam, 1997; LaFromboise, Coleman, & Gerton, 1993). The two dimensions vary independently from each other and an individual has a preference in maintaining the culture of origin while also adapting to the host culture. In this study, acculturation is defined as a respondent’s relative stance with respect to the two cultures, Estonian and Russian. The acculturation process is assessed through three discrete acculturative outcomes (Birman & Trickett, 2001): language competence, identification, and behavioral participation, along which acculturation also independently vary.

Alienation is defined as a sense of not belonging and a “state or experience of being isolated from a group or an activity to which one should belong or in which one should be involved” (Mann, 2001, p. 8). Alienation is conceptualized and measured as five psychological components: powerlessness, self-estrangement, normlessness,
cultural-estrangement (or value isolation), and meaninglessness (Kohn, 1976; Roberts, 1987; Seeman, 1959).

Acculturative stress is defined as “a by-product of acculturation that is specific to personal exposure to social situations and environments that challenge individuals to make adjustments in their social behavior or the way they think about themselves” (Vega, Gil, & Wagner, 1998, p.125). Acculturative stress is measured in social, attitudinal, familial, and environmental contexts and through the feelings of perceived discrimination (majority group stereotypes) (Mena, Padilla, & Maldonado, 1987).

HIV drug risk or HIV drug risk behaviors are defined as unsafe drug-related practices that generally increase one’s chances of contracting HIV/AIDS.

Research Questions

These considerations give rise to the following research questions:

Research focus 1: What is the optimal group classification which adequately represents Estonian acculturation among the Russian-speaking drug users in Estonia? How do the defined groups differ in their socio-economic status (SES), level of acculturation stress, and alienation?

Research focus 2: Do significant relationships exist between acculturation stress, alienation, and HIV drug risk among the Russian-speaking drug users living in Estonia?

Research focus 3: The third focus of this study is exploratory and aims to generate a tenable structural model of acculturation stress, alienation, patterns of drug abuse and HIV drug risk for Russian-speaking drug users living in Estonia. The hypothesized model posits the following research questions: Does the level of acculturation stress, alienation,
and patterns of drug abuse predict the level of HIV drug risk among the Russian-speaking
drug users living in Estonia? Does acculturation stress exert both direct and indirect
effect on HIV drug risk? Are the more severe patterns of drug abuse (polydrug use and
length of drug injecting) increased due to higher level of acculturation stress? Do severe
patterns of drug abuse increase the level of alienation?

Hypotheses

The research foci and questions above lead to the following hypotheses:

**Hypothesis 1**

In the sample of Russian-speaking IDUs in Estonia the orientation towards
Russian culture is strong, and therefore, the application of Berry’s (1990, 2003) four-type
acculturation typology is not relevant. Therefore, it was hypothesized that:

**H1 (a)** Two acculturation typologies exist in the sample of Russian-speaking IDUs
in Estonia: 1) A bicultural orientation group consisting of individuals who are
relatively highly acculturated to both Russian and Estonian cultures, and 2) A
Russian orientation group consisting of individuals who maintain high
acculturation to Russian culture and little acculturated to Estonian culture.

**H1 (b)** Bicultural individuals have a significantly higher socio-economic status
indicated by a higher legal monthly income and higher level of education than
individuals in the Russian orientation group.

**H1 (c)** Bicultural individuals are experiencing significantly lower levels of
acculturation stress than individuals in the Russian orientation group.
H1 (d) Bi-cultural individuals experience significantly lower levels of alienation than individuals in Russian orientation group.

Hypothesis 2

The second research hypothesis in this study examined the relationships between acculturation stress, alienation, and HIV drug risk.

H2. Statistically significant relationships exist between alienation, acculturative stress, and HIV risk:

H2 (a) There is a significant positive relationship between acculturation stress and the level of alienation.

H2 (b) The higher the acculturation stress, the higher the level of HIV drug risk.

H2 (c) The level of alienation is significantly positively related to HIV drug risk.

Hypothesis 3

Hypothesis 3 was concerned with a structural model of acculturation stress, alienation, and HIV drug risk, grounded in acculturation stress theory. Figure 1.1 is a pictorial representation of the model expressed as a path diagram. The direction of the arrows indicates theoretical causal relationships, circles represent latent constructs, and squares represent measured variables. Arrows indicate expected significant associations.
The model aims to predict an endogenous variable measuring HIV drug risk from a set of three exogenous variables (acculturation stress, duration of injecting, and polydrug use) and one endogenous variable (latent construct of social alienation). Acculturation stress is hypothesized to cause higher levels of alienation and more severe patterns of drug abuse (duration of injecting and polydrug use). It is expected that a higher level of acculturation stress, alienation and two variables of patterns of substance use would all predict higher levels of HIV drug risk. Alienation is hypothesized to serve as a mediating latent variable between acculturation stress on one hand, and HIV drug risk on the other.
CHAPTER TWO

REVIEW OF THE LITERATURE

This chapter provides a thorough review of the literature pertaining to the research questions under investigation. The literature review is organized as follows: (a) an overview of the Russian-Speaking population in Estonia (the definition of the term, a brief historical background, and challenges of the Russian-speaking minority living in Estonia), the injecting drug use and HIV/AIDS epidemics in Estonia and their socio-economic context, the progress and challenges of the new multicultural approach to integration in Estonia; (b) acculturation (the concept, its dimensions, and typology); (c) acculturation stress; (d) alienation (the concept and dimensionality); (e) theoretical perspectives of acculturation stress; (f) a summary of conclusions drawn from the literature review.

The Russian-Speaking Population in Estonia

During World War II, the Soviet Union annexed Estonia and soon carried out a major colonization and Russianization campaign which was the forced attempt to transform each ethnic group identity closer to the Russian by imposing Russian language, culture, and people into non-Russian cultures and regions. Politics, culture, and demographics were the three major areas that were specifically targeted by the Russianization policy. Russian nationals were assigned to the leading administrative positions in national institutions. Russian language dominated in politics, education, official business, art, and science.
The rapid change in demographics had a dramatic impact on language use, largely through migration of a Russian-speaking population, by diminishing the size of the indigenous population. During the period from 1939 to 1945, Estonia lost nearly 250,000 out of its 1.1 million people (Raun, 1991) due to emigration, deportation, execution, and other war-related deaths. As many as 83,000 ethnic Estonians were exiled eastward to Siberia by the 1950s. Concurrently, Russian speakers were settling in Estonia which continued for several decades. In consequence, Estonia’s demography changed significantly from 88% ethnic Estonians (of 1.1 million people) in 1934 to 61% (of 963,281 people) in 1989 (Raun, 1991; Statistical Office of Estonia, 1995). Over the period of 1959-1989, the proportion of the largest ethnic groups of Soviet migrants (Russians, Ukrainians, and Belarusians) increased from 22.3% to 35.2% (Statistical Office of Estonia, 1995).

As a result of geo-political events and the Russianization campaigns, large numbers of minorities who resided across the Soviet Union became Russified, spoke only Russian and regarded themselves as Russians, despite their ascribed nationality in the passports. At the same time, Russian communities living in the Soviet republics were influenced by the specific demographic, social, and cultural conditions from the societies in which they were living.

Based on the data of the last Soviet census Nahaylo, (1994) estimated that over 25 million ethnic Russians lived outside the Russian Federation in 1989. The author continued that it is reasonable to add numerous non-Russian Soviet citizens, who lived outside their national units, to this figure. Therefore, about one-fifth of the population, or
54 to 65 million people (depending on what definition of the homeland is used), lived in the 14 non-Russian Soviet states right before the collapse of the Soviet Union. In today’s Estonia, the largest ethnic groups after Estonians are Russians at 25.6% followed by Ukrainians at 2.1%, Belarusians at 1.3%, Finns at 0.86%, Tartars at 0.2%, and 2% other nationalities (Statistics Estonia, 2000b, 2009b). Most of Russian-speakers live in Tallinn (36.5% of the city's population) and the major eastern cities of Narva (85.5%) and Kohtla-Järve (69%) (Statistics Estonia, 2000b).

The European Centre for Minority Issues (ECMI) defines “Russian-speaking population, minorities,” or “Russian-speakers” as former Soviet citizens who mainly use the Russian language in their everyday life and who have been living outside the Russian Federation since the dissolution of the Soviet Union, mostly in 14 non-Russian Soviet successor states (ECMI, 1999). This definition has some important limitations. First, the term “Russian-speaking population” masks diverse needs of various ethnic groups as it does not make any reference to the ethnic origin, mother tongue, or current citizenship status. Second, this definition has been criticized on political grounds for promoting the hegemony of ethnic Russians in dealing with minority issues (Järve & Wellmann, 1999). Despite these limitations, the term “Russian-speaking population (minorities or Russian-speakers)”, seems to be quite pragmatic as it allows grouping together the former Soviet citizens of various nationalities who suffer similar identity, official language, and adaptation problems after the break-up of the Soviet Union. Thus, the term “Russian-speaking minority/population” used throughout this study denotes those former Soviet
citizens who, irrespective of their ethnic origin, predominantly use Russian at home and in their everyday life.

*Nationalizing Policies and Russian-Speaking Population*

As the Soviet Union collapsed and countries regained their independence, political power shifted overnight and re-establishment of ethnic identity and nationalism surged. In Estonia, a large Russian-speaking minority was created among the new Estonian population. Without formalities and the complexity of emigration process and relocation, Soviet non-Estonians living in the newly independent Estonia, had to realize they were essentially living in a foreign country. After 1991, they had to accept that, literally overnight, they became an immigrant ethnic minority among a dominant nationality of Estonians. This was especially hard to comprehend for ethnic Russians, who had before felt ethnic superiority and dominance over Estonians and considered themselves as the majority group in the former Soviet Union. With mixed feelings of fear, anger, frustration, loss, and insecurity, the Soviet era Russian-speaking immigrants observed how a titular Estonian nation ran the government, determined who was going to be appointed to public positions, and dictated the civic status of non-Estonians (Hagendoorn, Linssen, & Tumanov, 2001).

Russian-speakers residing in Estonia after its independence were migrants from the Soviet period (1945-1991) and their descendants, and a small fraction of ethnic Russians who can track back their ancestry in the region prior to the Soviet regime (prior to 1940). Migrants from the Soviet era, the Russians along with a smaller number of other ethnic groups from other national units of the Union of Soviet Socialist Republics
(USSR), migrated to Estonia after World War II. The majority of these migrants were working-class construction and factory workers who settled in the main urban areas, plus military personnel stationed in the Baltic region. According to the last Soviet census in 1989, Russians constituted about 30 percent of the population of the Estonian Republic, Ukrainians three-percent, Belarusians two-percent, and other ethnicities including Poles, Jews, and Finns as three-percent (Laitin, 1998). Some of the Russians and other ex-Soviet republics’ ethnic groups, mainly those who had come to live in Estonia just before the dissolution of the USSR in 1991 and had families elsewhere, emigrated back to Russia and other countries in early 1990s.

The legal reforms of the early 1990s reintroduced the Republic of Estonia Supreme Council Resolution on the Application of the Law on Citizenship (RT 1992, 7, 109) and later on the Citizenship Act, which granted Estonian citizenship only to the historical inhabitants of the country (Article 6) (Citizenship Act of Estonia, 1938, 1995). Only those individuals and their descendants, who were citizens of the Republic of Estonia prior to the occupation of Estonia by the Soviet Union (June 16, 1940), were entitled to Estonian citizenship. This category also included the long-term pre-war Russian settlers. However, for the citizens of the former Soviet Union who had migrated to Estonia during the Soviet era and their offspring, citizenship could be gained only through the process of naturalization that implies, inter alia, that the candidates have to pass an examination testing proficiency in the Estonian language, to show knowledge of the Estonian constitution, the history and the national anthem; to swear an oath of
allegiance to Estonia; have lived in Estonia on the basis of a residence permit or the right of residence for at least eight years and permanently at least the last five years.

The implementation of the Estonian citizenship legislation paralleled the development of new language laws. The Estonian language law of 1995 (Estonian Language Act, 1995) made good command of Estonian compulsory in all public state and public law sectors and for most positions in the private sector. Nevertheless, in the districts where more than one-half of the inhabitants spoke a language other than Estonian, the local administrations were legally obliged to offer services in both languages, and the local governments could conduct business in that language.

The sudden collapse of the Soviet Union left nations without policies to deal with ethnic minorities. While the primary focus of the Estonian Government after the end of the Soviet occupation was to restore Estonian nationhood and identity by implementing citizenship and linguistic policies, a complicated web of problems relating to democracy, human rights, and increasing tensions between the two linguistic communities had to be disentangled. For many Russian-speakers who migrated during the Soviet occupation, the re-establishment or restoration of Estonia's pre-war independence was not the fulfillment of their heart’s desire. As part of their identity collapsed with the Soviet Union, the disoriented and disfranchised Russian-speaking population had to make a choice to either leave the country or pass the language and citizenship requirement to legally stay in Estonia. For the majority of Russian-speakers, Estonia had become home, and they chose to stay.
Some non-ethnic Estonian residents, many of whom were born in Estonia, still oriented themselves toward the Russian Federation and saw no need to acquire Estonian citizenship or believed that obtaining Estonian citizenship would hamper their ability to visit relatives in Russia. For example, the proportion of Russians living in Estonia who considered themselves as having a Russian identity was 85% in 1992 and rose to 92% in 1993 (Kirch & Kirch, 1995). Interestingly, since the common Soviet identity had faded, the ideology inherent to ethnic Russians came to prevail among Russian speakers regardless of their actual ethnicity (Rannut, 2001, as cited in Kemppainen, Ferrin, Ward, & Hite, 2004). Fewer non-ethnic Estonian residents truly wished to integrate fully into Estonian society, to learn the Estonian language, and to become loyal Estonian citizens.

As a result of the difficult socio-political reality, a large part of the Russian-speaking community withdrew from the public sphere and state-level politics. Todd (2005) refers to this process as a shift in identity, when people do not wish to accept a new system of values but are unable to maintain the old one openly. Thus, the old identity remains preserved only in the private sphere and slowly disappears from its social dimension. The author continues that such is very typical for totalitarian societies or societies that have undergone a radical change in the power balance.

*Early Post-Soviet Economic and Political Reforms: A Growth in Health Disparities*

Early post-Soviet economic and political reforms have been a difficult experience for all residents of Estonia, yet Soviet era migrants have had a distinctively hard time in adjusting to new realities and unfamiliar social settings of a re-born independent Estonia. With limited hope, a lack of equal rights accorded to Estonian citizens, restricted
opportunities and resources, and a poor command of the Estonian language required for many jobs, many from the Russian-speaking minority suffered from low living standards, unemployment, poor health, and other social ills, including HIV/AIDS, substance abuse, and criminal behavior.

The majority of the non-Estonians were determined to be illegal aliens and had to apply for a residence permit and pass naturalization procedures to legally remain in the country. As a result, 32% of the Estonian population had no citizenship in 1992 (Riigikogu Press Service, 2009). According to the results of the census of 1989, only 15% of ethnic Russians, 8.1% of Ukrainians and 6.8% Belarusians could speak Estonian; the overall knowledge of Estonian among non-Estonians was 15% (Statistical Office of Estonia, 1995).

The main ethno-political changes in Estonian society in the 1990s – citizenship and increasing demands for Estonian language proficiency, had their impact on the unemployment rate among non-Estonians. Unemployment virtually did not exist in 1989, but it grew to 7.8% among Estonians and 13.2% among non-Estonians in 1997 (Heidmets, 2008). Higher rates of unemployment among the Russian-speaking minority can be attributed to lowering the Soviet era migrants’ competitiveness in the employment market due to poor command of Estonian language and the collapse of the industrial sector (Pavelson & Luuk, 2002; Vodopivec, 2002). Consequently, the population of non-ethnic Estonian origin had a significant reduction in relative wages compared to Estonians (Leinsalu, 2002; Noorkoiv, Orazem, Purr, & Vodopivec, 1998).
The legal reforms have brought about not only a change in the personal legal status of thousands Russian-speaking individuals, but also negative social, psychological and health impacts (Lauristin & Heidmets, 2002). In 1989, there was no significant difference between Russians and Estonians in total mortality for all ages combined; however, by 2000, the figures had changed dramatically. Total mortality had fallen by 4% among Estonian men and 11% among Estonian women, whereas among Russians, the mortality rate had increased by 24% for men and by 1% for women (Leinsalu, 2004). In 2000, Russians had a higher mortality than Estonians for almost all selected causes of death, with the highest rates tied to alcohol related causes (Leinsalu, 2004). In the mid-1990s, Russians reported more symptoms of depression than ethnic Estonians (Aluoja, Leinsalu, Shlik, Vasar, & Luuk, 2004).

The stress accompanying a radically changed sociopolitical status and the loss of privileged position and ideals was reflected in suicidal behaviors (Hovey, 2000). Thus, Varnik, Kolves, & Wasserman (2005) found that by 1998, suicide rates for the Russians in Estonia were significantly higher than for Estonians or Russians residing in Russia. During the Soviet era, there was no need for integration and acculturation of Russians as they enjoyed their sense of ethnic identity and maintained confidence in belonging to a privileged class. This may explain their lower suicide rate compared to ethnic Estonians before the Estonian independence in 1991. After 1991, Estonian Russians and Russian-speakers had to adapt to new circumstances, learn the Estonian language, and go through the tedious process of naturalization.
A “Russian problem”

Social and economic deprivation during the transition period resulted in the growth of violence, sex trade, substance abuse, HIV/AIDS, sexually transmitted diseases, and tuberculosis in all newly independent countries (Dehne, Pokrovskiy, Kobyshcha, & Schwartlander, 2000; Rhodes, Ball et al., 1999; Rhodes, Stimson, Fitch, Ball, & Renton, 1999). Estonia has not escaped these problems either. Since 2000, Estonia has experienced one of the fastest growing HIV epidemics in Europe. Data reported by the Health Protection Inspectorate showed that in 2001, there were 1,474 new HIV cases, which comprises an incidence of 107.8 new HIV cases per 100,000 people. Since 2002, the number of new HIV cases in Estonia had been steadily declining, however, the number is still notably high at 545 new HIV cases in 2008, which comprises an incidence of 40.6 per 100,000 (Health Protection Inspectorate, 2009).

Injection drug use is the main cause of the HIV outbreak in Estonia. Local studies revealed a high HIV prevalence (40–90%) (Uusküla et al., 2006; Uusküla, McNutt, Dehovitz, Fischer, & Heimer, 2007; Wilson, Sharma, Zilmer, Kalikova, & Uusküla, 2007) and an HIV incidence (more than 20 per 100 person per year at risk of HIV) among the IDU population in Estonia (Uusküla et al., 2008). Estimates indicate that 20,000 individuals, or 2.6% of the population aged 15–64 years, in Estonia inject drugs (Aceijas, Stimson, Hickman, & Rhodes, 2004). In 2004, the estimated number of injection drug users in Tallinn alone was 10,000 (Uusküla, Rajaleid et al., 2007).

A high prevalence of HIV and other blood borne infections among IDUs in Estonia is associated with high-risk injections, unsafe sexual behavior, fentanyl use and
alcohol abuse (Platt et al., 2006; Uusküla, McNutt et al., 2007). Among all IDUs in the 2005 IDU-survey, 29% reported having shared needles, syringes, or both with someone during past 4 weeks (Uusküla et al., 2005). Less than half of the respondents (40%) reported having used condoms during each occasion of vaginal intercourse in the last 12 months, and 38.4% during each occasion of intercourse in the last 4 weeks (Uusküla et al., 2005).

The use of multiple injection drugs (so called polydrug use) and the early age of drug use initiation have become a serious problem in Estonia. Over half of IDUs inject more than one type (Uusküla et al., 2005). A survey, among visitors of the SEP, showed that the most common combination of injected drugs was heroin and amphetamine (21%), heroin and poppy liquid (14%), poppy liquid and amphetamine (14%) and heroin, poppy liquid, and amphetamine (10%) (Abel-Ollo et al., 2007). Amphetamine and fentanyl are the major drugs used by IDUs in Estonia. An early age of drug use initiation is another characteristic of IDUs in Estonia. Over 70% of IDUs start using drugs at an age less than 18 years and almost 40% started drug use under the age of 16 (Kalikov, 2005).

The Russian speaking minority in Estonia has been the hardest hit by the spread of substance abuse and HIV/AIDS. It is suggested that the rate, among the population aged 15–64 years, in Estonia who inject drugs could be as high as 7.3% among Russian speakers and only 0.4% among ethnic Estonians (WHO, 2008). Overall, the IDU population in Estonia is characterized by a high prevalence of HIV, young age, and marginalization. Half of IDUs surveyed are less than 25 years old (Talu et al., in press).
Only 41% of IDUs reported having a regular or temporary job, reflecting the high unemployment (Uusküla et al., 2005). A low level of education is consistent across the studies, where approximately half of the IDUs reported less than nine years of education (Talu et al., in press; Uusküla et al., 2005). Lack of health insurance coverage is also a problem among the IDU population: only 45% of the IDUs surveyed are covered by state health insurance (Uusküla, et al., 2005).

The vast majority of IDUs (86%) are of non-ethnic Estonian origin (predominantly ethnic Russians) (Talu et al., in press; Uusküla et al., 2005; Uusküla et al., 2006; Uusküla et al., 2008). The prevalence of HIV in Uusküla’s et al. (2005) study was significantly higher among Russian-speaking IDUs (65%) than among Estonian IDUs (42%). The association of ethnicity of IDU and HIV prevalence remained significant even after adjustment for the geographic location and main drug of use. In the SAFER-IDUS survey carried out in Estonia in 2004, 64% of IDUs identified themselves as Russian-speakers, while 28.5% of respondents did not answer the question on their ethnicity (Kalikov, 2005). Researchers concluded that the question on ethnicity appeared to be quite sensitive and could be related to the general societal attitude of blaming Russians for the drug use problem while referring to it as a “Russian problem”. This survey also revealed that over half of the IDUs participating in the survey did not have any citizenship (those possessing a so called “Alien’s Passport”) and only 25% were Estonian citizens.

Most HIV infections are reported among the IDUs in Tallinn and the predominantly Russian-speaking Ida-Viru County in northeast Estonia (WHO, 2008).
For example, in Kohtla-Järve, a town in Ida-Viru County, the prevalence of HIV among IDUs reached an alarming 90% compared to Tallinn where the HIV prevalence among IDUs was 54% (Platt et al., 2006).

Integration: Progress and Challenges

After independence, Estonia was going through a transitional period and time was required for all the communities in Estonia to adjust psychologically to the new realities. The Russian-speaking community was in Estonia to stay. Changes began to occur in attitudes among the ethnic Estonian population in the middle of the 1990s. A new vision and policy towards the non-ethnic Estonian population was required by the desire for European integration, the pragmatism of stability and security of the Estonian society, and the awareness of the geo-political reality. Furthermore, there was a real threat of linguistic segregation between the Estonian and Russian-speaking populations and subsequent formation of ‘two societies in one country' model that could substantially threaten social harmony in Estonia for many years to come (Government of Estonia, 2000, sect. 3.1).

Since 2000, based on a new multicultural approach, state policies towards ethnic minorities and non-citizens have been framed within a general action plan for governmental agencies and other institutions (Government of Estonia, 2000). In the general action plan, so-called Integration in Estonian Society 2000-2007, integration is defined as the ‘social harmonization of society around a strong common national core based on knowledge of the Estonian language and Estonian citizenship’ (Government of Estonia, 2000, p. 1). The intended outcomes are listed as a strong common national core,
cultural pluralism, and the development of Estonian culture (Government of Estonia, 2000). Development of a common Estonian culture clearly refers to the pursuit of not only civic, but also a cultural form of social integration. For the Russian-speaking minority, it means acculturation to Estonian culture and the formation of a new identity that will serve as the cultural substrate of the Estonian nation.

The horizontal axis of Estonian identity suggests a continuum of positions stretching from minimal change to the left towards complete cultural re-identification to the right. However, intermediate types and nuance are possible along the continuum (Kolstoe, 1996). For example, some Russians may develop political loyalty to Estonia in the territorial sense only, but still identify culturally with the external homeland 'Russia' in the narrow sense, or the Russian Federation, which is regarded as a Russian nation-state. Political loyalties change much faster than do cultural self-understandings. New Russian self-understanding or formation of a new identity is another possible acculturation outcome for the Russian-speaking minority in Estonia. They may retain an identity as Russians, but nonetheless see themselves as Russians of a special kind, different from those living in Russia. Having lived for generations in a culturally different environment they, however, may adopt the habits, customs, and ways of life prevalent in the region (Arutiunian & Drobizheva, 1992).

Due to Estonian government efforts, some progress toward integration has been made and many of the Russian-speaking population have now adjusted to the new conditions. At the beginning of 2009, 83.8% of Estonia's population held Estonian citizenship, 7.9% were citizens of other countries (primarily Russia), and 8.2%
(approximately 107,000) were stateless (US Department of State, 2009). In 2005, the number of naturalized persons exceeded the number of stateless persons for the first time (Riigikogu Press Service, 2009). According to the 2000 population census, close to 40% of Russian-speakers reported good skills in the Estonian language (Statistics Estonia, 2000a) compared to 15% in 1989 (Statistical Office of Estonia, 1995). Despite these achievements, however, issues which need to be overcome still remain.

According to the Population and Social Statistics Department of Estonia, 14% of the immigrant population, who lived in Estonia in 2008, did not feel part of the Estonian society and 22% did not consider Estonia as their home country. Even among those with knowledge of the Estonian language, 17% did not consider Estonia as their home country. The respective proportion among the immigrants without knowledge of the Estonian language was 29% (Statistics Estonia, 2009a). Obtaining an EU passport became the primary motivation for gaining Estonian citizenship for some.

Since 2001 the unemployment rate in the country was steadily decreasing. However, the unemployment rate in 2007 was still two times higher (9.7%) among non-Estonians compared to Estonians (4.0%) (Heidmets, 2008). The predominantly populated Russian-speaking northeastern area of Estonia contains the highest unemployment (9%) (Statistics Estonia, 2008a). After years of a steady decline, unemployment increased in all regions of Estonia due to a global economic downturn: total unemployment in Estonia rose to 11.4% in the 1st quarter of 2009, with as high as 13.6% in the northeastern area of Estonia (Statistics Estonia, 2009c).
A large portion of Russian-speakers still exist as cultural anomalies, where they remain poorly integrated into the Estonian society and are still in search of new cultural identities. Among the Russian-speaking population in the process of integration, the reported barriers include: interrelated problems of acquiring citizenship, inadequate Estonian language skills, little interaction and mixing between the two groups, lack of proficiency among Estonian language teachers in Russian schools (who are non-native speakers themselves), a challenging constitution component of the citizenship exam (even for ethnic Estonians), and a reluctance to study for a citizenship test to integrate into a culture they are otherwise excluded from. The failure to effectively navigate the Estonian society by the Russian minority still manifests itself through heightened indicators of social exclusion in this linguistic group, including: low living standards, unemployment, criminal behavior, and poor health, including HIV/AIDS and substance abuse.

The magnitude of the devastating consequences of drug abuse within the Russian-speaking minority in Estonia cannot be understood without looking at the social contextual factors that contribute to their social marginalization. Social marginalization of the Russian-speaking minority could be influenced by their low level of acculturation to and heightened alienation from the Estonian society. Alienation could be an important mediator in the relationship between acculturation experiences and vulnerability to HIV infection among the Russian-speaking minority, highlighting the importance of this construct as a measure of adaptation. Given the growing relevance of acculturation among the Russian-speaking minority in Estonia and the public health importance of drug
abuse and HIV/AIDS among this population group, it is important to consider the role of acculturation stress and alienation in HIV drug risk, integrating state of the art knowledge of features of the acculturation process and its associated adverse behavioral and health outcomes.

Acculturation

For a long period of time, acculturation had been a focus of theoretical and empirical discussions that attempted to understand and explain the differences among racial and ethnic groups. Recently, acculturation has received attention from clinical, psychological, and educational fields and has been analyzed from a variety frameworks and perspectives. The earliest definition of acculturation comes from the field of anthropology. Redfield, Linton, & Herskovits (1936) defined acculturation as a range of “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” (p.149). The concept of acculturation has evolved and expanded over time. The most recent definitions of acculturation have sought to incorporate the impact of acculturation on changes in personal values, behavioral, cognitive, and affective functioning (Cuellar, Arnold, & Maldonado, 1995; Marin, 1992; Marin & Gamba, 2003). Overall, today’s definitions of acculturation imply that environmental and individual characteristics and preferences are critical in understanding the process of acculturation as they shape attitudes, beliefs, values, and behaviors of an individual, and have implications on how an individual adapts to and functions in a mainstream or host society (Rivera, 2007).
Initial attempts at explaining the process of acculturation viewed it as a linear and one-dimensional process with the ultimate objective of being assimilated into the host culture (Gordon, 1964). The instruments based on this one-dimensional perspective assessed acculturation as a process occurring along a continuum in which more acculturation to one culture is accompanied by the diminishing of culture of origin (Cuellar, Harris, & Jasso, 1980; Suinn, Rickard-Figueroa, Lew, & Vigil, 1987). The major criticism of this one-dimensional or assimilation model of acculturation is that it assumes the mutual exclusion of the two cultural identities (Nguyen & von Eye, 2002; Rogler, Cortes, & Malgady, 1991).

Theories of acculturation have increasingly recognized the complexity of the ways in which culture is adopted and expressed and a one-dimensional model of acculturation was further conceptualized as a bi-dimensional process, where the process of acculturation was seen as occurring along the two dimensions of the culture of origin and the host culture (Berry, 1980, 1990; Berry & Sam, 1997; LaFromboise et al., 1993). The bi-dimensional model of acculturation is based on an independence assumption, where the maintenance of ethnic identity is independent from the development of the mainstream cultural identity. The two dimensions vary independently from each other, and an individual has a preference in maintaining the culture of origin while also adapting to the host culture. Scholars also recognized that during the process of acculturation, changes in orientation towards one's cultural group and the host society can occur in multiple domains, such as language, behavioral practices, identity, and values, along
which acculturation also independently varies (Berry, 2003; Phinney, Horenczyk, Liebkind, & Vedder, 2001).

The most dominant bi-dimensional model of acculturation is the typological model developed by Berry and colleagues (Berry, 1988, 2003; Berry et al., 1987; Berry, Kim, Power, Young, & Bujaki, 1989). The authors suggested that acculturating individuals face the prospect of adopting one of four acculturative attitudes: integration (individual opts for maintaining both cultural identities), assimilation (individual embraces the host culture and rejects the ethnic cultural identity), separation (individual retains only ethnic cultural identity), and marginalization (individual expresses little interest in maintaining both cultural identities). At heart, this model assumes that immigrants may be placed in each dimension, based upon the degree of their cultural heritage retention in a new culture (Figure 1.2).

