

Article

The Effects of Trauma Types at Pre-Migration, Transit, and Post-Migration Stages on Depression and PTSD among North Korean Refugees in South Korea

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Abstract: This study aimed to assess the interrelationship (comorbidity pattern) between depression and PTSD among North Korean (NK) refugees in South Korea and examine the effects of trauma types at pre-migration, transit, and post-migration stages on both depression and PTSD. Therefore, the study analyzed the data of the 2017 Survey on the Human Right Abuses and Trauma of NK refugees (N = 299) using the Seemingly Unrelated Regression model. The results showed that depression and PTSD have a comorbidity pattern among NK refugees. In addition, the predominant death threat of trauma type at the transit stage had a positive relationship with depression and PTSD simultaneously. Based on these findings, we suggested a transdiagnostic approach and trauma-informed care for NK refugees who suffered from various traumas in the migration stage.

Keywords: trauma types; migration stages; depression; PTSD; North Korean refugees



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1. Introduction

North Korean (NK) refugees are particularly vulnerable to mental disorders, such as depression and post-traumatic stress disorder (PTSD) [1–3]. With about 1000 to 1500 NK refugees entering South Korea every year, except for 2020, when the number of NK refugees in South Korea has decreased significantly due to COVID-19, the cumulative number of NK refugees reaches 33,752 [1]. According to previous studies of NK refugees living in South Korea [2–5], 44–46% reported symptoms of depression, and 40–52% reported symptoms of PTSD. Compared to the fact that 3% of South Koreans suffer from depression and 0.6% of them suffer from PTSD [6], the depression and PTSD of NK refugees are severe.

Such high prevalence of PTSD and depression among NK refugees can be explained by exposure to traumatic events during their migration stage (pre-migration, transit, and post-migration stage). According to the National Human Rights Commission of Korea [1], NK refugees experienced 3.5 trauma cases in North Korea (pre-migration stage: immigrants' home countries). Moreover, they experienced 0.3 trauma cases in China (transit stage: a country that migrants cross on their way to their country of destination) and 0.1 trauma cases in South Korea (post-migration stage: their country of destination). For this reason, NK refugees are more likely to develop traumatic sequelae such as PTSD and depression even after they are incorporated into South Korean society. This mental health vulnerability can negatively affect interpersonal life, work-life, and daily life in the post-migration country [3].

It is worth noting that PTSD and depression are closely related and tend to co-occur as a 'comorbidity' pattern [7]. Previous studies pointed out that PTSD and depression have shared symptoms such as sleep disorders, concentration disorders, overgeneralized cognition, and rumination [7–9]. Empirical studies have shown that the comorbidity risk of PTSD and depression is higher in the groups with frequent trauma exposures, such as military personnel, police officers, firefighters, and refugees [10]. In other words, it can be predicted that NK refugees, vulnerable to trauma exposures during migration, will also experience similar problems. Nevertheless, finding a study that empirically identified

whether NK refugees have a comorbidity of PTSD and depression has been challenging. Psychiatry argues that interventions in common factors of comorbidities are effective [11]. Before admitting the intervention for NK refugees, it is necessary to determine whether PTSD or depression should be treated as a single disease or whether they should be treated as comorbidity.

Traumatic experiences are a common leading cause of PTSD and depression, but it is more complex in refugees [12]. Refugees experience various types of traumatic events as they go through each stage before, during, and after the migration [13,14]. In addition, a previous study showed different mental health outcomes depending on the types of traumas experienced [15]. However, there is a limitation of earlier studies [3,12,16,17]. The studies simply find a relationship between the trauma experiences of NK refugees and mental illness while ignoring these migration stages and trauma types. Moreover, to effectively intervene in the mental illness of NK refugees, an overall understanding of the various trauma types experienced at each migration stage is essential [14]. Therefore, it is crucial to provide a starting point for therapeutic intervention by finding the trauma types at different migration stages that may affect comorbidities of PTSD and depression.

Moreover, NK refugees are a unique refugee group in pre/transit/post-migration experiences. In North Korea (pre-migration), a communist country with no right to freedom of movement, they risk migrating outside North Korea and within North Korea [18]. In addition, they, as illegal aliens, are often exposed to dangerous situations when moving in hiding in China (transit) for an extended period [19]. Moreover, even if they come to South Korea, which shares the same language and culture, NK refugees have to adapt to the new environment of South Korea (post-migration), a capitalist country [20]. Considering the unique situation of NK refugees, a customized intervention is necessary.

