

Predictors for Mental Health Problems among Young North Korean Refugees in South Korea

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Abstract The mental health of young North Korean refugees is poorly understood given that only a few empirical studies have been conducted on the issue so far. Therefore, the purpose of the current study was to determine the extent of mental health problems among these North Korean refugees in South Korea and to investigate factors that account for these difficulties. The findings indicate that 30.5% of young North Korean refugee respondents have clinical levels of depression/anxiety and 13% show clinical PTSD symptoms. Trauma exposure, acculturation stress and presence of intimate family in the South were significant predictors for both mental health conditions. The implications of the study outcomes are further discussed.

Keywords North Korean, refugee, youth, mental health, depression, anxiety, PTSD

1. Introduction

An influx of North Korean refugees entering into South Korea has been growing steadily with annual numbers reaching 3,000 or so for the past several years. The most recent official count places the total of North Korean refugees in South Korea at over 23,000 as of December 2011 (www.unikorea.go.kr, 2012) and this number is projected to increase steadily in the future.

There have been some shifts in the demographic composition of incoming North Koreans over time. The vast majority of early arrivals in the 90's were single male

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political asylum-seekers. Currently, an increasing number of females and families with children are entering South Korea (Kim *et al.*, 2010). As a result, school-age children and youth currently represent 12% of the total North Korean immigrants and include over 2,700 individuals as of December 2011 (www.unikorea.go.kr, 2012). The change in demographic composition of the arrivals reflects the changing motives for migration that shifted from political defection up to the early 90's to economic reasons in the last decade.

Many previous studies on North Korean refugees, particularly ones about their mental health issues, have focused on the adult population while few studies have been conducted on children and youth. Early studies of North Korean children and youth documented the type and extent of trauma these individuals had experienced (Keum, Kwon and Lee, 2004; Yang & Hwang, 2008). This included chronic malnutrition, experiencing or witnessing physical violence and sexual assault, fear of arrest in China and repatriation to North Korea, and separation from or death of family members (Yang & Hwang, 2008; Kang, 2007; Keum, *et al.*, 2004). These findings suggest that this population has a high susceptibility to mental health problems. Considering that education is an important developmental task for these children and youth, other studies focused on problems with adjustment to the educational system such as low academic achievement and high rate of school dropout rates (Kim, 2009; Lee, 2006; Gil, & Moon, 2003). Some studies examined acculturation issues (Yoon, 2003; Chang, 2008) given that adjustment to life in South Korea can be as treacherous as the migration process due to culture shock, social discrimination, and poverty (Chung, Yang, Lee & Hwang, 2006).

All these investigations indicated that North Korean youth are at high risk of mental health problems as they have to deal with multiple challenges and developmental tasks of adjusting to physical and psychological changes while dealing with the deleterious effects of trauma and acculturation distress. Without appropriate interventions, the studies suggest that these youth may develop various kinds of mental health problems that may include, but are not limited to, internalized problems such as anxiety, depression, suicidal behavior, and externalizing problems

such as substantial school dropout rates, juvenile delinquency, and alcoholism. It has also been observed that disruption in the early developmental processes of these refugees seems to adversely affect their ability to forge attachments and build trust in interpersonal relationships.

Empirical studies on the mental health of youth in the general population have identified factors that may influence the mental well-being of North Korean youth. Factors that were consistently found to influence mental health are gender, age, quality of family relationship, intrapersonal characteristics such as self-esteem, optimism, and resilience; and SES of the youth's parents. Girls are more susceptible to depression than boys (Kessler *et al.*, 1993; Lucht *et al.*, 2003; Park & Kim, 1998). The quality of family relationships is inversely related to mental health problem observed in youths. Additionally, positive intrapersonal traits such as self-esteem and resilience are associated with lower levels of depression and anxiety (Yang, Lee & Lee, 2006). Adversities experienced in life have been found to predict a higher level of mental health problems such as depression and anxiety as well as externalizing problems in youths (Sohn, 2009). Parental SES was found to be inversely associated with mental health issues of children. Subjective assessment of health has also shown close correlations with mental health status (Derdikman-Eiron, Indredavik, Bratberg, Taraldsen, Bakken, Colton (2011). The prevalence of depression among South Korean youth has been estimated to be 2.9% (Seoul Child and Youth Mental Health Center, 2005) and the rate of Post-traumatic Stress Disorder (PTSD) was reported to be 3.5% (Ahn, 2005).