Figure 1.2. Berry’s Bi-dimensional Acculturation Model

<table>
<thead>
<tr>
<th>Is it considered to be of value to maintain cultural identity and customs?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>INTEGRATION</td>
<td>ASSIMILATION</td>
</tr>
<tr>
<td>No</td>
<td>SEPARATION</td>
<td>MARGINALIZATION</td>
</tr>
</tbody>
</table>

1 Adapted from Berry (1990, 2003).
Berry’s paradigm, though popular in determining acculturation outcomes, is not without some challenges and problems. The major challenge is to appropriately scale the underlying dimensions (Cohen, 1988). A failure of this often results in a lack of independence among the four types of acculturation strategies (Berry et al., 1989; Nguyen & von Eye, 2002; Rudmin, 2003). Rudmin (2006) describes psychometric problems evident in four studies reported by Berry and associates (1989), where a significant positive correlation between measures of mutually exclusive constructs of assimilation and separation shows a lack of divergent validity for acculturation scales.

To support the existence of two orthogonal dimensions, a number of other bi-dimensional acculturation models have been proposed. However, empirical studies have revealed considerable disagreement on the independence of the two dimensions in these models. Correlations have been found to be negative (e.g., Birman & Trickett, 2001; Flannery, Reise, & Yu, 2001; Kim, Laroche, & Tomiuk, 2001; Laroche, Kim, & Hui, 1997; Nguyen & von Eye, 2002), low and non-significant (e.g., Ryder, Alden, & Paulhus, 2000; C. Ward & Rana-Deuba, 1999), and positive (e.g., C. Ward & Kennedy, 1994). Independence assumption, for many acculturation measures, remains unresolved. Researchers have attempted to explain the strong inverse correlations observed between heritage and mainstream cultures and attributed them to stark differences between the two cultures (Birman, Trickett, & Vinokurov, 2002). Other researchers have argued that an individual undergoes changes in their values and attitudes while adjusting to a new culture, and therefore, the independence assumption should not be applied to acculturation models (Tsai & Chentsova-Dutton, 2002). Flannery and colleagues (2001)
maintained that inverse correlations may also imply that the bi-dimensional model is not sufficient to explain the depth and scope of the acculturation process (Flannery et al., 2001). As a result, investigators proposed a fusion model that adds a new dimension to the acculturation model to embrace a newly integrated culture or emergent ethnic identity (Coleman, 1995; Cuellar et al., 1995; Mendoza, 1989). In the fusion model, an acculturating individual may either adopt a mix of the two cultures or develop some unique aspects that do not belong to either culture. Although a majority of researchers agree with the definition of acculturation and bi-dimensional perspective of the acculturation process, debate still exists over which acculturation model captures the acculturation process more accurately and which instrument assesses acculturation more precisely.

Assessment of acculturation also involves the question of which domains should be explored in order to get sufficient coverage of the acculturation process and adaptive outcomes. Theoretical models embracing specific life domains are based on the assumption that acculturation preferences and practices vary across different life domains and across time. While the selection of life domains across acculturation studies varies broadly, the most frequently assessed domain is language use, social relations and affiliations, daily habits, cultural traditions, and beliefs (Arends-Toth & van de Vijver, 2006; Berry, 1997; Birman & Trickett, 2001; Kim et al., 2001; LaFromboise et al., 1993; Mendoza, 1989). Among those, language competence appears to be a stronger predictor of psychosocial adjustment, compared to the other domains of acculturation (Kang, 2006; Lopez & Contreras, 2005). Arends-Tóth & Van de Vijver (2006) categorized domain
specificity at three levels of abstraction based on the breadth of the domain: the public (functional, utilitarian) and the private (socio-emotional, value-related) domain; specific aspects within public (e.g., education and language) and private domains (e.g. childrearing and marriage); and specific situations when an individual expresses preferences for adopting the dominant culture or maintaining the culture of origin. The choice of domains is largely based on the purpose of the study.

Overall, acculturation is a complex process of cultural change. Researchers have observed that acculturation undergoes a series of phases that take place over time and progression through these phases is typically nonlinear, repetitive, and stressful (Berry & Kim, 1988; Gopaul-McNicol & Thomas-Presswood, 1998; Ryder et al., 2000). The duration of each phase varies for each person due to the amount of behavioral adaptations required of the acculturating individual.

**Acculturation Stress**

Acculturation is perceived as a process through which immigrants become incorporated into the host society. The incongruence between culture of origin and the mainstream culture can lead to stress in the process of acculturation. Acculturative stress is described as the stress that results directly from the acculturative experiences (Williams & Berry, 1991) and seen as the “psychological impact of adaptation to a new culture” (p.73) (Smart & Smart, 1995). Acculturative stress has been linked to depression, anxiety, heightened psychosomatic symptoms, feelings of marginality, alienation, and identity confusion (Williams, & Berry, 1991). Among the Russian population, researchers report that Russian men and women experience much distress upon their
immigration, resulting in somatization (Kohn, Flaherty, & Levav, 1989) and depression
(Barankin, Konstantareas, & de Bosset, 1989), and even demoralization (Flaherty, Kohn,
Levav, & Birz, 1988).

While acculturation stress is known to accompany the acculturation process,
disagreements exist on what acculturative outcome is more psychologically and socially
adaptive for an individual’s well-being. Taking a multidimensional acculturation
perspective, Berry (2005) argued that the differences in acculturative stress, as
experienced by immigrants, depend on the type of acculturation strategy an individual
prefers. According to Berry (2005), marginalization results in the most stress, in which
case an individual may turn to substance abuse as a coping strategy. A related
perspective, known as the “orthogonal cultural identification” model, occurs when
immigrants are considered at the most risk for substance use when they have not
successfully integrated neither in host nor in native cultures (Oetting, 1993). Neff and
colleagues referred to the described process as a model of stress marginality and found
some empirical evidence in support (Neff & Hoppe, 1992; Neff, Hoppe, & Perea, 1987).

According to Berry (2005), the integrated acculturation strategy is the least
stressful and offers access to a wider array of social resources and coping skills through
greater acceptance of the idea of living in both heritage and new cultures. In this sense,
biculturalism may protect against drug use by affording minority youths the opportunity
to reap the benefits of both cultural groups. Some researchers, both theoretically and
empirically, have shown that integrated or bicultural acculturation profiles are
psychologically and socially more adaptive and better predict adjustment than just mono-
cultural involvement, because finding a balance between the supportive elements of the heritage culture and the host culture requires skills essential for functioning in the new society (Berry, 2003, 2006a, 2006b; Lang, Munoz, Bernal, & Sorensen, 1982; Lopez & Contreras, 2005). Assimilation and separation acculturation strategies lie somewhere in between this continuum.

Other researchers did not find any evidence that bicultural integration has better outcomes on psychological and socio-cultural adaptation of the acculturating individuals compared to other modes of acculturation, and studies showing that assimilation or separation are more beneficial in respect to psychological adjustment than bicultural orientation. Rudmin (2006), for example, in his overview of the acculturation literature, cited numerous studies that bicultural integration is not uniquely beneficial for mental health. Sam (2000) found that immigrant adolescents in Norway, who preferred integration strategy, suffered increased acculturative stress. In a study of the acculturation and health of Korean-Americans, Lee, Sobal and Frongillo (2000) did not find any beneficial effects of biculturalism on health. A study of adolescent ethnic repatriates to Israel, Germany and Finland found that immigrants who preferred the separation option reported less stress symptoms than those who preferred the integration or assimilation options (Jasinskaja-Lahti, Liebkind, Horeanczyk, & Schmitz, 2003). Black and Markides (1993) also argue the effects of stress may be the most intense among the immigrant youth who become partially disengaged from their native culture but are not yet fully integrated into the host culture.
While debates are continuing to focus on which acculturation outcome is more adaptive for the individual’s well-being and mental health, other authors point out that different acculturation styles are adaptive in different contexts, and “from a coping and adaptation perspective, there is no ‘best’ acculturative style independent of context” (Birman et al., 2002, p. 586). Therefore, the importance of ideological and social context to the acculturation and adaptation of an individual’s interaction, in this context, should not be underestimated.

Multiple factors may aggravate the stress experienced during the acculturation process. The intensity of the relationship between acculturative stress and mental health outcomes is determined by a variety of mediating factors, which include individual, group and societal variables (Berry, 1990; Berry & Annis, 1974; Berry et al., 1987). The nature of the dominant or host culture expressed through multicultural ideology, pluralism, tolerance, social acceptance and prestige hierarchy of one group over another based on race, ethnicity, or religion plays an important role in acculturative stress of an individual (Ward & Searle, 1991). Among the factors that account for variations in acculturative stress during the acculturation process are contact experiences. Whether or not contacts with the host culture are frequent, pleasant, positively viewed, or meet the needs of an individual, not only influence the level of acculturative stress, but also determine a stage for later contacts. In an attempt to group mediating factors, Berry (1990) also distinguished between those factors that are present prior to contact with the host culture and those developed in the course of acculturation.
Overall, the ecological perspective of acculturation shows that it is not just the culture or cultural involvement, but the cultural fit between the individual and the environment that predicts individual adjustment (Nguyen & von Eye, 2003).

Alienation

Alienation can be an important mediator in the relationship between acculturation and mental health for immigrants, and a measure of adaptation for immigrants (Miller et al., 2006). The concept of alienation has been used across a range of disciplines from sociology, education, and economics to philosophy and psychology. The history of the concept of alienation dates back to the sociological theory of Hegel, Marx, and Durkheim. As a term, alienation was first described in the Phenomenology of the Spirit (Hegel, 1977) and was further elaborated in Marx’s work (Marx, 1956, 1959). Marx (1956) first introduced the concept of alienation in the social sciences to describe the negative effect of industrialization (Wegner, 1975). Using the term Entfremdung (adj. fremd), which is translated as “strange” or “foreign”, Marx defined alienation as a state of “not being at home” (Marx, 1959, p. 72). Durkheim used a similar alienation concept of "anomie" to describe the condition that results from thriving individualism and the breakdown of traditional society and shared values, that in turn, creates a widespread sense of frustration and meaninglessness (Durkheim, 1951). Elaborating on Marx’s concept of alienation, Ollman (1971) and Moltman (1977) emphasized isolation and separation as essential components of alienation. The term alienation has been considerably extended in scope. It has since been used across the diversity of intellectual
traditions and disciplines by philosophers, theologians, and sociologists, and more recently by psychologists and psychoanalysts.

A lack of consensus on the meaning of alienation across disciplines reflects a wide variety of definitions and use the term has received. The word alienation has its origin in the Latin word alienare, meaning to estrangement (R. Williams, 1985). Clark (1959) defined alienation as the degree to which an individual feels powerless in specific situations to achieve the role that he believes is rightfully his or her. In reviewing multiple definitions of alienation, Overend (1975) associated the word alienation with separation, loss, and estrangement. Johnson (1973) described social alienation as a state of separation from other people and disassociation from cultural norms and values. Alienation has been described as an important component accompanying sudden cultural change (Becker, 1961).

Within a social context, modern definitions of alienation have been generally referred to as a state of separation between the individual and the environment, with a research focus of exploring the negative consequences of separation, social isolation, cultural estrangement, stress or anxiety, and feelings of despair and hopelessness (Nicassio, 1983). Richards and Swanger (2006) described alienation as a state or process of becoming an unwelcome foreigner or stranger, who has lost all attachments and social bonds and is isolated from the community. Maxwell (2006) referred to alienation as a sense of not belonging and a feeling that one is not integrated into the ongoing society. Mann (2001) refers to the Oxford English Dictionary definition of alienation as “the state
or experience of being isolated from a group or an activity to which one should belong or in which one should be involved” (p. 8).

Theoretical and empirical discussions on the dimensionality of the alienation phenomenon have also received attention in the scientific literature. In the 1950s - 1980s, some researchers focused on the relationship between the alienated individual and the social order utilizing a unidimensional concept of alienation (Clark, 1959; Dean, 1961). This body of research has focused on personal dissatisfaction with certain structural elements of society, especially with economic and political aspects, as the underlying causes of alienation. Other researchers considered alienation as a multidimensional phenomenon and explored the diverse dimensions of alienation (Roberts, 1987; Seeman, 1959, 1972; Travis, 1986). The most successful and influential conceptualization of a multidimensional construct of alienation was Seeman’s theoretical framework that explained alienation as a psychological phenomenon that included the six facets: powerlessness, social isolation, cultural estrangement, self-estrangement, meaningfulness, and normlessness (Seeman, 1959, 1971, 1972).

Alienation has been measured in various ways and no universal standard exists, however, most scales utilize Seeman’s conceptualization as their starting point (Kohn, 1976; Roberts, 1987; Williamson & Cullingford, 1997). As noted, Seeman (1959, 1971, &1972) identified six psychological states: powerlessness, social isolation, cultural estrangement, self-estrangement, meaningfulness, and normlessness. A common underlying factor of the alienation construct was supported by the inter-correlations of alienation dimensions in a number of studies (Neal & Kettig, 1967; Simmons, 1966).
Weaker correlations were reported by Kohn (1976). Roberts (1987) constructed a model in which Seeman's original five dimensions of alienation reflected a common underlying alienation factor. By applying the basic structure of Kohn’s model (Kohn, 1976), Roberts also showed that powerlessness and self-estrangement are the facets that most strongly reflect the underlying concept of alienation, followed in order of magnitude by those of meaninglessness, normlessness, and cultural estrangement. While this finding generally supports the notion that all five types of alienation identified by Seeman (1959) are part of a common domain, cultural estrangement (or value isolation) appeared to be the least important aspect of alienation, as it showed the weakest relation to the underlying construct of alienation.

The basic structure of Kohn’s model (Kohn, 1976; Kohn & Schooler, 1978) has been evaluated in studies that used data collected in Poland and Japan (Naoi & Schooler, 1985; Slomczynski, Miller, & Kohn, 1981). In both countries, all of the facets of alienation were significantly related to a common underlying concept and, unlike the U.S. sample, cultural estrangement was not more distal to the underlying concept of alienation than the other aspects (Roberts, 1987). Although Seeman's work has been very influential, the theoretical and empirical relations between dimensions of alienation remain unclear, undermining the utility of the concept of alienation.

Powerlessness, the first component of alienation, is characterized by the feeling that one’s actions and behavior are unable to influence or determine circumstances in his/her life (Seeman, 1959). The literature suggests that multiple factors mediate the effect of the feeling of powerlessness and low levels of personal control, including low
self-esteem, chronic stress, lack of social support and a low socio-economic status (Bird & Ross, 1993; Margaretha, 2004; Mirowsky & Ross, 1983; Ross & Mirowsky, 1989, 1992). Perceived control and powerlessness represent two ends of a continuum (Mirowsky & Ross, 2003). A number of studies have shown differences in the degree of powerlessness and perceived control experienced by ethnic and racial minority group members compared to their counterparts (Ross & Mirowsky, 1989; Syed et al., 2006).

Normlessness represents a perceived gap between goals and normative, legitimate, and socially accepted means to realize them (Mirowsky & Ross, 2003; Ross & Mirowsky, 1987; Seeman, 1959). Ross & Mirowsky (2009) described normlessness as a state that arises from social conditions where resources and opportunities are limited, and where threatening social conditions, such as disorder, crime, and fear, are common. In this sense, as long as the goals are reached and needs are satisfied, illegal and deviant behaviors become acceptable. Therefore, this type of alienation is likely to be correlated with mistrust and isolation. In rejecting the community as a source of guidance, the person positions himself or herself against everyone else, which in turn may effect the level of distress reflected in anxiety and, in the long run, depression (Ross & Mirowsky, 2009).

Meaninglessness refers to an individual's low sense of understanding of events, stated objectives, and planned actions in which he or she is engaged, as well as anticipating and weighing their outcomes (Holcomb-McCoy, 2004). In contrast to meaningfulness, the concept of self-estrangement implies a negative evaluation of one's own worth and a sense of being detached from self, of being purposelessly afloat, bored
with everything, responding only to what life has to offer, rather than setting one's own goals and course of life (Kohn, 1976).

Relatively few researchers have examined alienation as a measure of psychological adaptation in immigrants. However, the classical sociological concept of alienation, applied to a minority-majority context, helps to describe the acculturative experience of immigrant and ethnic minority populations to a new culture (Bullough, 1967; Mirowsky & Ross, 1980). Minority group members are often not well integrated into the host societies and are very likely to experience feelings of alienation. Minority individuals may perceive they are not part of the mainstream society and believe their minority group’s values dramatically differ from those of the majority. Loss of social networks, limited or restricted social interactions in a new cultural environment and inability to navigate and comprehend mainstream culture due to poor language skills and cultural competency, all create a sense of social isolation and alienation among immigrant and ethnic minority groups (Miller et al., 2006; Nicassio, 1983). Indeed, in the United States, females who were holding onto a Russian identity and behavioral acculturation were feeling more alienated than those who were more assimilated in the American culture (Birman & Tyler, 1994). Furthermore, acculturation stressors arising from the acculturation process may result in feelings of alienation and marginality (Sam, Vedder, Ward, & Horenczyk, 2006). Alienation can also be seen as a form of giving up, and as such, an adaptation mechanism in a situation where few active stress-coping mechanisms are available (Manderscheid, 1978; Palosuo, 2000). Overall, research literature suggests the importance of cultural alienation as a measure of adjustment.
among adult immigrants and ethnic minorities in general, and those from the former in particular.

Theoretical Framework for the Study

Studies have shown that the process of acculturation has wide-ranging effects on the immigrant minority's lives. It creates life changes that could potentially benefit or negatively impact the health status of immigrants and their subsequent generations. Two theoretical approaches are generally used to model the relationship between immigrants’ acculturation experiences and its relationship to health risk behaviors. The first theoretical framework, the assimilation model, suggests that patterns of health and risk behaviors among immigrants converge with those of the host culture as they become more integrated into their new social environment (Gilbert & Cervantes, 1986; Gordon, 1964). Grounded in the assimilation studies that assessed the ways in which the attitudes and behaviors of immigrants reflect the influence of the host culture, it was revealed that greater acculturation is associated with reduced HIV risk behaviors, including sexual-risk behaviors (Afable-Munsuz & Brindis, 2006; Hines & Caetano, 1998) and injection practices (Zule, Desmond, Medrano, & Hatch, 2001). Acculturation was also found to be associated with beliefs and norms related to healthy behaviors adopted from the host culture (e.g., increased condom use) (Afable-Munsuz and Brindis, 2006).

The second theoretical framework, a bi-dimensional acculturation stress model, that helps to explain health outcomes of specific acculturating individuals and groups, proposed by Berry and colleagues (1987; 1997). The acculturative stress model is the underlying theoretical assumption that guides the present study.
The acculturation stress model emphasizes the importance of examining acculturative stress as a manifestation of acculturation experiences when an individual or a group of people comes into contact with another cultural group. Acculturative stress has been linked to negative physical health outcomes, including cardiovascular disease and hypertension, diabetes, cancer, and HIV/AIDS (Myers & Rodriguez, 2003; Sam, 2006). A growing body of research has focused its attention on the effects of acculturative stress on mental health including posttraumatic stress disorders, depression, and anxiety (Organista et al., 2003).

Acculturative stress is rooted in the stress/coping paradigm in which the stressors encountered during the acculturative process may exceed an individual's coping skills (Unger et al., 2004; Vega et al., 1998). An important premise is that stressors are harmful only when coping resources are inadequate for solving problems.

When an individual experiences a high level of acculturative stress, substance use not only becomes a means of adaptation to the new culture, but also a coping mechanism for the stress. Namely, as individuals try to adapt to and resolve conflicting differences between the old and new cultures, they may perceive the acculturating stressors as uncontrollable, and may engage in a variety of destructive behaviors such as rebellion, delinquency, or substance use (Berry & Kim, 1988; Berry et al., 1987; Bhattacharya & Schoppelrey, 2004; Marsiglia, Kulis, & Hecht, 2001; Szapocznik, Santisteban, Rio, Perez-Vidal, & Kurtines, 1989; Unger et al., 2004; Vega et al., 2002). First-generation immigrants often turn to alcohol and drug consumption to forget their broken dreams and harsh life conditions, with some of them dealing drugs to finance their own addiction.
(Paoli, Greenfield, & Reuter, 2008). Coping motives for substance use appear as a consistent predictor for increased substance consumption and its adverse effects (Carey & Carey, 1995; Redman, 2008).

Initially used primarily as a coping mechanism, drug use turns into a maladaptive means to cope with all of life stressors. This fact is supported by the Peer Cluster theory, which argues that life stress is one of the strongest predictive factors for substance abuse (Oetting & Beauvais, 1986). Briere & Runtz (1993) proposed that drug or alcohol abuse may serve as a form of chemically induced dissociation from painful internal states and distressing memories.

Wills and Shiffman (1985) further suggested that a reliance on drug abuse, as an approach to coping with life stressors, reduces the probability of learning more adaptive means to cope with those stressors. Psychological and physical dependency drug abuse ultimately leads to diminished social competence, less social support, social isolation, and to increased overall stress levels. This further suggests that drug users may have more difficulty in coping with the HIV threat due to higher stress levels, thus resulting in less safe behavior.

The acculturative stress model utilized in this study has a greater application to post-Soviet migrants compared to the assimilation model, as it does not assume that immigrant minorities come from non-Western cultures and adopt the health behavioral patterns common in Western societies. Furthermore, it takes a perspective that acculturation is a bi-dimensional process where the changes occur along two cultural dimensions: a new culture and the culture of origin.
The Present Study

Early post-Soviet socio-political reforms have been particularly difficult for Soviet era migrants residing in Estonia, who have had a distinctively hard time in adjusting to new political realities and unfamiliar social settings that emerged after Estonian independence. With loss of citizenship, rights accorded to ethnic Estonian citizens, and poor command of the Estonian language, the Russian-speaking population was disadvantaged from jobs, income and education opportunities, and left at the edge of society. The Russian-speaking minority in Estonia has been the hardest hit group by the spread of substance abuse and of HIV/AIDS.

Hardships relating to acculturation and associated conflicts can be very stressful. Acculturation stress theory emphasizes the importance of examining acculturative stress as a manifestation of acculturation experiences when an individual or a group of people comes into contact with another cultural group. Acculturative stress is rooted in the stress/coping paradigm, in which the stressors encountered during the acculturative process may exceed an individual's coping skills (Unger et al., 2004; Vega et al., 1998). Disappointment and inability to cope with psychological stressors, as result of acculturation experiences and a mismatch with cultural, social, economic, and political structures of the mainstream society, can manifest in social alienation. Alienation has been traditionally considered an important measure of adaptation to life in a new socio-cultural and political environment.

Social alienation and acculturation stress arising from acculturation processes could be responsible for the non-adaptive attitudes and behaviors of immigrants that put
them at risk for HIV infection and social alienation could act as an important mediator of these relationships.

Empirical studies point out a possible link between acculturation, acculturative stressors, and a variety of psychological distresses that may influence individual HIV risk-related behaviors. Acculturative stressors may result in depression, identity confusion, anxiety, feelings of alienation and marginality, and heightened psychosomatic symptoms (Sam et al., 2006; Williams & Berry, 1991). Among drug users, depression, anxiety, antisocial personality disorder, and general psychiatric symptoms have been found to be significantly associated with HIV risk behaviors (Brooner, Greenfield, Schmidt, & Bigelow, 1993; Compton, Cottler, Shillington, & Price, 1995; S. D. Johnson, Cunningham-Williams, & Cottler, 2003; Kelley & Petry, 2000; Reyes et al., 2007; Woody, Metzger, Navaline, McLellan, & O’Brien, 1997).

Exposure to stress and stressful life events is found to be predictive of more severe patterns of substance use (Fouquereau, Fernandez, Mullet, & Sorum, 2003), associated continued drug use (Brewer, Catalano, Haggerty, Gainey, & Fleming, 1998) and with long-term polydrug use (Hartgers, Van Den Hoek, Coutinho, & Van Der Pligt, 1992), and increased drug craving (Sinha, Fuse, Aubin, & O’Malley, 2000).

When few stress-coping mechanisms are available, alienation, combined with an inadequate social support among immigrant minority members, can negatively impact their health. A sense of powerlessness increases depression and anxiety (Benassi, Sweeney, & Dufour, 1988; Mirowsky & Ross, 2003), which, in turn, can serve as a barrier to health maintenance motivation (Klassen, Smith, Shariff-Marco, & Juon, 2008).
Operating through a stress-coping mechanism, stress behaviors that occur during acculturation can manifest into alienation, as individuals feel left out of the normal functioning of the host society. Thus, alienation can be seen as a ‘give up’ response to the acculturation stressors. Alienated individuals reject the norms and values of the dominant society, and are less motivated for health maintenance and living healthy life styles.

Although, knowledge about how acculturation stress and alienation impacts vulnerability to drug abuse and HIV risk remains under-researched, literature often relates the disparities in drug use and its associated adverse behavioral and health outcomes in the immigrant minority population to alienation and the stress arising from the acculturation process (e.g. Berry & Kim, 1988; Berry, Kim, Minde, & Mok, 1987; Horman, 1973; Myers & Rodriguez, 2003; Organista, Organista, & Kurasaki, 2003; Reyes et al., 2007; Sam, 2006; Sam, Vedder, Ward, & Horenczyk, 2006; Vega, Zimmerman, Warheit, & Gil, 2002). Compounding the lack of consistent findings in this field, these studies seldom extended beyond the simple test of a direct relationship between acculturation and mental health status, patterns of drug abuse and HIV risk behaviors among immigrant minorities, leaving the conceivably complicated processes in which acculturation exerts influence on health outcomes unexamined. The focus of these studies was predominantly on immigrant minorities from non-Western cultures coming to Western societies, when immigrants adopt the behavioral patterns of the host society. Virtually nothing is known about experiences of post-Soviet Russian-speaking minorities living in Eastern Europe and Central Asia, for whom the Soviet Union pre- and post-
collapse experiences may have created different patterns of adjustment and health risks compared to migrants in Western countries. Furthermore, the lack of empirical research in the links on alienation and health related behaviors, the current understanding of the role of alienation in health status, healthy lifestyles, and vulnerability to diseases remains significantly limited.

To bridge the gap in the literature, this study purports to explore the possible relationships between acculturation, acculturation stress and alienation and the manners in which these factors are related to vulnerability to HIV infection. The current research focuses on the population of Russian-speaking drug users, who are disproportionally affected by HIV epidemic in Estonia. Drug risk behaviors, in Estonia, play a major role in HIV epidemic in the country. The patterns of drug abuse and their relationship to HIV drug risk are also explored, owing to their significance in HIV drug risk, as well as their likely associations with the constructs of acculturation stress and alienation through the stress-coping mechanism.

Based on theoretical and empirical considerations this study seeks to: (a) determine an optimal group classification which adequately represents acculturation to Estonian culture among the Russian-speaking IDUs in Estonia, and to validate these findings by comparing the defined groups on selected demographic characteristics, acculturation stress, level of alienation, and HIV drug risk; (b) explore the quality and nature of the relationship between acculturation stress, alienation, and their predictive strength on the level of HIV drug risk among Russian-speaking drug users in Estonia based on theoretical considerations and previous research findings. The relationships
between the variables are further tested in a structural equation model and give additional insight into socio-cultural contextual factors such as, acculturation stress and alienation and their impact on HIV drug risk among the population of drug users. Such an integrative approach to the analysis moves beyond the simple test of the direct relationships between the variables of interest by advancing a holistic understanding of the broad socio-cultural context of individual vulnerability to HIV infection.

Chapter 3 describes the research design and methodology used in this study to examine the research questions and hypotheses under investigation.
CHAPTER THREE

RESEARCH DESIGN - METHODS AND PROCEDURES

This chapter describes the methodology of this study, presents the research design and details the population, inclusion and exclusion criteria, sampling procedure, and timeline. An overview of the data collection and research procedure, research instruments, the plan for statistical analyses, and human subject concerns are also discussed.

Setting and Sample

The sampling procedure utilized a non-random method. A convenience sample of adult intravenous drug users living in Estonia was recruited from the Russian-speaking minority through “AIDS-i Tugikeskus” (AIDS Information and Support Center) in Tallinn, that allowed access to the population. “AIDS-i Tugikeskus” is a social non-profit, non-governmental organization (NGO). With collaboration of the Medical Center “Elulootus”, Tallinn city Government, National Institute of Health Development, “AIDS-i Tugikeskus” runs harm reduction and rehabilitation programs for injecting drug users, which include HIV/STD testing and counseling, consultations by narcologists, psychologists, and therapists, needle exchange programs (NEP) (1500 visits per month), mobile NEP (500-600 visits per month), methadone maintenance programs (120 clients), and outreach work (500 visits per month). Recruiting participants through AIDS-i Tugikeskus was used to access the sample since this agency provided a variety of services for intravenous drug users. AIDS-i Tugikeskus was presumed to be a practical
and efficient recruitment venue due to the large gathering of individuals who suffer from
drug addiction, as well as higher likelihood of them seeing the posted recruitment flyers.
Flyers with information about the study were also distributed at the bus stops in the
surrounding area, which increased the representativeness of the accessible population to
the theoretical population in this study. Snowball procedures were used among the IDUs
to spread the message about the ongoing study. Sampling in Tallinn vs. nation-wide
allowed the opportunity to document any potential patterns relevant to the aim of this
study that may present further interest to researchers in this region. AIDS-i Tugikeskus
provided written agreement allowing access to the population, which was approved by
the Clemson University Institutional Review Board (IRB) (Appendix A, B).

A sample size (N = 150) was selected to obtain a sample large enough to achieve
the power of statistical significance and a good model fit in structural equation modeling
(SEM). SEM relies on tests which are sensitive to sample size as well as to the magnitude
of differences in covariance matrices. Hoyle (1995) recommends a sample size of at least
100 – 200. Other researchers proposed general guidelines, where the sample size should
be at least 50 more than 8 times the number of variables in the model (Garson, 2009c) or
10 to 20 times as many cases as variables (Mitchell, 1993). It was hypothesized that 10
to 13 measured variables in the model would predict HIV drug risk; therefore, following
general guidelines, a sample size of 150 individuals met the minimum criterion for SEM
analysis. Participants for the study were recruited over a period of three months.
Inclusion and Exclusion Criteria

The study population consisted of drug users who met criteria for inclusion as described below. The term ‘Russian-speaking minorities’ included not only ethnic Russians, but other ethnic groups that migrated from the former Soviet Union, the vast majority of whom speak Russian as their first language. In order to participate in the study, participants were required to meet five inclusion criteria: (a) they must be 18-65 years old, (b) report drug use within the past 30 days, (c) have ethnicity other than Estonian, (d) be fluent in the Russian language; and (e) be born in Estonia or have been living in Estonia before 1991. The length of residence criterion was important in this study since an attempt was made to capture the subjects' experiences of acculturation, alienation, and acculturative stress as a Russian-speaking minority living in Estonia since the country acquired independence in 1991.

