Trauma History and Mental Health of North Korean Defectors

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Abstract

Purpose of Review This study aimed to review the mental health status of North Korean defectors (NKDs) and related factors. Interventions to promote their mental health and issues to be dealt with are also reviewed.

Recent Findings NKDs are often exposed to multiple severely traumatic events, both in North Korea and surrounding their defection. Furthermore, they face sociocultural barriers in adapting to a new society. Past exposure to traumatic events, longer defection periods, forced repatriation, psychological factors, and acculturative stress such as perceived discrimination, low income, family violence, and health complaints contribute to negative effects on mental health and obstruct their adaptation to life in the Republic of Korea.

Summary It is necessary to develop evidence-based programs to promote NKDs' mental health and help them to adapt to their new society. An NKD cohort study would be helpful to reveal their long-term mental health prognoses and interactions with pre- and post-migration factors.

Keywords Trauma · Mental health · Post-traumatic stress disorder · North Koreans refugees · Social adaptation · Intervention

Introduction

North Korean defectors (NKDs) are often exposed to traumatic events, both in North Korea and surrounding their defection [1•]. Furthermore, they face various sociocultural barriers when adapting to their new society [2]. Early interviews with NKDs during and immediately after the famine revealed, not surprisingly, that hunger and food shortages were the major factors motivating their escape from their homeland [3]. A Human Rights Watch report from 2002 stated that hunger was one of the key motives for flight. Others included frustration over lack of opportunities, loss of status, political persecution, and the desire to live in similar environments to North Koreans who live outside their country [4].

More than 33,000 NKDs have entered the Republic of Korea since 1998 [5]. Over 70% of these people were women

and around 55% were in their 30s and 40s. In most cases, NKDs escape through a third country then come to South Korea. These are mainly Southeast Asian countries or China [6]. Furthermore, about 70% of NKDs reported having stayed in a third country and about 80% had stayed in the Republic of Korea for more than five years [7].

Some NKDs have been deported from China before reaching the Republic of Korea. Most NKDs go to China because it is easily geographically accessible from North Korea. However, NKDs are repatriated to North Korea if they are arrested by Chinese police. This repatriation experience is particularly traumatic, especially considering that it usually results in torture, possible execution, and incarceration [1•].

Additionally, NKDs often have multiple experiences of human rights violations in North Korea, including arbitrary arrest, torture, inhumane treatment, and forced witnessing of public executions [8]. Investigations into the mental health consequences of human rights abuses have revealed increases in symptoms of anxiety, depression, and post-traumatic stress disorder (PTSD). Indeed, these symptoms have been found to be significantly associated with exposure to cruel and inhumane treatment by authorities [9••].

Thus, the purpose of the present study was to review recent studies about the mental health of NKDs and elucidate factors related to their mental health, including traumatic experiences and stressful events. The present review may deepen current

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insights into the mental health risk factors of NKDs and inform the administration of practical interventions for ameliorating mental health problems such as PTSD through the development of individually tailored programs. Furthermore, the present findings may contribute to the establishment of policy alternatives regarding the improvement of mental health in NKDs by emphasizing their unique traumatic experiences and preventing further stressful events.

Current Mental Health Status of NKDs

According to previous studies on immigrants and refugees, mental health can be the key determining factor for successful integration into a new culture and society [10, 11].

Refugees affected by multi-traumatic stressors are at high risk of trauma-related mental disorders, including anxiety, PTSD, and depression. Recent findings have revealed that 44–46% of NKDs exhibited depressive symptoms [12, 13] and 43–54% of NKDs exhibited symptoms of anxiety [14, 15]. When using self-reported scales, PTSD symptoms were observed in 40–52% of adult NKDs [12, 16] and 13–30% of adolescent NKDs [17, 18]. However, studies using the Structured Clinical Interview for DSM (SCID) found that the prevalence of PTSD among NKDs was lower, at 4–5% [19, 20].

Studies that have compared the current mental health status between South Korean natives (SKNs) and NKDs have consistently reported significantly higher rates of mental health problems like depression, anxiety, PTSD, and insomnia in NKDs [21, 22]. The prevalence of depression (56.3%), anxiety (60.1%), and PTSD (22.5%) in NKDs [9••] is notably higher than the prevalence of depression (3.1%), anxiety (6.8%), and PTSD (0.6%) in SKNs [23]. In one study, the prevalence of insomnia (38%) in NKDs was more than four times higher than that seen in SKNs (9%) [21]. Additionally, when comparing general psychological adaptation, adolescent NKDs reported more severe psychological problems, such as attention and thought problems, post-traumatic stress and somatic symptoms, and lower social functioning than their SKN peers [24].

