

The Impact of Unusual Social Experience during the Sojourn on the Health of North Korean Defectors

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ABSTRACT

The number of North Korean defectors entering South Korea to seek permanent residency has notably increased recently. This population is unusual in terms of their experience in the third countries they had to pass before they finally enter South Korea. This study examines the health of North Korean defectors who currently reside in South Korea, focusing on three social characteristics unique to this population as fugitives that may have important impact on their health: duration of sojourn in the third country, major third country during the sojourn, and with whom they are accompanied during the sojourn. Health is measured by self-assessment of global health. Data are gathered from the North Korean defectors (n=221, aged 20 and more) housed in Hanawon, a governmental facility that houses all North Korean defectors for eight weeks to help them adjust to South Korean society. The results from descriptive and multivariate analyses show that the longer-duration in the third country and being accompanied with one or more family members during the sojourn positively affect the health of North Korean defectors. However, the country where

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defectors mainly stayed during the sojourn as a bridge between North and South Korea does not affect the health of this population. While most demographic characteristics affect their health in a direction generally expected, higher educational attainment and the membership of Labor Party in North Korea show negative association with their health. We found that North Korean defectors seemed to improve their health status as residential duration within an interim country increased in spite of their unstable social status and lack of access to health care. It may imply unbelievably abject health and health care contexts within North Korea.

Keywords: North Korean defectors; Fugitive; Self-rated health; Physical conditions

INTRODUCTION

Recently there has been a notable growth in the number of North Korean defectors who enter South Korea seeking permanent residency. In 1999, there was only 148 North Korean defectors who came to South Korea, but the number has increased to 1,139 in 2002, and 1,894 in 2004 (South Korea's Ministry of Unification, 2005)). Since almost all defectors come to South Korea via neighboring countries (China, Cambodia, Mongolia, Russia, Vietnam, and so on) rather than crossing the DMZ (de-militarize zone) between South and North Korea, political and diplomatic concern and interest in this population has increased across related countries. In spite of the increased international interest, this population has been understudied yet. Particularly research on the health of North Korean defectors has been very rare. To our knowledge, there have been only three studies on the health of this population. Suh (2002) examined psychological and emotional instability of this population during the process of adaptation and resettlement in South Korea. Lee et al. (2001) studied mental health and trauma experience of North Korean defectors who illegally stayed in China escaping from the famine in North Korea. Robinson et al. (1999) surveyed North Korean migrants in Yeonbien area, a Chinese border city, to investigate the mortality patterns and trends in North Korea. Although these studies are noteworthy, they focus on the health issues of North Koreans only in North Korea (Robinson et al. 1999) and in China (Lee et al. 2001) or on the influence of South Korean society on the emotional health of North Korean defectors (Suh, 2002). We do not know yet which and to what extent unusual and extraordinary experience of North Koreans as defectors in the third countries is associated with the health of this population.

This study aims to examine the health status of North Korean defectors who

have just entered South Korea, paying particular attention to the effect of three characteristics that they may have experienced while exiling in the third countries: duration of sojourn, major third country during the sojourn, and with whom they are accompanied during the sojourn. Further, we investigate the influence of demographic and socioeconomic status that they currently or used to have in North Korea on their health. As discussed in depth below, North Korean defectors are unique in terms of their migrant status. In a sense they are immigrant who voluntarily crossed international borders seeking better quality of life. But they are also refugees who are not able to return to their origin country, North Korea, and seek for asylum in South Korea. Indeed it is not easy to clearly conceptualize their migration status, because they are always wary of being caught and sent back to North Korea by the third country governments, especially Chinese government, and have to hide themselves from the authorities before they come to South Korea, unlike immigrants or refugees in a general sense. Therefore, this study also aims to parse out if the determinants of health are similar to the patterns generally known to immigrants or refugees.