Exclusion criteria were: (a) children (<18 years); and (b) cognitive impairment that limited ability to participate in the survey. Because some participants experienced a cognitive impairment as the result of current intoxication, withdrawal, or temporary or permanent mental or biological problems resulting from long-term substance use, an exclusion criterion related to cognitive functioning was applied, ensuring the validity of self-report data. The researcher made every effort to carefully observe for possible signs of cognitive impairment during the screening interview, including heightened agitation, distraction, sluggishness, having a hard time standing or sitting straight, being extremely unbalanced and uncoordinated, or other signs of intoxication. If an individual experienced signs of cognitive impairment and it appeared the current cognitive
impairment was transitory in nature, the participant was asked to reschedule another time to participate in the study.

Data Collection Procedure

This study employed a non-experimental design consisting of one group of participants, Russian-speaking drug users living in Tallinn, Estonia, to examine relationships between research participants’ socio-demographic characteristics, acculturation, acculturation stress, alienation and their reported drug use and HIV drug risk behaviors. There was no follow-up data collection for this research study.

Participants in this study were identified and recruited through the local NGO, “AIDS-i Tugikeskus” (AIDS Information and Support Center) in Tallinn, Estonia where the study was conducted. The Director of the “AIDS-i Tugikeskus” provided a written agreement to survey the participants at “AIDS-i Tugikeskus”. An e-mail confirming that “AIDS-i Tugikeskus” was supportive of this research endeavor and provided access to their clients, private space for screenings and interviews, and locked cabinet space for the storage of hard copy survey instruments and electronic data files, has been obtained and approved by the Clemson University Institutional Review Board (IRB) committee.

The researcher approached users of the center in the waiting room and asked if they spoke the Russian language. Those attendees who spoke Russian were informed about the purpose and procedures of the study. Using the in-person method, the researcher introduced herself as a student researcher with Clemson University/Tallinn University to each individual interested in participating in the study. For those expressing an interest in participating in the study, the researcher obtained a verbal
consent to administer a screening tool and then conducted a brief screening interview to
determine eligibility for participation. The screening interview took place in a private
room at "AIDS-i Tugikeskus".

The screening interview took approximately five minutes to administer. The
screening interview was important to verify that the participant satisfied the five
eligibility requirements and possessed the necessary cognitive, literacy skills, and sensory
capability to self-administer the questionnaire (Appendix D, E, F, and M). During the
screening interview, the researcher observed for possible signs of cognitive impairment.
The participants who were not able to place themselves in space and time and showed
evidence of significant psychiatric, physical, or neurological impairment were excluded
from the study. This was confirmed using the Global Appraisal of Individual Needs’
(GAIN) Cognitive Impairment Scale ([CIS], Dennis et al., 2003) (Appendix E). CIS
represents a modified version of the 10-item Short Blessed Scale of Cognitive
Impairment (Katzman et al., 1983) that has been widely used in research on substance
abuse, homelessness, head injury, Alzheimer’s, and other forms of cognitive impairment.

The CIS interview questionnaire consists of six questions. The person
administering the instrument checks off points for the number of errors in the respondent
responses. If the points add up to more than 10, the person is too impaired to assess at
this time, and it will be less likely that he/she will give reliable and valid answers for the
survey questions. It is observed that about 5% of a substance abuse treatment population
would score 10 or higher (with 1-2% scoring 14 or more) (Dennis, Feeney, Stevens, &
Bedoya, 2006). In this study, only five individuals required CIS assessment. The range
of their scores was 1-5, meaning that participants were able to place themselves in space and time and, thus, they were allowed to participate in the survey.

As the next step, the researcher determined the participant’s literacy skills to self-administer the test. This was evaluated by asking the participant about his or her ability to read and write using a modified GAIN’s Literacy Scale (Dennis, 1999) (Appendix F). Although the survey was self-administered, illiteracy and/or sensory impairment were not the exclusion criteria for this study. Therefore, the literacy scale was only used to determine whether a participant was able to independently complete the questionnaire or if he or she required assistance. First, participants answered two questions about their ability to read and write. Scores of 0-1 for each question suggested that the participant required assistance in administering the survey. Second, participants were asked if they would prefer completing the assessment on their own or they felt the need for help to complete it. A non-exclusion approach in conducting research with self-reported measures demonstrated that self-reported measures can be effectively used with persons who would otherwise be excluded because of sensory impairment or illiteracy (Ward, Wadsworth, & Peterson, 1994). In this study, none of the participants reported a low literacy level, however six individuals requested verbal administration of the survey.

Individuals who were not eligible to participate were informed of their ineligibility and thanked for their time and effort. No information from the screening form was kept and the form was destroyed right after the screening. Participants, whose eligibility for the research had been established through the screening interview, were consented orally for participation in the study and for use of their information from the
screening form and data from the main questionnaire for the data analysis. A participant was afforded about two minutes to consider whether or not to participate in the research. The researcher signed and dated the informed consent form to document each subject's consent. The waiver of consent form was used to protect participants from the risk of criminal or civil liability or damaging their financial standing, employability, insurability, or reputation due to the illegal nature of drug use. Instead of the informed consent form, subjects were provided with an informational sheet that included all the required elements found in the consent form (Appendix C, L).

Every individual whose eligibility for inclusion was established and the informed consent had been obtained, was invited to a quiet place where he or she could complete (or be administered) the questionnaire. The room/office space was established at the recruitment site “AIDS-i Tugikeskus” to allow for privacy and lower the bias in reporting sensitive and stigmatized behavior such as illicit drug use (Schaeffer, 2000). Self-report pen-and-pencil questionnaires and a quiet room/office space offered such privacy. Participants were allowed to withdraw from participating at any time without any penalty. Smokers and participants in active stages of withdrawal had no limitation to take breaks as they were needed.

The researcher stepped in and orally administered the questionnaire to the participant, if necessary. As recommended by Dennis (1999) to improve the validity of recalling recent events and behaviors, each participant was provided with a calendar to help him/her develop a past six to one-month time frame (Dennis, 1999). A researcher was available during administration of the questionnaire to answer questions as they
arose before and during the assessment. The administration of the questionnaires took approximately 35 minutes. The participants were informed how they could obtain access to the results of the completed study at a later date.

The type of data collected included demographic data without any identifiable information and responses to Likert-type scaled statements. The questionnaire itself was relatively self-explanatory; however, a brief review of the assessment instrument with the participant was still deemed to be useful. The researcher explained to the participant there were three types of questions in this assessment: (1) questions that ask to select one answer in a list of answers by checking a corresponding box with an ‘X’; (2) questions that ask to select one answer by circling a letter or a corresponding number; and (3) questions that ask to write down a numerical value or a word.

Upon completion, the participant returned the questionnaire to the researcher. The completed questionnaires were stored in a locked file cabinet in the locked office of the director of AIDS-i Tugikeskus right after they were returned to the researcher. The only individual who had further access to these questionnaires was the researcher.

After the participant completed the questionnaire, a financial compensation in the value of 50 Estonian Kroons (~$5) was provided for the time and effort spent to complete the survey. The size of this monetary compensation was kept within locally acceptable norms. Although commonly practiced, the use of financial compensation for participating in research among participants who are recruited from economically disadvantaged or marginalized population groups, such as drug users, has been controversial. Until recently, there has not been enough evidence to assess either the
positive or negative impact of the practice. Consistent with past evidence, recent findings did not suggest that compensation increases the risk of relapse following research participation (Dempsey, Back, Waldrop, Jenkins, & Brady, 2008). The monetary compensation for research has been viewed by the participants themselves as essential to attract participation and perceived as desirable and potential income; participants did not support the notion of payment for participation as encouraging drug use or as inducing risk taking (Slomka, McCurdy, Ratliff, Timpson, & Williams, 2007). Festinger et al. (2005) indicated that neither the magnitude nor mode of the incentives had a significant effect on rates of new drug use or perceptions of coercion.

Each participant was provided with a research pack that included:

1. Informational sheet (Appendix C, L);
2. Language, Identity, and Behavior Scale [LIB], (Birman & Trickett, 2001) (Appendix F, N);
3. Drug risk scale of the Risk Assessment Battery ([RAB], Metzger, Nalvaline, & Woody, 2001; Metzger, Woody, McLellan et al., 1993; Navaline et al., 1994) (Appendix H, N);
4. Social, Attitudinal, Familial, and Environmental Acculturative Stress Scale ([SAFE], Mena et al., 1987; Padilla, Wagatsuma, & Lindholm, 1985) (Appendix I, N);
5. Alienation Scale (Kohn, 1976; Roberts, 1987; Seeman, 1959) (Appendix J, N);
Measures

Instruments were selected for this study based on their relevance, clarity of language, and their reliability with minority or vulnerable population groups. All measures were translated into Russian and back-translated into English using standard procedures recommended by Brislin (1970, 1986). All the instruments, including screening questionnaire, were translated into Russian by the co-investigator, a native Russian speaker and back translated into English by another native Russian speaker with a fluent command of English. The questions concerning substance abuse and HIV risk behaviors in the recent past had retrospective recall period of one to six months to maximize the accuracy of recollection and to reflect a subject's current risk-taking behavior.

The battery of measures consisted of (a) Language, Identity, and Behavior Scale ([LIB], Birman & Trickett, 2001); (b) Drug risk scale of the Risk Assessment Battery ([RAB] Metzger et al., 2001; Metzger, Woody, McLellan et al., 1993; Navaline et al., 1994); (c) The Social, Attitudinal, Familial, and Environmental Acculturative Stress Scale ([SAFE], Mena et al., 1987; Padilla et al., 1985); (d) Alienation Scale (Kohn, 1976; Roberts, 1987; Seeman, 1959); and (e) Socio-demographics questionnaire.

Language, Identity, and Behavior scale

Acculturation to Russian and Estonian cultures was measured by the Language, Identity, and Behavior scale ([LIB], Birman & Trickett, 2001) (Appendix G). The LIB is a two-dimensional orthogonal measure initially developed by the authors to assess acculturation to American and Russian cultures independently. By assessing parallel
items in both cultures, the LIB measures a respondent’s relative stance with respect to the two cultures. The LIB consists of 50 Likert-type scale items and assesses acculturation across the three domains of identity, language competence, and behavioral acculturation. The instrument yields an overall acculturation index score and separate subscale scores for language, identity, and behavioral acculturation. The reliabilities for the overall American and Russian acculturation index in previous studies were .92 and .94, respectively (Birman et al., 2002; Jones & Trickett, 2005). The LIB was used in this research because it has good overall validity, reliability, and is the only acculturation measure devised based on interviews with a Russian-speaking population. The instrument was adapted to the Estonian context, where statements regarding identification with the American culture or English language were replaced by the word Estonian.

Identity acculturation subscale of the LIB was originally adapted by Birman & Trickett (2001) from the Multidimensional Scale for Latinos (Birman & Zea, 1996) and the American Identity Questionnaire (Phinney & Devitch-Navarro, 1997). Alpha reliability coefficients for the identity acculturation subscale in different countries and among peers and parents are generally over 0.90 each for American and Russian identity (Birman & Trickett, 2001; Birman et al., 2002; Jones & Trickett, 2005). Ratings are made on a 4-point Likert-type scale ranging from not at all to very much. Examples of this subscale on two opposite dimensions of cultural identity are “I think of myself as being Estonian” vs. “I think of myself as being Russian.”

Given that new Russian self-understanding and formation of a new identity as a possible cultural identity trajectory for Russians in Estonia, the decision was made to add
a subscale measuring the formation of a new identity among the Russian-speaking population in Estonia. This new identity was labeled as “Estonian-Russian”. The questions were worded in a similar fashion as those on Estonian and Russian identity subscales. A sample question of this subscale is: “I think of myself as being Estonian-Russian.” To help participants identify with one or another cultural identity, the explanation of the terms Estonian, Russian and Estonian-Russian identity was added to the questionnaire. Reliability of Estonian, Russian, and Estonian-Russian identity subscales in the present sample was .85, .87, and .89, respectively.

The behavioral acculturation subscale of the LIB represents a revision of a measure used by Birman and Tyler (1994) and the Behavioral Acculturation Scale (Szapocznik, Scopetta, Kurtines, & Aranalde, 1978) that were adapted by Birman & Trickett (2001) to a bicultural framework. Nine parallel items assess behavioral acculturation to each culture. The authors defined behavioral acculturation as "the extent to which they engage in behaviors associated with each culture (e.g. language use, media, music, entertainment, food)” (Birman, Trickett, & Vinokurov, 2002, p. 593). Behavioral acculturation includes both the "competencies" and "opportunities to engage in cultural activities in the surrounding community" (Birman & Trickett, 2001, p. 459). Items are rated on a 4-point Likert-type scale ranging from not at all to very much. The reliability of the instrument was shown to be .77 to .82 for the American and .72 to .85 for the Russian subscale among adolescents and their parents (Birman & Trickett, 2001; Birman et al., 2002; Jones & Trickett, 2005).
First, participants of the survey were encouraged to give feedback about the applicability of the LIB scale questions to the Estonian context. Based on their feedback, three questions were eliminated from the Estonian and Russian cultural participation subscales. The question, “How much do you eat at Estonian (Russian) restaurants?” was irrelevant because participants pointed out the overwhelming majority of the cafeterias and restaurants serve both Estonian and Russian cuisines. For the same reasons, the question, “How much do you buy groceries in Estonian (Russian) stores?” was inappropriate to the local context, because the majority of the population in Tallinn buy their grocery products in supermarkets, malls or local markets that provide a wide selection of food products. Furthermore, the question, “How much do you visit Estonian (Russian) speaking doctors?” was eliminated from the analysis. Participants indicated that in general, doctors would speak Russian language and there is no need to specifically search for and visit a Russian-speaking doctor. In the course of the data analysis, these questions were removed from the Estonian and Russian LIB scales. In the present sample, slightly modified Estonian and Russian behavior subscales demonstrated good internal consistency reliability of .84 and .81, respectively.

The Language Acculturation subscale represents a modified version of the Multidimensional Scale for Latinos developed by Birman and Zea (Birman & Zea, 1996; Zea, Asner-Self, Birman, & Buki, 2003). Nine items ask respondents to rate their ability to speak and understand both the Russian and Estonian language in a variety of situations. Ratings were made on a 4-point Likert-type scale ranging from not at all to very well, like a native. The American Language Acculturation subscale showed validity
for measuring language competence among Russians (Birman & Trickett, 2001). Alpha reliability coefficients of .67 to .95 were found for the Russian language and .90 to .95 for the American language subscales (Birman & Trickett, 2001; Birman et al., 2002; Jones & Trickett, 2005). The relatively low reliability score for the Russian language scale (.67) among parents of adolescents was explained by the variance of the scale, when the majority of parents ranked their command of Russian (native) language as very well, like a native (Birman & Trickett, 2001). In this sample, the Estonian and Russian language subscales showed an internal consistency reliability of .97 and .96, respectively.

Examples of the questions included: “How would you rate your ability to speak Estonian with colleagues at work?” and “How well do you understand Russian on TV or at the movies?”

The internal consistency reliability of the modified version of LIB (without three questions on cultural participation) in the present sample was .93 for the Estonian acculturation index, and .87 for the Russian acculturation index. Estonian-Russian identity was assessed separately and showed a high internal consistency reliability in the current sample (Cronbach’s alpha = .89).

The Risk Assessment Battery

The Risk Assessment Battery (RAB) (Appendix H) is a simply worded, self-administered questionnaire designed for administration with substance using populations (Metzger et al., 2001; Metzger, Woody, McLellan et al., 1993; Navaline et al., 1994). It provides a rapid and confidential, non-interview assessment of HIV risk behaviors. In order to avoid underestimation of risk behaviors, the items in the RAB not only assess the
behaviors directly related to viral transmission such as syringe sharing and unprotected sexual activity, but also ‘peripheral behaviors’ indirectly associated with these activities (HIV/AIDS Prevention Research Division, n.d.). The RAB instrument allows identifying individuals at increased risk of HIV exposure, even if respondents are reluctant to report primary transmission events such as sharing a syringe or unprotected sexual activity or if direct HIV transmission behaviors did not happen at all (Metzger et al., 2001).

The RAB was chosen based on a previously demonstrated validity with Russian patients in drug abuse treatment facilities (Krupitsky, 2005). The test-retest reliability of the RAB has been found to be relatively high ranging from .75 to .88 (Metzger, Woody, & Navaline, 1993). Importantly, the RAB has demonstrated predictive validity in identifying HIV sero-converters on the basis of higher risk scores (Metzger, Woody, McLellan et al., 1993). When properly administered, the RAB responses are equivalent to those collected via personal interview (HIV/AIDS Prevention Research Division, n.d.).

The full RAB questionnaire consists of 45 questions with discrete response categories. Questions are close-ended and respondents are asked to mark the answer that best describes their behavior. There are three sections within the RAB: 1) drug and alcohol use during the past 30 days, 2) syringe/needle use and 3) sexual practices during the previous six months. Because the research interest of this study was to investigate HIV drug risk, only questions on drug and alcohol use during the past 30 days and syringe/needle use in the previous six months were used in this study. The HIV drug risk score was calculated as a sum of responses to eight questions measuring unsafe injection practices.
Because cocaine is not a common and affordable drug among the drug users in Estonia, the questions on cocaine use were removed from the questionnaire. Instead, the questions on poppy liquid or extract use (injecting and smoking) were added. Poppy liquid and extract are relatively widespread in the country.

The response values for each individual question ranged from 0 to 3, with higher values reflecting greater frequency of the behavior (Metzger et al., 2001). The Cronbach’s alpha for the drug risk items in previous samples was .82 (Metzger, Woody, & Navaline, 1993). The drug risk composite score demonstrated a good internal consistency reliability in the present sample (α = .80).

Two questions were added to the questionnaire to assess drug use history such as “Age of drug use initiation” and “Age at injection drug use initiation.”

The Social, Attitudinal, Familial, and Environmental Acculturative Stress Scale

Acculturative stress was measured by the Social, Attitudinal, Familial, and Environmental Acculturative Stress Scale ([SAFE], Mena et al., 1987; Padilla et al., 1985) (Appendix I). The 24-item SAFE scale (Mena et al., 1987) is based on an original 60-item scale developed by Padilla et al. (1985). The 24-item version of the SAFE measures acculturative stress in social, attitudinal, familial, and environmental contexts and perceived discrimination. Although a measure of stress, the SAFE is designed to measure stress specific to the acculturative process rather than stress surrounding other domains, such as socio-economic status, education, or social support, and is therefore different from other stress measures.
The reliability of the 24-item version of the SAFE, in immigrant and later generation college students, has been reported at \( \alpha = .89 \) (Mena et al., 1987). The authors demonstrated an acceptable convergent validity with low to moderate correlations between the SAFE and stressfulness ratings of respondents’ answers to open-ended questions regarding their life in the U.S. High reliability for the SAFE has been shown in diverse populations, including Asian Americans and international students (alpha = .89) (Mena et al., 1987), Hispanic Americans (alpha = .89) (Fuertes & Westbrook, 1996), and African Americans (alpha = .89) (Joiner & Walker, 2002). Furthermore, the items of the 24-item version of SAFE have been shown to differentiate between generational groups of Mexican American students. Construct validity was demonstrated by strong fit statistics and a meaningful hierarchy of the scale with items reflecting greater alienation and hopelessness indicating greater stress (Wright & Masters, 1982). The SAFE demonstrated good internal consistency reliability within the present sample (\( \alpha = .88 \)). Corrected inter-item total correlation for each item ranged from .30 to .59.

Participants were asked to rate each of the items that applies to them on a 1 to 5 point Likert-type scale ranging from “not stressful” (1) to “extremely stressful” (5). Some of the questions from the SAFE instrument have been slightly modified to make them applicable to the Russian-speaking population in general, rather than only to ethnic Russians living in Estonia. For example, a question like “The fact that many people have stereotypes about my culture or ethnic group and treat me as if they are true” has been modified to “The fact that many people have stereotypes about Russian culture or Russians and treat me as if they are true.”
Alienation Scale

Alienation was measured by the Alienation Scale (Seeman, 1959) revised by Kohn (1976) and Roberts (1987) (Appendix J). In his initial analysis of the concept of alienation, Seeman (1972) distinguished five psychological components: powerlessness, self-estrangement, normlessness, cultural-estrangement (or value isolation) and meaninglessness. In subsequent work, the author identified six dimensions of alienation by applying a slightly different approach to the analysis. A common underlying factor of the alienation construct was supported by the inter-correlations of alienation dimensions in a number of studies (Neal & Kettig, 1967; Simmons, 1966). The basic structure of Kohn’s model (Kohn, 1976; Kohn & Schooler, 1978) has been also confirmed in studies that used data collected in Poland and Japan (Naoi & Schooler, 1985; Slomczynski et al., 1981). In both countries, all of the facets of alienation were significantly related to a common underlying concept (Roberts, 1987). In the U.S. sample, however, Roberts found that cultural estrangement was more distal to the underlying concept of alienation than were the other aspects of alienation.

The current questionnaire is drawn from both concepts of alienation measured by Kohn (1976) and Roberts (1987). The overall measure consists of three items for powerlessness, four items each for self-estrangement, normlessness, and cultural-estrangement (or value isolation) and one item for meaninglessness. Depending on the statement, answers are ranked on a 5-point Likert-type scale ranging from ‘strongly disagree’ to ‘strongly agree’ (six items); ‘not at all’ to ‘very much’ (three items); and ‘not at all’ to ‘all the time’ (eight items). The questions with double statements like “Do you
believe that it's all right to do whatever the law allows, or are there some things that are wrong even if they are legal?” were modified into one statement to be ranked on the Likert-type scale and reflect only an alienation dimension: “I believe that there are some things that are wrong even if they are legal.” The internal consistency reliability of alienation scale in this sample is 0.77.

Socio-Demographic Questionnaire

Socio-demographic variables included gender, city/town of residence, marital status, highest level of education achieved, religion, employment status, major source of financial support, size of legal monthly income, and health insurance. These variables allowed the investigator to characterize the people who participate in the study. A socio-demographics questionnaire (Appendix K) is placed at the end of the survey as recommended in literature (Bradburn, Sudman, & Wansink, 2004; Dillman, 1978; Rubin & Babbie, 1997; Valente, 2002). Questions on age, ethnicity, and length of residence in Estonia appear early in the screening interview and used to determine eligibility of the participants.

Human Subject Concerns

Protection against Risks and Procedures for Safeguarding Confidentiality

Participation in this study primarily involved the risks of (1) psychological or emotional discomfort or distress arising from the personal and potentially sensitive nature of information shared during the screening interview or survey, and (2) loss of confidentiality. The level and probability of experiencing such risks was minimized due
to the procedures for safeguarding confidentiality described below. Approval was received from the Clemson University IRB prior to the start of the study.

Human subjects’ protection and data safety was a paramount priority. Safeguarding the confidentiality of personal data reported in screening questionnaires and during the survey was achieved through:

(1) Waiver of consent form. The consent was obtained orally, protecting against any potential breach of confidentiality. Having a signed consent form would be the only record linking the subjects and the research that could place participants at risk of criminal or civil liability or be damaging to their financial standing, employability, insurability or reputation due to illegal nature of drug use and possible illegal citizenship status. Waiver of Consent based on the HIPAA-45CFR 164.512(i)(2) was requested.

(2) Screening interview form and questionnaire did not contain any identifying information as defined by the Health Insurance Protection Accountability Act (HIPAA) (name, number on the residence permit card, passport, personal identification code, address, phone number, or medical record number).

(3) The data collected were anonymous, posing no risk of breach of confidentiality. Code numbers on the screening interview form and main questionnaire were not associated with a specific name, and served only for counting purposes and data matching and entry. This approach ensured the confidentiality of the data throughout the study.
(4) Risks associated with the illegal nature of drug use were rendered moot considering that participants were coming to a sanctioned non-governmental facility where their drug use status was known.

Data management, including data collection and storage, security, data analysis software and hardware, and quality assurance were the responsibility of the researcher. Each pair of screening interview forms and main questionnaire were assigned a unique study identification number only for counting purposes and for data entry and matching. The screening interview and survey responses returned to the researchers were stored in a locked file cabinet in the locked office of the director of AIDS-i Tugikeskus. The only individual who had subsequent access to these questionnaires was the researcher. Electronic files with data listed only the study identification number. There was no link between participants’ identities to their study identification numbers. All hardcopy items were kept in a locked file cabinet in the “AIDS-i Tugikeskus” director’s office. All software files were stored on a computer protected by passwords and a firewall. Backup copies of files were encrypted and password protected using 128-bit AES encryption before being archived on a flash drive and locked in a file cabinet in the “AIDS-i Tugikeskus” Director’s office. At the completion of the screening interview, the screening interview forms of the individuals who were identified as ineligible to participate in the study were physically shredded. The researcher verified that all instruments and answer sheets were gathered before the individuals left the data collection site. The screening forms and questionnaires of study participants will be kept
by the researcher for three years following completion of the research study and then destroyed.

Managing Respondent’s Psychological Discomfort and Adverse Events Handling Procedure

To minimize the risk from psychological or emotional distress, participants were informed of the possible risks and the measures taken to safeguard the confidentiality of their responses. Participants were informed they did not have to respond to questions they found distressing and were free to terminate the study at any time without penalty. The researcher was at “AIDS-i Tugikeskus” at all times the surveys were administered and was responsible for ensuring that an adequate response would be provided if the participant experienced psychological distress. The researcher also determined whether the event was related to participation in the study. During the data collection period there was no adverse events detected.

Quality Control and Assurance Procedures

Quality control and assurance procedures in this study included the reliability of the assessment and intervention protocol for the studied population and setting and adherence to the study protocol. To avoid confusion and to ensure linguistic equivalence of the measures, all the instruments (Appendix N), including screening questionnaire (Appendix M) and information sheet (Appendix L), were translated into Russian by the co-investigator, a native Russian speaker, and then back translated into English by another native Russian speaker with a fluent command of English. The study
questionnaire was also pilot tested with the first five participants. Feedback on the clarity of the language used, concept meaning questions and format of the survey provided by the participants were reviewed by the researcher; no changes in the protocol requiring an IRB approval were made.

The next chapter discusses data analysis procedures used in this study.
CHAPTER III

DATA ANALYSIS

The data were entered and analyzed using the Predictive Analytics Software (PASW) v. 17, SPSS Missing Value Analysis (MVA) module v. 7.5, and Analysis of Moment Structures (AMOS) v. 16. Data preparation and screening procedures involved assessment of sample size, data cleaning measures, missing values analysis, assessment of univariate normality, assessment of multicollinearity, and internal consistency reliability of the scales.

Several data analytic techniques were utilized in this study. Descriptive statistics (measures of central tendency, dispersion, and univariate and bivariate association) were conducted to characterize the prevalence and demographic correlates of patterns of acculturation, acculturation stress, alienation, drug use, and HIV risk behaviors. Hierarchical and \( k \)-means cluster analyses were conducted to achieve an optimal classification of the sample in terms of acculturation types. Bivariate statistics were used to identify unadjusted associations among the variables and to guide the selection of variables for structural equation modeling (SEM). SEM was utilized to examine interactions between bicultural orientation, alienation, acculturation stress, socio-economic status, and HIV drug risk variables. Justification for and an explanation of these techniques are found below.
Data Preparation and Screening

Data preparation and screening procedures involved data cleaning measures, missing values analysis, univariate normality (the distribution of scores, outliers, skewness, and kurtosis), multivariate non-normality and multicollinearity, and reliability and construct validity of the scales. These procedures are required for the SEM analysis to be accurate.

Data Cleaning

Data cleaning was conducted by running frequencies on all data and looking for any missing data and unusual values in the data output. Duplicate cases analysis using PASW v.17 software was run to identify if there were any duplicate responses from the same individuals in the data set. The variables were collapsed when necessary.

Missing Data

In order to examine the predicted model using SEM, the issue of missing data needed to be assessed first. Because AMOS v.16, a statistical program used for the SEM analysis, assumes that data are missing at random (Arbuckle, 1996), it is important to assess the amount and pattern of missing values for the variables included the SEM model. The standard missing completely at random (MCAR) test (R. Little, 1988) was conducted in SPSS Missing Value Analysis module, release 7.5, to determine if the missing data were missing completely at random. Missing completely at random (MCAR) exists when missing values are randomly distributed across all observations.
AMOS automatically substitutes missing values with imputations based on a full information maximum likelihood estimation (MLE) using all information of the observed data. The likelihood is computed for the observed portion of each case's data and then accumulated and maximized. This procedure has been found to be superior to other methods in providing unbiased model estimates in a dataset with missing data (Enders & Bandalos, 2001; Schumacker & Lomax, 2004). Unlike other methods for addressing missing data, the method used in AMOS represents a direct approach based on MLE estimation and, thus, is theoretically based (Arbuckle, 1996).

Although AMOS will use MLE estimation to address missing data, modification indexes output in AMOS will not be produced with a dataset that contains missing values. Furthermore, not all fit indices can be computed by AMOS when data are missing (Garson, 2009c).

Therefore, the decision was made to address missing data prior to the analysis. One of the methods frequently used to replace missing data is linear trend at point. This method was chosen over mean substitution because the latter results in a loss of variance (since it becomes a constant). Trend replaces missing values with the linear trend for that point. The existing series is regressed on an index variable scaled 1 to \( n \). Missing values are replaced with their predicted values. Single methods of imputation, such as that used in this study, are considered more efficient than multiple imputation when the proportion of missing values for a given variable are no greater than 5%. In addition, studies comparing single and multiple imputation methods have found changes in variance...
between the methods to be trivial, especially when data are missing for a small proportion of cases (Ezzati-Rice, Khare, Rubin, Little, & Schafer, 1993; Fridley et al., 2009).

**Univariate Normality**

SEM assumes univariate normality. The distribution of scores for any variable in the model should approximate a normal curve. Therefore, outliers, skewness, and kurtosis were examined and addressed. Several methods for assessing skewness and kurtosis, including viewing the distributions through visual representations (i.e., histograms), and examining the skewness and kurtosis values were employed in this study. When skewed, data were transformed using a square root, logarithmic, or inverse transformation, depending on the degree of skew. The values falling between -1 and +1 were considered as acceptable. The negative skew values were reflected by subtracting values from the highest value plus one before transformations occurred.

Kurtosis could be especially problematic in SEM because of its impact on significance tests and standard errors of parameter estimates (DeCarlo, 1997; Hopkins & Weeks, 1990). A common rule-of-thumb is that kurtosis should be within the +2 to -2 range when the data are normally distributed (Garson, 2010). Kurtosis is generally addressed with a cube root or a sine transformation.

In the present study, scores that fell more than plus or minus three standard deviations from the mean of the variable, and separated by some distance from the remaining continuum of scores, were considered outliers. Efforts were made to reduce the influence of outliers by changing them to one unit higher or lower than the next extreme-most score (Tabachnick & Fidell, 2007).
**Multivariate Non-normality and Multicollinearity**

For an accurate SEM model, data should be examined for multivariate non-normality and multicollinearity (Kline, 2005; Schumacker & Lomax, 2004). Careful evaluation and correction of univariate non-normality and outliers was deemed to resolve issues of multivariate non-normality if any existed (Kline, 2005; Tabachnick & Fidell, 2007). Multicollinearity is considered an issue if the correlation among variables is greater than .85, which indicates that the variables may be measuring the same construct. To identify pairwise multicollinearity a correlation matrix of the variables included in the model was examined.