The lifetime prevalence of suicidal ideation (28.3%), suicide plans (13.3%), and suicide attempts (17.3%) among NKDs are reported to be higher than the rates reported in a nationwide sample of SKNs (suicidal ideation: 15.4%, suicide plans: 3.0%, and suicide attempts: 2.4%) [25]. Moreover, the rates of suicidal thoughts and behaviors (suicidal ideation, suicidal plans, or suicide attempts) among NKDs are much higher (31.3%) than the nationwide prevalence in the Republic of Korea, Western countries, and Asian countries, which range from 0.9 to 15.9% [26, 27].

Furthermore, severe depression, anxiety, PTSD, or somatization symptoms in NKDs have been found to be negatively

correlated with their overall satisfaction with living in the Republic of Korea [28]. Thus, a strategy that focuses on relieving psychiatric symptoms in traumatized refugees may help them to adapt to their new environment.

Trauma Experiences as Factors Related to Mental Health in NKDs

The ability to identify the NKDs who are at high risk of poor mental health would help services to provide appropriate medical and social support.

Trauma Experiences of NKDs in North Korea and During Defection

Both children and adults are consistently reported to be fleeing North Korea because of political oppression and poverty. NKDs are affected by a variety of adverse life experiences, such as traumatic events. These individuals have often been exposed to political violence and life-threatening situations related to famine. Furthermore, prolonged insecurity due to chronic illegal status in a third country is particularly traumatic for NKDs.

Most studies have found that the number and severity of these traumatic experiences are predictive of a wide range of psychiatric disorders, including PTSD, in NKDs [21, 28, 29••, 30, 31]. Moreover, various traumatic experiences experienced by NKDs negatively affect their life satisfaction, especially economic satisfaction, in the Republic of Korea [28]. Indeed, the negative effect of trauma experiences is mediated by psychiatric symptoms.

Around 95% of adult NKDs have reported at least one exposure to trauma, while 90% report having experienced different types of trauma, which most frequently included witnessing public executions, personally experiencing life-threatening starvation, witnessing the deaths of friends or family members from starvation, witnessing serious physical assaults, and escaping arrest following defection [31]. Adolescent NKDs are no exception, 88.7% of the young NKDs had experienced at least one traumatic event that met the DSM-5 A criteria [17, 32]. Additionally, 45.2% reported having experienced between two and four traumatic events and 30.6% had experienced more than five traumatic events. Moreover, female NKDs are exposed to the additional risk of sexual violence. Almost one in four female NKDs reported sexual victimization, such as rape, sexual harassment, and sex labor. This occurred in both North Korea and third countries [33].

Specifically, NKDs report that they have been through various violent and traumatic experiences in North Korea [1•, 20]. These include witnessing death from starvation (56.6–87.4%), experiencing great pain from illness or being

gravely ill due to lack of treatment (16.1–62.2%), witnessing a public execution (43.5–87.4%), imprisonment (17.3–27.4%), physical violence (17.7–28.1%), and torture (6.5–20.9%). During escape, NKDs have reported being exposed to traumatic events such as human trafficking (25%), hiding for fear of being found by others (25.8–83.4%), being inspected by secret agents or North Korean guards at the border (17.7–52.3%), having life-threatening shortages of food and water (17.4–38.6%), and being robbed of food, money, and water in their possession (4.8–23.2%).

Regarding human rights violations in North Korea, 29.3% of NKDs suffered inhumane treatment and torture, 74.6% had no freedom of movement and residence, 49.1% experienced discrimination, and 63.8% experienced denials of freedom of expression, thought, and religion [9•]. Furthermore, NKDs reported organized violations of the right to food, health, and livelihood, and forced labor was also common (70.3%) [9•].

Exposure to organized violence prior to entry into South Korea was reported by more than half of young NKDs (59.7%), whereas no one reported being exposed to this type of violence in the SKN youth sample [17]. The three most common types of systematic violence were starvation (43.5%), witnessing public execution or torture (27.4%), and imprisonment (21%).

PTSD as a Factor Influencing Other Comorbid Mental Health Problems

PTSD has been reported to be an influencing factor for other comorbid mental health problems. One study, a meta-analysis investigating depression, anxiety, and PTSD among NKDs, revealed strong, significant associations between depression, anxiety, and PTSD [34]. The relationships between depression, anxiety, and PTSD were stronger in adults and in those who had spent more than five years in third countries.