Considering the research problem and background, the poor mental health of NK refugees is not a simple personal tragedy but a social problem that reflects the difficulties through the migration stages. Therefore, this study empirically verified the effects of trauma types at pre-migration, transit, and post-migration stages on depression and PTSD of NK refugees. So, the research questions of this study are as follows.

First, is there an interrelationship (comorbidity pattern) between depression and PTSD of NK refugees?

Second, what are the trauma types at migration stages (pre-migration, transit, and post-migration stage) that affect both depression and PTSD?

2. Methods

2.1. Sample and Procedures

In this study, a secondary analysis was carried out using the data from “A Study on the Human Right Abuses and Trauma of NK refugees” conducted by the National Human Rights Commission of Korea. Primary data were collected through a survey conducted from April to June 2017. The study obtained approval from the Institutional Review Board for the overall research protocol [2]. For recruiting study subjects, 300 NK refugees residing in South Korea were set as a target sample based on age, gender, residential area (metropolitan and provincial units), and statistical power. Since NK refugees had restrictions on recruitment, study subjects were recruited through snowball sampling through settlement support centers, offline communities, and psychological counseling centers for the NK refugees. All surveys were conducted with experts with an excellent understanding of North Korean refugees. The researchers explained to survey participants the purpose, procedures, benefits, rights to withdraw, and confidentiality of the study with official documents. If respondents expressed an intention to refuse, the researchers allowed them to leave the study without penalty. In this study, 299 people were selected as study subjects, excluding one who answered no response to some questions.

2.2. Measures

2.2.1. Dependent Variables: Depressive Symptom and PTSD

There are two dependent variables in this study: depressive symptoms and PTSD. To measure depressive symptoms, this study adopted the scale used in a study by Park et al. [21], who adapted and translated the Patient Health Questionnaire-9 (PHQ-9) scale for Korean participants. This scale was developed by Kroenke et al. [22]. The scale includes a total of 9 items, such as “not interested in or interested in anything”, “disappointed with me”, “difficulty concentrating on everyday tasks such as reading newspapers or watching television”, etc. The scales are from 0 (none) to 3 (almost every day), with a maximum possible score of 27. The PHQ-9 has an internal consistency (Cronbach’s alpha of 0.91). The higher the score, the more severe the depressive symptom.

To measure PTSD, this study adopted the scale used in a study by Oh et al. [23], who adapted and translated the PTSD Check List-5 (PCL-5) scale for use in NK refugees. This scale was developed by Weathers et al. [24]. The scale includes a total of 21 items, such as “a painful and unwanted memory of the stress experience repeatedly”, “a mental illness when reminded of the stress experience”, “a nervousness, anger explosion, or aggressive behavior”, etc. The scales are from 0 (not at all) to 4 (very much), with a maximum possible score of 80. The PCL-5 has an internal consistency (Cronbach’s alpha of 0.97). The higher the score, the more severe the PTSD symptom.

2.2.2. Independent Variables: Experienced Trauma Types at Pre-Migration, Transit, and Post-Migration Stage

To measure trauma types at different stages (pre-migration, transit, and post-migration), this study adopted the scale used in a study by Shim et al. [25], who adapted and translated the Life Events Checklist for DSM-5 (LEC-5) scale for NK refugees. This scale was developed by Weathers et al. [26]. This questionnaire is designed to respond to 17 types of trauma events experienced at each stage of pre-migration (North Korea), transit (China), and post-migration stage (South Korea). Participants rate each item with three response options: happened to me, witnessed it, or doesn’t apply. A positive trauma endorsement was indicated for the current study when individuals selected either of the first two response options consistent with PTSD DSM-5 Criterion A [27]. According to the criteria for classifying trauma types by Contractor et al. [27], this study classified trauma types into accidental/injury, victimization, and predominant death threat trauma types. When the subjects experienced a natural disaster, fire or explosion, transportation accident, serious accident at work/home/during recreational activity, or life-threatening illness, it was defined as “Accidental/Injury Trauma”. When the subjects experienced physical assault, sexual assault, or other unexpected/uncomfortable sexual experiences, it was defined as the type of “Victimization trauma”. When the subjects experienced exposure to a toxic substance, assault with a weapon, exposure to war, forced captivity, severe human suffering, violent death, accidental death, or serious injury/harm/death you caused to someone else, it was defined as “Predominant Death Threat Trauma”. Therefore, the independent variables are trauma types at pre-migration stage (none = 0, accidental/injury = 1, victimization = 2, predominant death threat = 3), trauma types at transit stage (none = 0, accidental/injury = 1, victimization = 2, predominant death threat = 3), and trauma types at post-migration stage (none = 0, accidental/injury = 1, victimization = 2, predominant death threat = 3).