Insight gleaned from studies of youths in the general population can only help to partially understand the North Korean youth population and their mental health difficulties. Reviewing studies on refugee populations will provide further insight for understanding young North Korean refugees. Life experiences prior to migration, during the migratory process, and during the resettlement stage pose risks for negatively impacting the mental health of refugee populations. Levels of trauma exposure and acculturation demands have emerged in past empirical research as two salient factors that impact the mental health of refugee populations and North

Korean migrants (Kim, 2006; Cho & Kim, 2010; Mollica *et al.*, 1998; Beiser & Hyman, 1997; Miller *et al.*, 2002). Factors frequently cited as sources of acculturation stress include discrimination, culture shock due to linguistic and cultural differences, lack of social support networks, and social isolation. Some unique features of acculturation stress among North Korean refugees are survivor guilt, fear for the safety of family members left behind due to the refugee's defection, and a sense of obligation to financially support the family members remaining in North Korea or to finance their escape to the South. Due to disruption in schooling in North Korea and the migratory process, adjustment to South Korean educational system is a daunting challenge for North Korean youth and is mentioned as great source of stress. School drop-out rate is very high among North Korean refugee youth (Kim, 2010).

These unique challenges for North Korean refugees require personal and social resources. Personal resources that were found to affect the level of psychological adjustment of the migrant population include self-esteem, personal coping styles, resilience, and proficiency in the language of the host country (Noh, 2001; Kim, 2006; Blair, 2000; Miranda & Matheny, 2000; Beiser & Hou, 2001; Chung & Bemak, 2002). Resilience is most appropriate for this study to measure internal resource as it refers to a dynamic two dimensional construct that implies exposure to adversity and the manifestation of positive adjustment outcomes (Luthar, Cicchetti & Becker, 2000). Social resources work as protective factors that buffer against the detrimental effects of trauma and acculturation stress. Resources proven to exert positive effects on migrant populations are the presence of immediate family members, perceived levels of social support, employment, and presence of an ethnic community (Kim, 2006; Han, 2001; Chung & Singer, 1995; Blair, 2000; Beiser, Johnson, & Turner, 1993).

Empirical data on the mental health status of young North Korean populations is relatively scant despite of many circumstantial evidences for significant mental health problems (Kim, Cho, & Kim, 2009; Yang & Hwang, 2008). Therefore, the present study was designed to address this gap by estimating the prevalence of men-

tal health problems defined as depression, anxiety, and PTSD. We also examined the relative contribution of trauma exposure and acculturation stress to the mental health of young North Korean refugees.

2. Methods

1) Sampling procedures and participants

The current investigation attempted to recruit a sample population that is representative of all North Korean youth in South Korea. However, the number of these youth is relatively small and these individuals are scattered throughout South Korea. They are also highly mobile which makes it very difficult to conduct randomized sampling. Therefore, only 214 participants were recruited for this study by convenience sampling methods and 200 completed the survey we administered. Out of the 200 respondents, 39 were from the Resettlement Orientation Center (ROC) and 161 were residing in the community at the time of the survey. The ROC is a residential facility that provides a 12-week orientation that teaches various topics from basic survival skills such as public transportation, shopping, and banking to Korean history and the democratic political system of South Korea. The ROC youth represented the total number of North Korean youth staying at the center during the survey period of October to December 2009. The survey for the community group was conducted with assistance from the Community Service Centers, a North Korean youth agency, and two alternative schools in Seoul and Ansong that are in frequent contact with North Korean youth. The sample for this study has characteristics similar to the total North Korean youth population in the 13-21 years old age bracket in terms of gender and age distribution.

2) Measurements

The questionnaire we administered was designed to obtain information about basic demographic characteristics along with mental health characteristics measured by depression and anxiety levels, and incidence of PTSD. Putatively universal risk and protective factors were identified from a review of previous empirical studies on refugee and immigrant youth as well as general youth populations. Variables such as the presence of immediate family members in South Korea, subjective health assessment results, and personal resilience were identified as protective factors. Trauma exposure and acculturation stress were considered major risk factors that posed a threat to the mental health of the North Korean youth.