Previous overviews: characteristics of immigrants, refugees and N.K. defectors, and their general health status

Immigrants can be divided into two groups conceptually: economic immigrants (hereafter “immigrant”) and refugees (hereafter “refugee”). They seem to commonly bear a two-fold burden in the destination country as a racial/ethnic minority group with relatively low social positions (Lindström et al., 2001). But they are very different in many senses. Immigrants are generally young or middle-aged who have motivation, skills, knowledge, resources, and/or necessary social ties. They also

voluntarily migrate to other countries where, usually, they can have better economic opportunities legally or illegally. Moreover, they have ability to return to their homeland whenever they desire (Cortes, 2004; Sundquist, 1995). In light of health issues, immigrants are generally a healthy selective group, because only strong and healthy people can migrate while health problems can be a barrier of migration. Refugees, on the other hand, voluntarily or involuntarily leave their homeland in order to ensure the survival and safety of themselves and family, and are unable or unwilling to return home for fear or threat of psychological or physical persecutions. Thus, they continually try to seek an eternal asylum, where there is a possibility of securing immigrant status and, eventually, citizenship (Kopinak, 1999). Thus, immigrants tend to be healthier than their host populations in their early arrivals, as well as non-immigrants in their homeland (Pudaric et al., 2003), while refugees tend to be unhealthier than their host populations due to physical and mental trauma such as the poor access to health care during and after the sojourn, social hostility or prejudice toward them from host populations, and the low level of social/financial resources (Salant and Lauderdale, 2003; Kopinak, 1999). The positive selection effect on immigrant's health (so-called "healthy migrant effect") has known to wear off with increased duration of residence (Cho et al., 2004; Lindström et al, 2001; Abbott et al., 2000; Sundquist, 1995). The exposure to social and cultural environment of a host country gradually lowers the protective influence of cultural buffer that immigrants share with their co-ethnics. Unlike immigrants, the health of refugees has known to gradually improve with time. Their health at the time of entering the host country is already in the most inferior stage due to the physical and emotional pain that they experienced in homeland or during the sojourn. After a certain time period in the

destination country, they gain legal status with access to health care and social resources provided by the host government, which protectively affect the health of this population. However, due to the struggled life with an overwhelming number of stresses, difficulties, and challenges from the adaptation processes to new society and culture, the health of refugees also known to follow the health trajectory of immigrant populations when their duration of residence increases (Cho et al. 2004).

In addition, the health of immigrants and refugees in a new country are affected by the general risk factor such as sociodemographic characteristics (e.g., age, sex, marital status, education, and the number of family members) and health behaviors (e.g., smoking status and alcohol consumption). Here we introduce some interesting discussions from previous studies on immigrant and refugee health which particularly examine self-rated health status, the main health outcome variable employed in this research. Female refugees are known to encounter many more unexpected challenges than do male refugees, such as discrimination, an abrupt change in roles, and lowered self-esteem, which unfavorably affects their subjective health (Kopinak, 1999). On the other hand, female immigrants of Asian background have lower rates of health problems than do male counterparts due to their greater health promoting behaviors rooted on the conservatism within traditional roles (Salant et al., 2003). In regard to marital status, because marriage is associated with tremendous supports and benefits to immigrants by assisting emotional adaptation and providing a financial partnership in a new country (Montgomery, 1996), the married or cohabited are generally reported to feature healthier self-rated status than the immigrants of other marital status. On the other hand, Read et al. (2005) find that the married tend to rate themselves to have worse health than those divorced/widowed/separated among