PTSD could mediate mental health problems, especially interpersonal trauma [35, 36]. However, they observed that trauma exposure, both interpersonal exposure and non-interpersonal exposure, had no direct association with comorbid mental health problems.

PTSD symptoms in young NKDs were strongly related to insomnia and depression [18]. Furthermore, PTSD was found to affect insomnia via depression, which indicates that more severe PTSD is associated with a greater likelihood of developing sleep problems via depression.

NKD have been reported to exhibit attention deficits that could be related to their psychiatric symptoms, particularly dissociation. One study on the performance of NKDs on attention subjects showed that attention deficits were associated with dissociative experiences. Dissociation in NKDs may be a result of their traumatic experiences.

Defection-Related Variables in NKRs

Additionally, several defection-related variables were revealed to be risk factors for mental health problems among NKDs.

NKD who stayed longer in third countries reported higher levels of psychological problems, such as PTSD, depression, anxiety, and suicidal ideation [22, 37]. Given that longer periods in third countries have been found to be associated with more traumatic experiences among NKDs [20], a longer stay might increase the mental health risks posed by traumatic experiences or distressing events during the immigration process.

One study found that, in NKDs with premigration trauma, those with repatriation experiences were at greater risk of experiencing overall psychopathological symptoms [38]. Around 26% of NKDs had experienced at least one repatriation [39]; these individuals had more than twice the number of escape attempts [22]. These experiences were associated with high rates of suicidal ideation or depression/anxiety among NKDs.

Psychological Factors Influencing the Relationship Between Traumatic Experiences and Mental Health Problems

Some psychological factors were reported to be risk factors in relationships between the traumatic experiences and mental health problems of NKDs, namely alexithymia, expressive suppression as an emotional regulation strategy, and negative cognitions of personal failure.

The moderating effect of alexithymia in the association between PTSD and the number of traumas experienced in NKDs was emphasized; more severe PTSD was reported in refugees with a higher degree of alexithymia and who had experienced more traumatic experiences [31]. They suggested that clearly identifying and expressing emotions becomes more crucial for decreasing PTSD symptoms as individuals experience more traumatic events.

Regarding emotion regulation strategies, the use of expressive suppression among young NKDs significantly worsens the effects of early trauma on both depressive and attention-deficit hyperactivity disorder (ADHD) symptoms, which indicates that it could be a risk factor for mental health issues [40]. However, cognitive reappraisal seems to slow the effect of expressive suppression on depressive symptoms.

One study examined the relationship between early traumatic experiences, negative automatic thoughts, and depression in young NKDs ($N=109$, 13–29 years) living in the Republic of Korea. Early traumatic experiences were positively associated with depressive symptoms both directly and through thoughts of personal failure [41]. Interventions that

target negative cognitions of personal failure could decrease the risk of depression in NKDs.

Lower resilience was found to be related to more severe depression and prolonged severe depression in a one-year follow-up study that investigated changes in depression in young NKDs [42]. Additionally, in models predicting clinical depression (dichotomous), resilience fully mediated the relationship between family cohesion and clinical depression in NKDs [13].

Psychosocial Stress During Adaption to New Society and Its Relationship With Mental Health in NKDs

A 7-year follow-up study on the mental health of NKDs in South Korea reported that the rate of PTSD and PTSD symptom scale scores decreased significantly from baseline over the study period [43]. However, staying more than 5 years after entering South Korea was related to high rates of suicidal ideation among NKDs [22, 44]. Additionally, female adult NKDs who had been resettled in South Korea for longer periods experienced more severe depressive symptoms than those in the earlier stages of resettlement [21]. These findings suggest that NKDs were suffering from post-migratory life stress despite the common traditional cultural heritage, common language, and systemic support offered by non-governmental organizations and the South Korean government. Several acculturative stresses related to the mental health of NKDs have been reported, including perceived discrimination, financial difficulties, poor family relationships, and physical illnesses.

Perceived Discrimination

One study found that the perception of discrimination and poor social and cultural adaptation were associated with increasing levels of depressive symptoms in a sample of NKDs taken from the 2010 National Survey. Perceived discrimination was reported to play a moderating role [45]. Perception of discrimination attenuated the relation between fewer depressive symptoms and better adaptation, when they experienced no perception of discrimination. This means that we have underestimated the importance of educating South Koreans to be accepting hosts who value diversity despite living in a homogeneous society.