2.2.3. Control Variables

Based on previous research [4,5,10,13,14,19,20], control variables were included. The control variables in this study were gender (male = 0, female = 1), age (continuous variable), duration of stay in post-migration country (continuous variable), employment status in post-migration country (unemployed = 0, employed = 1), marital status (live without spouse = 0, live with spouse = 1), alcohol use disorder identification test consumption (non/low-risk drinker = 0, hazardous drinker = 1).

2.3. Data Analysis

Descriptive analysis was used to determine the study subjects' sociodemographic characteristics and main variables. The seemingly unrelated regression (SUR) model is used to examine the relationships between trauma types at different stages and the comorbidity of depression and PTSD. According to previous studies [7], depression and PTSD, dependent variables, seem to have an interrelationship. If two dependent variables are mutually related, it is known that the SUR model produced more efficient estimates than the ordinary least squares model [28]. First, to examine the interrelationship between depression and PTSD, the study calculated the correlation between the error terms between the two dependent variables [29]. Next, to determine whether trauma types at different stages had a significant effect on both depression and PTSD, SUR analysis was conducted. Statistical tests were two-tailed, and $p < 0.05$. All analyses were performed using STATA 13.0 (StataCorp, College Station, TX, USA).

3. Results

3.1. Descriptive Statistics of Sociodemographic and Main Variables

Table 1 shows the sociodemographic characteristics and the main variables of the subjects.

Table 1. Sample characteristics ($n = 299$).

Variables		<i>n</i>	%	Mean	Standard Deviation
Gender	Male	55	18.4%	-	-
	Female	244	81.6%	-	-
Age	years	-	-	52.8	15.9
Duration of stay in the post-migration country	years	-	-	6.9	4.41
Employment status in the post-migration country	Employed	152	50.8%	-	-
	Unemployed	147	49.2%	-	-
Marital status	With spouse	224	74.9%	-	-
	Without spouse	75	25.1%	-	-
Family members left behind in the pre-migration country	Yes	49	16.4%	-	-
	No	250	83.6%	-	-
AUDIT-C	Non/low-risk drinker	247	82.6%	-	-
	Hazardous drinker	52	17.4%	-	-
Trauma types in the pre-migration stage	None	7	2.3%	-	-
	Accidental/injury	10	3.3%	-	-
	Victimization	11	3.7%	-	-
	Predominant death threat	271	90.6%	-	-
Trauma types at the transit stage	None	183	61.2%	-	-
	Accidental/injury	7	2.3%	-	-
	Victimization	31	10.4%	-	-
	Predominant death threat	78	26.1%	-	-
Trauma types at the post-migration stage	None	211	70.6%	-	-
	Accidental/injury	63	21.1%	-	-
	Victimization	11	3.7%	-	-
	Predominant death threat	14	4.7%	-	-
Depression	Score	-	-	13	8.3
PTSD	Score	-	-	35.9	22.9

Of the 299 study samples, 81.6% were female, while 18.4% were male. The average age of subjects was 52.8 years at the time of the survey. The average length of residence in a post-migration country was 6.9 years. 50.8% were employed, slightly higher than those unemployed (49.2%). 74.9% of subjects have lived with spouses in the post-migration country. In addition, 16.4% of study subjects left their family members in the pre-migration country, and 17.4% of the study subjects were dangerous drinkers.

Regarding the characteristics of the independent variables, the most common trauma type at the pre-migration stage was the predominant death threat (90.6%), followed by victimization, accidental/injury, and none. The most common trauma type at the transit stage was none (61.2%), followed by predominant death threat, victimization, and accidental/injury. The most common trauma type at the post-migration stage was none (70.6%), followed by accidental/injury, predominant death threat, and victimization. Regarding the characteristics of the dependent variables, the depression average score was 13 points, and the PTSD average score was 35.9 points.

3.2. Seemingly Unrelated Regression (SUR) Model of Depression and PTSD

Table 2 presents the results of the seemingly unrelated regression (SUR) model. This model verified the effect of trauma types at different stages on the depression and PTSD levels. For comparing the fitness of the SUR model and ordinary least squares (OLS) model, the researcher tested whether residuals of two dependent variables were correlated using the Breusch–Pagan test. Because this was statistically significant ($\text{ChiSq}(1) = 208.03$, $p < 0.001$), the SUR model was more appropriate for this dataset.