immigrants from Arabia, net of ethnicity and duration of residence in US. Regarding educational attainment, favorable health status is found to be associated with the years of education among immigrants and refugees, although education received from the origin countries is often not accredited in the host society. It may be that immigrants with high education are more likely to feel better adjusted in a new society and to speak or learn a foreign language better than those with lower education (Pudaric et al., 2003; Montgomery, 1996; Sundquist, 1995). Regarding health behaviors (smoking status and alcohol consumption), Sundquist (1995) reports that the smokers among refugees or labor migrants in Sweden are more likely than their non-smoker counterparts to rate themselves having poor health. However, Lee et al. (2000) report that the health of never smokers is inferior to smokers (current and former) among Korean Americans, even after controlling for the level of acculturation, demographic and SES characteristics, and health behaviors. Although there have been few empirical studies on the association between alcohol consumption and self-rated health of immigrants/refugees, it is deemed that a common pattern shown among non-immigrant population would hold true for the immigrants as well. That is, alcohol consumption exhibits a J-shaped association with self-rated health with best health among the moderate drinkers and with worst among the heavy drinkers compared to never drinkers, after controlling for sex, age and other health behaviors (e.g., smoking status, BMI, and so on) (Manderbacka et al., 1999). According to Finch and Vega (2003), the greater numbers of family members people have in the U.S., the more favorable self-rated health they report, regardless of whether immigrants or refugees.

Then, what are the characteristics of N.K. defectors? According to Ko et al. (2002), N.K. defectors can be divided into three categories by the motive of defection:

economic reasons (hunger, malnutrition and fear of starvation), political persecution, and family reunion. No matter what the reasons are, staying in neighboring countries, especially in China, after crossing the border is not the end of defection. Rather, it is the beginning of another pressure, because China has kept “An Agreement on Repatriation of Border Crossers” with North Korea since 1987. Despite the call by the international community to stop the practice, China continually regards them as not “political refugees” but “economic floaters,” who are not qualified for legal protection. As a result, a huge number of N.K defectors who cross the border of China in search of food and basic necessities are forcibly repatriated back to North Korea when caught by the Chinese authorities: 5,439 in 1997, 6,300 in 1998, and over 10,000 in 2000 (Lee, 2004; Lee et al., 2001; Cho, 2000). Its underlying reasons may be that China tries to minimize social problems within its territory and to prevent possible mass escapes which will trigger political friction with North Korea. In addition, China strongly refuses to allow the UNHCR (United Nations High Commissioner for Refugees), religious, or civic organizations to access to the border area, where there are large numbers of defectors (Ko et al., 2002). Thereby, most N.K. defectors staying in China are not protected by international law and are outside of the reach of international aids. Consequently, they have little recourse of justice, security and medical care even under a critical event of accident or attack.

N.K. defectors in China always have to be cautious of being not detected and arrested from the authorities. When their sojourn in China becomes prolonged, just hiding in towns or mountains cannot be a solution from the problems that they confront. They have to find financial resources not only to simply survive but also to generate migration funds to their final destination (South Korea). They usually work as a

cheap or non-wage worker in rural communities where they can, relatively easily, elude surveillance of authorities (Lee, 2004; Ko et al., 2002). Female N.K. defectors have a relative advantage of finding financial security working as housemaids, waitresses, or janitors. Further, some female defectors find marriage to ethnic Koreans or Chinese as an instrumental way of gaining financial support or legal status, although many of them become the object of human-trafficking and are sold as a hostess or as a prostitute. In spite of their unstable and stressful life in China, they usually cannot return to their homeland. If they are caught, not only themselves, but also their family members are subjected to harsh punishment, including incarceration in a political prison camp or execution, because North Korea considers the very act of crossing the border out of its territory as an act of betrayal. Besides, not only prejudice and discrimination by Chinese citizens against N.K. defectors, but also their family left behind in North Korea is a critical source of psychological stress (Ko et al., 2002).

A number of N.K. defectors choose to move neighboring countries such as Mongolia, Vietnam, Cambodia, and Russia from China where South Korea embassies or consulates are located. Although the move itself guarantees neither complete freedom nor allowance of entrance to South Korea, these countries do not have the strong hard-line policy toward N.K. defectors, which is believed to alleviate much of the physical and mental stress or trauma they had to bear in China. Thus, their life is never secure until they arrive at their final destination (South Korea), and such unusual experience during sojourn in China or other neighboring countries may work as a serious risk factor to the health of this population. Note that most N.K. defectors use China as a basic route of sojourn, since North Korea shares about 90% of its inland

border with China (remaining 10% with Russia). Even most of those who mainly stayed in other third countries had been through China at least a short period.