Low Income

Financial difficulties may put NKDs at greater risk of mental health problems. Many reports have found that adult NKDs with lower monthly incomes are more vulnerable to a wide range of psychiatric symptoms, including anxiety, depression,

and somatization [13, 46, 47]. It should be noted that no independent association was observed between low-income status and depressive symptoms when controlling for other confounding variables, such as family characteristics, sociocultural adaptation, and physical health [45]. This suggests that NKDs' financial status may influence their psychiatric symptoms.

Family Relationships

NKD in South Korea are reported to be at a higher risk (57.1%) of intimate partner violence (IPV) than SKNs (9.9%) [48]. A tolerant attitude and stress were significantly related to IPV against women in NKDs. However, child abuse and children witnessing IPV between parents were the main factors contributing to IPV against women in SKNs.

A study that examined the association between the amount of organized family violence and psychopathology reported that experiences of family violence were significantly more frequent among young NKDs than in young SKNs (56.5% vs. 33.8%). Regarding the prevalence of various forms of family violence in their lifetime, compared with young SKNs, young NKDs had significantly higher rates of neglect (25.8% vs. 6.2%) and physical abuse (32.3% vs. 10.8%), whereas psychological abuse did not vary between these two groups. The authors observed that the severity of depressive symptoms and PTSD in young NKDs was associated with the number of family violence and traumatic events, but not with higher levels of organized violence [17]. These findings suggest that abusive experiences by family members are strongly linked to the psychopathology of NKD adolescents in the context of organized violence.

The level of emotional suppression and familial cohesion are reported to be significantly associated with suicidal ideation and suicide attempts among young NKDs, after controlling for other socioeconomic variables [49]. Familial cohesion, but not family adaptability, is significantly associated with depression among NKDs [13]. Familial and individual interventions, particularly those focused on encouraging familial cohesion, could be useful for young NKDs as they are at high risk of suicide ideation and depression.

A study that conducted quantitative and qualitative interviews with NKDs found that there is a significant link between previous victimization by political violence in North Korea and abuse of offspring in the Republic of Korea, the resettled country [50]. The mediator or mechanism underlying this association has not yet been identified. The authors hypothesized that this link was mediated by PTSD or alcohol problems, but this prediction was not supported. Further studies are needed to clarify how family violence in NKDs should be dealt with, while also considering the intergenerational transmission of trauma.

Physical Health

Physical health and health behavior appear to be closely associated with mental health problems in NKDs. The number of physical illnesses and presence of at least one chronic health complaint have been found to be predictive of overall psychological problems in adult NKDs [19, 51]. Regarding the relationship between physical health and PTSD, one study that examined medical records over approximately 10 years found that NKDs with PTSD use outpatient services more frequently than others [52••]. They require higher total revenue than NKDs without PTSD. Additionally, patients with PTSD frequently used a variety of medical services. A greater number of traumatic experiences during their escape was also associated with the frequency of physician visits among NKDs [53].

With regard to health behavior, NKD adolescents reported higher current smoking, drinking, and drug-use rates than SKN adolescents [54]. Furthermore, perceived stress, smoking, and drinking experiences of NKD adolescents were related to depression. A specialized approach for NKD adolescents is required to promote proper health behaviors and adaptation to South Korean society.

Interventions to Improve Mental Health in NKDs

Despite the large number of traumatized refugees, no effective treatment for trauma in refugees and immigrants has yet been developed.

One follow-up study investigated traumatized refugee patients receiving treatment at the Competence Center for Transcultural Psychiatry in Copenhagen, which consisted of a combination of trauma-focused cognitive behavioral therapy (TFCBT), sertraline, mianserin treatment, and psychoeducation [55]. Patients had several co-morbidities such as depression, pain, untreated somatic complaints, and PTSD. They found less improvement in PTSD when patients received public subsidies, less improvement in depression when patients reported pain in the upper extremities, and a positive relationship between the systematic use of cognitive behavioral therapy (CBT) methods and improvements in patient condition.

Another randomized controlled clinical trial conducted at the same center used a 2×2 factorial design (antidepressants, TFCBT, antidepressants and TFCBT, waiting list) [55]. The authors found a small but significant effect of treatment with medicine on blinded observer-ratings of depression and anxiety. Indeed, they also found a large effect on non-blinded ratings of functioning and a small effect of intervention type on self-reported levels of functioning and headaches. No effect of psycho-therapy on any outcome was identified, and there was no effect of psycho-therapy or medicine on PTSD.