**Reliability Analysis**

In SEM each observed variable must correspond to a reliable and valid measurement, and inconsistent scaling should be addressed (Kline, 2005; Schumacker & Lomax, 2004). Reliabily and validity of the instruments in this study were established in previous research. In this study, Cronbach's alpha (Cronbach, 1951), a reliability coefficient, was used to estimate the internal consistency reliability, or average correlation of grouping items that measure the same concept. Cronbach's alpha represents the percentage of observed response variance that is reproducible. Item reliability can fall within the range of 0 to 1. Cronbach's alpha of .70 or higher is considered “acceptable” in most social science research situations (George & Mallery, 2005). The estimated value of alpha if a given item was removed from the model was reassessed. The items where the “alpha if deleted” was higher than the overall alpha were dropped. Item-total correlation was evaluated. A low item-total correlation (less
than .3) indicated that the item is little correlated with the overall scale and should be considered for elimination. The squared multiple correlation ($R^2$) indicates how well the item is predicted from all other items in the scale. If the $R^2$ is low the item may be dropped. A negative correlation indicated the need to recode the item in the opposite direction. However, a scale that has an acceptable Cronbach's alpha overall may still have one or more items with low item-total correlations and low $R^2$ for some items. The reliability analysis was re-run if an item was dropped or recoded. Evaluation and correction of reliability estimates are reported in the results chapter.

Construct Validity

A confirmatory (CFA) and exploratory factor analysis (EFA) were conducted for those scales that showed problems with internal consistency reliability to evaluate the construct validity of the scales in the current sample. An alpha factoring and direct oblimin rotation (with Kaiser normalization) were selected to assist in providing a clear separation of items that loaded on the factors. CFA was used to determine if the number of factors and the loadings of indicators on the factors conform to what was expected. An EFA approach was chosen over principle component analysis, because EFA hypothesizes an underlying construct, allows description and identification of the number of latent constructs (factors), and traditionally has been used to explore the possible underlying factor structure of a set of measured variables without imposing any preconceived structure on the outcome (Child, 2006). Oblimin rotation was selected because the assumption was that the factors are correlated with each other. A minimum acceptable cut-off was .30 for the factor loadings (Mertler & Vannatta, 2001).
Furthermore, a communality of less than .40, suggested that the variables may not be related to the other items (Osborne & Costello, 2005). The results were evaluated and the instruments were revised as necessary based on results by using EFA. The variance explained by the factors was also reported.

Descriptive Statistics

Univariate analysis (mean, standard deviation, frequencies, mean differences, cross tabulation, ANOVA) was used to characterize the sample. These measures ensured the appropriate selection of statistical analysis procedures and allowed for characterization of the sample in terms of socio-demographic, acculturation types, alienation, acculturative stress, HIV risk behaviors, and patterns of substance abuse. A bivariate analysis (a Pearson product moment correlation matrix) was employed for all variables to identify possible confounds and covariates, and to justify selection of the variables for SEM. Pearson correlations were calculated between interval variables and Spearman correlations were calculated between ordinal and interval variables.

Cluster Analyses and Discriminant Function Analysis

To classify individuals into mutually exclusive acculturation type groups based on combinations of the two acculturation dimensions, acculturation to Estonian culture and acculturation to Russian culture, the cluster analysis technique was used. A cluster analytic approach to define different types of acculturation groups was employed in previous studies (Lee, Sobal, & Frongillo, 2003). First a hierarchical method to define
the number of clusters was performed, and then a $k$-means procedure was used to actually form the clusters.

A cluster analysis technique was chosen over discriminant analysis, because it does not require a researcher to know group membership for the cases used to derive the classification rule. Indeed, the true acculturation typology in the sample of the Russian-speaking IDUs is unknown and, therefore, the exploratory nature of the hierarchical cluster analysis is preferable.

To determine the optimal number of acculturation subgroups, an agglomerative, hierarchical cluster analysis was performed with squared Euclidean distances used in the proximities matrix and Ward’s method used as a clustering method. Ward’s method groups cases to maximize between group differences and minimize within group differences (i.e., optimizes the F Statistic). Hierarchical clustering is believed to be more appropriate than other clustering methods for smaller samples (typically < 250) (Garson, 2009a). Fusion coefficients and visual examination of the dendrogram were used to determine the optimal number of clusters. Fusion coefficients show a clean jump after clusters are merged into an optimal cluster solution, which would indicate dissimilarity in the clusters that were merged. Likewise a subjective judgment can be made by inspecting the dendogram. A large agglomeration coefficient corresponds with a larger distance in the dendogram between sequential vertical lines of the clusters that are combined. Clusters should also contain at least four elements. The smallest group should comprise of no less than 5% or more of the total number of cases.
After a certain cluster solution is determined to be the most optimal, \( k \)-means cluster procedure in PASW v. 17 was used, forcing a prior specified cluster solution. \( K \)-means clustering is optimal among iterative partitioning clustering methods when the number of clusters can be specified in advance (Norusis, 2009). The \( k \)-means algorithm assigns each data point to the cluster whose centroid is nearest. Unlike agglomerative hierarchical clustering where the cases are added only to existing clusters, the \( k \)-means algorithm repeatedly reassigns cases to clusters, so the same case can move from cluster to cluster during the analysis (Norusis, 2009). \( K \)-means cluster analysis also uses Euclidean distance. There is an interpretive advantage of \( k \)-means cluster analysis to non-hierarchical cluster methods. The analysis results in a set of mutually exclusive clusters that are as compact and well-separated as possible.

A \( k \)-means cluster output with ANOVA F-tests for each variable was used to assess how well the variables help to discriminate between clusters. However, the observed significance levels should not be interpreted in the usual fashion because the clusters have been selected to maximize the differences between clusters. Non-significant variables or a variable with a large mean square error should be considered for elimination as not contributing to the differentiation of clusters (Garson, 2009a).

As a follow-up procedure for cluster analysis, a discriminant function analysis was conducted for predictive purposes to formulate a linear discriminant function describing the importance of the independent variables in differentiating observations of known cluster membership. If discriminant function analysis is effective for a set of data, the classification table of correct and incorrect estimates will yield a high percentage
correct. Discriminant analysis uses a set of variables with associated weights that are
derived in a best fit, linear unbiased fashion, to predict the score of the dependent
variable (Smith, n.d.). Relationships between acculturation clusters and exogenous
variables were examined with the $\chi^2$ and ANOVA tests.

Structural Equation Modeling

Structural equation modeling (SEM), a second generation multivariate analysis
technique also known as covariance structure modeling, was utilized to examine the
interactions among acculturation, alienation, acculturation stress, socio-economic status
(SES), and HIV drug risk variables. Structural equation models determine the extent to
which the theoretical model is supported by sample data (Schumacker & Lomax, 2004).
Using the scientific method of hypothesis testing, SEM allows a researcher to enhance
understanding of the complex relationships and interactions amongst constructs based on
strong theoretical assumptions and previous empirical findings.

SEM has several advantages over the first generation multivariate methods, such
as multiple regression analysis (Golob, 2003; Kline, 2005; Schumacker & Lomax, 2004).
First, SEM allows simultaneous analysis of multiple “dependent” variables and
interpretation of the same variable as both an outcome and predictor variable. Second,
measurement error is not aggregated in a residual error term. Third, covariance matrix or
confirmatory factor analysis (CFA) generated in SEM reduces measurement error by
having multiple indicators per latent variable. Fourth, the visual representation of the
interactions in a SEM model is a powerful mode of presentation. Fifth, regression is
highly susceptible to error of interpretation by misspecification, while SEM allows for
comparing alternative models to assess relative model fit. Sixth, SEM simultaneously estimates direct and indirect effects. Finally, SEM takes into account nonlinearities and missing data.

SEM is a statistical technique which integrates path analysis and factor analysis. SEM refers to a hybrid model when both multiple indicators for each latent variable, and paths specified connecting the latent variables, are examined. For the current study, a hybrid model (Schumacker & Lomax, 2004) that combines a structural model (relationships among observed variables, similar to path analysis), and a measurement model (relationships between a latent variable and its indicators, similar to confirmatory factor analysis) was used. The row data were inputted in AMOS v. 16. statistical software. Generally, the researcher has a choice of either inputting the raw data, which is preferred when it is available, or entering the data in the form of a correlation matrix, or in the form of a raw covariance matrix.

SEM is viewed as a confirmatory rather than exploratory procedure; therefore theoretical insight, previous empirical findings, and judgment by the researcher are still of utmost importance. In this study a model development approach was utilized. It combined confirmatory and exploratory purposes: a model is tested using SEM procedures, and if found to be deficient, an alternative model is tested, based on changes suggested by SEM modification indexes and theoretical underpinnings (Schumacker & Lomax, 2004). Although it is the most common approach found in the literature, it has limitations. The model is confirmed post-hoc, based on the uniqueness of an initial dataset, and there is always a risk that the model may not fit new data.
In the SEM model diagram, observed variables, including indicators for the latent variables, are presented as squares or rectangles. Indicators are observed variables or reference variables, such as items in a survey instrument. The latent variables (not measured variables), errors, and residuals are presented as circles or ellipses. All relationships among variables, for example, path coefficients, factor loadings, and covariances, are called parameters. Single-headed arrows indicate a direct causal relationship between observed variables and represent path coefficients. Single-headed arrows from a latent variable to its indicators indicate the direct causal effect of the underlying latent variables on the indicators, and are referred to as factor loadings. Double-headed arrows correspond to bidirectional associations (Schumacker & Lomax, 2004).

Model Specification and Identification

Model specification in SEM involves determining every relationship and parameter in the model that is of interest to the researcher. It is based on the utilization of relevant theory, and previous empirical research and data. Identification of a model is a requirement for producing estimable results in SEM analysis. A model is considered identified if it is theoretically possible to determine a unique estimate of each parameter. For this to happen, the number of free parameters must be less than or equal to the number of observations. With complex models, such as in this study, where there is more than one level of latent variable structures, it could be possible that the first-order level is identified, but the second-order level may indeed be underidentified. Thus, it is
suggested to visually check each level separately for evidence that identification has been attained (Byrne, 2006).

For SEM with latent variables, it is recommended that the measurement model be developed first, followed by the structural model (Anderson & Gerbing, 1988). The measurement part of SEMs are concerned with the relationship between unmeasured or latent variables or factors on one hand, and observed indicators of those factors, on the other. Measurement models must be identified for the overall SEM to be identified. The measurement portion of the model will most likely be identified if (O’Brien, 1994):

- There is only one latent variable, it has at least three indicators that load on it, and the errors of these indicators are not correlated with one another.
- There are two or more latent variables, each with at least three indicators that load on it, and the errors of these indicators are not correlated, each indicator loads on only one factor, and the factors are allowed to co-vary.
- There are two or more latent variables, but there is a latent variable on which only two indicators load, the errors of the indicators are not correlated, each indicator loads on only one factor, and none of variances or covariances between factors is zero.

Furthermore, to avoid problems related to identification, a scale or metric must be assigned to each latent variable. This will eliminate the scale indeterminacy problem, but not necessarily the identification problem, and additional constraints may be needed. The scale for each construct must have either (Byrne, 2006; Schumacker & Lomax, 2004): 1) one fixed nonzero loading (usually 1.0); or 2) for causal factors, fixed factor variance
(usually 1.0) or for factors that are caused, fixed factor disturbance variance (usually 1.0); or 3) a fixed causal path (usually 1.0), leading into or out of the latent variable. With these constraints, the model is identified. One fixed nonzero loading, termed a “reference variable”, is often the variable with the most reliable scores (Kline, 2005).

Another way to avoid the risk of the identification problem is to check if the structural model is recursive. When a latent dependent variable does predict another latent dependent variable, the relationship is recursive, and the disturbances are not correlated. A relationship is recursive if the causal relationship is unidirectional (one line pointing from the one latent variable to the other). In a non-recursive relationship there are two lines between a pair of variables, pointing to each other, and disturbances (residual errors) are correlated as indicated by a single line with an arrowhead on each end. A structural model is recursive when latent variables are not reciprocally related, that is, no feedback loops exist whereby a latent variable feeds back upon itself (Schumacker & Lomax, 2004). Models with correlated disturbance terms may be treated as recursive only so as long as there are no direct effects among the endogenous variables (Garson, 2009c). In practice, the "structural" parts of many SEMs satisfy the recursive rule. If a model does so, the identification issue of the structural part of the model is solved.

Lastly, to avoid problems of identification it is best to begin with a parsimonious (simple) model with a minimum number of parameters. The model should only include variables (parameters) considered to be absolutely crucial. Once this model is identified,
then the researcher should consider including other parameters in subsequent models (Schumacker & Lomax, 2004).

**Parceling**

Parceling is a measurement practice that is used most commonly with latent-variable analysis techniques. A parcel can be defined as an aggregate-level indicator comprised of the sum (or average) of two or more items of the scale (T. Little, Cunningham, Shahar, & Widaman, 2002). Numerous researchers have highlighted the psychometric merits of parcels relative to items. For example, because fewer parameters are needed to define a construct when parcels are used, parcels are preferred, particularly when sample sizes are relatively small (Bagozzi & Edwards, 1998). Furthermore, compared with item-level data, models based on parceled data have improved distributional qualities (e.g., less skew), greater parsimony and reliability, better stability of solutions, lower likelihood of correlated residuals and dual factor loadings, and result in reductions in various sources of sampling error (T. Little et al., 2002; MacCallum, Widaman, Zhang, & Hong, 1999). A final issue related to the “more items” question has to do with the optimal number of indicators needed to identify and represent a latent construct. Three indicators of a construct lead to a just-identified latent variable while four or more indicators lead to an overidentified latent variable. A just-identified latent variable is better than an overidentified one, because a just-identified construct has only one unique solution that optimally captures the relations among the items, no matter what other constructs are considered or included in a model. Thus, parcels can be used to effectively reduce the number of indicators to an optimal, just-identified level (T. Little et
Various techniques are available to build parcels, including random assignment, item-to-construct balance, an internal-consistency approach, and a domain-representative approach, among others.

Model Estimation Procedures

SEM analysis uses an iterative procedure to minimize the differences between the sample variance/covariance matrix and the estimated population variance matrix. AMOS v. 16.0 uses maximum likelihood estimation (MLE) for determining parameter estimates, which has been found to have the least bias. MLE assumes multivariate normality (Schumacker & Lomax, 2004). When the normality assumption is violated, parameter estimates and standard errors are suspect. MLE seeks to maximize the log likelihood, which reflects how likely it is (the odds) that the observed values of the dependent variable may be predicted from the observed values of the independent variables. MLE estimates all parameters simultaneously producing a full estimation model. After the initial solution is derived, the iteration process occurs and the program attempts to improve the estimates with subsequent calculation cycles. The final solution renders the best data fit to the model (Kline, 2005). Maximum likelihood estimation assumes the multivariate normality of endogenous variables and allows dichotomous exogenous variables (Garson, 2009b).

A model generating approach was used in this study. This approach specifies an initial model (implied or theoretical), and if the data do not fit this initial model at an acceptable model fit criterion level, certain paths in the model are added or deleted to
arrive at a best model fit, which should also have practical and substantive theoretical meaning.

The model used in this study was a complex structural model. Complex structural models can be assessed at different levels of aggregation (Bagozzi & Heatherton, 1994): Total disaggregation, total aggregation, and partial aggregation. Bagozzi and Heatherton (1994) argued that adopting the appropriate level of aggregation allows researchers to perform meaningful tests of model fit, despite small achieved sample size (Bagozzi & Heatherton, 1994). A combination of total aggregation and total disaggregation approaches was used in this study.

**Model Fit**

In judging the statistical significance and substantive meaning of a theoretical model, two sets of statistical criteria were used: 1) global fit measures, and 2) the magnitude, significance, and directionality of individual parameter estimates.

*Global fit measures*

Global fit measures include the non-statistical significance of the Chi-square ($\chi^2$) test, goodness-of-fit indices, and the root-mean-square error of approximation (RMSEA) values. A non-statistically significant $\chi^2$ value, or likelihood ratio chi-square, means that the sample covariance matrix and the reproduced model-implied covariance matrix are similar. Higher values of $\chi^2$ correspond to a worse model fit, and a model that fits the data perfectly has a value of zero. Chi-square, however, has several limitations. First, just-identified models, or models where the degrees of freedom equal zero (i.e., the number of observations equals the number of free parameters), are more likely to explain
data perfectly. Larger correlations and multivariate non-normality in the data may inflate $\chi^2$ statistics. Larger sample sizes (greater than 200) consistently lead to statistically significant results. Therefore, a researcher may incorrectly reject the null hypothesis (Type I error) when the model is true (Kline, 2005; Schumacker & Lomax, 2004).

Researchers have addressed the $\chi^2$ limitations by developing goodness-of-fit indices that take a more pragmatic approach to the evaluation process. In this study, several alternative indices of fit were used as adjuncts to the $\chi^2$ statistic. The first is the ratio of $\chi^2$ divided by degrees of freedom, which appears as CMIN/DF in the AMOS output. Recommended values of 2.0 to 5.0 have been suggested as acceptable, with lower values indicating better fit (Kline, 2005). The next set of goodness-of-fit statistics is classified as incremental or comparative indices of fit. The values of both, the Normed Fit Index (NFI) and a revised NFI taking sample size into account, the Comparative Fit Index (CFI), range from zero to 1.00 and are derived from the comparison of a hypothesized model with the independence (or null) model (Byrne, 2006). For NFI and CFI, a cutoff value close to .95 is considered representative of a well-fitting model (Hu & Bentler, 1999). The Tucker-Lewis Index (TLI) yields values ranging from zero to 1.00, with values close to .95 (for large samples) being indicative of good fit (Hu & Bentler, 1999).

Another goodness-of-fit statistic appearing on the AMOS output is Hoelter’s (1983) Critical N (CN) (Hoelter’s .05 and .01 indices), which focuses directly on the adequacy of sample size, rather than on model fit, estimating a sample size that would be sufficient to yield an adequate model fit for a $\chi^2$ test (Hu & Bentler, 1995). A value in
excess of 200 is indicative of a model that adequately represents the sample data (Byrne, 2006).

The last global fit statistics focuses on the root mean square error of approximation (RMSEA). The RMSEA index corrects for parsimony and simpler models that explain the same data generally produce better statistics. Values less than or equal to .05 indicate good fit, those between .05 and .08 are considered adequate, those between .08 and .10 are mediocre, and above .10 a poor fit (MacCallum, Browne, & Sugawara, 1996). A 90% confidence interval provides information on the lower and upper bounds of the RMSEA statistic. If RMSEA is small, despite a wide confidence interval, a researcher would conclude that the estimated discrepancy value is quite imprecise, thereby recognizing a low likelihood of accurately determining the degree of fit in the population. In contrast, a very narrow confidence interval would suggest good precision of the RMSEA value in reflecting model fit in the population (MacCallum et al., 1996).

It is important to note that global fit indices alone cannot possibly envelop all that needs to be known about a model in order to judge the adequacy of its fit to the sample data. Therefore, it is necessary to evaluate individual parameter estimates for the paths in the model.

*Individual parameter estimates*

Individual parameter estimates, path coefficients, and factor loadings were interpreted as multiple regression coefficients. These regression weights are reported in unstandardized and standardized form. Standard errors and tests of significance are
calculated for the unstandardized solutions. To produce standardized estimates, the variances for the variables are set to equal 1.0. It is also important to pay attention to the magnitude and the direction of the parameter estimates to check whether a positive or a negative coefficient is theoretically meaningful for the parameter estimate. The absolute magnitude of the coefficients less than .10 signifies a “small” effect, those at .30 and higher, a “medium” effect and those greater than or equal to .50 indicate “large” effects. SEM also estimates coefficients for indirect effects, or the impact of one variable on a third variable through a mediating variable. Total effects, the combined indirect and direct effects from a predictor to an endogenous variable, are calculated as a sum of both direct and indirect coefficients. Bidirectional associations are reported as unstandardized covariances or standardized correlations (Kline, 2005).
CHAPTER IV

RESULTS

There were 150 eligible participants enrolled for this study who completed the screening interview and the questionnaire. All 150 participants reported drug use of which 146 stated injecting drug use and four reporting non-injecting drug use; the latter were excluded from statistical analysis due to insignificant representation, and to allow for improved homogeneity of the sample and interpretation of results relative to HIV injecting risk behaviors among all subjects. As a result, the summary analyses are based on 146 IDUs.

Data Cleaning and Transformations

Duplicate cases analysis using PASW v.17 software was run to identify if some of the participants entered the survey twice. Because no identifying information was collected, the following socio-demographic variables were used to detect matching cases: year of birth, month of birth, ethnicity, gender, marital status, the highest level of education, religion, whether a person was born in Estonia, and source of income. The analysis did not reveal any cases that suggested duplicate responses.

Based on the results of frequency tables and univariate normality analysis, two variables, education and legal income, were transformed. The variable on legal income was highly positively skewed (skewness = 2.2) with a leptokurtic distribution, indicated by elevated kurtosis of 4.8. This was due to over 54% of participants not having any legal income. For descriptive purposes, the continuous variable on legal income was
collapsed into ordinal categories where 0 = 'No legal income', 1 = 'Less than 3000 EEK', 2 = '3,000-6,000 EEK', 3 = 'More than 6,000 EEK'.

The categorical variable ‘education’ was collapsed into an ordinal variable with three categories: 1 = 'Less than high school', 2 = 'some high school/or technical education', and 3 = 'high school diploma/completed technical'. The original categories of the variable were not ordered, e.g. individuals could have technical or high school diploma after graduation from secondary school. Collapsing the education variable would allow categories to be ordered with a higher category representing a higher level of education achieved.

A new variable on polydrug use was created by summing the number of substances used, except for alcohol, which was excluded as it did not meet the requirement of the National Institute on Alcohol Abuse and Alcoholism (NIAAA) on alcohol-related problems. According to NIAAA guidelines for physicians, males who drink more than four standard drinks in a day (or more than 14 per week) and females who drink more than two standard drinks in a day (or more than seven drinks per week) are at heightened risk for alcohol-related problems (Dawson, Grant, & Li, 2005; National Institute on Alcohol Abuse and Alcoholism, 2004). The highest possible category of the variable on alcohol use was “every day”, which did not reflect the amount of alcohol consumed. In addition, a variable for the duration of injecting drug was calculated by subtracting age of initiation of injecting from the current age.

For bivariate analysis dichotomous variables ‘officially/unofficially employed’ and ‘married/cohabiting’ were created, where 1 = ‘Yes’ and 0 = ‘No’. Many participants
indicated in the survey that they are unofficially employed, meaning that some of them are self-employed, have temporary jobs, or do moonlighting. For example, some participants would go to abandoned plants, factories, or old buildings and dig up old copper cables and wires, which they scrap and sell to the metal redemption center. Although it is hard to judge whether this source of income is legal or not, it is not generally viewed as stealing or a crime. Therefore, having official employment, moonlighting, or temporary employment were collapsed in one category and coded as 1 in ‘officially/unofficially employed’ variable. In the variable ‘married/living together’, the 1 = ‘Yes’ category included participants who are married or living together, and 0 = ‘No’ indicated that individuals are single, widowed, or divorced.

There were two variables with outliers: duration of injecting and legal income. Rather than deleting these scores, efforts were made to reduce their influence by changing them to one unit higher or lower than the next most extreme score as recommended by Tabachnick and Fidell (2001). For duration of injecting, one score of 28 was considered an outlier, falling considerably higher than the next highest score of 22 and was subsequently changed to a score of 23, one unit above the next most extreme score. For legal income, two cases of 15,000 EEK were considered an outlier, falling considerably lower than the next lowest score of 10,000 EEK. They were changed to a score of 10,100 EEK, which was one value higher than the next highest score. The original variables, duration of injecting and legal income, however, were used in descriptive statistics.
Descriptive Statistics

Out of the total of 146 participants, 140 completed the questionnaire through self-administration while six required oral administration assistance. There was no significant difference in the responses between those who completed the questionnaire themselves and those who required assistance. Seventy-seven percent of the participants were males and 23% females. All individuals identified themselves as heterosexual, except one person reporting a homosexual orientation and two individuals a bisexual orientation.

Socio-demographics

The sample was 89.0% Russians, 4.8% Ukrainians, 2.1% Tartars, 2.1% Roma, 1.4% Belarusians, and 0.7% Georgian. A majority (91.1%) of the participants were born in Estonia while 8.9% migrated to Estonia during the period of 1962 to 1991, the time of the Soviet Union. The vast majority (98.6%) of participants lived in Tallinn. One person reported living in Narva, a city 211 kilometers due west on the border with Russia, and one was a resident of Lithuania.

The average age of the sample was 28.1 with a range of 18 to 47 years old. Three-quarters (74%) of participants were 30 years of age and younger. The highest level of education achieved varied from 'Less than high school' to 'High school or technical school diploma'. Less than high school education was reported by 59.3% of the sample, some high school and some technical education by 15.2%, and completed high school or technical (high school or technical school diploma) by 25.2%. For marital status, 54.1% described themselves as single, 8.9% as married, 6.2% as divorced, 4.1% as widowed, and 26.7% as living together with a partner. Religious affiliation was
represented as 78.8% ‘Russian Orthodox’, 10.3% ‘Atheism’, and 10.9% ‘other religious affiliations.

Roughly a third (31.5%) of those surveyed had an illegal source of financial support, such as drug dealing, stealing, fencing stolen goods, and prostitution, among others. Legal employment was identified as a major source of financial support by 17.1% of participants, while moonlighting or temporary employment was reported by 12.3% of individuals and 15.8% reported receiving pension benefits, social security benefits, or public assistance or welfare benefits. Only 9.0% of respondents had unemployment compensation, and 10.3% got financial support from mates, family, or friends.

The open ended question on the size of legal monthly income reveals that over half (54.5%) of those surveyed reported no legal income. The highest legal income reported was 15,000 EEK (1,435 USD) per month. About one-fifth (20.0%) of participants had a legal income up to 3,000 EEK, 13.1% reported 3,000-6,000 EEK, and more than 6,000 EEK was reported by 12.4%. Presence of health insurance was reported by 58 (40%) of participants.

Drug Risk Behaviors

The sample of Russian-speaking IDUs was characterized by early age of drug initiation ($M=17.6, SD=4.6$) and early age of initiation into injection drug use ($M=19.3, SD=5.1$), indicating a conversion from non-injecting to injecting drug use after an average of two years. About half (48.6%) of participants reported initiating drug use with intravenous drug administration. The earliest ages for drug initiation in this sample was nine years old, and for injecting drugs was 10 years old. Ninety percent of individuals
started using drugs at age 23 and younger, and injecting drugs between 25-26 years old. The average duration of injecting drug use was 8.8 years. A one-third of the sample had been injecting for a decade or longer.

The reduced availability of heroin in Estonia appears to have resulted in an increase in Fentanyl use. Injecting Fentanyl, a synthetic opioid used primarily for surgical anesthesia and chronic pain management (U.S. Drug Enforcement Administration, n.d.), was reported by 93.2% of the sample, compared to heroin by 39.7%, and poppy liquid by 13%. Daily use of Fentanyl in this sample reached 58.9%. Amphetamine was injected by 61% of those surveyed. A combination of drugs such as heroin and amphetamine was injected by 54.1% of individuals. Participants reported that it was hard to find heroin in the city. Polydrug use or the use of multiple substances (excluding alcohol) in the last month ranged from using only one drug to using seven drugs. The average number of drugs used was 2.9.

Despite the fact that almost all participants attended the syringe exchange program, injecting risk behaviors, such as sharing needles/syringes, a cooker (a vessel, such as a spoon, bottle cap, or soda can bottom, used to mix heroin in solution), cotton (used to filter the drug as it is drawn into the syringe), rinse-water, and using one syringe to divide a drug with others, were high in this sample. These risky behaviors during a recall period of the last six months were used to calculate the HIV drug risk score and the percentages of responses are presented in Table 4.1.
### Table 4.1. Drug Risk Behaviors: Description of Variable Response

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of initiation into drug use <em>(M, SD)</em></td>
<td>142</td>
<td><em>(M=17.6, SD=4.6)</em></td>
</tr>
<tr>
<td>Age of initiation into injection drug use <em>(M, SD)</em></td>
<td>144</td>
<td><em>(M=19.3, SD=5.1)</em></td>
</tr>
<tr>
<td>Duration of injecting</td>
<td>144</td>
<td><em>(M=8.8, SD=4.4)</em></td>
</tr>
<tr>
<td>Drugs injected in the last six months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fentanyl</td>
<td>136</td>
<td>93.2</td>
</tr>
<tr>
<td>Heroin</td>
<td>58</td>
<td>39.7</td>
</tr>
<tr>
<td>Amphetamine</td>
<td>89</td>
<td>61.0</td>
</tr>
<tr>
<td>Poppy liquid</td>
<td>19</td>
<td>13.0</td>
</tr>
<tr>
<td>Combination of heroin and amphetamine</td>
<td>79</td>
<td>54.1</td>
</tr>
<tr>
<td>Polydrug use</td>
<td>146</td>
<td><em>(M=2.9, SD=1.4)</em></td>
</tr>
<tr>
<td>Sharing needles and syringes</td>
<td>87</td>
<td>59.6</td>
</tr>
<tr>
<td>rinse-water</td>
<td>94</td>
<td>64.4</td>
</tr>
<tr>
<td>cooker</td>
<td>81</td>
<td>55.5</td>
</tr>
<tr>
<td>cotton</td>
<td>58</td>
<td>40.0</td>
</tr>
<tr>
<td>syringe to divide a drug with others</td>
<td>103</td>
<td>70.5</td>
</tr>
<tr>
<td>Sharing needles with</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 other person</td>
<td>36</td>
<td>24.7</td>
</tr>
<tr>
<td>2 or 3 different people</td>
<td>40</td>
<td>27.4</td>
</tr>
<tr>
<td>4 or more different people</td>
<td>13</td>
<td>8.9</td>
</tr>
<tr>
<td>Attending shooting gallery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A few times or less</td>
<td>45</td>
<td>30.8</td>
</tr>
<tr>
<td>A few times each month</td>
<td>31</td>
<td>21.2</td>
</tr>
<tr>
<td>Once or more each week</td>
<td>41</td>
<td>28.1</td>
</tr>
</tbody>
</table>

**Missing Data**

None of the individual variables showed a percentage of missing data higher than 2.7%. A chi-square test for missing completely at random was not significant (p > 0.05) and the data are assumed to be missing completely at random (MCAR).