Therefore, we suggest three hypotheses regarding the unusual experience of N.K. defectors as fugitives and their health, focusing on three characteristics (duration of sojourn, major third country of sojourn, and the companions of sojourn). First, duration of sojourn will negatively affect the health of N.K. defectors, since longer duration in the third countries as fugitives may increase the level of physical and emotional stress and trauma to this population. Second, N.K. defectors who mainly stayed in China prior to entering South Korea will show more adverse health status compared to those stayed in other countries, because the enforced repatriation policy of China may negatively affect the health of N.K. defectors. Finally, we hypothesize that N.K. defectors who accompanied with one or more family member(s) during sojourn will rate their health more positively than those alone or accompanied someone else than family members (e.g., friends, neighbors, or strangers), because they may receive emotional support from the fact they are accompanied with family that offsets stress and financial burdens caused by accompanied family members.

METHODS

Participants and procedures

Upon arriving in South Korea, all N.K. defectors are moved to the investigation institution (so-called “Dae-Sung-Gong-Sa”), a completely sealed-off place from outside world, and usually stay there for 1-4 weeks. Then they are moved to Hanawon. Hanawon is a government shelter facility for N.K. defectors funded and operated by the Ministry of Unification of South Korea, since July 1999, to provide an intensive two-month resettlement training course (i.e., easing the socioeconomic and

psychological anxiety of N.K. defectors, overcoming the barriers of cultural heterogeneity, and offering practical trainings for earning livelihood in South Korea). All N.K. defectors have to go through Hanawon to gain legal status and protection by the government in South Korea. Each month, about 60-100 N.K defectors including children were admitted to this facility in 2003. Thus, N.K defectors housed in Hanawon make the ideal population for this research that focuses on the impact of social experience they had to go through during sojourn on their health.

Prior to the main survey, a pretest questionnaire was reviewed by two N.K. defectors (43 and 32 year old in 2003), who entered South Korea via China in 1997 and 2000 and have now settled in Seoul as a religious minister and an undergraduate student, respectively. Linguistic variations (differences in expression and wording between North and South Korea) that could mislead the result were modified by them. With the administrative assistance from Hanawon, we were able to survey N.K. defectors a total of six times from June to December 2003. We excluded those who refused to participate in the survey. The interview took about 20 minutes and all questions regarding the survey and each question raised by the participants were answered by the trained interviewers. A total of 247 N.K. defectors participated in the survey. Some participants (n=18) with missing data on some questions important to the purpose of this, such as self-rated health, age, and sex, or who are aged under 20 years old (n=8) were omitted. Consequently, information from a total of 221 N.K. defectors is utilized in the current study.

Dependent Variable

We measure global health status of N.K. defectors using self-rated health status. Since research on the health of N.K. defectors has been rare and self-rated

health status, of course, has not been used for this population, we do not have sound groundings that this outcome is useful and appropriate in measuring health status of this population. However, it has been reported by a number of studies that self-rating of one's health status a useful indicator of global health which is highly correlated with morbidity and mortality in various demography and social context (e.g., Finch and Vega, 2003; Doctor, 2001; Lindström et al., 2001; Lee et al., 2000). Further, Pudaric et al. (2003) report that decline in self-rated health is significantly associated with worsening of objective health. Participants of this study were asked to self-rate their health using four response categories: "excellent", "good", "fair", and "poor". Most studies which use this health outcome dichotomize the response categories no matter how many response categories are provided to respondents (e.g., Edgar Iglesias et al., 2003; Lindström, 2001). Here we also dichotomize the response categories merging "excellent" and "good" into one and "fair" and "poor" as the other.