A draft of the survey questionnaire was reviewed by three North Korean youths, two teachers at the alternative schools for North Korean students, and two therapists working with North Korean refugees for appropriateness of the items in the scales and wording. A pilot test with the draft questionnaire was conducted with North Korean youth in the ROC. Items that survived the two-stage process of community consultation and pilot testing were retained for the study. Anxiety and depression, two dependent variables of this study, were measured by the Hopkins Symptoms Checklist-25 (HSCL-25). PTSD, the third dependent variable, PTSD, was measured by the Posttraumatic Stress Diagnostic Scale (PDS). Predictive variables are comprised of protective factors of presence of intimate family members in the South, subjective health assessment, resilience and risk factors of trauma exposure and acculturation stress. Gender and age, two socio-demographic factors, were included as control variables.

The HSCL-25 is a well-known and widely used screening instrument that measures symptoms of depression and anxiety. It consists of 25 items including 10 items for measuring anxiety and 15 for depression. The scale for each question includes four response categories with respect to the past month from 1 = never to 4 = always. It has been widely used in evaluating the mental health of refugee populations and has shown to consistently correlate with indicators and diagnoses

of emotional stress (Bean, Derluyn, Eurelings-Bontekoe, Broekaert & Spinhave, 2007). The reliability of the measure in the present study was 0.927.

The Posttraumatic Stress Diagnostic Scale (PDS), a 49-item self-report measurement of PTSD, is designed to assess all DSM-IV diagnostic criteria for PTSD (Foa, Cashman, Jaycox, & Perry, 1997). The PDS is comprised of four sections. The first section is comprised of a list of common potential traumatic events and asks respondents to indicate whether they have experienced one or more of these events. The second section identifies events that were most distressing to the respondents and the timing of these events. The third section rates the frequency/severity of the 17 PTSD symptoms. The fourth section assesses functional impairment. Our study used the first and third sections of the PDS to establish the level of trauma exposure and symptom severity. The original PDS measures the effects of 12 traumatic events ranging from natural disasters to physical and sexual violence, serious illness, torture, and witnessing a traumatic scene. Specific examples of each traumatic event in the scale were modified to fit traumatic events commonly experienced by North Korean youth. The thirteenth item (“other”) was added to report uncommon and unique traumatic episodes. The total number of traumatic events reported was measured as the trauma exposure level. PTSD symptoms were rated on a 4-point scale with respect to the past month with 0 = not at all or only one time, 1 = once a week or less/once in a while, 2 = two to four times a week/half the time, and 3 = five or more times a week/almost always. Symptom scores are summed to yield a total symptom severity score ranging from 0 to 51. Higher scores indicated a more severe condition. The reliability of the scale in this study was 0.922.

The Acculturation Stress Scale (ASC) was developed to measure the acculturation stress of young North Korean refugees (Kim, *et al.*, 2009). The ASC is comprised of five constructs with a total of 16 items. Factors measured by the constructs include a sense of alienation (four items), culture shock (three items); and experiences of discrimination (three items), marginalization (three items), and homesickness (three items). The responses are expressed by a 5-point Likert scale (0 being ‘strongly disagree’ and 4 ‘strongly agree’). The higher the score, the greater the acculturation

stress experienced by the respondent. The reliability of the scale was 0.903.

The Resilience Scale (Kim, *et al.*, 2009) was a 13-item measurement tool for assessing the resilience of North Korean youth. It consisted of three constructs with a total of 13 items measuring hardiness (five items), capacity for intimacy (four items), and a clear sense of goals (four items). Responses were measured by a 5-point Likert scale with higher scores indicating a higher level of resilience. A subjective health assessment was performed by having the participants self-report on his/her physical condition. This was measured on 5-point scale with 1 being “very poor” and 5 being “very good”.

3. Results

1) Description of participants

Descriptive statistics of the survey participants are presented in Table 1. The gender breakdown is similar to that of the North Korean youth population in South Korea. Thirty-nine out of 200 individuals were living in the ROC at the time of survey, a place where recent arrivals undergo a 12-week resettlement orientation program, and 161 were residing in the community. The average length of stay in South Korea was 37 months with maximum of 138 months. The average migration time from the departure from North Korea to the arrival in the South was 24 months.