Although the percentage of missing values was small, the number could substantially increase when the sum scores are calculated for the research measures. In addition, in the SEM analysis not all fit and modification indices can be computed by
AMOS and thus will not appear on output when there are missing data. Thus, for further analysis all missing values for the variables comprising the research measures and variables to be included in the model were replaced by calculating a linear trend at point.

Research Measures

*Language, Identity, and Behavior Scale*

The American and Russian acculturation index showed excellent reliability in previous research (Birman & Trickett, 2001; Birman et al., 2002; Jones & Trickett, 2005). In the present sample internal consistency reliability for the slightly modified version of LIB (without three questions on cultural participation) was 0.93 for the Estonian acculturation index, and 0.87 for the Russian acculturation index.

Participants scored across the possible range of 24-96 on the two dimensions of Estonian and Russian acculturation scales. As anticipated, participants showed relatively low levels of Estonian acculturation ($M = 45.57$, $SD = 13.61$) and high levels of acculturation to Russian culture ($M = 84.12$, $SD = 9.35$). Participants scored across the possible range of 7-28 on the Estonian, Russian, and Estonian-Russian cultural identity scales. The sample demonstrated a low levels of Estonian identity ($M = 11.00$, $SD = 4.42$) and a high Russian identity ($M = 21.82$, $SD = 5.40$). For Estonian-Russian identity scores fell in the middle range ($M = 14.13$, $SD = 5.52$). Participants endorsed a low level of Estonian ($M = 19.75$, $SD = 7.29$) and high level of Russian ($M = 33.47$, $SD = 4.33$) language competency as measured by the LIB language subscales with possible scores on the scale ranging of 9-36. The means of Estonian and Russian scores on the LIB cultural
participation subscales were 14.81 (SD = 5.36) and 28.83 (SD = 3.75), respectively. The central tendency and internal consistency reliability statistics for the LIB scale are presented in Table 4.2.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Number of Items</th>
<th>Mean</th>
<th>SD</th>
<th>Possible Range</th>
<th>Actual Range</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIB Estonian</td>
<td>24</td>
<td>45.57</td>
<td>13.61</td>
<td>24.0-96.0</td>
<td>24.0 - 90.0</td>
<td>0.93</td>
</tr>
<tr>
<td>Estonian language</td>
<td>9</td>
<td>19.75</td>
<td>7.29</td>
<td>9.0 - 36.0</td>
<td>9.0 - 36.0</td>
<td>0.97</td>
</tr>
<tr>
<td>Estonian identity</td>
<td>7</td>
<td>11.00</td>
<td>4.42</td>
<td>7.0 – 28.0</td>
<td>7.0 - 28.0</td>
<td>0.85</td>
</tr>
<tr>
<td>Estonian participation</td>
<td>8</td>
<td>14.80</td>
<td>5.36</td>
<td>8.0-32.0</td>
<td>8.0 - 32.0</td>
<td>0.84</td>
</tr>
<tr>
<td>LIB Russian</td>
<td>24</td>
<td>84.12</td>
<td>9.35</td>
<td>24.0-96.0</td>
<td>53.0 - 96.0</td>
<td>0.87</td>
</tr>
<tr>
<td>Russian language</td>
<td>9</td>
<td>33.47</td>
<td>4.33</td>
<td>9.0 - 36.0</td>
<td>10.0 - 36.0</td>
<td>0.96</td>
</tr>
<tr>
<td>Russian identity</td>
<td>7</td>
<td>21.81</td>
<td>5.40</td>
<td>7.0 – 28.0</td>
<td>7.0 - 28.0</td>
<td>0.87</td>
</tr>
<tr>
<td>Russian participation</td>
<td>8</td>
<td>28.82</td>
<td>3.75</td>
<td>8.0-32.0</td>
<td>11.0 - 32.0</td>
<td>0.81</td>
</tr>
<tr>
<td>LIB Estonian-Russian</td>
<td>identity</td>
<td>7</td>
<td>16.19</td>
<td>6.37</td>
<td>7.0 – 28.0</td>
<td>7.0 - 28.0</td>
</tr>
<tr>
<td>SAFE</td>
<td>24</td>
<td>46.63</td>
<td>12.95</td>
<td>24.0 – 120.0</td>
<td>25.0 – 88.0</td>
<td>0.88</td>
</tr>
<tr>
<td>Social alienation</td>
<td>7</td>
<td>26.93</td>
<td>6.71</td>
<td>9.0-45.0</td>
<td>10.0-45.0</td>
<td>0.83</td>
</tr>
<tr>
<td>Self-alienation</td>
<td>4</td>
<td>14.70</td>
<td>4.34</td>
<td>5.0-25.0</td>
<td>6.0 - 25.0</td>
<td>0.80</td>
</tr>
<tr>
<td>Cultural estrangement</td>
<td>3</td>
<td>12.23</td>
<td>3.41</td>
<td>4.0-20.0</td>
<td>4.0-20.0</td>
<td>0.75</td>
</tr>
<tr>
<td>RAB HIV drug risk</td>
<td>8</td>
<td>9.05</td>
<td>5.11</td>
<td>0 - 22.0</td>
<td>1.0 - 21.0</td>
<td>0.80</td>
</tr>
</tbody>
</table>

**Alienation Scale**

In this sample, the internal consistency reliability of the original alienation scale (Kohn, 1976; Roberts, 1987; Seeman, 1959) was 0.77. However, despite the acceptable level of the reliability coefficient, several variables on the scale showed corrected item-total correlations below 0.3, which indicates that items do not measure the same underlying construct. Because the underlying structure of the alienation scale identified by Roberts (1987) has not been independently examined, the present study utilized confirmatory (CFA) and exploratory factor analysis (EFA) to determine the factor
structure of the Roberts’ alienation scale. Alienation was measured by 16 items which represent five dimensions. Powerlessness, normlessness, self-estrangement, and cultural estrangement were measured by multiple indicators, while the fifth dimension, meaninglessness, was measured by a single indicator. A CFA with alpha factoring and direct oblimin rotation (with Kaiser normalization) was selected to assist in providing a clear separation of items loading on the factors. A CFA aimed to verify a five-dimensional factor structure of the scale and confirm that items of the alienation construct specified by Roberts (1987) were associated with the appropriate subscales. Analysis showed that some items were ambiguous as they loaded onto the conceptually irrelevant factor and also loaded highly onto other factors.

In the next step, an EFA by alpha factoring with oblimin rotation was selected to explore the factor structure of the alienation construct. The rotation converged in ten iterations. Four factors were extracted explaining 38.6% of the variance in alienation. Items with low communalities, those that cross-loaded on several factors and onto the irrelevant factor were considered for elimination. The modified scale consisted of 9 items which loaded on two distinct factors. Rotation converged in 6 iterations. Two factors explained 37.6% and 9.1% of variance in alienation, respectively. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.85 and $\chi^2 (36) = 405.3$, $p < .001$. The final rotated factor solution for the alienation scale is shown in Table 4.3.
Table 4.3. Final Rotated Factor Solution for the Alienation Scale

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self-Alienation</td>
<td>Cultural estrangement</td>
</tr>
<tr>
<td>No PURPOSE in being alive</td>
<td>.902</td>
<td>.103</td>
</tr>
<tr>
<td>Feel BORED with everything</td>
<td>.713</td>
<td>-.101</td>
</tr>
<tr>
<td>Feel POWERLESS</td>
<td>.711</td>
<td>-.042</td>
</tr>
<tr>
<td>I am NO GOOD at all</td>
<td>.557</td>
<td>.039</td>
</tr>
<tr>
<td>World is not UNDERSTANDABLE</td>
<td>.398</td>
<td>-.222</td>
</tr>
<tr>
<td>Opinions differ from COUNTRY</td>
<td>-.057</td>
<td>-.701</td>
</tr>
<tr>
<td>Opinions differ from RELIGIOUS</td>
<td>-.030</td>
<td>-.682</td>
</tr>
<tr>
<td>Opinions differ from FRIENDS</td>
<td>.042</td>
<td>-.634</td>
</tr>
<tr>
<td>Opinions differ from RELATIVES</td>
<td>.236</td>
<td>-.498</td>
</tr>
</tbody>
</table>

The modification of the scale resulted in eliminating the normlessness dimension of alienation. The research literature supports the fact that normlessness could be a manifestation of anomie rather than of alienation (Seeman, 1991). Similar to Roberts’ (1987) study the facets of alienation which most strongly reflect the underlying concept are powerlessness (one item from the original scale), self-estrangement (three items from the original scale) and meaninglessness (measured by one item) that loaded on factor 1. The fact that items measuring cultural estrangement loaded on factor 2 indicated that cultural estrangement may not represent the concept of alienation. Indeed, Roberts (1987) found that cultural estrangement (or value isolation) was the facet showing the weakest relation to the underlying concept of alienation.

The first factor representing the alienation construct was named ‘self-alienation’, or alienation from self, consisting of powerlessness, meaninglessness, and self-
estrangement. The second was named ‘cultural-estrangement’, alienation from the larger society or the value of isolation, represented by three cultural-estrangement items from the original alienation scale (Kohn, 1976; Roberts, 1987). The alienation construct was named ‘social alienation’ to better represent two second-order constructs: alienation from self and alienation from the larger society.

The internal consistency reliability of the modified scale was .83, and for the self-alienation and cultural-estrangement subscales, .80 and .75, respectfully. All items on the total scale were highly correlated with the overall scale showing a range of corrected item-total correlation from .44 to .65. The score on each scale score was represented by a sum of the individual items. The average social alienation score in this sample was 26.93 (SD = 6.71) from a possible score range of 9-45. For self-alienation the average score was 14.70 (SD = 4.34) and for cultural estrangement 12.23 (SD = 3.41). The central tendency and internal consistency reliability statistics for the alienation scale are presented in Table 4.2.

SAFE Acculturation Stress Scale

The 24-item version of the SAFE (Fuertes & Westbrook, 1996; Mena et al., 1987) showed high reliability in the current sample (α = .88). Acculturation stress was represented by a single scale score measured by the sum of 24 individual items on the SAFE scale. Participants endorsed a relatively low level of acculturative stress (M = 46.63, SD = 12.95) as measured by the 24-item SAFE scale with a possible score ranging from 24 to 120 (Table 4.2).
**RAB HIV drug risk**

The response values for each individual question on the drug risk items of RAB (Metzger et al., 2001; Metzger, Woody, McLellan et al., 1993; Navaline et al., 1994) range from 0 to 3 with higher values reflecting greater frequency of the behavior (Metzger et al., 2001). The drug risk composite score demonstrated good internal consistency reliability in the present sample (α = .80). The total HIV drug risk score was calculated by summing seven items that measure drug risk (Metzger, Woody, & Navaline, 1993). Overall, the average HIV drug risk score across the sample was 9.06 (SD = 5.11) with a range of possible scores of 0-22. The mean, standards deviation, and internal consistency reliability statistics for the RAB drug risk scale is presented in Table 4.2.

**Bivariate Statistics**

Bivariate statistics were used to examine the relationships between socio-demographic variables and drug use patterns with acculturation, alienation, acculturative stress, and HIV drug risk. Pearson product-moment correlations were calculated between interval variables and Spearman rank order correlations were calculated between ordinal and interval variables.

The results showed that age of participants strongly positively correlated with the age of drug injection initiation (r = .67, p < .01), indicating that the older the participants, the later they began to inject drugs.

Males tended to have higher employment rates (official and unofficial) and higher levels of education than females, but were less likely to be married and have health
insurance. They were also more likely to use multiple drugs. Females were more likely
to experience a higher level of self-alienation \((r = -.23, p < .01)\), acculturation stress \((r =-.22, p < .01)\) and score higher on Estonian-Russian identity scale compared to males.

Being married (or cohabiting) was negatively related to having an illegal income
as a major source of financial support \((r = -.29, p < .01)\). Married (or cohabiting)
individuals were more likely to have health insurance. They also tended to score higher
on Russian acculturation compared to participants who were single, widowed, or
divorced.

Those who had higher levels of Estonian acculturation tended to have higher legal
incomes, health insurance, and be officially/unofficially employed. They also scored
higher on Estonian-Russian identity. Individuals with higher Estonian-Russian identity
were more likely to have health insurance. At the same time those who had lower legal
incomes, and did not have health insurance are those who experienced a higher level of
self-alienation. Participants with higher legal incomes were more likely to have health
insurance \((r = .38, p < .01)\), and less like to have illegal sources of income \((r = .42, p <
.01)\).

Acculturation to Estonian culture was related to a higher level of Estonian-
Russian identity \((r = .31, p < .01)\) and acculturation stress \((r = .25, p < .01)\). A weak but
significant negative relationship was detected between length of living in Estonia and the
level of acculturation to Russian culture \((r = -.19, p < .05)\). IDUs with a long history of
injecting drug abuse tended to be less acculturated to Estonian culture.
Those who had illegal income as a major source of financial support experienced higher levels of HIV drug risk \( (r = .27, p < .01) \) and were more likely to use multiple drugs \( (r = .25, p < .01) \) and to have had longer duration of injecting drugs \( (r = .17, p < .05) \). Duration of injecting and polydrug use were significantly positively related to HIV drug risk.

Research Hypotheses Testing

Based on the review of the extant literature on acculturation, acculturation stress, alienation, and HIV drug risk the following hypotheses were generated and tested:

**Hypothesis 1**

In the sample of Russian-speaking IDUs in Estonia, the orientation towards Russian culture is strong, and therefore, the application of Berry’s (1990, 2003) four-type acculturation typology is not relevant. Therefore, it was hypothesized that:

**H1 (a)** Two acculturation typologies exist in the sample of Russian-speaking IDUs in Estonia: 1) A bicultural orientation group consisting of individuals who are relatively highly acculturated to both Russian and Estonian cultures, and 2) A Russian orientation group consisting of individuals who maintain high acculturation to Russian culture and little acculturation to Estonian culture.

**H1 (b)** Bicultural individuals have a significantly higher socio-economic status indicated by a higher legal monthly income and higher level of education than individuals in the Russian orientation group.
**H1 (c)** Bicultural individuals experience significantly lower levels of acculturation stress than individuals in the Russian orientation group.

**H1 (d)** Bicultural individuals experience significantly lower levels of alienation than individuals in Russian orientation group.

To test hypothesis 1 of the study, hierarchical and $k$-means cluster analyses were undertaken to identify acculturation patterns among the Russian-speaking IDUs using the scores obtained from the Russian and Estonian LIB scales. A discriminant function analysis was used to predict cluster membership. Univariate ANOVAs and chi-square analyses examined participants’ demographic backgrounds and research measures in relation to cluster membership.

This study assumed that classification within the four types of Berry’s (1990, 2003) acculturation typologies would be misleading without considering the unique nature of the sample. The descriptive analysis showed that Russian-speaking IDUs in Estonia had a positively skewed distribution for scores on orientation toward Russian culture, while the scores for their orientation toward Estonian culture were distributed over a wider range. With the absence of individuals with low scores on the Russian acculturation subscales, the classification of groups based on the four typologies of acculturation (e.g., median split) is ineffective. Figure 4.1 illustrates that the Russian orientation scores are scattered in the upper part of the scale’s distribution while the scores of the Estonian orientation are more broadly distributed along the range of possible scores. The distribution suggests that Berry’s (1990, 2003) acculturation groups of ‘assimilation’ and ‘marginalization,’ which require non-adherence to the original
culture, could not be identified in this sample. Given the unique characteristics of the sample, a cluster analysis was conducted to explore the unique acculturation patterns existing in the sample of the Russian-speaking IDUs in Estonia and to classify individuals into mutually exclusive acculturation type groups based on the seven acculturation variables of Estonian and Russian language, Estonian, Russian, and Estonian-Russian identity, Estonian, and Russian cultural participation. The LIB subscales were used instead of total acculturation scores in order to see the contribution of each variable in the classification of the clusters.

Figure 4.1. Distribution of Scores of the Estonian Orientation and Russian Orientation Scales

Note: The dotted lines show a split based on mid-points (60.0) of the LIB Estonian and Russian Acculturation Scales

An agglomerative, hierarchical cluster analysis with squared Euclidean distances and Ward’s clustering method was performed. Fusion coefficients and visual
examination of the dendrograms showed that three clusters represented the optimal solution. Fusion coefficients showed a clean jump from 22,601.8 to 29,573.0 after clusters were merged into a two cluster solution, indicating a greater distinctiveness between the clusters in the two cluster solution compared to the three cluster solution. The subsequent \( k \)-means cluster analysis was predetermined to yield two clusters. The analyses converged in 6 iterations. The minimum distance between initial centers was 51.69.

The results of a \( k \)-means cluster output with ANOVA F-tests showed that each variable contributed to the differentiation of the two clusters at the probability level of \( p < .001 \), except for Russian language and Russian cultural participation variables. These variables did not contribute to the differentiation of the two clusters at the acceptable probability level of \( p < .05 \). This was not surprising, because this sample of Russian-speaking IDUs was shown to have high acculturation to Russian culture. Therefore, the hierarchical and \( k \)-means cluster analyses were re-run without Russian language and Russian participation variables. Fusion coefficients showed an even cleaner jump from 17,681.1 to 24,821.6 after clusters were merged into a two cluster solution, compared to the first analysis. A second \( k \)-means cluster with a two cluster solution converged in 6 iterations. The minimum distance between initial centers was 42.69.

At the next step, a direct discriminant analysis was performed using five variables as predictors of cluster membership. Predictors were Estonian language, Estonian identity, Russian identity, Estonian-Russian identity, and Estonian participation. The predicted groups were cluster 1 and cluster 2. Using an alpha level of .001 to evaluate
the homogeneity of covariance assumption, the significance of the Box's M test was $p = .001$. However, it is important to note that discriminant analysis can be robust even when the assumption of multivariate normality is violated (Garson, 2008).

The discriminant function showed $\chi^2 (5) = 157.18, p < .001$. The calculated value of $\chi^2$ exceeded the critical value of $\chi^2 = 11.07$ at the five percent level of significance, with five degrees of freedom. The null hypothesis that there is no significant difference between the acculturation profiles of the two clusters was therefore rejected. Two clusters had significantly different acculturation characteristics.

The discriminant function accounted for 100.0% of the between-group variability. The discriminant function classified individuals who belong to cluster 1 ($M = -.87$) from those individuals who belong to cluster 2 ($M = 2.31$). The standardized discriminant function coefficients were .55 for Estonian language, .21 for Estonian identity, -.21 for Russian identity, .45 for Estonian-Russian identity, and .57 for Estonian participation. The loadings or structure coefficients were .56 for Estonian language, .39 for Estonian identity, -.22 for Russian identity, and .36 for Estonian-Russian identity, and .71 for Estonian participation. These weights and loadings both suggest that the best predictors for distinguishing between individuals who belong to cluster 1 and those who belong to cluster 2 are Estonian language, Estonian identity, Russian identity, Estonian-Russian identity and Estonian participation variables.

There were 106 individuals in cluster 1 and 40 in cluster 2. Overall, 99.3% of the sample was correctly classified into their cluster group. To test whether or not a 99.3% percent correct classification rate was significantly different from what would be
classified correctly by chance, the Press’s Q test was calculated (Hair, Black, Babin, Anderson, & Tatham, 2006). Press’s Q \( (Q = 142.0, df = 1) \) exceeded the critical value of \( \chi^2_{.05}(1) = 3.84 \). Thus, observed classification was significantly different from expected chance classification. At the individual group level, 100% of individuals in cluster 1 and 97.5% in cluster 2 were correctly classified.

A multivariate analysis of variance (MANOVA) was performed using the two cultural orientation factor scores as dependent variables and the cluster groups as independent variables to help name the clusters. Using Wilk's criterion as the omnibus test statistic, the combined dependent variables resulted in significant multivariate effects for all five acculturation variables, \( F (5, 140) = 57.0, p < .001 \), partial \( \eta^2 = .67 \). This multivariate effect was accounted for by significant univariate effects of five factor scores (Table 4.4).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cluster 1 (N=106)</th>
<th>Cluster 2 (N=40)</th>
<th>Total (N=146)</th>
<th>F (1, 144)</th>
<th>( \eta^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Estonian language</td>
<td>16.97</td>
<td>5.72</td>
<td>27.13</td>
<td>5.73</td>
<td>19.75</td>
</tr>
<tr>
<td>Estonian identity</td>
<td>9.68</td>
<td>3.25</td>
<td>14.51</td>
<td>5.17</td>
<td>11.00</td>
</tr>
<tr>
<td>Russian identity</td>
<td>22.79</td>
<td>4.76</td>
<td>19.25</td>
<td>6.17</td>
<td>21.82</td>
</tr>
<tr>
<td>Estonian-Russian identity</td>
<td>14.41</td>
<td>5.99</td>
<td>20.91</td>
<td>4.80</td>
<td>16.19</td>
</tr>
<tr>
<td>Estonian participation</td>
<td>12.47</td>
<td>3.24</td>
<td>21.00</td>
<td>4.93</td>
<td>14.81</td>
</tr>
</tbody>
</table>

Note: *** \( p < .001 \)
Based on the delineating characteristics, cluster 1 was named ‘Russian orientation’ (low Estonian language, identity, and participation, low Estonian-Russian identity and high Russian identity) and cluster 2 was named ‘Bicultural orientation’ (high Estonian language, identity, and participation, high Estonian-Russian identity and low Russian identity). As a way to validate the grouping, univariate ANOVA and chi-square analyses examined participants’ demographic backgrounds and research measures in relation to cluster membership. The findings from these analyses are presented below (Table 4.5).

The Russian orientation group consisted of 106 respondents, representing 73% of the sample. These participants scored significantly above the sample mean on the Russian identity scale, and significantly below the sample mean on the Estonian language, Estonian and Estonian-Russian identity, and Estonian participation LIB scale (Table 4.4). Following Berry’s (1990; 2003) acculturation typology this cluster represented a separation group, wherein the individuals are strongly oriented to the culture of origin, and exhibited low acculturation in the host culture. Participants in the Russian orientation group were younger, more often male, and more often single than were participants in the bicultural group. Individuals with a Russian orientation reported significantly lower incomes, than did individuals with a bicultural orientation. More participants in this cluster had their mate, family, or friends as a major source of financial support, although the difference was not statistically significant. Fewer individuals in this cluster had a health insurance than those in the bicultural group. There were slightly more people with higher than secondary school education compared to the bicultural
## Table 4.5. Differences in Cluster Membership by Selected Socio-Demographic and Research Measures

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cluster 1 Russian orientation (N=106)</th>
<th>Cluster 2 Bicultural orientation (N=40)</th>
<th>F (χ²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years</td>
<td>(28.3/5.1)</td>
<td>(27.8/7.0)</td>
<td>.23</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td>(3.1)</td>
</tr>
<tr>
<td>Female</td>
<td>19</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>81</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>Born in Estonia</td>
<td>91</td>
<td>93</td>
<td>(0.1)</td>
</tr>
<tr>
<td>Years living in Estonia</td>
<td>(28.2/5.2)</td>
<td>(27.2/6.7)</td>
<td>.96</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td>(3.3)</td>
</tr>
<tr>
<td>Single</td>
<td>58</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Married/living together</td>
<td>33</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Divorced/widowed</td>
<td>8</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td>(1.8)</td>
</tr>
<tr>
<td>Completed secondary education and less</td>
<td>56</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>Some high school/or technical</td>
<td>17</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>High school/diploma/completed technical</td>
<td>27</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Legal income</td>
<td>(1440.4/2498.7)</td>
<td>(2673.8/3701.0)</td>
<td>5.3*</td>
</tr>
<tr>
<td>A major source financial support</td>
<td></td>
<td></td>
<td>(4.9)</td>
</tr>
<tr>
<td>Officially employed</td>
<td>14</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Self-employed/Moonlighting</td>
<td>16</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Unemployment compensation</td>
<td>9</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Pension, public assistance, social security or welfare</td>
<td>14</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Mate, family or friends</td>
<td>12</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Illegal</td>
<td>33</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>No sources</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Health insurance</td>
<td>34.3</td>
<td>55.0</td>
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<td>(29.0/3.8)</td>
<td>(28.4/3.6)</td>
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Note: *p < .05
group, but the difference was not statistically significant. The Russian orientation group scored lower on the level of acculturation stress than did the bicultural group. HIV drug risk, polydrug use, and duration of injecting did not differ from the bicultural orientation cluster. While the level of social alienation and self-alienation were not statistically different from the bicultural group, cultural estrangement was significantly lower (see Table 4.5).

The bicultural orientation group included 40 respondents, representing 27% of the sample. Individuals in the bicultural orientation group scored significantly higher on Estonian language skills, Estonian and Estonian-Russian identity, and Estonian cultural participation, and significantly lower on the Russian identity score compared to the Russian orientation group (Table 4.4). Following Berry’s (1990, 2003) acculturation typology the members of this group may also be called integrated, as they maintain close ties with the Russian culture and at the same time accept the host culture. Individuals in this cluster are on average 27.8 years old, and one third (33%) of them are females. Members in this group tend to be slightly less educated than individuals with a Russian orientation. Participants reported significantly higher average monthly legal incomes than individuals in the Russian oriented group. There were more individuals who were officially employed compared to the Russian orientation cluster, however the difference was not statistically significant. Members of this group were more likely to have health insurance compared to the other group memberships. This group scored significantly higher on the level of acculturation stress and cultural estrangement than the Russian orientation group. However, the average levels of alienation and self-alienation were not
significantly different from those in the Russian orientation group. No difference was observed with polydrug use, duration of injecting, and HIV drug risk (see Table 4.5).

Based on the analysis, hypothesis 1 (a) was confirmed. Two acculturation typologies exist in the sample of Russian-speaking IDUs in Estonia: 1) a bicultural orientation group consisting of individuals who scored significantly higher on Estonian language, identity, and participation, Estonian-Russian identity, and significantly lower on Russian identity compared to the Russian orientation group, and 2) a Russian orientation group consisting of individuals who scored significantly lower on Estonian language, identity, and participation, Estonian-Russian identity, and higher on Russian identity than those in bicultural orientation group. However, the clusters did not significantly differ from each other in Russian language and Russian participation, which were high in both clusters.

Hypothesis 1 (b) was partially supported. Individuals with a bicultural orientation had significantly higher legal monthly incomes (2673.8 ± 3701.0 EEK) compared to those in the Russian orientation group (1440.4 ± 2498.7 EEK). This difference was significant at \( p < .05 \). As for education, there was not any significant difference detected between two groups.

Hypothesis 1 (c) was not confirmed in that bicultural individuals experienced significantly higher level of acculturation stress than did individuals in the Russian orientation group, \( F(1, 144) = 5.8, p = <.05 \).

Hypothesis 1 (d) was not confirmed. There was not a significant difference in the levels of social alienation between the two acculturation groups. However, there was a
significant difference between the groups in the level of cultural estrangement. Individuals in the bicultural orientation group experienced significantly higher levels of cultural estrangement than did individuals in the Russian orientation group, $F(1,144) = 4.4, p < .05$. No significant difference was found for self-alienation.

Further discussion on the cluster differences is presented in the Chapter V.

**Hypothesis 2**

The second research hypothesis in this study examined the relationships between acculturation stress, alienation, and HIV drug risk.

**H2.** Statistically significant relationships exist between alienation, acculturative stress, and HIV risk:

**H2 (a)** There is a significant positive relationship between acculturation stress and the level of alienation.

**H2 (b)** The higher the acculturation stress, the higher the level of HIV drug risk.

**H2 (c)** The level of alienation is significantly positively related to HIV drug risk.

A Pearson product-moment correlation matrix was generated to determine if there were any significant correlations between levels of acculturation stress, alienation, and HIV drug risk, as well as to identify the strength, directionality, and level of significance of these correlations.

The results showed that, indeed, significant moderate positive relationships existed between acculturation stress and alienation ($r = .45, p > .01$), confirming hypothesis H2 (b). In addition, acculturation stress had a weak but significant positive effect on the level of HIV drug risk ($r = .17, p > .05$), confirming hypothesis H2 (c).
Finally, as expected, the level of alienation was significantly positively related to HIV drug risk \( r = .35, p > .01 \), confirming hypothesis H2 (d).

**Hypothesis 3**

Hypothesis 3 was concerned with a structural model of acculturation stress, alienation, and HIV drug risk, grounded in acculturation stress theory. Figure 1.1 is a pictorial representation of the model expressed as a path diagram. The direction of the arrows indicates theoretical causal relationships, circles represent latent constructs, and squares represent measured variables. Arrows indicate expected significant associations.

The model aimed to predict an endogenous variable measuring HIV drug risk from a set of three exogenous variables (acculturation stress, duration of injecting, and polydrug use) and one endogenous variable (latent construct of alienation). Exposure to a higher level of acculturation stress was hypothesized to cause, in SEM terms, higher levels of alienation and more severe patterns of drug abuse (duration of injecting and polydrug use). It was expected that a higher level of acculturation stress, alienation, and two variables of patterns of substance use would all predict higher levels of HIV drug risk.

Alienation was hypothesized to serve as a mediating latent variable between acculturation stress on one hand, and HIV drug risk on the other. The errors of two variables on severity of drug abuse were allowed to co-vary as it was believed that individuals with a longer history of injecting drugs were more likely to use several substances.
Data Screening and Preparation

For the SEM analysis to be accurate, data preparation and screening procedures involving univariate normality (the distribution of scores, outliers, skewness, and kurtosis), multivariate non-normality and multicollinearity, and reliability of the scales were met. To retain all of the cases in the analysis, a linear trend at point technique was used to replace missing values. The variables with outliers were corrected in the data cleaning step of the analysis.

Multivariate normality was not evaluated in full because outliers and univariate non-normality did not present a problem, so it is likely that multivariate non-normality did not present a problem either (Kline, 2005). A correlation matrix of the variables included in the current model was examined to identify pairwise multicollinearity; none of the correlations were high enough to suggest a problem. All observed variables corresponded to a reliable and valid measurement.

Variables in the Model

Social alienation was mapped as an endogenous latent construct and was represented by a modified version of the alienation scale (Roberts, 1987). The social alienation construct consisted of two factors identified in the process of EFA, those of self-alienation (five items) and cultural-estrangement (four items). For the purposes of SEM, the self-alienation construct, consisting of five indicators, was transformed through the parceling procedure. The parceling technique was used to reduce a number of parameters needed to define a construct of self-alienation. This was done in order to have three items per latent variable, which would lead to a just-identified latent construct. A
just-identified latent construct has only one unique solution that optimally captures the relations among the items. An internal-consistency approach (Kishton & Widaman, 1994) was employed to create a parcel that uses one facet as the grouping criteria. Because the self-alienation construct consisted of three facets of powerlessness (one item), meaningfulness (one item), and self-estrangement (three items), an average score of three items on self-estrangement was used to create one item. This approach resulted in a higher stratum latent construct, self-alienation, with a lower stratum of internally consistent facets serving as the manifest indicators. The final multi-faceted latent construct of self-alienation included three items measuring self-estrangement, powerlessness, and meaningless. Because it was not possible to combine four items on cultural estrangement, the latter was left in its original form. Overall, a total disaggregation approach to the social alienation construct was employed, whereby each item was used as a separate indicator of the relevant construct.