Independent Variables

Three main effects of experience of N.K defectors as fugitives in the third countries (duration of the sojourn, major third country of the sojourn, and accompanied persons during sojourn) are measured in the following manners. Duration of the sojourn is trichotomized: "less than 1 year", "1-2 years", and "3 years or more". Major third country prior to entering South Korea is classified into two categories: "China" and "Others (including Cambodia, Hong Kong, Mongolia, Thailand, Ukraine and Vietnam)", because 81.9 % of the participants came to South Korea via China. Companion of the sojourn is measured by the three categories: "family", "single", and "others (including friend, neighbor, and stranger)".

Categorization for other control variables such as demographic profiles (age,

sex, and marital status), socioeconomic status (educational attainment), and health behaviors (cigarette smoking and alcohol consumption) are straightforward. Note that Chosun Labor Party membership in North Korea is involved in our study. We believe this variable suggests the socioeconomic status of N.K. defectors when they were in North Korea, since the party membership is a necessary condition that one can be successful in North Korea. The party membership also suggests that one is intensively educated about Chuche ideology (so-called “Dear Leader Absolutism” or “Kimilsungism”) and has power of control and monitor that their general population does not have (Maxwell, 2004; Lee, 2002). Accordingly, the Labor Party membership indicates one’s socioeconomic status in North Korea as well as more advantageous health status with more resources. Dichotomous membership status (member versus non-member) is used in this study. We also include dichotomized physical symptom status as to control the baseline health and conditions of N.K. defectors.

RESULTS

Descriptive Analysis

Table 1 documents the weighted descriptive result of bivariate associations between various risk factors and the outcome variable, self-rated health. “Poor” self-rating of health is more likely associated with shorter duration of the sojourn in the third country, and slightly less than a half of respondents (47.5%) spend at least three years before they finally enter South Korea. N.K defectors who mainly used China as a bridge between North and South Korea are more likely to rate their health being “good” compared to others who used other countries, although statistically not significant. Regarding persons who they accompanied during sojourn, majority

(53.9%) answered that they are accompanied with their family members, and they seem to enjoy better self-ratings of health than fugitives who are single or accompanied with others.

In terms of the association between control variables and self-rated health of N.K. defectors, several findings are worthy of special attention. Unlike the general patterns, defectors with college or higher educational attainment are more likely to rate their health being “poor” than their counterparts with lower educational attainments. Similarly, defectors who answered that they had Labor Party membership in North Korea seem to have worse self-rated health than non-member defectors. Since these findings from Table 1 are unadjusted, it is obviously necessary to adjust for all covariates selected in this study to find out which and to what extent individual’s risk factors are associated with self-rated health among North Korean defectors. Accordingly we postpone our discussions on the major findings from Table 1 until after the multivariate analyses.

-- Table 1 about here --

Multivariate Analysis

The parameter estimate result of logistic regression analysis, in the form of odds ratios with 95% confidence intervals in the parenthesis, is reported in Table 2. Model 1 is a baseline model that includes all control variables such as individual’s demographic and socioeconomic characteristics, physical symptom status, and health behaviors, while none of three main independent variables are involved. Results show that being female, having physical symptoms, and being smoker significantly elevates the odds of “poor” self-ratings of health among N.K. defectors. Although not statistically significant, odds ratios of educational attainment and party

membership indicate worse health of the highly educated and Labor Party members, which is consistent with findings from descriptive analysis. This puzzling and inconsistent finding in contrast to the generally expected patterns of association will be explained in the discussion section. Interestingly, the widowed are less likely to assess their health being “poor” than their married/cohabitated counterparts, net of other risk factors. This pattern does not change in the subsequent models. In Model 2 through 4, each exposure characteristic is successively included. N.K. defectors with shorter duration of the sojourn are more likely to rate their health being “poor” than those with longer-term duration in the third countries (Model 2). Further, being accompanied with non-family members during the sojourn elevates the odds of negative self-assessment of health (Model 4). The country where N.K. defectors mainly stayed during the sojourn does not show any notable effect (Model 3). In these models, the effects of other risk factors on self-rated health show almost no change in their magnitudes and statistical significances compared to those observed in Model 1, except in the case of marital status. The odds ratio for being divorced/separated turns to less than the unity when the person accompanied during sojourn is taken into consideration (Model 4), although it is not statistically significant. It may be that this population tends to be accompanied with non-family members during sojourn in the third countries, which negatively affects their health. In the full model (Model 5), where all risk factors are simultaneously considered, most odds ratios remain unchanged in their magnitude and significance except for the main third country during sojourn. Although not statistically significant, the odds ratio turns to be less than the unity (from 1.13 in Model 3 to 0.92 in Model 5), which indicates that N.K. defectors who mainly stayed in other countries are more likely to be accompanied