Even though the average age of the respondents was 18 years, the average years of education was 8 years, representing a 3-year difference between the years of actual schooling and the number of years of education expected for students this age. An average migration time of 2 years explains the gap in the educational process. Disruption in education as suggested by this gap seemed to adversely affect the adjustment to South Korean schools as only 22% were in regular schools while 39.5% were in alternative schools and 17.5% attended vocational training schools. The

21% who did not respond to inquiries about their education is very likely to have dropped out of school or never attended school in South Korea.

Only 26% of the respondents had both parents living with them and 51.5% lived with only one parent. 18% reported living with relatives or acquaintances, and 8.5% of the respondents did not have any family members in the South. 3.5% of the respondents reported their health as “good” or “very good”, 46.5% rated themselves as having average health, and the remaining 10% thought themselves to be in poor or very poor health. One out of four respondents reported their school performance to be poor whereas 50% rated their performance as average and 21.5% believed their performance to be “good” or “very good”. The level of overall satisfaction with life was relatively high with only 9.5% considering their life “poor” or “very poor”; 40.5% rated their life as “average” and 50% thought their life was “good” or “very good”.

2) Psycho-social Characteristics of Participants

71% of the respondents reported to have experienced one or more traumatic incidents in the past and had undergone an average of 2.5 traumatic events. The types of incidents most frequently reported were witnessing traumatic incidents such as the death or arrest of their family members (36.0%) or hearing about it (37.5%), followed by suffering violence or abuse by family or acquaintances (29.5%; Table 2). The scores for the main psychosocial variables are presented in Table 1. The mean resilience score was 2.85 (SD = 0.58) on the 5-point Likert scale. The mean acculturation stress score was 1.07 (SD = 0.58). ROC youth reported a significantly higher level of acculturation stress (mean = 1.33, SD = 0.32) than respondents residing in the community (mean = 1.00, SD = 0.46). This result may be associated with the length of time spent in the South. However, the overall level of acculturation stress was not too high for either group.

The mean HSCL-25 score for all respondents was 1.54 (SD = 0.48). Based on the cut-off point of 1.75 for clinical condition, 30.5% of the surveyed youth had clini-

Table 1. Socio-demographic characteristics of the study participants

Variables		Frequency (%)	Variables	Mean (SD)
Gender	M	92 (46)	Age (yr)	18.18 (2.60)
	F	104 (54)	Length of stay in the South (mo)	29.56 (25.83)
Residence	ROC	39 (19.5)	Duration of migration (mo)	23.61 (31.25)
	Community	161 (80.5)	Total time of education (mo)	96
Family composition	Both parents	52 (26.0)	In North Korea	60
	Single parent	103 (51.5)	In South Korea	25.15
	With relatives	20 (10.0)	In a 3 rd country	11.19
	Alone	17 (8.5)	Trauma events	2.54 (0.18)
Subjective health level	Poor	20 (10.0)	Resilience	2.85 (0.58)
	Average	93 (46.5)	Acculturation stress	1.07 (0.45)
	Good	87 (43.5)	HSCL-25	1.54 (0.48)
School performance	Poor	52 (25.5)	Clinical level	61 (30.5)
	Average	101 (50.5)	Non-clinical level	139 (69.5)
	Good	43 (21.5)	PTSD	9.89 (9.25)
Life satisfaction	Poor	18 (9.0)	Severe (≥ 36)	4 (2.0)
	Average	81 (40.5)	Severe to Moderate (35~21)	22 (11.0)
	Good	100 (50.0)	Moderate (20~11)	46 (23.0)
School	Regular	44 (22.0)	Low (≤ 10)	128 (64.0)
	Alternative	54 (27.0)		
	HanGeorye*	25 (12.5)		
	Voc. school	35 (17.5)		
	No response	42 (21)		

* Alternative boarding school for North Korean students

cal levels of depression and anxiety (Ichikawa, Nakahara & Wakai, 2006; Mollica *et al.*, 1999). 33.3% of the ROC youth and 29.8% of the community residents were identified as having clinical levels of depression and anxiety. Among 200 respondents, 2% were deemed to have severe PTSD; 11% fell into the severe to moderate category, which resulted in a total of 13% of the respondents having clinical condi-

tion of PTSD (Ahn, 2005).