Polydrug use and duration of injecting were used as observed variables, rather than indicators of a severity of drug abuse construct, because latent variables with only two indicators may produce less accurate estimates (Kline, 2005), and may relate differently to the other variables.

Acculturation stress was measured by the SAFE acculturation stress scale and HIV drug risk by the RAB HIV drug risk scale. Both scales were found to be reliable and valid measures of acculturation stress and HIV drug risk in previous research. Each of the scales shared sufficient common variance and revealed good internal consistency reliability in the current sample. Applying a total aggregation approach, a single
composite variable, made up of the sum of all items measuring the constructs, was used for each instrument (Bagozzi & Heatherton, 1994). Such an approach constitutes an aggregation of both dimensions and items. The total aggregation approach was chosen because of its simplicity, the ability to smooth random error, and to capture the essence of the underlying meaning of a concept (Bagozzi & Heatherton, 1994; Baumgartner & Homburg, 1996). Furthermore, the assessment of the unique properties of the scales’ sub-dimensions was not a purpose of this study. SAFE acculturation stress was included in the model as an observed exogenous variable, while the RAB HIV drug risk was included as an observed endogenous variable.

Overall, the observed exogenous variables in the model were acculturation stress, polydrug use, and duration of injecting. The observed endogenous variable was HIV drug risk. The latent constructs included were social alienation, self-alienation, and cultural estrangement.

A coefficient of 1.0 was assigned to the direct effects of the disturbances on their corresponding endogenous variables. The scale of each construct had one fixed nonzero loading (1.0) and a fixed causal path (1.0) leading into or out of the latent variable. With these constraints, the model was identified.

The measurement model, consisting of self-alienation (three items) and cultural-estrangement (four items) was identified with 28 distinct sample moments and 15 distinct parameters to be estimated, resulting in 13 degrees of freedom. For the measurement model, $\chi^2 = 20.1 (13), p = .09$, root mean square error of approximation (RMSEA = .06 (90% confidence range = .000 - .111) indicating a good model fit. The comparative fit
indices also yielded a good fit with comparative fit index (CFI) = .973, normal fit index (NFI) = .930, Tucker-Lewis coefficient (TLI) = .957, minimum sample discrepancy/degrees of freedom (CMIN/DF) = 1.55. Critical N (CN) as Hoelter’s .05 and .01 indices were 162 and 200, respectively, indicating that the measurement model moderately represents the sample data. The full hypothesized model is presented in Figure 4.2.

**Evaluation of Model Fit**

The hypothesized full structural model was recursive. The sample size of \( N = 146 \) for the model with 11 observed variables was larger than the minimum threshold for sample size required for SEM analysis (Garson, 2009c; Mitchell, 1993). Identification of the model was achieved with 66 distinct sample moments and 30 distinct parameters to be estimated. For the theoretical model, \( \chi^2 = 40.3 \) (36), \( p = .29 \), RMSEA = .029 (90% confidence range = .000 - .068) indicating a good model fit. Comparative fit indices also yielded a good fit: CFI = .987, NFI = .895, TLI = .980, CMIN/DF = 1.12. The CN Hoelter’s .05 and .01 indices were 184 and 211 respectively, indicating that the model represented the sample data well enough.

Consistent with this study’s hypotheses, alienation showed a significant positive effect on HIV drug risk. The regression weight for alienation (\( r = 3.72 \)) in the prediction of HIV drug risk is significantly different from zero at the .001 level (two-tailed). As hypothesized, acculturation stress had a small but highly a significant positive impact on alienation (\( r = .03, p < .001 \)). As expected, polydrug use and duration of injecting had significant positive effect on HIV drug risk (\( r = .66, p < .05 \)) and (\( r = .20, p < .05 \)),

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respectively. The covariance between the errors of polydrug use and duration of injecting was significant and in the expected direction. The standardized parameter estimates for the hypothesized model are presented in Figure 4.3.

Figure 4.2. Hypothesized Full Structural Model

Despite, a good model fit, several hypothesized relationships between the variables in the model were not significant. Acculturation stress was not significantly related to HIV drug risk, and did not predict the more severe patterns of drug abuse. Polydrug use and duration of injection drug use did not significantly increase the level of alienation.
Figure 4.3. *Standardized Parameter Estimates of the Hypothesized Model*

![Graph showing correlation matrix and model specification.]

**Note:**
- \( * \) \( p < .05 \)
- \( ** \) \( p < .001 \)
- This regression weight was fixed at 1.0 and was not estimated.

**Model Re-specification**

Although the hypothesized model produced adequate fit statistics, some of the hypothesized path coefficients were not significant, and a series of modifications was made. As recommended by Schumacker and Lomax (2004) all modifications made were theoretically meaningful and based on previous empirical literature. Because prior research on HIV drug risk, acculturation stress, and alienation is scarce and no previous models have been developed, data from the present study (variable correlation matrix)
were also used to guide modifications to the model. To identity misspecifications in the hypothesized model, path coefficients, factor loadings, covariances, and variances of the disturbances were examined. Furthermore, modification indexes in AMOS output were used to alter the model to achieve better fit. In the process of model modification several variable paths in the hypothesized model that were not significant were deleted. With each modification, model fit was estimated to determine if the modification improved the model.

*Final Model*

The final model predicted an endogenous variable measuring HIV drug risk from a set of three exogenous variables (acculturation stress, duration of injecting, and polydrug use) and one endogenous variable (latent construct of alienation). Acculturation stress was anticipated to cause higher levels of alienation. Similarly to the hypothesized model, alienation served as a mediating latent variable between acculturation stress on one hand, and HIV drug risk on the other. A higher level of alienation and two variables of patterns of drug abuse all predicted higher levels of HIV drug risk. Two variables on severity of drug abuse were allowed to co-vary as it was believed that individuals with a longer history of injecting drugs were more likely to use several substances.

The final model for acculturation stress, alienation, and HIV risk is presented in Figure 4.4. The final full structural model was recursive. There were 66 observations, 25 free parameters, and 41 degrees of freedom. There were 11 observed variables and three latent constructs. The sample size of $N = 146$ was sufficient for the model with 11 observed variables (Garson, 2009c; Mitchell, 1993). Goodness-of-fit statistics and
comparative fit indexes indicated a good fit for the modified model and were $\chi^2 = 46.5$ (41), $p = .26$; RMSEA = .031 (90% confidence range= .000 - .067); CFI = .983; NFI = .878; TLI = .977. The CN Hoelter’s .05 and .01 indices, however, were 178 and 203 respectively. Although the sample size ($N=146$) meets a minimum for the SEM analysis, it is still considered small. Despite this fact, it afforded several good model fit indices and a non-significant Chi square, so the CN = 203 (.01 level) recommended sample size cutoff for testing the model was satisfied. Furthermore, RMSEA and CFI indices, which are least affected by sample size than others (Fan, Thompson, & Wang, 1999) showed a very good fit.

Figure 4.4. Final Full Structural Model with Standardized Parameter Estimates

Notes: * $p < .05$
** $p < .001$
1 This regression weight was fixed at 1.0 and was not estimated.
Consistent with this study’s hypotheses, duration of injecting drug use and polydrug use predicted higher HIV drug risk, \((r = .25, p < .05)\) and \((r = .57, p < .05)\). Acculturation stress had a significant positive impact on social alienation \((r = .03, p < .001)\). The impact was small, but highly significant. Social alienation was a significant predictor of the level of HIV drug risk. When the level of alienation goes up by 1 unit, HIV drug risk goes up by 3.16 units \((p < .001)\). The covariance between polydrug use and duration of injecting was significant at \(p < .05\) \((COV_{\text{polydrug use, duration of injecting}} = 1.1)\), meaning that individuals with a longer history of drug injection tend to be multiple drug users.

Factor loadings on the self-alienation and cultural estrangement latent variables demonstrated moderate to large effects. The path coefficients were of small to moderate magnitude. As listed in Table 4.6, all parameter estimates were significant. Overall, it is estimated that the predictors of HIV drug risk as measured by RAB HIV drug risk scale explain 25% of the variance. The determinant with the largest direct causal effect on HIV drug risk was alienation \((3.16)\) followed by polydrug use \((.57)\) and duration of injecting \((.25)\). The discussion and implications of the findings, as well as limitations of the study are presented in the next chapter.
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*Note: *p < .05, **p < .001
CHAPTER VI

DISCUSSION

The purpose of this study was twofold. First, the study aimed to determine an optimal group classification which adequately represented acculturation to Estonian culture among the Russian-speaking IDUs in Estonia, and to validate these findings by comparing the defined groups on selected demographic characteristics, acculturation stress, level of alienation, and HIV drug risk. To accomplish this, cluster analysis was used to explore the unique acculturation patterns existing in the sample of Russian-speaking IDUs in Estonia and classify individuals into mutually exclusive acculturation type groups of a Russian orientation group and a bicultural orientation group. Bivariate statistics were used to examine the magnitude, directionality, and significance of the relationships between acculturation stress, alienation, and HIV drug risk.

Second, this research sought to determine the quality and nature of the relationship between acculturation stress, alienation, and their predictive strength on the level of HIV drug risk among Russian-speaking drug users in Estonia. SEM was utilized to explore direct and indirect effects of acculturation stress, alienation, and severity of drug abuse on the dependent variable of HIV drug risk. The originally hypothesized model showed a good fit, but failed to confirm several hypothesized associations. However, after modifications, a robust final model based on theoretical considerations and previous research findings was obtained. The final model gave additional insight into socio-cultural contextual factors such as acculturation stress and alienation and their impact on HIV drug risk among IDUs. This chapter discusses the results and limitations
of this study. Also, implications for practitioners are highlighted and suggestions for future research are presented.

Discussion of the Study Findings

**Acculturation Group Classification**

The first hypothesis stated that in the sample of Russian-speaking IDUs in Estonia the orientation towards Russian culture would be strong, and therefore, Berry’s (1990, 2003) four-type acculturation typology would not be applicable. That is, an optimal group classification, which adequately represents acculturation of the Russian-speaking drug users in Estonia, would be achieved by the two acculturation typologies of Russian orientation group and bicultural orientation group.

Results from the analyses supported the proposed hypotheses. Indeed, two mutually exclusive acculturation type groups existed in the sample of the Russian-speaking IDUs in Estonia. This classification was based on the seven acculturation variables of Estonian language, Estonian, Russian, and Estonian-Russian identity, and Estonian participation that significantly contributed to differentiation of the clusters. The scores of the Russian language and Russian behavior scales were distributed toward the high end of the respective scale, suggesting a high level of familiarity and adherence to the original culture. The average scores on Russian language skills and Russian participation did not contribute to differentiation of the clusters. Among Berry’s four typologies of acculturation, ‘assimilation’ and ‘marginalization’ types that require non-adherence to the original culture, did not exist in this particular sample, and only two
groups of Russian orientation (‘separation’) and bicultural orientation (‘integration’) were found. Similar findings have been reported for other groups of immigrant minorities (Jang, Kim, Chiriboga, & King-Kallimanis, 2007). These findings suggest that the relevance of the four-typology form of acculturation depends on the nature of the sample.

The study findings showed that individuals in the bicultural orientation group were more acculturated to Estonian culture on all three dimensions of language, identity, and behavioral participation. They were also in the process of forming a new identity, which may be termed Estonian-Russian. Identity confusion and new identity formation might cause immigrant minority groups to become alienated from the values of both cultures, rejecting the native culture’s values because they no longer seem useful or relevant, and rejecting the host culture’s values because they seem discriminating, foreign, or unacceptable.

In this sample, the dissonance between individuals’ own beliefs or values and those maintained by the mainstream culture that surrounds them is evidenced by the higher levels of cultural-estrangement in the bicultural orientation group. This finding is different from the results by Suarez et al. (1997) where an inverse relationship between biculturalism and the degree of loneliness and alienation was reported.

Attempts to navigate two cultures simultaneously could be a stressful experience. The study showed that the bicultural group experienced a higher level of acculturation stress. Indeed, acculturation models predict that living in an environment with more than one culture might be stressful due to negotiating more than one set of identities, values, and norms (LaFromboise, Coleman, & Gerton, 1993). That is, individuals may feel
acculturative stress in response to a perceived imperative to adopt the majority culture while maintaining their culture of origin. Bicultural stress may arise as a result of stressors such as negative stereotyping, discrimination, and pressures to speak another language (Romero, Carvajal, Valle, & Orduña, 2007). Numerous studies reported associations between integration attitudes (bicultural orientation) and stress, depression, and anxiety (Berry, 1997; Berry & Sam, 1997; Krishnan & Berry, 1992; Rudmin, 2006; Sam, 1994, 2000; Sam & Berry, 1995; Sanchez & Fernandez, 1993; Shen & Takeuchi, 2001).

Being able to better navigate Estonian society, bicultural individuals have higher financial security in terms of official employment and higher legal income, and have health insurance. The literature supports a strong link between bicultural orientation and socio-economic status (SES). In an early meta-analysis of acculturation and adjustment, in a large, national probability sample, Berry and colleagues (1977) found statistically significant positive correlations among integration attitudes, income, and occupational status. Other researchers have replicated the positive correlation between SES and preference for integration or bicultural orientation. For example, Negy and Woods (1992) documented that cultural learning and SES are positive correlates. Lee et al. (2003) found their bicultural group to have higher incomes than the uni-cultural groups. Higher socioeconomic status samples evidenced the greatest increases in adjustment with acculturation in a meta-analysis (Moyerman & Forman, 1992). Thus, the link between SES and bicultural orientation may also suggest that people of low SES may lack the resources to be bicultural.
Contrary to the hypothesis of the study, level of education did not show the predicted significant differences with regard to acculturation orientation. After the collapse of the Soviet Union, education among the Russian-speaking population in Estonia had not been a resource leading to a stable position and good salary. Some educated Russians, who have not been able to convert their Soviet era cultural or material assets to meet the requirements of the market of the post-Soviet transition, have fallen into great social and material difficulties. Furthermore, poor Estonian language skills and an arduous process to re-establish Estonian citizenship hindered Russians from employment in certain employment sectors. Thus, in the Estonian context, education among Russian-speaking adults may have a different value, meaning, and position in causal attributions of success as well as in the ability to effectively navigate Estonian society, at least for this generation of the Russian-speaking minority. Other researchers have documented statistically significant positive correlations of integration attitudes (bicultural orientation) with education (e.g., Berry et al., 1977).

*Acculturation Stress, Alienation, and HIV Drug Risk*

The second and third hypotheses of the study examined the relationships between acculturation stress, alienation, and HIV drug risk. For hypothesis 2, a correlation matrix was generated to determine the strength, directionality and significance of the relationships between levels of acculturation stress, alienation, and HIV drug risk. The goal of hypothesis 3 was to develop a tenable model of the complex interrelationships among acculturation stress, variables on the severity of drug abuse, alienation, and HIV drug risk. Structural equation modeling was used due to its unique ability to
simultaneously estimate the relationship between manifest variables and latent variables, estimate direct and indirect effects on these relationships, and provide a visual representation of the interactions in the model. The final model demonstrated a good fit. The substantial factor loadings supported this measurement model. All parameter estimates were significant and most yielded small or medium effects, further lending evidence in support of the validity of the modeled relationships in explaining the observed data.

In this study, a significant positive correlation was found between acculturation stress and alienation, and higher acculturation stress predicted higher alienation in the SEM model. Stress behaviors that occur during the acculturation process may evolve into alienation, as individuals feel left out of the normal functioning of the host society. Rapid social change, such as that which occurred after Estonia acquired its independence, when the values, goals, norms, and identities are being redefined, is likely to have evoked feelings of alienation, especially among those segments of the population who lost their usual means of subsistence without finding new possibilities to earn their living and to create meaningful ways to exist. The positive impact of acculturation stress on alienation is consistent with earlier propositions that acculturative stressors may result in depression, identity confusion, anxiety, feelings of alienation and marginality, and heightened psychosomatic symptoms (Sam et al., 2006; Williams & Berry, 1991). Furthermore, alienation can also be seen as a form of giving up, and as such, an adaptation mechanism in a situation where few active stress-coping mechanisms are available (Manderscheid (1978) in Palosuo, 2000).
Obviously causality could be in both directions in these connections, if alienation is understood in its social psychological meaning rather than as a structural factor. Furthermore, alienation can be conceptualized as social helplessness, and depression could be viewed as individual helplessness. In this sense, symptoms of personal depression and low self-esteem may be a manifestation of alienation. Indeed, it is hard to separate a depressive affect from alienation. As Karp (1996) has suggested, alienation of this extreme kind may be a result of a biosocial-psychological feedback loop where depression leads to alienation from others, which leads to more intense depression, intensifying alienation, and so on, amplifying the original depression. Depression and low self-esteem among diverse groups of immigrants are known to increase due to acculturation stress (Hovey & King, 1996; Livingston, Neita, Riviere, & Livingston, 2007; Mena et al., 1987; Organista et al., 2003; Padilla, Alvarez, & Lindholm, 1986; Padilla et al., 1985; Park, 2009; Shen & Takeuchi, 2001).

Polydrug use was found to be a significant covariate of duration of injecting, meaning that a tendency toward multidrug use increases with the duration of injecting drugs. Duration of injecting drug use along with polydrug use was a significant predictor of HIV drug risk. There is no single conclusion in the research literature with regard to longer duration of injection and its relationship to seropositivity for blood born infections. For example, some researchers have observed a positive relationship between longer duration of injection and HIV and Hepatitis C seropositivity (Garfein et al., 1998; Kuo et al., 2006; Robles et al., 1994), while others did not find this association (Carneiro, Fuller, Doherty, & Vlahov, 1999; Hagan et al., 2007). Polydrug use has also been linked
to an increased risk of exposure to blood borne pathogens, such as HIV and Hepatitis (Darke, Swift, Hall, & Ross, 1993; Peters, Davies, & Richardson, 1998).

In this study, both the level of acculturation stress and social alienation were significantly positively related to HIV drug risk. Alienation in the SEM was a significant predictor of HIV drug risk, while acculturation stress showed an indirect effect on HIV drug risk fully mediated by alienation. When acculturation stress increases by one standard deviation, HIV drug risk score as measured by RAB scale goes up by 0.23 standard deviations.

The research literature generally supports the present findings with regard to health, healthy lifestyles, and behaviors. Bobak et al. (1998) found that low perceived control over life and health, concepts related to alienation, under conditions in which there is a disruption of social institutions, contribute to poor health among Russians (Bobak, Pikhart, Hertzman, Rose, & Marmot, 1998). Palosuo (2000) found that feelings of alienation among the Russian population had statistically significant correlations with most health variables and those who did not feel alienated tended to behave in a more healthy way. An alienated person is not strongly attached to the goals of society and may not be particularly motivated to follow generally accepted norms and may not be interested in keeping fit or healthy (Palosuo, 2000). In this sense, alienation could be understood as an expression of the frustration which arises from the lack of possibilities to make healthy choices.

Moreover, it was shown that a sense of powerlessness, one of the central concepts of alienation, increases depression and anxiety (Benassi, Sweeney, & Dufour, 1988;
Mirowsky & Ross, 2003), which, in turn, serve as barriers to health maintenance motivation (Klassen, Smith, Shariff-Marco, & Juon, 2008). Acculturative stressors were found to increase depression, anxiety, feelings of alienation and marginality, and heightened psychosomatic symptoms (Sam, et al., 2006). Depression, anxiety, and antisocial personality disorders among drug users are significantly associated with HIV risk behaviors (Brooner, et al., 1993; Compton, et al., 1995; Johnson, et al., 2003; Kelley & Petry, 2000; Reyes, et al., 2007; Woody, et al., 1997). A weak correlation found between acculturation stress and HIV drug risk in this study suggests that most likely the impact of acculturation stress on HIV drug risk is indirect and mediated by the level of alienation or other proximal factors such as level of depression and anxiety, which were not explored in the study.

Overall, the final model suggests that acculturation stress exerts a significant effect on HIV drug risk through the increased level of social alienation, while polydrug use and duration of drug injection impact HIV risk directly. The final model explained 25% of variance in HIV drug risk.

Practical Implications

An objective of this study was to inform policymakers, researchers, and the general public of the need to explore the relationships between acculturation, acculturation stress, and alienation as they affect HIV risk behaviors among ethnic minority IDUs. Consistent with acculturation stress theory, acculturation stress exerted a significant effect on the level of alienation. The level of alienation and severity of drug abuse were significant predictors of HIV drug risk. The findings of this study further
stress the need to study the process of acculturation not only from an intra-individual perspective, but also from the broader socio-ecological context of population subgroups. Integration of knowledge and multidisciplinary perspectives in studying HIV risk offers a far richer multidimensional portrait of the problem focusing on the interrelatedness of risk parameters in real-life contexts.

Social alienation is crucial to understand for what it reveals about HIV vulnerability. From the viewpoint of health policy, being alienated can be seen as a characteristic of a risk group, indicating passivity and indifference to lead a healthy life (Palosuo, 2000). Studying the phenomenon of social alienation in a society and among specific groups can help uncover the causes of and reduce health related risk behaviors and drug abuse. Although the causes of drug abuse and vulnerability to HIV infection are certainly complex, heightened social alienation could be among the contributing factors. Previous empirical research seemed insufficient to capture the dynamics and mediating effects of alienation that underlie acculturation and its mental health consequences, such as acculturation stress. Acculturation typology and acculturation stress alone do not fully explain HIV drug risk patterns among ethnic minorities because they do not capture the important psychological dimensions of alienation.

The study findings outline the role of socio-cultural pressures in the development of social alienation. As a form of human adaptation, social alienation manifests itself as result of stressful acculturating experiences in social situations and environments where individuals have to make adjustments in their social behavior to fit both cultures. Stressful acculturating experiences are known to lower self-esteem and increase
depression and anxiety, which are in turn significantly associated with HIV risk behaviors among drug users. It is also hard to separate depression from alienation, both of which represent a biosocial-psychological feedback loop (Karp, 1996). An alienated person may not be strongly attached to the goals of society and may not be particularly motivated to follow generally accepted norms and may not be interested in keeping fit or healthy (Palosuo, 2000).

Given these considerations, social alienation could be an additional important element that impacts the design of health programs for minorities (National Advisory Commission on Civil Disorders, 1968). Many minority communities feel considerable mistrust of the government, its institutions, agents, and the messages conveyed. The impact of social alienation then, is that any government-sponsored or even majority-controlled program must first overcome a substantial credibility gap before it can begin to operate within the minority population. To reach minority populations effectively with HIV risk prevention information would require messages and programs that are tailored to reach this specific audience. Socioeconomic and cultural variations among the minority populations would define the choice of health messages and messengers. In addition, to be effective, health programs targeting minority groups should include empowerment as a necessary component to overcome a sense of social alienation among these population groups (Nickens, 1990).

Health program development needs to utilize a cultural conflict approach. The cultural conflict approach underscores conflict as the genesis of behaviors (Issel, 2004). Ethnic discrimination, oppression, and lack of political power may lead to social
alienation and identity conflict, and subsequently to unhealthy behaviors and illnesses. From a psychological perspective, individuals who are experiencing these kinds of conflicts are more likely to undergo some form of crisis and, may have less desire, energy and motivation to engage in health promoting behaviors, and be less receptive or powerless in making changes. Health program planners need to address the immediate causes of the cultural conflict in order to develop effective interventions for ethnic and immigrant minority groups. The assessment of the target population in health program development and implementation should assess the degree of cultural conflict.

Biculturalism may be one of the strengths of minority cultures that merit further attention and study. The findings from the current research suggest bicultural individuals may be the most susceptible to psychological distress. The current study augments an understanding of biculturalism and its benefits and highlights the importance of coordinating various types of services for the Russian-speaking IDU population during the acculturation process to prevent their further marginalization and vulnerability to HIV infection. These services could include Estonian-language and vocational training, cultural-adaptation training, and stress-coping strategies. Providing healthy alternatives to reaching desired levels of social and cultural belonging rather than drug abuse as coping strategy may be important additions to prevention efforts. Partnerships with civic, social, cultural, ethnic, and religious organizations should be utilized, given the findings in this study.

Understanding and clarifying the roles that acculturation, cultural adaptation, new identity formation, acculturation stress, and alienation play in susceptibility to HIV
infection are essential for HIV program development. Empirical data on the Russian-speaking IDUs’ vulnerability to HIV are vital for formulating public policy and developing culturally sensitive prevention and intervention programs. Trained researchers from the Russian-speaking community need to be involved in project development and implementation.

It is clear that a single model would not sufficiently address the complex issues related to acculturation experiences, alienation, and HIV risk for diverse ethnic subgroups and across risk categories in an ever-changing multidimensional context. However, this generic model can be adapted to depict the unique characteristics of specific population subgroups accurately. Future research would be necessary to further investigate the impact of socio-cultural pressures and the level of alienation on health related lifestyles and behaviors among ethnic minority groups.

Strengths and Limitations

The proposed study contributes significantly to the research knowledge base on acculturation, acculturation stress, alienation, and HIV drug risk among the Russian-speaking population living in Estonia. It offered a valuable opportunity to rigorously test acculturation stress hypotheses offered by previous researchers and to use more complex statistical methods such as SEM to account for the interactions among multiple variables in the prediction of HIV drug risk. It also provided the prospects of two acculturation subgroup comparisons in terms of socio-demographics, acculturation stress, alienation, and the level of HIV drug risk. Several limitations and challenges found during this study, however, deserve further attention.
One of the limitations of the study is that the sample was not randomly selected from a population. Therefore, it is not clear to what extent the current sample is representative of Russian-speaking IDUs in Estonia, and readers should be cautioned from blindly generalizing the results of the study. However, because a random sample of IDUs was not feasible, to obtain larger and more diverse samples, a snowball sampling procedure, where existing study subjects are used to recruit more subjects into the sample, was employed.

Operationalization of acculturation and cultural identity has been a challenging task. First, there is no such word as “acculturation” in the Russian language, at least in its ordinary understanding. Second, additional clarification was required for Russian, Estonian, and Estonian-Russian cultural identity to clearly differentiate among them. It is possible that the three scales on cultural identity could have biased respondents’ answers such that they based their ratings on internal comparisons of the differences between their Estonian, Estonian-Russian, and Russian identities rather than a separate assessment of each identity. Furthermore, Estonian and Russian cultural identities could be misinterpreted by the participants and regarded as a pure ethnic, rather than cultural identification. At the same time, Estonian-Russian identity could be understood as a bi-cultural identity integrating Russian ethnicity and Estonian nationality, which explains its significant positive relation to Estonian identity in the data analysis.

Social desirability may have been impacted by the self-report nature of the study. However, it is possible that the confidential and private atmosphere of the office space established at the recruitment site “AIDS-i Tugikeskus” reduced bias in reporting
sensitive and stigmatized behavior such as illicit drug use and risky behaviors. This private atmosphere for survey completion was also important for IDUs who may be suspicious of research and fear that their answers will be identified and possibly used against them. Thus, the confidential and relatively anonymous nature of the private area for surveys could decrease the impact of social desirability on responses, although no measure of this tendency was included.

The possible influence of drug use and low literacy skills during survey self-administration may raise questions about the validity of the responses. All reasonable efforts were made to carefully observe for possible signs of cognitive impairment during the screening interview, including heightened agitation, distraction, sluggishness, having a hard time standing or sitting straight, being extremely unbalanced and uncoordinated, or other signs of intoxication. If individuals manifested signs of cognitive impairment and it appeared that the current cognitive impairment was transitory in nature, the participant was asked to reschedule another time to participate in the study. The participant’s literacy skills to self-administer the survey were tested with GAIN’s Literacy Scale (Dennis, 1999). If the participant required help in verbal administration of the questionnaire as determined by the GAIN’s Literacy Scale or individual preference, the researcher orally administered the questionnaire. There was not a significant difference in the research measures in the responses between those who self-administered the survey and those who required assistance.

Another limitation of the study is that the survey data may include duplicate responses from the same person. Because identifying information was not collected and
the study offered a monetary incentive for participation, it was possible that some individuals could participate in the survey multiple times. Several efforts were made to reduce the likelihood of duplicate entries. First, a reminder during the screening interview explicitly warned those who had already participated not to do it again. Second, because the screening interviews and surveying were conducted by the same researcher, it was possible for the researcher to visually remember the majority of those who had already participated in the survey. Third, to detect duplicate responses, a duplicate cases analysis based on several socio-demographic variables was employed. However, it is still possible that individuals could change socio-demographic determinants intentionally. Overall, given all the precautionous measures, the number of duplicated completed questionnaires in the final data set is more likely to be insignificant and should not impact the essence of the findings.

Another limitation of the study is that causal directions cannot be identified definitively. Thus, it is theoretically plausible that acculturation stress may lead to cultural estrangement or feelings of alienation from the norms and values of the mainstream culture and societal values may lead to negative acculturative experiences and elevated levels of acculturation stress, or that all of these factors may be related reciprocally. It is quite possible that reversing the directionality of the paths may produce similar parameter estimates and model fit (Hoyle & Panter, 1995). Moreover, a cross-sectional design of the study warns against the irrevocable causality of the model.

One of the general criticisms of ethnic minority research is that the measures used are not valid or culturally sensitive. The measures used in the present study underwent
assessments of validity and cultural sensitivity for the Russian-speaking population in earlier research, and underwent pilot testing with the first five participants in the current study. The participants were asked to provide oral feedback on the items in the questionnaire in terms of concept meaning, readability, and applicability to the local context. After subsequent discussion with NGO staff, several questions from the Language, Identity, and Behavior Scale ([LIB], Birman & Trickett, 2001) cultural participation subscales were identified as not applicable to the context of Estonia and were eliminated from each Estonian and Russian subscale. Thus, the final questionnaire included measures that are valid, culturally sensitive, and applicable to the local context.

Recommendations for Future Research

The present study offers a comprehensive assessment of acculturation, acculturation stress, alienation, and HIV drug risk among Russian-speaking IDUs in Estonia, covering issues related to bicultural orientation and its socio-demographic correlates. The study also advances knowledge on acculturation stress, social alienation, and HIV drug risk by testing a theoretically- and empirically-based model. Although this study was conducted on a particular immigrant group, hopefully it will also shed light on the common experiences shared by all the immigrants and minority groups who are struggling to achieve integration of their identities with the mainstream society. Thus, this study lays the foundation for future research on socio-cultural factors related to HIV risk among ethnic minority groups.

While this study is more comprehensive than previous studies in its attempt to examine acculturation, acculturation stress, alienation, and HIV drug risk together, it is...
by no means entirely comprehensive in terms of simultaneously investigating the interrelationships among all constructs known to significantly contribute to HIV drug risk among ethnic minority groups (e.g., social support, family support, the level of depression, self-esteem, anxiety). Although the differences between the Russian orientation group and the bicultural orientation group were striking in this study, it will be important to conduct further research to explain these effects. For example, it would be valuable to determine if these differences are still evident when socio-economic status and other potentially confounding variables are controlled. However, as individual studies work towards uncovering important constructs for better understanding HIV risk among ethnic minority populations, the ultimate goal is to develop and test increasingly comprehensive models. A larger sample size would be required for future research to accommodate more variables in the model.