Narrative exposure therapy (NET) has been suggested as a treatment option for traumatized young NKDs, and may also be effective for the treatment of sleep problems caused by traumatic experiences [56]. The study found clinically significant reductions in PTSD, depression, and internalizing and externalizing symptoms in the NET group, but not in the treatment-as-usual group. NET also resulted in a significant improvement in insomnia symptoms and sleep quality.

We should consider the possibility that stigma around mental illness among NKDs acts as a barrier to the provision of proper interventions. NKDs have been found to have lower perceived stigmas in relation to depression and higher perceived stigmas in relation to psychosis and alcoholism than SKNs [57]. However, the perceived stigma associated with attempted suicide was very similar in the two groups. Interestingly, NKDs who had spent more than one year in a transit country exhibited an association between lower alcoholism and perceived stigma of psychosis. NKDs who had experienced compulsory repatriation to North Korea or a North Korean family in South Korea exhibited an association between higher perceived stigma and depression. Another study found that knowledge of mental illness in NKDs was associated with their attitude toward people with mental illness, which indicates that we can improve attitudes by educating NKDs on mental illness [58].

NKD's health literacy and drug knowledge levels have been found to be low, and many drug misuse cases have been identified in women in their 40s [59]. A significant association between health literacy and drug knowledge has also been reported. Four issues have been suggested to affect NKDs: (1) their tendency to see their psychological symptoms as being physical in nature, (2) their tendency to trust in the belief systems established in North Korea and in their ability to self-diagnose, (3) their tendency to see the available medical treatment as inappropriate, and (4) their feeling that the treatment they received was ineffective and slow because of capitalism.

Conclusions

The traumatic experiences and psychosocial stress affecting NKDs are mental health risk factors that hinder their successful resettlement in the Republic of Korea. Previous studies have consistently found that NKDs have experienced traumatic events; longer stays in third countries; forced repatriation; psychosocial stresses during adaptation to their new society such as perceived discrimination, low income, and poor family relationships; and physical health conditions (Table 1).

These findings suggest the need for enhanced awareness about human rights issues in North Korea. We also need to provide more resources to prevent victimization among

Table 1 Factors related to mental health of North Korean defectors

Premigration	Migration	Post-migration	Psychology
<ul style="list-style-type: none"> • Traumatic experiences [1, 9, 17, 20] - Witnessing death from starvation - Witnessing public execution - Experiencing great pain from illness or being gravely ill due to lack of treatment - Imprisonment - Physical violence - Torture etc. 	<ul style="list-style-type: none"> • Traumatic experiences [1, 20] - Hiding for fear of being found by others - Human trafficking - Inspected by North Korean guards or secret agents at the border - Shortage of food and water to a life-threatening level - Robbed of money, food, and water in their possession etc. • Long stays in third countries [20, 22, 37] • Repatriation experiences [38] 	<ul style="list-style-type: none"> • Long staying periods after entrance [21, 22, 44] • Perceived discrimination [10] • Low income [13, 46, 47] • Family relationships (family violence, family cohesion) [17, 48, 49] • Physical illnesses [19, 51] 	<ul style="list-style-type: none"> • Alexithymia [31] • Emotion regulation strategy [40] • Thoughts of personal failure [41] • Resilience [42]

NKDs. Additionally, more rigorous studies are required to determine the long-term trajectory of psychological problems of NKDs and evaluate the long-term interactions among mental health problems, including PTSD in NKDs and their pre- and post-migration experiences, as well as their personal characteristics. To achieve these goals, an NKD cohort study that follows the mental health and social integration of subjects registered upon entrance to the Republic of Korea would be helpful.

There are insufficient studies on the development of evidence-based therapies for NKDs. Future studies should be developed to implement targeted psychiatric interventions through adequate policies. Previous findings suggest that the effectiveness of therapies for PTSD in traumatized refugees is questionable, and NKDs suffer from numerous psychiatric problems and co-morbidities. Given that the negative effects of trauma were primarily mediated by psychiatric symptoms, strategies that aim to relieve the psychiatric symptoms of traumatized refugees may facilitate their successful adaptation to life in the Republic of Korea.

Considering the considerable stigma surrounding mental illness and the low health literacy of NKDs residing in South Korea, it is necessary to provide community-based information to vulnerable groups to promote knowledge of mental illness and ensure the safe use of medications.

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Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no competing interests.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

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