with non-family members during the sojourn.

-- Table 2 about here --

DISCUSSION

The purpose of this study is to examine which and to what extent individual's risk factors are associated with self-rated health among North Korean defectors, particularly focusing on the social experience unique to this population as fugitives during the sojourn. Based on this research question, we suggested three hypotheses: (1) the duration of the sojourn in the third countries will negatively affect the self-ratings of health; (2) the experience of sojourn mainly in China will be associated with the increased risk of "poor" self-rated health; and (3) exiling with at least one family member will be advantageous to the health of this population.

Since N.K. defectors, in general, have to go through serious physical and emotional trauma and stress associated with their illegal status and lack of social/financial resources in the third countries, we expected that prolonged duration of the sojourn would negatively affect their health. Both descriptive and multivariate analyses show results opposite from our expectation. One possible explanation is that the effect from the seriously abject food and public health conditions in North Korea may remain much strongly among the N.K. defectors with shorter-term duration of the sojourn in a third country (Lee et al., 2001). In North Korea, almost all daily necessities, including food and medical services, are provided and administered by the central government. Thus it would be better to find opportunities for food and medical services in the third countries, including China, than in North Korea where overall food and medical situation is in the worst situation, and the longer duration would provide them more opportunities, even though they always have to suffer from

the stress of being arrested by the authorities in China and repatriated back to North Korea. Further, those who just defected from North Korea may experience unstable emotional anxiety associated with a new social system, culture, and social status in the third country that they never have experienced or expected in North Korea. In contrast, the longer the duration of sojourn, the more they are adjusted to new culture and social system and even their status as fugitives. Thus, acculturation to the third country and the de-North Koreanization process seem to have protective effect on the health of N.K. defectors.

Due to the hardline policy of the Chinese government toward North Korean defectors, a policy that considers this population not as asylum-seeking refugees but as simple illegal migrants who must legally be repatriated back to North Korea, it is very probable that defectors in China may suffer from a higher level of mental stress and emotional anxiety which may result in the negative self-assessment of global health, compared to those in within other third countries. However, our results show that the utilization of China as a major route of flight does not significantly change the global health status of defectors from those who utilize other countries. It may suggest that the impact of social, cultural, and political stresses encountered in other countries is not altogether different from those experienced in China. It is also possible that defectors in China versus other countries may have closer access to resources they can utilize during exile and toward achieving their final goal of entering South Korea, which may blur the effect of major country on their self-rated health.

With regard to the effect of companion during the sojourn, findings from this research support our third hypothesis that being accompanied with at least one family member exerts protective effect on the self-rated health status of N.K. defectors

Perhaps, N.K. defectors who are alone or accompanied with non-family members during the sojourn may feel guilty about their families being left behind in North Korea, which would cause emotional unjustness or anxiety because their family members left behind in North Korea will be stigmatized as family of the national traitor or even experience physical assaults (Ko et al., 2002; Suh, 2002). Indeed, Kopinak (1999) argues that one of the sources of stress that hamper the coping ability is constant rumination of family members left behind. It is also probable, as we already discussed, that family members would be a mighty source of emotional comfort and support. According Finch and Vega (2003), the greater family members immigrants have in a third country, the more they can share their innermost thoughts, feelings, and problems.