Because the current study was not longitudinal in nature, prospective research should use a longitudinal design to untangle the intriguing relationship among the variables, and to truly examine the changes in alienation and acculturation stress that occur as individuals progress through the acculturation experience. Gathering data at different time points and among different generations of immigrant and ethnic minority groups will better speak to the role of acculturation stress and alienation in affecting vulnerability to HIV risk.

Longitudinal work extending to further generations of ethnic minorities would also be able to examine how generational status affects changes in the level of social alienation and HIV risk over time. Thus, more research is needed to determine if persons
from the second generation of the current Russian-speaking immigrants (who would be citizens of Estonia by birth) experience qualitatively different levels of alienation and health risks. Perhaps a “window of opportunity” for this generation of Soviet era migrants could be proposed as ideal in terms of the prevention of drug abuse, HIV, marginality, and other social ills.

Overall, the findings in this study supported some hypotheses proposed by previous researchers and did not support others. For future studies it is important to examine the hypothesized associations that were not supported to determine if the hypotheses should be modified or rejected. For example, the association between acculturation stress, alienation, and HIV risk can be explored further with a sample that draws upon wider variability in acculturation levels. Similar analyses can further explore the relationships among acculturation stress, alienation, and HIV sexual risk behaviors. Acculturation stress did not serve as a predictor for HIV drug risk in the present study. Further work is needed to assess the validity of the SAFE measure for ethnic minorities living in Eastern Europe, where the revolutionary social, economic, and cultural changes after the collapse of the Soviet Union may have created unique patterns of acculturation experiences compared to the Western countries.

In addition, the psychological mechanism of acculturation needs to be addressed in a more systematic manner and in greater detail. As demonstrated in the findings, bicultural individuals tend to experience higher acculturation stress, meaning that these individuals tend to experience higher dissonance and more conflicts between their cultural identity (mainstream Estonian or new Estonian-Russian) and their ethnic identity.
(Russian). This was supported by the fact that bicultural individuals were also those who experienced higher levels of cultural estrangement from their relatives, friends, and people of the same religious background, and from the majority of the people in the country. To resolve identity conflict and battle against cultural stereotypes, bicultural individuals may have to exert more effort to deal with these matters and, thus, experience more stress. Future research is needed to examine empirically these possible psychological mechanisms in the acculturation process.

Finally, other areas of research relating to Russian minority acculturation and health are suggested. For example, other psychological conditions such as depression, posttraumatic stress disorders, somatization, and prevalence of alcohol and drug abuse can be assessed in relation to the acculturation process and alienation. Research on youth and older samples can help generate a life-span perspective on the acculturation, alienation and health patterns among the Russian-speaking minority.
Clemson University Institutional Review Board Approval Letter

June 23, 2009

Dr. Rubin Klinkbrug-Melvan
Institute on Family and Neighborhood Life
229 S. Pleasantburg Drive
McAlister Square, Suite B11
Greenville, SC 29607


Dear Dr. Klinkbrug-Melvan,

The Institutional Review Board (IRB) of Clemson University reviewed the above-mentioned study using expedited review procedures and has recommended approval. Approval for this study has been granted as of June 17, 2009.

Your approval period is June 17, 2009 to June 16, 2010. Your continuing review is scheduled for April 2010. Please refer to the IRB number and title in communication regarding this study. Attached are handouts regarding the Principal and Co-Investigators' responsibilities in the conduct of human research. The Co-Investigator responsibilities handout should be distributed to all members of the research team. The Principal Investigator is also responsible for obtaining all signed consent forms (if applicable) for at least three (3) years after completion of the study.

No change in this approved research protocol can be initiated without the IRB's approval. This includes any proposed revisions or amendments to the protocol or consent form. Any unanticipated problems involving risk to subjects, any complications, and/or any adverse events must be reported in the Office of Research Compliance immediately. Please contact the office if your study has terminated or been completed before the identified review date.

The Clemson University IRB is committed to facilitating ethical research and protecting the rights of human subjects. Please contact the Office of Research Compliance at 656-6460 if you have any questions.

Sincerely,

Laura A. Moll, M.A., CIP
IRB Administrator

Enclosures
Appendix B

Clemson University Institutional Review Board Amendment Approval Letter

July 13, 2009

Dr. Robin Kinbrugh-Melton
Institute on Family & Neighborhood Life
225 S. Pleasantburg Drive, McAllister Square
Suite B 11
Greenville, SC 29607


Dear Dr. Kinbrugh-Melton,

Your amendment submitted to the IRB (Institutional Review Board) on July 7, 2009, has been approved by expedited review procedures on July 10, 2009. Your approval remains through June 16, 2010, the expiration of your approval period.

No change in this approved research protocol can be initiated without the IRB's approval. This includes any proposed revisions or amendments to the protocol or consent form. Any unanticipated problems involving risk to subjects, any complications, and/or any adverse events must be reported to the Office of Research Compliance immediately. Please contact the office if your study has terminated or been completed before the identified review dates.

The Clemson University IRB is committed to facilitating ethical research and protecting the rights of human subjects. Please contact the Office of Research Compliance at 656-6460 if you have any questions.

Sincerely,

Laura A. Moll, M.A., CIP
IRB Administrator
Appendix C

Information sheet

Information Concerning Participation in a Research Study
Clemson University

Acculturation, Alienation, and HIV risk among the Russian-Speaking Drug Users in Estonia

You are invited to participate in the research study conducted by Dr. Robin Kimbrough-Melton, a research professor at the Institute on Family and Neighborhood Life, Clemson University; and Anna Skosireva, a graduate student at Clemson University.

PURPOSE: The purpose of this research is to better understand the problem of drug use among Russian speaking people living in Estonia. The results of this study will help health care providers and program planners improve services to meet the individual needs of Russian-speaking drug users living in Estonia.

PROCEDURES: If you agree to be in the study, you will fill out a survey with questions on drug use, risky behaviors, acculturation to Estonian society, feelings of alienation, and some information on your background. The survey is anonymous. That is, your name will not be on the survey form, and there will not be any way for someone to know what answers you gave. We expect about 150 people to fill out the survey, which will take about 30 minutes to complete.

Risks and discomforts

There is a slight risk that some of the questions on the survey will make you feel sad or anxious. These feelings are not likely to be any greater than the way you might feel when talking to anyone about yourself and they will pass quickly. You do not have to answer any questions that you do not want to answer and you can stop filling out the survey any time you like. However, if you feel a need to talk to someone about how you feel, let us know and we will make arrangements for you to see a professional helper.

If you need information about a substance abuse treatment, referral, or psychological support contact AIDS-i TUGIKESKUS (AIDS Information & Support Centre), located at 5 Erika, Tallinn, Phone: +372 6603636.

Potential benefits

You are unlikely to get any direct benefit from taking part in the study, apart from the good feeling you get when you help someone and a small payment of 50 Estonian Kroons. However, the knowledge that we obtain from your participation will help us to understand the problem of drug abuse and HIV/AIDS spread in the Russian-speaking
population living in Estonia. If you are interested in the results of the study, let us know, and we will send you a copy.

**Protection of confidentiality**

We will do everything we can to protect your privacy. No identifying information (name, number on the residence permit card, passport, personal identification code, address, phone number, or medical record number) is placed on the questionnaire. Only a code number assigned to your questionnaire is used. No list of code numbers associated with a specific name will be kept. The information in the questionnaire cannot be identified as belonging to you. Your answers to the survey and screening interview questions will be stored in an electronic file protected by a password. The answers collected from all participants will be used only for research purposes. The screening forms and questionnaires of study participants will be kept for five years following completion of the research study and then will be destroyed.

In rare cases, a research study will be evaluated by an oversight agency, such as the Clemson University Institutional Review Board or the federal Office for Human Research Protections that would require that we share the information we collect from you. If this happens, the information would only be used to determine if we conducted this study properly and adequately protected your rights as a participant.

**Voluntary participation**

Your participation in this research study is voluntary. You may choose not to participate and you may withdraw your consent to participate at any time. However, we are very interested in your responses as we feel our study can make a valuable input to understanding the problem of drug abuse and contribute to general well-being of the Russian-speaking population in Estonia. You will not be penalized in any way should you decide not to participate or to withdraw from this study.

**Contact information**

If you have any questions or concerns about this study or if any problems arise, please contact Anna Skosireva at +372 641-3165 or e-mail her at askosir@clemson.edu. You may also contact Robin Kimbrough-Melton, at +1 864-250-4635 or e-mail her at rkimbro@clemson.edu. If you have any questions or concerns about your rights as a research participant, please contact the Clemson University Institutional Review Board toll-free at +1 (866) 297-3071 or e-mail to irb@clemson.edu.
Appendix D

Screening Form Questionnaire

1. Do you understand and speak Russian?
   - [ ] No  [STOP the interview]  [ ] Yes

2. How old are you?
   - [ ] < 18 years old  [STOP the interview]
   - [ ] > 65 years old  [STOP the interview]
   - [ ] ≥ 18 and ≤ 65 years old - _______ years old (specify)

3. What is your date of birth (year and month)?  |___|___|                          _______
                                               Year           Month

4. What best describes your ethnicity?
   - [ ] a) Estonian  [STOP the interview]
   - [ ] b) Russian
   - [ ] c) Ukrainian
   - [ ] d) Belorussian
   - [ ] e) Tatar
   - [ ] f) Moldavian
   - [ ] g) Armenian
   - [ ] h) Azerbaijani
   - [ ] i) Georgian
   - [ ] j) Latvian
   - [ ] k) Jewish
   - [ ] l) Lithuanian
   - [ ] m) Other (Describe) _________________________________

5. Were you born in Estonia?
   - [ ] Yes  [ ] No

6. Have you lived in Estonia before 1991?
   - [ ] No  [STOP the interview]
   - [ ] Yes, - How many years have lived in Estonia? _____ years (should be earlier than 1991)

7. In the past 30 days, have you used drugs?
   - [ ] No  [STOP the interview]  [ ] Yes
Appendix E

Cognitive Impairment Scale (CIS)


Because we are going to ask you a lot of questions about when and how often things have happened, I need to start by getting a sense of how well your memory is working right now.

<table>
<thead>
<tr>
<th>ERROR SCORES</th>
</tr>
</thead>
</table>
| a. What year is it now? ________________________  
(Circle 4 for any error) ......................................................... 0  4 |
| b. What month is it now? ________________________  
(Circle 3 for any error) ......................................................... 0  3 |
| Please repeat this phrase after me: Alexander Ivanov, 32 Kopli Street, Tallinn.  
(No score -- used for (f) below) |
| c. About what time is it? ________________________  
(Circle 3 for any error) ......................................................... 0  3 |
| d. Please count backwards from 20 to 1.  
[20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1]  
(Circle 2 for one error, 4 for 2 or more errors) ...................... 0  2  4 |
| e. Please say the days of the week in reverse order.  
[Sat, Fri, Thurs, Wed, Tues, Mon, Sun]  
(Circle 2 for one error, 4 for 2 or more errors) ...................... 0  2  4 |
| f. Please repeat the phrase I asked you to repeat before.  
[Alexander/Ivanov/32/Kopli Street/Tallinn]  
(Circle 2 for each subsection of /text/ missed) ...................... 0  2  4  6  8  10 |
| g. (Add up scores from (a) through (f) and record): ......................... | | |

Is the total score from line (g) greater than 10?

☐ No [CONTINUE]  
☐ Yes

/IF YES, STOP the interview. The individual is experiencing some degree of cognitive impairment/. 

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Appendix F

*Literacy Scale*


a. How well can you **read** in Russian in something like a newspaper or magazine? Would you say...

- Not at all .....................................0
- Slightly well .................................1
- Moderately well .............................2
- Considerably well ...........................3
- Extremely well ..............................4

b. How well can you **write** in Russian in something like a job application or resume? Would you say...

- Not at all .....................................0
- Slightly well .................................1
- Moderately well .............................2
- Considerably well ...........................3
- Extremely well ..............................4

Overall score ............................... |___|___|
Appendix G

Language, Identity, and Behavior Scale

(Birman & Trickett, 2001)

**LANGUAGE**

*We are interested in learning how living in Estonia has affected your language abilities. Please circle the digit that corresponds with your language ability.*

<table>
<thead>
<tr>
<th>How would you rate your ability to speak <strong>Estonian:</strong></th>
<th>Not at all</th>
<th>Very well, like a native</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. with colleagues at work</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2. with Estonian friends</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. on the phone</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. with strangers</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>5. overall</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How well do you understand <strong>Estonian:</strong></th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. on TV or at the movies</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>7. in newspapers or in magazines</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. on the phone</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>9. overall</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How would you rate your ability to speak <strong>Russian:</strong></th>
<th>Not at all</th>
<th>Very well, like a native</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. with family</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>11. with Russian friends</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. on the phone</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13. with strangers</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>14. overall</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How well do you understand <strong>Russian:</strong></th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. on TV or at the movies</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>16. in newspapers or in magazines</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>17. on the phone</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>18. overall</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
The term “Estonian” is used here to describe Estonian culture and mentality. The term “Estonian-Russian” refers to a culture and mentality of those Russian-speakers who live in Estonia. “Estonian-Russians” to some extent are different from the Russians living in Russia. The term “Russian” is used here to describe a culture and mentality similar to the one prevailing in Russia.

To what extent are the following statements true of you?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not at all</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I think of myself as being Estonian</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. I feel good about being Estonian</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. Being Estonian plays an important part in my life</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. I feel that I am part of Estonian culture</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. If someone criticizes Estonians I feel they are criticizing me</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. I have a strong sense of being Estonian</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. I am proud of being Estonian</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. I think of myself as being Russian</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. I feel good about being Russian</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. Being Russian plays an important part in my life</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. I feel that I am part of Russian culture</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. If someone criticizes Russians I feel they are criticizing me</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. I have a strong sense of being Russian</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14. I am proud that I am Russian</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15. I think of myself as being Estonian Russian</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16. I feel good about being Estonian Russian</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17. Being Estonian-Russian plays an important part in my life</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18. I feel that I am part of both Estonian-Russian culture</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19. If someone criticizes Estonian-Russians I feel they are criticizing me</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20. I have a strong sense of being Estonian-Russian</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21. I am proud of being Estonian-Russian</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
We are interested in how much you take part in Estonian and Russian activities. Please circle the response that indicates to what extent the following statements are true about things that you do.

### CULTURAL PARTICIPATION

<table>
<thead>
<tr>
<th>Estonian Activities</th>
<th>Not at all</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. at home?</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>2. with your neighbors?</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>3. with friends?</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>4. read Estonian books, newspapers, or magazines?</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>5. watch Estonian movies (on TV, VCR, etc)?</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>6. eat Estonian food?</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>7. attend Estonian concerts, exhibits, etc.?</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>8. socialize with Estonian friends?</td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>

### Russian Activities

<table>
<thead>
<tr>
<th>Russian Activities</th>
<th>Not at all</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. at home?</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>2. with your neighbors?</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>3. with friends?</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>4. read Russian books, newspapers, or magazines?</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>5. watch Russian movies (on TV, VCR, etc)?</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>6. eat Russian food?</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>7. attend Russian concerts, exhibits, etc.?</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>8. socialize with Russian friends?</td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>
Appendix H

_HIV Drug Risk (Risk Assessment Battery)_

(Metzger et al., 1992; D. S. Metzger et al., 1993)

Please read each of the following questions very carefully. As you will see, many of these questions are personal. We understand this and will make every effort to protect the privacy of your answers. It is very important that you answer every question honestly. In fact, it's better not to answer a question at all than to tell us something that is not accurate or true. Some questions may not seem to have an answer that is true for you. When this happens, you should simply choose the answer that is most right. Don't spend too much time on any one question. Remember, always ask for help if you're unsure about what to do.

Thank you for your time and cooperation.

---

**PAST MONTH DRUG AND ALCOHOL USE**

1. In the past month, how often have you *injected* heroin (not mixed)?
   - 0. Not at all
   - 1. A few times
   - 2. A few times each week
   - 3. Everyday

2. In the past month, how often have you *snorted* heroin (not mixed)?
   - 0. Not at all
   - 1. A few times
   - 2. A few times each week
   - 3. Everyday

3. In the past month, how often have you *smoked* heroin?
   - 0. Not at all
   - 1. A few times
   - 2. A few times each week
   - 3. Everyday

4. In the past month, how often have you *injected* poppy liquid or extract (not mixed)?
   - 0. Not at all
   - 1. A few times
   - 2. A few times each week
   - 3. Everyday

5. In the past month, how often have you *smoked* opium?
   - 0. Not at all
   - 1. A few times
   - 2. A few times each week
3. ❑ Everyday

6. In the past month, how often have you injected amphetamines, meth, speed, crank or crystal?
   0. ❑ Not at all
   1. ❑ A few times
   2. ❑ A few times each week
   3. ❑ Everyday

7. In the past month, how often have you snorted amphetamines, meth, speed, crank or crystal?
   0. ❑ Not at all
   1. ❑ A few times
   2. ❑ A few times each week
   3. ❑ Everyday

8. In the past month, how often have you smoked amphetamines, meth, speed, crank or crystal?
   0. ❑ Not at all
   1. ❑ A few times
   2. ❑ A few times each week
   3. ❑ Everyday

9. In the past month, how often have you injected amphetamines and heroin together (Speedball)?
   0. ❑ Not at all
   1. ❑ A few times
   2. ❑ A few times each week
   3. ❑ Everyday

10. In the past month, how often have you used benzodiazepines (benzos, benzies) such as Xanax, Valium, Klonipin or Ativan?
    0. ❑ Not at all
    1. ❑ A few times
    2. ❑ A few times each week
    3. ❑ Everyday

11. In the past month, how often have you taken painkillers - pills such as Percodan, Percocet, Vicodin, Demerol, Dilaudid, Darvon, Darvocet or syrup (Codeine)?
    0. ❑ Not at all
    1. ❑ A few times
    2. ❑ A few times each week
    3. ❑ Everyday

   a. Which types of painkillers did you use? ______________________________________

12. In the past month, how often did you inject Dilaudid?
   0. ❑ Not at all
   1. ❑ A few times
2. ☐ A few times each week
☐ Everyday

13. In the past month, how often have you used acid, LSD, or other hallucinogens?
0. ☐ Not at all
1. ☐ A few times
2. ☐ A few times each week
☐ Everyday

14. In the past month, how often have you used marijuana?
0. ☐ Not at all
1. ☐ A few times
2. ☐ A few times each week
☐ Everyday

15. In the past month, how often have you used beer, wine or liquor?
0. ☐ Not at all
1. ☐ A few times
2. ☐ A few times each week
☐ Everyday

16. How old were you when you first started using drugs? _______ years old

17. How old were you when you first started injecting drugs? _______ years old

________________________

NEEDLE USE

1. In the past six months, have you injected drugs?
0. ☐ No
1. ☐ Yes

2. In the past six months, have you shared needles or works?
0. ☐ No or I have not shot up in the past six months
1. ☐ Yes

3. With how many different people did you share needles in the past six months?
0. ☐ 0 or I have not shot up in the past six months
1. ☐ 1 other person
2. ☐ 2 or 3 different people
3. ☐ 4 or more different people

4. In the past six months, how often have you used a needle after someone *(with or without cleaning)*?
0. ☐ Never or I have not shot up or shared in the past six months
1. ☐ A few times or less
2. ☐ A few times each month
3. ☐ Once or more each week
5. In the past six months, how often have others used after you (with or without cleaning)?
   0. □ Never or I have not shot up or shared in the past six months
   1. □ A few times or less
   2. □ A few times each month
   3. □ Once or more each week

6. In the past six months, how often have you shared needles with someone you knew (or later found out) had AIDS or was positive for HIV, the AIDS virus?
   0. □ Never or I have not shot up or shared in the past six months
   1. □ A few times or less
   2. □ A few times each month
   3. □ Once or more each week

7. Where did you get your needles during the past six months? (Check all that apply)
   0. □ I have not shot up in the past six months
   1. □ From a diabetic
   2. □ On the street
   3. □ Drugstore
   4. □ Shooting gallery or other place where users go to shoot up
   5. □ Needle Exchange Program
   6. □ Other: ____________________________

8. In the past six months, how often have you been to a shooting gallery/house or other place where users go to shoot-up?
   0. □ Never
   1. □ A few times or less
   2. □ A few times each month
   3. □ Once or more each week

9. In the past six months, how often have you been to a Crack House or other place where people go to smoke crack?
   0. □ Never
   1. □ A few times or less
   2. □ A few times each month
   3. □ Once or more each week

10. Which statement best describes the way you cleaned your needles during the past six months? (Please choose one)
    0. □ I have not shot up in the past six months
    1. □ I always use new needles
    2. □ I always clean my needle just before I shoot up
    3. □ After I shoot up, I always clean my needle
    4. □ Sometimes I clean my needle, sometimes I don't
    5. □ I never clean my needle

11. If you cleaned your needles and works in the past six months, how did you clean them? (Check all that apply)
0. □ I have not shot up in the past six months
1. □ Soap and water or water only
2. □ Alcohol
3. □ Bleach
4. □ Boiling water
5. □ Other:____________________
6. □ I did not clean my needles in the past six months
7. □ I ALWAYS used new needles in the past six months

12. In the past six months, how often have you shared rinse-water?
   0. □ Never or I have not shot up in the past 6 months
   1. □ A few times or less
   2. □ A few times each month
   3. □ Once or more each week

13. In the past six months, how often have you shared a cooker?
   0. □ Never or I have not shot up in the past 6 months
   1. □ A few times or less
   2. □ A few times each month
   3. □ Once or more each week

14. In the past six months, how often have you shared a cotton?
   0. □ Never or I have not shot up in the past 6 months
   1. □ A few times or less
   2. □ A few times each month
   3. □ Once or more each week

15. In the past six months, how often have you divided or shared drugs with others by using
    one syringe (yours or someone else’s) to squirt or load the drugs into the other syringe(s)
    (backloading, for example) ?
    0. □ Never or I have not shot up in the past 6 months
    1. □ A few times or less
    2. □ A few times each month
    3. □ Once or more each week
Appendix I

Situational, Attitudinal, Familial, and Environmental Acculturation Stress Scale

(Fuertes & Westbrook, 1996; Mena, Padilla, & Maldonado, 1987)

The term "Russian" is used here to describe all Russian-speaking population living in Estonia, rather than to refer to ethnic Russians only. Please read each of the following statements below carefully. For the following set of items rate how much emotionally stressful they are for you on the scale from 1 to 5. Please, for each statement check one answer only.

How much emotionally stressful do you feel in the following situations?

<table>
<thead>
<tr>
<th></th>
<th>Not Stressful</th>
<th>Somewhat Stressful</th>
<th>Stressful</th>
<th>Very Stressful</th>
<th>Extremely Stressful</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. When others make jokes about or put down Russian people.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Having more barriers to overcome than most people.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Having family members you are close to not understand your new values.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. You and your close family members have conflicting expectations about your future.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. When it is hard to express to your friends how you really feel.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. The fact that your family does not want you to move away but you would like to.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Seeing so many people using drugs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Not being able to be with your family members in Russia or other former Soviet Republics.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. When looking for a good job, you sometimes feel that being Russian is a limitation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Not having any close friends.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
11. The fact that many people have stereotypes about Russian culture or Russians and treat you as if they are true. 

12. Not feeling at home like at home. 

13. When people think that you are unsociable when in fact you have trouble communicating in Estonian. 

14. You often feel that people actively try to stop you from advancing. 

15. When people pressure me to assimilate to Estonian culture. 

16. You often feel ignored by people who are supposed to assist you. 

17. Because you are different you do not get enough credit for the work you do. 

18. Having an accent in Estonian. 

19. Loosening the ties with Russia and other former Soviet Republics is difficult. 

20. You often think about your Russian background. 

21. Because of your Russian background, you feel that others often exclude you from participating in their activities. 

22. It is difficult for me to "show off" my family. 

23. People look down upon me if I practice customs of Russian culture. 

24. I have trouble understanding others when they speak Estonian.
Appendix J

Alienation Scale

(Kohn, 1976; Roberts, 1987; Seeman, 1959)

We are interested in learning of how your experience of living in Estonia has affected your life. Please indicate how much you agree or disagree with each statement by checking the answer that applies to you.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I generally have confidence that when I make PLANS I will be able to carry them out.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2. At times I think I am NO GOOD at all.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3. It's all right to do ANYTHING you want as long as you stay out of trouble.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4. It's all right to get AROUND the LAW as long as you don't actually break it.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5. If something WORKS, it doesn't matter whether it's right or wrong.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6. Most of the things that happen to me are the result of things over which I have no CONTROL.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>7. I am the sort of person who takes life AS IT COMES.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>8. I believe that are there some things that are WRONG even if they are LEGAL.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

For this set of questions, please choose how often, if at all, have you experienced each the following feelings/thoughts by checking the answer that applies to you.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Never</th>
<th>Sometimes</th>
<th>Average</th>
<th>Often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. How often do you feel POWERLESS to get what you want out of life?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>10. How often do you feel that there isn't much PURPOSE in being alive?</td>
<td>☐</td>
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<td>11. How often do you feel BORED with everything?</td>
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<tr>
<td>12. According to your general impression, how often do your ideas and opinions about important matters differ from those of your RELATIVES?</td>
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<tr>
<td>13. How often do your ideas and opinions differ from those of your FRIENDS?</td>
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<tr>
<td>14. How about from those of other people with your religious BACKGROUND?</td>
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<tr>
<td>15. Those of most people in the COUNTRY?</td>
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<tr>
<td>16. How often do you feel that the world just isn't very UNDERSTANDable?</td>
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</tbody>
</table>
Appendix K

Socio-Demographic Questionnaire

1. What is your gender? ☐ Female ☐ Male

2. In what city do you live now?
   - Tallinn
   - Tartu
   - Viljandi
   - Narva
   - Kohtla-Järve
   - Jõhvi
   - Sillamäe
   - Kiviõli
   - Püssi
   - Other (specify) _______________________

3. Are you (choose one):
   - Single
   - Married
   - Divorced
   - Widowed
   - Living together

6. What is the highest level of education you have obtained? (Check one)
   - No schooling
   - Some grade/primary school
   - Completed grade/primary school
   - Some high/secondary school
   - Completed high/secondary school (High school diploma)
   - Some technical, community college
   - Completed technical, community college (Technical School diploma)
   - Some university
   - University degree (Bachelor’s degree, Masters’ degree, Ph.D., etc.)
   - Other (please specify) _______________________

7. What are your religious beliefs?
   - Russian Orthodox
   - Estonian Orthodox
   - Judaism
   - Roman Catholic
☐ Evangelical Lutheran
☐ Pentecostal
☐ Methodist
☐ Baptist
☐ Islam
☐ Atheism
☐ Other (specify) _________________

8. Do you have health insurance?  ☐ Yes  ☐ No

9. Which is the major source of your financial support? (Check one)
   ☐ Employment
   ☐ Unemployment compensation
   ☐ Pension, benefits, social security, public assistance or welfare
   ☐ Mate, family or friends (money for personal expenses)
   ☐ Illegal (includes drug dealing, stealing, fencing stolen goods, prostitution, etc.)
   ☐ Other sources (specify) ______________________________

10. What is your current income per year? _________ Estonian Kroons
Appendix L

*Information sheet (in Russian)*

Информация об участии в научно-исследовательском проекте Университета Клемсона

Аккультурация, Отчуждение, и Рискованное Поведение среди Русскоговорящих Потребителей Наркотиков в Эстонии

Вы приглашены участвовать в научном исследовании, проводимом доктором Робин Кимбро-Мелтон, профессором из Института по изучению Семьи и Жизни в Соседских Сообществах Университета Клемсона, и Анной Скосыревой, аспиранткой Университета Клемсона.

**Цель:** Цель этого исследования - лучше понять проблему злоупотребления наркотиками среди русскоговорящего населения, проживающего в Эстонии. Результаты этого исследования помогут представителям и организаторам медицинских услуг и программ здравоохранения улучшить медицинское обслуживание. Таким образом, мы надеемся на более эффективное удовлетворение индивидуальных потребностей русскоговорящих потребителей наркотиков, живущих в Эстонии.

**Порядок проведения:** Если Вы согласитесь принять участие в исследовании, вам необходимо будет заполнить анкету с вопросами об употреблении наркотических веществ, опасных поведениях, культурном приобщении к эстонскому обществу, испытываемом отчуждении, и некоторые библиографические данные. Анкетирование является анонимным. Это означает, что в анкете не будет никаких записей Вашего имени/фамилии, и, таким образом, никто не сможет определить, что именно Вы заполнили анкету. Мы планируем, что около 150 человек будут участвовать в анкетировании. На заполнение анкеты уходит приблизительно 30 минут.

**Риск и неудобства**

Существует только незначительный риск, что некоторые из вопросов анкеты могут Вас расстроить или взволновать. Такие же эмоции Вы обычно испытываете в повседневной жизни, когда Вы кому либо рассказываете о себе самом(й). Если такие ощущения и возникают, то обычно они очень быстро и проходят. Вы не обязаны отвечать на те вопросы, на которые Вы не хотите отвечать. Вы также можете прекратить заполнение анкеты в любое время, когда пожелаете. Однако если у Вас всё-таки возникнет потребность обсудить Ваши эмоции, дайте нам знать, и мы примем меры, чтобы Вас проконсультировал специалист.

Если Вам нужна информация о лечении наркотической или алкогольной зависимости, направление на консультацию/лечение, или психологическая поддержка обратитесь в AIDS-i TUGIKESKUS (СПИД-центр Информации и Поддержки), расположенный по адресу ул. Эрика, дом 5A, Таллинн 10416. Тел. +372 6603636.
Возможные выгоды/польза
Очень маловероятно, что Вы получите непосредственную выгоду от принятия участия в этом исследовании, кроме приятного чувства, что Вы помогаете кому то, и небольшого вознаграждения за Ваше участие в размере 50 Эстонских Крон. Однако научная информация, которую мы получим в результате Вашего участия в исследовании, поможет нам понять проблему злоупотребления наркотиками и распространения ВИЧ/СПИДа среди русскоговорящего населения Эстонии. Если Вы заинтересуетесь результатами проведенного исследования, дайте нам знать, и мы вышлем Вам копию.