3) Bivariate analyses

Results of bivariate analyses are presented in Table 3. Contrary to the outcomes of many mental health studies showing a higher prevalence of depression and anxiety among females in general, the current study did not uncover significant gender-specific differences in depression, anxiety, or PTSD. The male respondents indicated having experienced a significantly greater number of traumatic incidents than their female counterparts, and may explain the absence of significant differences in mental health issues between the two genders in this study.

When examining the relations between mental health variables and having family members to live with, individuals living with family members seem to consistently fare better (Table 3). They had lower scores for PTSD symptoms, depression, and anxiety (HSCL-25). The differences in PTSD and HSCL-25 scores were statistically significant. PTSD and HSCL-25 scores also differed significantly between

Table 2. The type and level of trauma

	Events	Frequency (%)
1	Serious accident, fire, or explosion	49 (24.5)
2	Natural disaster: flood, landslide, earthquake, typhoon	56 (28.0)
3	Violence by family members, relative or acquaintance	59 (29.5)
4	Violence by strangers	35 (17.5)
5	Sexual assault by family, relatives or acquaintance	10 (5.0)
6	Sexual assault by strangers	9 (4.5)
7	Sexual relationship before 18 with one 5 years or more older	10 (5.0)
8	Incarceration (imprisonment, being taken hostage, abduction)	45 (22.5)
9	Being tortured	22 (11.0)
10	Having a life-threatening serious illness	55 (27.5)
11	Witnessing traumatic incident involving family members(death, arrest etc)	72 (36.0)
12	Hearing about traumatic incident involving family members	75 (37.5)
13	Other traumatic events (e.g.,_____)	11(5.5)

Table 3. Comparison of clinical profiles

Variables	Group		Mean	SD	t/F test
HSCL-25	Gender	M	1.54	0.48	0.07
		F	1.55	0.48	
	Family present	Yes	1.52	0.47	2.35*
		No	1.81	0.62	
Trauma level	High	1.59	0.47	2.09*	
	Low	1.43	0.48		
Subjective health	Good <i>a</i>	1.66	0.43	4.45** b < c	
	Average <i>b</i>	1.62	0.51		
	Poor <i>c</i>	1.66	0.43		
PTSD	Gender	M	9.85	9.24	1.30
		F	10.02	9.28	
	Family present	Yes	9.38	8.74	2.46**
		No	15.00	11.31	
Trauma level	High	11.02	9.43	2.77***	
	Low	7.10	8.51		
Subjective health	Good <i>a</i>	8.0	8.83	5.22* a < c	
	Average <i>b</i>	10.37	8.72		
	Poor <i>c</i>	15.85	10.92		

* p < 0.05, ** p < 0.01, *** p < 0.001

individuals who had experienced traumatic incidents and ones who had not. Those with higher exposure to traumatic events indicated higher levels of PTSD and HSCL-25. Subjective assessment of overall health was significantly associated with mental health profiles. Those who reported themselves to be in good health showed better mental health as evidenced by HSCL-25 and PTSD scores than the ones reporting poor health

Bivariate correlations between risk and protective factors along with mental health outcome variables (HSCL-25 and PTSD) are presented in Table 4. Subjective assessment of overall health was inversely related with both HSCL-25 and PTSD scores (p < 0.05). As expected, major stressors experienced before and after the migration - that is, traumatic events experienced in the North, during migra-

Table 4. Correlation coefficients analysis of major variables

	Subjective health	Trauma level	Resilience level	Acculturation	HSCL-25	PTSD
Subj. health	1					
Trauma	-0.22*					
Resilience level	0.17*	-0.06				
Acculturation	-0.30*	0.15*	-0.29**			
HSCL-25	-0.28*	0.24*	-0.27*	0.38**		
PTSD	-0.24*	0.31*	-0.09	0.32**	0.66**	1.00

*p <0.05, **p <0.01, ***p <0.001

tion, and exposure to acculturation stress in the South - were positively associated with psychopathology in North Korean youth.