We have noted that the social status of N.K. defectors is unique and they are neither economic immigrants nor refugees. Findings from the current research also suggest that their health trajectory is different in some senses from what have been reported for the health of immigrant and refugee populations. N.K. defectors with higher educational attainment show a tendency to have less favorable health than do their less educated counterparts net of various risk factors. Although the effect is not statistically significant, the magnitude of odds ratio indicates substantial influence which may have been significant when the sample size were larger. Studies have shown that the advantageous effect of education holds true even for immigrant populations no matter where they achieved the highest educational diploma (Finch and Vega 2003). The reason for the inconsistent findings on the effect of education on the health of N.K. defectors may be related with the substantial reduction in their social status after they voluntarily crossed the border. We believe the level of education is

associated with the level of social resources in North Korea just as any other society, although we do not have clear reference. Defectors with high education and associated social resources may acquire strong loss of self-esteem or enervation during the sojourn in the third countries where their educational attainment is hardly compensated. Further, they have to encounter a great range of physical challenges during the sojourn which they may not have experienced before defection. However, we do not expect that the disadvantages of education on their health would continue even after they are successfully settled in South Korea. Just as observed among immigrants in general, educational attainments will help them settle in and adjust to South Korean society which, in turn, positively affect their health. The negative association between Labor Party membership with self-rated health among N.K. defectors found in this research can be understood in a similar fashion.

Our study has several limitations. To begin with, this study considers only self-rated health to measure current health status due to the limitations in time that we could access the N.K. defectors in Hanawon where external approach is extremely restricted. Although self-rated health is widely used as a predictor of all cause morbidity and mortality (Wiking et al., 2004), examining more health indicators may have been helpful to better understand the health determinants for this population. This study is also limited in that it does not address the relationship between stressors related with acculturation in the third countries (such as perceived discrimination, language conflicts, social supports, and so on) and self-rated health. Studies have discussed the importance of acculturation as a determinant of immigrant health (e.g., Lee et al., 2000; Finch and Vega, 2003). Lastly, there has been difficulty in drawing inferences about causal pathways between the variables of interest in this study and

self-rated health of N.K. defectors due to the cross-sectionally structured data. Accordingly, in order to identify the underlying causal mechanisms, future research should consider construction of longitudinal data sets which will be useful in preparing international health policies for this population.

Despite these and other limitations, our findings suggest that more attention should be paid to N.K. defectors who stayed less than 1 year in the third countries and entered South Korea with one or more friend(s), neighbor(s), or stranger(s), as well as to who are older, female, smoker, and have one or more physical symptom(s). To our knowledge, this study is the first attempt to examine the association of unusual social experience of North Koreans under sojourn in the third countries with their health. As already begun, it is not hard to imagine that more North Koreans would cross border to seek better quality of life due to the continuous famine and hunger in North Korea. More academic and politic attention should be paid to the health of this population.

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TABLE 1. Percentage distributions of demographic, socioeconomic status, and unusual social experiences by the self-rated health of North Korean defectors housed in Hanawon in 2003

	Poor	Good	N
Exile duration			
Less than 1 year	62.8	37.2	78
1-2 years	52.6	47.4	38
3 or more years	40.0	60.0	105
Major routing country			
China	48.6	51.4	181
Other countries*	57.5	42.5	40
Exile companion			
Alone	48.2	51.8	81
Others†	76.2	23.8	21
Family	47.1	52.9	119
Age, mean (SD‡)	38.4 (11.7)	36.7(12.3)	221
Sex			
Female	51.5	48.5	103
Male	49.1	50.9	118
Marital status			
Single	46.4	53.6	69
Divorced/separated	58.1	41.9	31
Widowed	37.5	62.5	24
Married/cohabitating	53.6	46.4	97
Educational attainment			
Middle/high school or less	48.3	51.7	147
Higher specialized school	45.8	54.3	46
College or more	67.9	32.1	28
Labor Party membership			
Non-member	47.4	52.6	171
Member	60.0	40.0	50
Physical symptoms			
Yes	65.9	34.1	135
No	25.6	74.4	86
Smoking status			
Smoker	55.1	44.9	89
Non-smoker	47.0	53.0	132
Alcohol intake			
Drinker	46.5	53.5	99
Non-drinker	53.3	46.7	122
Total N	111	110	221

* Cambodia, Hong Kong, Mongolia, Thailand, Ukraine or Vietnam.