Защита конфиденциальности
Мы сделаем все необходимое, чтобы гарантировать защиту Вашей частной жизни. Никакие персональные данные (имя/фамилия, номер карточки вида на жительство, паспортные данные или номер паспорта, адрес, телефонный номер, или номер медицинской карты) не будут внесены в анкету. Только кодовый номер будет помещён на Вашу анкету. В нашем исследовании мы не составляем список, в котором этот кодовый номер соответствует определённому имени/фамилии. По информации, которая будет внесена в анкету, невозможно определить, что эта анкета принадлежит именно Вам. Ваши ответы на анкетный опрос и вопросы этого скрининг-интервью будут сохранены в электронном файле, защищённом паролем. Данные полученные в результате анкетирования участников, будут использоваться исключительно в научных целях. Скрининг формы и анкеты участников исследования будут храниться в течение пяти лет после завершения окончания исследования и затем будут уничтожены.

В редких случаях научное исследование будет проходить оценку в организации по контролю качества исследования, такой как, например Ревизионный Совет Учреждения (IRB) университета Клемсона или федерального Отдела по Защите Человека как Субъекта Исследований. Эти организации могут потребовать предоставить им информацию, собранную у Вас в ходе исследования. Если это произойдет, информация полученная от нас этими учреждениями будет использоваться только для того чтобы определить, проведено ли данное исследование надлежащим образом, и в достаточной ли мере мы обеспечили защиту Ваших прав как участника исследования.

Добровольное участие
Ваше участие в этом проекте добровольное. Вы можете решить не участвовать, и Вы можете прекратить участие в любое время. Тем не менее, мы очень заинтересованы в получении Ваших ответов, поскольку считаем, что наше исследование принесёт ценный вклад в понимание проблемы распространения злоупотребления наркотиками, и улучшит общее благополучие русскоговорящего населения, проживающего в Эстонии. Вы ни в коем случае не подвергнитесь никакому наказанию, если решите не участвовать или прекратить участие в исследовании.
Контактная информация

Если у Вас возникнут какие-либо вопросы или проблемы, связанные с этим исследованием, пожалуйста, свяжитесь с Анной Скосыревой по номеру +372 641-3165, или напишите ей по эл. почте на адрес askosir@clemson.edu. Вы можете также связаться с Робин Кимбро-Мелтон по телефону +1 864-250-4635 или написать ей по эл. почте на rkimbro@clemson.edu. Если у Вас есть какие-либо вопросы или проблемы по защите Ваших прав как участника исследования, пожалуйста, свяжитесь с Ревизионным Советом Учреждения университета Клемсона, по +1 (866) 297-3071 (беспошлинный номер) или эл. почте по адресу irb@clemson.edu.
Appendix M

Screening Form Questionnaire (in Russian)

1. Понимаете ли Вы русский язык и можете ли свободно говорить на нем?
   - Нет [ОСТАНОВИТЕ интервью]    - Да

2. Сколько Вам лет?
   - <18 лет [ОСТАНОВИТЕ интервью]    - > 65 лет [ОСТАНОВИТЕ интервью]    - > 18 и <65 лет - __________ лет (впишите сколько)

3. Ваша дата рождения (год и месяц)?    _________    _________
   Год    Месяц

4. Кто Вы по национальности?
   - a) Эстонец(ка) [ОСТАНОВИТЕ интервью]    - b) Русский(кая)
   - c) Украинец(ка)    - d) Белорус(ка)
   - e) Татарин(ка)    - f) Молдаванин(ка)
   - g) Армянин(ка)    - h) Азербайджанец(ка)
   - i) Грузин(ка)    - j) Латыш(ка)
   - k) Еврей(ка)    - l) Литовец(ка)
   - m) Другое (Впишите) _________________________________

5. Вы родились в Эстонии?
   - Да    - Нет

6. Проживали ли Вы в Эстонии до 1991?
   - Нет [ОСТАНОВИТЕ интервью]
   - Да, - С какого года Вы проживаете в Эстонии? _______ (должно быть ранее 1991)

7. За прошедшие 30 дней употребляли ли Вы наркотики?
   - Нет [ОСТАНОВИТЕ интервью]    - Да
### Шкала Когнитивного Нарушения


В анкете содержится довольно много вопросов, требующих подробных ответов. Не могли бы Вы ответить на несколько вопросов, которые помогут нам определить, насколько внимательны Вы к деталям.

<table>
<thead>
<tr>
<th>БАЛЛЫ ЗА ОШИБКИ</th>
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<tbody>
<tr>
<td><strong>Шкала Когнитивного Нарушения</strong></td>
<td></td>
</tr>
<tr>
<td><strong>a.</strong> Какой сейчас год? ________________</td>
<td>(Обведите 4 при любой ошибке)................................................................. 0 4</td>
</tr>
<tr>
<td><strong>b.</strong> Какой сейчас месяц? ________________</td>
<td>(Обведите 3 при любой ошибке)................................................................. 0 3</td>
</tr>
<tr>
<td><strong>Пожалуйста, повторите следующее предложение за мной:</strong> Александр Иванов, Улица Копли, дом 32, г. Таллинн.</td>
<td></td>
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<tr>
<td><strong>[Без присвоения баллов – будет использоваться ниже для пункта (f)]</strong></td>
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<td><strong>c.</strong> Сколько примерно сейчас времени? ________________</td>
<td>(Обведите 3 при любой ошибке)................................................................. 0 3</td>
</tr>
<tr>
<td><strong>d.</strong> Пожалуйста, посчитайте от 20 до 1 (в противоположном направлении)</td>
<td>[20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1]</td>
</tr>
<tr>
<td><strong>e.</strong> Пожалуйста, перечислите дни недели в обратном порядке.</td>
<td>[Воскресение, суббота, пятница, четверг, среда, вторник, понедельник]</td>
</tr>
<tr>
<td><strong>f.</strong> Пожалуйста, скажите предложение, которое я попросил(а) повторить Вас до этого.</td>
<td>[Александр/Иванов/ Улица Копли/ 32/ Таллинн]</td>
</tr>
<tr>
<td><strong>g.</strong> (Сложите баллы от пункта (a) до пункта (f) и впишите здесь):.........</td>
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Больше ли общее число баллов в пункте (g) чем 10?

- Нет [ПРОДОЛЖИТЕ]
- Да

*[ЕСЛИ Да, ОСТАНОВИТЕ интервью. У человека имеется определённая степень когнитивных нарушений.]*
Вопросы по Определению Уровня Грамотности


a. Как хорошо Вы можете читать газеты или журналы на русском языке? Вы бы сказали...

☐ Не умею .................................. 0
☐ Немного.................................... 1
☐ Средне...................................... 2
☐ Неплохо................................. 3
☐ Очень хорошо.......................... 4

b. Как хорошо Вы можете писать по-русски, например, написать заявление о приеме на работу или личное резюме? Вы бы сказали...

☐ Не умею .................................. 0
☐ Немного.................................... 1
☐ Средне...................................... 2
☐ Неплохо................................. 3
☐ Очень хорошо.......................... 4

Итоговый балл .................[ | ] | |
Appendix N

Questionnaire (in Russian)

Шкала Оценки Владения Языком, Национальной Принадлежности, и Поведения

(Birman & Trickett, 2001)

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<th>ЯЗЫК</th>
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<tbody>
<tr>
<td>Мы интересуемся изучением, как проживание в Эстонии повлияло на Ваши языковые способности. Пожалуйста, обведите ту цифру, которая соответствует Вашим языковым навыкам.</td>
<td>Очень плохо</td>
<td>Очень хорошо, как родной язык</td>
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<tr>
<td>Как Вы оцениваете своё умение говорить по-эстонски:</td>
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<tr>
<td>1. с коллегами по работе</td>
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<td>2. с эстонскими друзьями</td>
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<tr>
<td>3. по телефону</td>
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<td>4. с незнакомыми людьми</td>
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<tr>
<td>5. вообще</td>
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<tr>
<td>Как хорошо Вы понимаете эстонский язык:</td>
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<td>6. по телевизору или в кино</td>
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<td>7. в газетах или в журналах</td>
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<td>8. по телефону</td>
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<td>9. вообще</td>
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<tr>
<td>Как Вы оцениваете свою способность говорить по-русски:</td>
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<td>10. с семьей</td>
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<td>11. с русскими друзьями</td>
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<td>12. по телефону</td>
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<td>13. с незнакомыми людьми</td>
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<td>14. вообще</td>
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<tr>
<td>Как хорошо Вы понимаете русский язык:</td>
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<tr>
<td>15. по телевизору или в кино</td>
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<td>16. в газетах или в журналах</td>
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<tr>
<td>17. по телефону</td>
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<tr>
<td>18. вообще</td>
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</tr>
</tbody>
</table>

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## КУЛЬТУРНАЯ ПРИНАДЛЕЖНОСТЬ

Под термином «эстонец» мы имеем в виду эстонскую культуру и менталитет. Под термином «эстонский русский» мы подразумеваем культуру и менталитет русскоговорящих людей, которые проживают в Эстонии. Эстонские русские в некоторой степени отличаются от русских, живущих в России. Под термином «русский» мы имеем в виду ту русскую культуру и менталитет, которые преобладают в России.

Насколько следующие утверждения соответствуют Вашему мнению?

<table>
<thead>
<tr>
<th>№</th>
<th>Утверждение</th>
<th>Совсем нет</th>
<th>В значительной степени</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Я считаю себя эстонцем</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Мне нравится быть эстонцем</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>То, что я эстонец играет важную роль в моей жизни</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Я чувствую, что я являюсь частью эстонской культуры</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Если кто-то критикует эстонцев, мне кажется,</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>что критикуют меня</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Я полностью ощущаю себя эстонцем</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>Я горжусь тем, что я эстонец</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Я считаю себя русским</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Мне нравится быть русским</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>То, что я русский играет важную роль в моей жизни</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>Я чувствую, что я являюсь частью русской культуры</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>Если кто-то критикует русских, мне кажется,</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>что критикуют меня</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Я полностью ощущаю себя русским</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>14</td>
<td>Я горжусь тем, что я русский</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>15</td>
<td>Я считаю себя эстонским русским</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>16</td>
<td>Мне нравится быть эстонским русским</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>17</td>
<td>То, что я эстонский русский играет важную роль в моей жизни</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>18</td>
<td>Я чувствую, что я являюсь частью эстонско-русской культуры</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>19</td>
<td>Если кто-то критикует эстонских русских, мне кажется,</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>что критикуют меня</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Я полностью ощущаю себя эстонским русским</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>21</td>
<td>Я горжусь тем, что я эстонский русский</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
УЧАСТИЕ В КУЛЬТУРНОЙ ЖИЗНИ

Нам было бы интересно узнать, как часто Вы принимаете участие в эстонских и русских жизненных ситуациях. Пожалуйста, обведите ту цифру, которая соответствует вашему мнению о том, что вы делаете в повседневной жизни.

<table>
<thead>
<tr>
<th>Как часто Вы говорите по-эстонски:</th>
<th>Совсем нет</th>
<th>В значительной степени</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. дома? ................................................................. 1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. с Вашиими соседями? .................. 1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. с друзьями? ...................................................... 1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Как часто Вы говорите по-русски:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. дома? ................................................................. 1</td>
<td>2</td>
<td>3</td>
</tr>
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<td>2. с Вашиими соседями? .................. 1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. с друзьями? ...................................................... 1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Как часто Вы:

4. читаете эстонские книги, газеты, или журналы? .................. 1 | 2 | 3 | 4 |
5. смотрите эстонские фильмы (по телевидению, видео, и т.д)? __ 1 | 2 | 3 | 4 |
6. кушаете традиционную эстонскую еду? .................................. 1 | 2 | 3 | 4 |
7. посещаете эстонские концерты, выставки, и т.д.? .................. 1 | 2 | 3 | 4 |
8. проводите время с эстонскими друзьями? ............................ 1 | 2 | 3 | 4 |

Как часто Вы:

4. читаете русские книги, газеты, или журналы? .................. 1 | 2 | 3 | 4 |
5. смотрите русские фильмы (по телевидению, видео, и т.д)? __ 1 | 2 | 3 | 4 |
6. кушаете традиционную русскую еду? .................................. 1 | 2 | 3 | 4 |
7. посещаете русские концерты, выставки, и т.д.? .................. 1 | 2 | 3 | 4 |
8. проводите время с русскими друзьями? ............................ 1 | 2 | 3 | 4 |
**Тест оценки степени риска (ТОСР)**

(Metzger et al., 1992; D. S. Metzger et al., 1993)

Пожалуйста, прочитайте каждый из предлагаемых вопросов очень внимательно. Вы увидите, что многие из этих вопросов сугубо личного характера. Мы это понимаем и поэтому приложим все усилия, чтобы обеспечить конфиденциальность Ваших ответов.

Очень важно, чтобы на каждый вопрос был дан честный ответ. На самом деле, лучше совсем не отвечать на вопрос, чем дать не совсем точный или ложный ответ. Может показаться, что некоторые вопросы не имеют подходящих вариантов ответов. Если Вы с этим столкнетесь, выбирайте просто наиболее правильный вариант ответа. Не старайтесь слишком быстро на каждый вопрос. Помните, что Вы всегда можете обратиться за помощью, если не уверены, что и как делать.

Спасибо!

**УПОТРЕБЛЕНИЕ НАРКОТИКОВ И АЛКОГОЛЯ**

1. Как часто за последний месяц Вы делали себе инъекции героина (не смешивая ни с чем)?
   - 0. НИ разу
   - 1. Несколько раз
   - 2. Несколько раз в неделю
   - 3. Каждый день

2. Как часто за последний месяц Вы нюхали героин (не смешивая ни с чем)?
   - 0. НИ разу
   - 1. Несколько раз
   - 2. Несколько раз в неделю
   - 3. Каждый день

3. Как часто за последний месяц Вы курили героин?
   - 0. НИ разу
   - 1. Несколько раз
   - 2. Несколько раз в неделю
   - 3. Каждый день

4. Как часто за последний месяц Вы делали себе инъекции макового экстракта («ханка», «ширка», «черная», «семена», «компот») (не смешивая ни с чем)?
   - 0. НИ разу
   - 1. Несколько раз
   - 2. Несколько раз в неделю
   - 3. Каждый день

5. Как часто за последний месяц Вы курили маковую соломку («солома», «сено»)?
   - 0. НИ разу
   - 1. Несколько раз
   - 2. Несколько раз в неделю
   - 3. Каждый день

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6. Как часто за последний месяц Вы делали себе инъекции амфетаминов («мет», «винт», 
«спид», «кристалл», «первитин»)?
   0. ✗ Ни разу
   1. ✗ Несколько раз
   2. ✗ Несколько раз в неделю
   3. ✗ Каждый день

7. Как часто за последний месяц Вы нюхали амфетамины («мет», «винт», «спид», 
«кристалл», «первитин»)?
   0. ✗ Ни разу
   1. ✗ Несколько раз
   2. ✗ Несколько раз в неделю
   3. ✗ Каждый день

8. Как часто за последний месяц Вы курили амфетамины («мет», «винт», «спид», 
«кристалл», «первитин»)?
   0. ✗ Ни разу
   1. ✗ Несколько раз
   2. ✗ Несколько раз в неделю
   3. ✗ Каждый день

9. Как часто за прошедший месяц Вы делали себе инъекции амфетамина и героина в 
комбинации («качели»)?
   0. ✗ Ни разу
   1. ✗ Несколько раз
   2. ✗ Несколько раз в неделю
   3. ✗ Каждый день

10. Как часто за последний месяц Вы принимали транквилизаторы, бензодиазепины, 
такие как Седуксен, Реланиум, Элениум, Реладорм, Феназепам?
    0. ✗ Ни разу
    1. ✗ Несколько раз
    2. ✗ Несколько раз в неделю
    3. ✗ Каждый день

11. Как часто за последний месяц Вы принимали болеутоляющие средства - таблетки 
(такие как Трамал, Стадол, Пентаагин, Солпадеин, Нурофен, Кодеин и др.)?
    0. ✗ Ни разу
    1. ✗ Несколько раз
    2. ✗ Несколько раз в неделю
    3. ✗ Каждый день

    а. Какие болеутоляющие средства Вы принимали? ____________________________

12. Как часто за последний месяц Вы делали себе инъекции Фентанила, 3-метилфентанил 
(«белый китаец», «белый перс»), Морфина, Промедола, и т. п.?
    0. ✗ Ни разу
    1. ✗ Несколько раз
2. □ Несколько раз в неделю
3. □ Каждый день

13. Как часто за последний месяц Вы принимали ЛСД («кислоту», «марки», «бумаги»), «грибы», ПСП или другие галлюциногены?
   0. □ Ни разу
   1. □ Несколько раз
   2. □ Несколько раз в неделю
   3. □ Каждый день

14. Как часто за последний месяц Вы употребляли марихуану («гашиш», «каннабис», «коноплю»)?
   0. □ Ни разу
   1. □ Несколько раз
   2. □ Несколько раз в неделю
   3. □ Каждый день

15. Как часто за последний месяц Вы пили пиво, вино или крепкие напитки?
   0. □ Ни разу
   1. □ Несколько раз
   2. □ Несколько раз в неделю
   3. □ Каждый день

16. Сколько Вам было лет когда вы начали принимать наркотики? _______ лет

17. Сколько Вам было лет когда вы начали принимать наркотики
   инъекционно (колоться)? _______ лет

ИСПОЛЬЗОВАНИЕ ИГЛ И ИНЪЕКЦИОННЫХ ПРИНАДЛЕЖНОСТЕЙ

1. За прошедшие 6 месяцев делали ли Вы себе инъекции наркотиков?
   0. □ Нет
   1. □ Да

2. За прошедшие 6 месяцев приходилось ли Вам пользоваться и/или обмениваться (делитьсь) с кем-либо уже использованными иглами?
   0. □ Нет, или я не кололся последние 6 месяцев
   3. □ Да

3. Оцените общее количество людей, с которыми Вам приходилось обмениваться (делиться) уже использованными иглами за прошедшие 6 месяцев?
   0. □ Нет, или я не кололся последние 6 месяцев
   1. □ 1 человек
   2. □ 2 или 3 человека
   3. □ 4 и более человек

4. Как часто за прошедшие 6 месяцев Вам приходилось употреблять ранее кем-то уже использованные иглы (с дезинфекцией или без дезинфекции)?
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1. Я всегда использую новые иглы
2. Я всегда дезинфицирую мою иглу прямо перед использованием
3. Я всегда дезинфицирую мою иглу после использования
4. Иногда я дезинфицирую мою иглу, иногда нет
5. Я никогда не дезинфицирую мою иглу

11. Если Вы дезинфицировали (обеззараживали, чистили) Вашу иглу на протяжении последних 6 месяцев, то как Вы это делали (выберите все варианты ответов, которые подходят)?
   0. Я не кололся(ась) последние 6 месяцев
   1. Мылом и водой или только водой
   2. Спиртом
   3. Хлорраствором
   4. Кипятком
   5. Другое: ______________
   6. Я не дезинфицировал(а) мои иглы последние 6 месяцев
   7. Я ВСЕГДА использовал(а) новые иглы на

12. Как часто за последние 6 месяцев Вы пользовались и/или обменивались (делились) с кем-либо водой, которая уже была использована для очистки игл?
   0. Никогда или Я не кололся(ась) последние 6 месяцев
   1. Несколько раз или меньше
   2. Несколько раз в месяц
   3. Раз в неделю или чаще

13. Как часто за последние 6 месяцев Вы обменивались (делились) посудой, в которой приготавливали наркотик?
   0. Никогда или Я не кололся(ась) последние 6 месяцев
   1. Несколько раз или меньше
   2. Несколько раз в месяц
   3. Раз в неделю или чаще

14. Как часто за последние 6 месяцев Вы обменивались (делились) ватой?
   0. Никогда или Я не кололся(ась) последние 6 месяцев
   1. Несколько раз или меньше
   2. Несколько раз в месяц
   3. Раз в неделю или чаще

15. Как часто за последние 6 месяцев Вы обменивались (делились) с кем-либо наркотиком, используя один шприц (Ваш или чей-то) для переноса наркотика в другой шприц(ы)?
   0. Никогда или Я не кололся(ась) последние 6 месяцев
   1. Несколько раз или меньше
   2. Несколько раз в месяц
   3. Раз в неделю или чаще
Шкала стресса
(Fuertes & Westbrook, 1996; Mena, Padilla, & Maldonado, 1987)

Под термином "Русский " мы подразумеваем все русскоговорящее население, проживающее в Эстонии, а не только этнических русских. Пожалуйста, внимательно прочтайте каждое из следующих утверждений. Оцените следующие ситуации по шкале от 1 до 5, в зависимости от того, насколько сильно они заставляют Вас переживать или нервничать. Пожалуйста, для каждой ситуации отметьте только один ответ.

Как сильно вы нервничаете, или переживаете по следующему поводу?

<table>
<thead>
<tr>
<th></th>
<th>Не нервничая</th>
<th>Немного нервничая</th>
<th>Нервничая</th>
<th>Очень нервничая</th>
<th>Крайне сильно нервничая</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Когда другие люди шутят или осуждают русских людей.</td>
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<tr>
<td>2. От присутствия в Вашей жизни большего количества препятствий, чем большинство других людей.</td>
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<tr>
<td>3. Когда близкие члены Вашей семьи не понимают Ваших новых жизненных ценностей, появившихся после распада СССР.</td>
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<tr>
<td>4. Когда близкие члены Вашей семьи, и Вы имеете разные мнения о том, что Вы должны делать в будущем.</td>
<td></td>
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<tr>
<td>5. Когда Вам трудно выразить своим друзьям, то, что Вы на самом деле чувствуете.</td>
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<tr>
<td>6. Когда, Ваша семья не хочет, чтобы Вы переехали жить в другое место, но Вы сами этого хотите.</td>
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<tr>
<td>7. Видя, как много людей употребляют наркотики.</td>
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<tr>
<td>8. То, что вы не можете быть рядом со своими близкими родственниками в России или в других республиках бывшего Советского Союза.</td>
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<tr>
<td>9. Когда при устройстве на хорошую работу Вам иногда кажется что то, что Вы русский(ая) это Ваш недостаток.</td>
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<tr>
<td>10. То, что у Вас нет близких друзей.</td>
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</tr>
<tr>
<td>11. То, что много людей поддерживают какие-то устоявшиеся негативные взгляды о</td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

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русской культуре или самих русских и относятся к Вам, как будто их мнение является правдой.

12. О том, что находясь дома Вы не чувствуете себя «как дома».

13. Когда люди думают, что Вы замкнутый человек, а на самом деле Вам просто трудно разговаривать на эстонском языке.

14. То, что довольно часто люди пытаются помешать Вам преуспеть в Вашей жизни.

15. Когда люди оказывают на Вас давление, чтобы вы приобщились к эстонской культуре.

16. То, что довольно часто те люди, которые должны Вам помогать, просто не обращают на Вас внимания.

17. Из-за того что Вы, будучи русским, отличаетесь от большинства людей, и из-за этого не получаете заслуженную похвалу за Вашу работу.

18. То, что у Вас есть акцент, когда вы говорите на Эстонском языке.

19. Что Вам очень сложно жить с тем, что разорваны отношения с Россией и другими республиками бывшего Советского Союза.

20. Вы часто размышляете о Вашей русской принадлежности.

21. То, что часто из-за того, что Вы русский (ая), другие люди не приглашают Вас участвовать в своих мероприятиях.

22. Вам тяжело осознавать то, что Вы не можете блеснуть или похвастаться тем, из какой вы семьи.

23. Люди смотрят на Вас с пренебрежением, из-за того что вы живёте в традициях русской культуры.

24. Когда Вам трудно понять разговор людей на эстонском языке.
Шкала отчуждённости

(Kohn, 1976; Roberts, 1987; Seeman, 1959)

Мы интересуемся изучением того, как Ваш опыт проживания в Эстонии повлиял на Вашу жизнь. Пожалуйста, укажите, насколько Вы согласны или не согласны с каждым утверждением, отмечая ответ, который Вам соответствует.

<table>
<thead>
<tr>
<th>1. Как правило, когда я делаю какие-либо ПЛАНЫ, я уверен, что я буду в состоянии их выполнить.</th>
<th>Решительно не согласен</th>
<th>Не согласен</th>
<th>Не решалось ответить</th>
<th>Согласен</th>
<th>Полностью согласен</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Время от времени я думаю, что я абсолютно НИЧТОЖНЫЙ ЧЕЛОВЕК.</td>
<td>Решительно не согласен</td>
<td>Не согласен</td>
<td>Не решалось ответить</td>
<td>Согласен</td>
<td>Полностью согласен</td>
</tr>
<tr>
<td>3. Я считаю, что могу делать ВСЕ, ЧТО ЗАХОЧУ, при условии, что я не нарываюсь на неприятности</td>
<td>Решительно не согласен</td>
<td>Не согласен</td>
<td>Не решалось ответить</td>
<td>Согласен</td>
<td>Полностью согласен</td>
</tr>
<tr>
<td>4. Это нормально УВИЛИВАТЬ ОТ ЗАКОНОВ, если не попадаешься.</td>
<td>Решительно не согласен</td>
<td>Не согласен</td>
<td>Не решалось ответить</td>
<td>Согласен</td>
<td>Полностью согласен</td>
</tr>
<tr>
<td>5. Если что-то приносит мне ПОЛЬЗУ, то мне все равно, хорошо это или плохо.</td>
<td>Решительно не согласен</td>
<td>Не согласен</td>
<td>Не решалось ответить</td>
<td>Согласен</td>
<td>Полностью согласен</td>
</tr>
<tr>
<td>6. Многое, что случается со мной, порой совершенно ОТ МЕНЯ НЕ ЗАВИСИТ.</td>
<td>Решительно не согласен</td>
<td>Не согласен</td>
<td>Не решалось ответить</td>
<td>Согласен</td>
<td>Полностью согласен</td>
</tr>
<tr>
<td>7. Я человек, который принимает жизнь ТАКОЙ, КАКАЯ ОНА ЕСТЬ.</td>
<td>Решительно не согласен</td>
<td>Не согласен</td>
<td>Не решалось ответить</td>
<td>Согласен</td>
<td>Полностью согласен</td>
</tr>
<tr>
<td>8. Я верю, что существуют обстоятельства, которые НЕСПРАВЕДЛИВЫ, даже если они являются ЗАКОННЫМИ.</td>
<td>Решительно не согласен</td>
<td>Не согласен</td>
<td>Не решалось ответить</td>
<td>Согласен</td>
<td>Полностью согласен</td>
</tr>
</tbody>
</table>

Для следующей серии вопросов, пожалуйста, выберите, как часто, если вообще когда-нибудь, вы испытывали каждое из нижеперечисленных эмоций/мыслей. Отметьте тот ответ, который соответствует вашему мнению.

<table>
<thead>
<tr>
<th>9. Как часто Вы ощущаете себя БЕССИЛЬНЫМ(ОЙ), когда пытаетесь чего-то добиться в жизни?</th>
<th>Никогда</th>
<th>Очень Редко</th>
<th>Не часто</th>
<th>Часто</th>
<th>Очень часто</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Как часто Вы ощущаете, что НЕТ СМЫСЛА в том, чтобы жить?</td>
<td>Никогда</td>
<td>Очень Редко</td>
<td>Не часто</td>
<td>Часто</td>
<td>Очень часто</td>
</tr>
<tr>
<td>11. Как часто Вы ощущаете, что Вам всё НАДОЕЛО?</td>
<td>Никогда</td>
<td>Очень Редко</td>
<td>Не часто</td>
<td>Часто</td>
<td>Очень часто</td>
</tr>
</tbody>
</table>

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12. Как вы думаете, как часто Ваше понимание или мнение по важным вопросам отличается от мнения Ваших РОДСТВЕННИКОВ?

<table>
<thead>
<tr>
<th></th>
<th>Да</th>
<th>Нет</th>
<th>Неважно</th>
</tr>
</thead>
</table>

13. Как часто Ваше мнение отличается от мнения Ваших ДРУЗЕЙ?

<table>
<thead>
<tr>
<th></th>
<th>Да</th>
<th>Нет</th>
<th>Неважно</th>
</tr>
</thead>
</table>

14. Как часто Ваше мнение отличается от мнения людей, которые исповедуют одну и ту же с вами РЕЛИГИЮ?

<table>
<thead>
<tr>
<th></th>
<th>Да</th>
<th>Нет</th>
<th>Неважно</th>
</tr>
</thead>
</table>

15. Как часто Ваше мнение отличается от мнения большинства населения в вашей СТРАНЕ?

<table>
<thead>
<tr>
<th></th>
<th>Да</th>
<th>Нет</th>
<th>Неважно</th>
</tr>
</thead>
</table>

16. Как часто Вы ощущаете, что Вам трудно ПОНЯТЬ окружающий мир?

<table>
<thead>
<tr>
<th></th>
<th>Да</th>
<th>Нет</th>
<th>Неважно</th>
</tr>
</thead>
</table>
Социально-демографические данные

1) Каков Ваш пол? □ Женский □ Мужской

2) В каком городе Вы проживаете?

☐ Таллин
☐ Тарту
☐ Вильянди
☐ Нарва
☐ Кохтла-Ярве
☐ Йыхви
☐ Силламяэ
☐ Кивиыли
☐ Пюсси
☐ Другой (напишите) _______________

3. Вы (выберете один):

☐ Не состоите в браке
☐ Женаты (замужем)
☐ Разведенный (ая)
☐ Вдовец (вдова)
☐ Живете в гражданском браке

4. Какое Ваше образование? (Выберете один ответ)

☐ Я не обучался(ась) в школе
☐ Несколько классов основной школы
☐ Закончил(а) все классы основной школы
☐ Несколько классов гимназии (лицея)
☐ Закончил(а) гимназию (лицей)/свидетельство о среднем образовании
☐ Незаконченное среднее профессиональное образование (технический колледж, техникум, училище)
☐ Законченное среднее профессиональное образование (технический колледж, техникум, училище) (свидетельство об окончании)
☐ Несколько лет университета/института
☐ Университетский диплом (Степень бакалавра, степень Магистра, Кандидат наук, и т.д.)
☐ Другое (пожалуйста, напишите), _______________________

5. Какие Ваши религиозные взгляды?

☐ Русская Православная церковь
☐ Эстонская Православная церковь
☐ Иудаизм
☐ Римский Католик
☐ Лютеранская вера
☐ Пятидесятник
☐ Методист
☐ Баптист
Ислам
☑ Атеизм (не верю ни в какую религию)
☑ Другое (напишите) __________________________

8. У Вас есть медицинская страховка? ☐ Да ☐ Нет

9. Какой у вас сейчас источник дохода? (Выберете один ответ)
☐ Я работаю/трудоустроен
☐ Получаю пособие по безработице
☐ Получаю пенсию, льготы, материальную помощь по программе социального обеспечения
☐ Мой интимный партнер, семья или друзья (деньги на личные расходы)
☒ Незаконный доход (включает торговлю и распространение наркотиков, воровство, продажа краденого, проституция, и т.д.)
☐ Другие источники дохода (поясните) ______________________________

10. Каков Ваш легальный месячный доход? ________ эстонских крон
REFERENCES


Citizenship Act of Estonia. (1938). RT 1938, 39, 357; 43, 404 and 405 XVI.


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