4) Regression analyses predicting mental health outcomes

This study was designed to further understand the effects of these stressors as well as protective factors such as health status, presence of family, and the youth resilience levels. To examine the effect of each factor when controlling for other factors, multiple regression models were constructed for HSCL-25 and PTSD data (Table 5). Mental health outcomes, expressed as HSCL-25 and PTSD scores, underwent regression analyses to estimate the relative effect of each predictive variable on the outcome variables. The HSCL-25 and the PTSD scores were regressed on the socio-demographic variables, and the putative risk and protective factors, respectively. The risk factors included trauma exposure level and acculturation stress, and the protective factors were subjective assessment of overall health, presence of family members in the household, and youth resilience levels. Gender and age were included as control variables as these have been shown to have salience to mental health in previous studies (Hong, 2004; Cho et al., 2010). The seven variables explained 21% of depression/anxiety, and 17% of PTSD observed in the present

Table 5. Regression analyses of HSCL-25 and PTSD outcomes

Variables	HSCL-25			PTSD		
	β	SE	β	β	SE	β
Constant	28.12	10.02		15.94	8.17	
Gender ¹	0.49	1.63	0.02	0.45	1.33	0.02
Age	-0.09	0.33	-0.02	-0.28	0.27	-0.08
Subjective health	-1.56	0.97	-0.12	-0.95	0.79	-0.09
Family presence ²	-6.60	2.91	-0.17*	-4.90	2.38	-0.15*
Trauma exposure	0.74	0.35	0.16*	0.94	0.28	0.26***
Resilience	-0.26	0.11	-0.17*	-0.04	0.09	-0.03
Acculturation stress	0.34	0.10	0.26***	0.25	0.08	0.24**
Adjusted R ²	0.215			0.170		
F	8.04***			6.26***		
n	181			181		

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

¹Reference group = males ²Reference group = individuals living with family members

study. Unlike the outcomes of previous studies, gender, age and subjective overall health did not exert much influence on depression, anxiety, or PTSD. The presence of family members ($\beta = -0.17$) and resilience ($\beta = -0.17$), representing external and internal resources variables, respectively, were negatively associated with depression and anxiety. In contrast, exposure to traumatic events ($\beta = 0.16$) and acculturation stress ($\beta = 0.26$) were positively associated with depression and anxiety.

The same predictive variables accounted for 17% of the PTSD score variance. The three variables of trauma exposure, acculturation stress, and living with family showed statistically significant levels of associations with PTSD scores. Exposure to traumatic events and acculturation stress made significant and independent contributions to PTSD development with ($\beta = 0.26$ and 0.24 , respectively). Respondents living with a family member were less likely to display PTSD symptoms as indi-

cated by β coefficient of -0.15.

4. Discussion

This study aimed to investigate the prevalence and factors that contribute to the mental health status of North Korean youth resettling in South Korea. It tested that the risk and protective factors identified in the previous studies. Findings of the current study showed that the young North Korean refugees have experienced many elements of instability in their life that would increase their susceptibility to mental health problems. These elements include high levels of exposure to traumatic events, loss of natural support system of family, and acculturation, which have been substantiated by previous studies. It was found that mental health problems are high as the prevalence of depression and anxiety among the respondents was at 30% and PTSD was at 13%. The findings are consistent in that high prevalence of mental health problems has been documented in many previous reports on North Korean adult refugees and refugee youth abroad (Kim, 2006; Cho *et al.*, 2010; Sack, Clark, and Seely, 1996; Tousignant *et al.*, 1999). Although previous studies reported a higher prevalence of psychopathology in girls compared to boys (Ahn, 2005; Kessler *et al.*, 1993), there was no significant difference in mental health between the two genders in the present study. We speculate that the greater level of trauma exposure among the boys accounts for the outcome of the current study.

The outcomes of this study also substantiated the effects of risk and protective factors on the mental health of young North Korean refugees. Risk factors such as exposure to traumatic events and acculturation stress had deleterious effects on mental health outcomes. Acculturation stress as a proximal stressor exerted a greater effect on depression and anxiety than trauma exposure, even though trauma was still a significant contributing factor. PTSD has been linked more to past trauma exposure. These findings are consistent with previous reports demonstrating that resettlement stressors have a greater influence on depression whereas trauma con-

tributes more to PTSD (Kim, 2006; Sack *et al.*, 1996; Heptinstall, Sethna, and Taylor, 2004). As expected, trauma exposure was the biggest contributing factor to PTSD. However, acculturation stress was almost as influential to the development of PTSD, thus highlighting strong impact of resettlement experiences on the mental health of young North Korean refugees.