† Friends, neighbors, or strangers.

‡ SD, standard deviation

TABLE 2. Odds ratios for the effect of unusual social experiences during exile on self-rated health* of North Korean defectors

	Model 1		Model 2		Model 3		Model 4		Model 5	
	OR†	95% CI‡	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Exile duration (3 or more years)										
Less than 1 year			2.29	1.13, 4.64					2.69	1.25, 5.76
1-2 years			1.61	0.66, 3.91					1.87	0.75, 4.69
Major routing country (China)										
Others countries§					1.13	0.51, 2.50			0.92	0.38, 2.22
Exile companion (family)										
Alone							1.37	0.68, 2.77	1.51	0.73, 3.13
Others#							6.10	1.63, 22.89	7.82	1.94, 31.54
Age (continuous)	1.04	1.00, 1.08	1.04	1.00, 1.08	1.04	1.00, 1.08	1.04	1.00, 1.08	1.05	1.00, 1.09
Sex (male)										
Female	4.05	1.29, 12.74	4.48	1.40, 14.37	4.09	1.30, 12.91	4.70	1.45, 15.26	5.38	1.61, 17.98
Marital status (married/cohabitating)										
Single	1.31	0.52, 3.29	1.52	0.59, 3.91	1.29	0.51, 3.26	1.04	0.40, 2.71	1.22	0.45, 3.28
Divorced/separated	1.20	0.42, 2.88	1.01	0.41, 2.96	1.09	0.42, 2.87	0.85	0.32, 2.29	0.84	0.30, 2.32
Widowed	0.26	0.09, 0.78	0.30	0.10, 0.93	0.26	0.09, 0.78	0.26	0.09, 0.80	0.31	0.10, 0.98
Education attainment (college or more)										
Middle/high school or less	0.49	0.17, 1.35	0.45	0.15, 1.31	0.48	0.17, 1.37	0.49	0.17, 1.39	0.45	0.15, 1.33
Higher specialized school	0.39	0.12, 1.24	0.38	0.12, 1.23	0.39	0.12, 1.25	0.38	0.12, 1.21	0.36	0.11, 1.18
Labor Party membership (member)										
Non-member	0.79	0.33, 1.91	0.89	0.36, 2.17	0.79	0.33, 1.90	0.67	0.28, 1.64	0.76	0.31, 1.90
Physical symptoms (no)										
Yes	6.94	3.39, 13.43	6.73	3.45, 13.11	6.92	3.57, 13.40	7.53	3.80, 14.94	7.38	3.68, 14.80
Smoking status (non-smoker)										
Smoker	4.94	1.74, 14.04	5.01	1.75, 14.33	4.90	1.72, 13.96	4.62	1.60, 13.36	4.71	1.61, 13.78
Alcohol intake (non-drinker)										
Drinker	0.75	0.34, 1.68	0.78	0.35, 1.77	0.77	0.34, 1.71	0.75	0.33, 1.70	0.77	0.33, 1.78
Intercept (SE)	-2.86 (1.27)		-3.53 (1.32)		-2.88 (1.27)		-2.99 (1.32)		-3.88 (1.41)	
-2LL	249.75		244.37		249.66		241.6		234.43	
-2LL, Delta to Model 1 (df)			5.38 (2)		0.09 (1)		8.15 (2)		15.32 (5)	

* Self-rated global health, poor=1, good=0

† OR, Odd ratio

‡ CI, confidence interval

§ Cambodia, Hong Kong, Mongolia, Thailand, Ukraine or Vietnam

Friends, neighbors, or strangers