Internal and external protective factors showed positive effects on mental health of North Korean refugee youth. Internal resource of resilience seems to ameliorate deleterious effects of risks on depression and anxiety in North Korean refugee youth but did not show an effect on PTSD. It seems that while internal resource may not prevent the immediate effects of trauma exposure, it exerts positive effect on reducing a rather chronic mental health problem such as depression and anxiety. Presence of immediate family had positive effects on depression and anxiety, and PTSD, which suggests the critical role of a family support system for these youth. Both external and internal resources seem to alleviate the negative effects of risk factors on the lives of these youth, which is consistent with previous studies (Brough, Gorman, Ramirez, and Westoby, 2003).

The results of this study highlight three primary implications. First, programs and policies should be designed to find ways to mitigate acculturation stress of North Korean youth living in South Korea. There are various methods that may help alleviate the acculturation stress of North Korean youth. These could include anti-discrimination education for children and youth in schools and instituting anti-discrimination school policies to create a safe and supportive environment. A comprehensive individualized education plan for all new arrivals at the ROC should be developed that address not only academic but also the social and psychological needs of the refugees in order to help these youth adjust well. Finally, a referral system should be established between the ROC and other community programs for those in need of close monitoring after being released from the ROC for continuity of care.

Secondly, we suggest the use of some simple indicators for early identification of youth at risk for mental health issues. High trauma exposure and absence of family

would be indicative of greater risk and a need for further mental health assessment. Attention should be given to culture-unique manifestations of mental health problems in somatic symptoms.

Thirdly, some of mental health interventions for North Korean youth may include efforts to restore or augment personal resources such as resilience. Internal resources can be developed through social and communication skills program, which in turn help the refugees forge positive relationships with peers and others, and reduce acculturation stress. Cognitive-behavioral components are effective in enhancing ego resilience of children and youth (Gillham, Reivich, Fereres et al., 2006) and personal coping and acculturation skills (Kim, 2006, 2009; Noh and Kaspar, 2003). Social support networks can be expanded through mentoring programs and positive activities such as art, sports, and academic programs. Integrated programs that encourage participation of both South and North Korean youth will be particularly effective in expanding the personal and social resources of North Korean youth.

This study had a few methodological limitations. Our findings are based on data from individuals that were selected by convenience sampling methods and may not be representative of North Korean youth. The results should therefore be interpreted with caution and not be generally applied to all North Korean youth. However, the aim of the study was to establish a basis for estimating the degree of mental health problems of North Korean youth and to investigate the impact of theoretically meaningful factors on the mental health of these individuals. Even though social support plays an important role in one's mental health, information on social support was not available for this study.

Despite this limitation, the results of this present study substantiated the high prevalence of mental health problems among North Korean youth and provided empirical evidence on the negative effects of pre- and post-migration stresses on young North Korean refugees. The study outcomes also include personal and social resources that ameliorate the deleterious effects of stresses on their mental health. The indicators identified in the present study as risk and protective factors for men-

tal health of young North Korean refugees will help develop resettlement assistance policies and programs that respond better to the mental health needs of North Korean refugee youth.

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탈북청소년의 정신건강문제에 대한 예측 요인

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요약 탈북청소년의 정신건강에 대한 실증적 연구가 소수에 불과하여 이들의 정신건강에 대한 심도 있는 이해가 필요하다. 따라서 본 연구의 목적은 탈북청소년들의 정신건강 문제의 정도를 파악하고 이들의 정신건강문제에 기여요인을 파악하는 것이다. 본 연구결과에 의하면 연구에 참여한 탈북청소년의 30.5%가 임상적 수준의 우울/불안을, 13%가 PTSD를 경험하는 것으로 나타났다. 외상경험, 문화적응 스트레스, 남한에 친가족이 있는 것 등이 두 정신건강 문제에 유의한 영향요인인 것으로 나타났다. 연구결과와 함의가 논의되었다.

주요어 북한이탈주민, 난민, 청소년, 정신건강, 우울, 불안, PTSD

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