Table 2. Seemingly unrelated regression model of depression and PTSD among North Korean refugees ($n = 299$).

Variables	Depression (PHQ-9) Model 1		PTSD (PCL-5) Model 2	
	B	SE	B	SE
Gender (ref. male)	1.664	1.223	2.416	3.299
Age	−0.025	0.036	−0.142	0.097
Duration of stay in the post-migration country	0.02	0.124	0.125	0.334
Employment status in the post-migration country (ref. unemployed)	−0.028	1.01	1.568	2.725
Marital status (ref. no spouse)	−1.751	1.069	−6.943 *	2.883
Family members left behind in the pre-migration country (ref. no)	0.741	1.233	−1.171	3.327
AUDIT-C (ref. non/low-risk drinker)	1.248	1.271	1.304	3.430
Trauma types in the pre-migration stage (ref. none)				
Accidental/injury	1.08	3.875	5.713	10.454
Victimization	2.151	3.829	9.262	10.331
Predominant death threat	0.17	3.027	7.386	8.167
Trauma types at transit stage (ref. none)				
Accidental/injury	4.582	3.057	11.389	8.248
Victimization	1.384	1.56	5.787	4.209
Predominant death threat	3.073 **	1.112	11.100 ***	3.000
Trauma types at the post-migration stage (ref. none)				
Accidental/injury	1.693	1.172	4.996	3.162
Victimization	2.562	2.445	5.43	6.597
Predominant death threat	1.838	2.209	3.395	5.959
Constant	11.707 **	3.923	33.474 **	10.583
rho12 = 0.8341 ***				

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

In order to examine the interrelationship (comorbidity pattern) between depression and PTSD, the correlation between the error terms between the two dependent variables was calculated. The rho12 value was 0.8341 and was statistically significant ($p < 0.001$). In other words, depression and PTSD had a strong positive interrelationship while controlling the influencing factors on each dependent variable.

Model 1 in Table 2 showed the effects of the independent variables on depression. Among independent variables, the predominant death threat at the transit stage (+) had a statistically significant impact on the depressive symptom ($p < 0.001$).

Model 2 in Table 2 showed the effects of the independent variables on PTSD. Among sociodemographic variables, marital status (−) had a statistically significant impact on PTSD ($p < 0.05$). Among independent variables, the predominant death threat of trauma type at the transit stage (+) had a statistically significant effect on PTSD ($p < 0.001$).

Among trauma types at different stages, the predominant death threat at the transit stage affects both depression and PTSD. The predominant death threat at the transit stage had a positive relationship with depression and PTSD simultaneously (ChiSq (2) = 14.3, $p < 0.001$).

4. Discussion

This study determined whether trauma types at different stages (pre-migrant, transit, and post-migrant stages) significantly affected both depression and PTSD of NK refugees residing in South Korea. To our best knowledge, this is the first study of the impact of trauma types at various migration stages on mental health among NK refugees, even though there are previous studies dealing with Latino refugees [13,14]. Further, our study provides political and practical implications for traumatized NK refugees by identifying factors associated with depression and PTSD.

4.1. Main Findings

Depression and PTSD have a strong positive interrelationship. In addition, the predominant death threat of trauma type at the transit stage had a positive relationship with depression and PTSD simultaneously.

4.2. Interpretation of Findings

First, depression and PTSD had a strong positive interrelationship among North Korean (NK) refugees while controlling the influencing factors on each dependent variable. In other words, it shows that the depression and PTSD of NK refugees have many similar aspects and should be dealt with together. This result is somewhat different from a previous study that dealt with the general population [30]. However, our findings are consistent with earlier studies that dealt with groups vulnerable to traumatic event exposure, such as military personnel, firefighters, and refugees [31–33]. That is, the studies reported that the groups have a high risk of comorbidity of depression and PTSD. Previous studies explain that this is due to “common risk factors” and “overlapping symptoms”. In other words, traumatic events experienced in migration stages become common risk factors, which can cause both PTSD and depression [7]. These common risk factors lead to shared symptoms of PTSD and depression, where similar symptoms are expressed. For example, both mental disorders share symptoms, such as sleep disorders, concentration disorders, overgeneralized cognition, and rumination [7–9], although PTSD and depression have distinguished symptoms [34].

Second, the predominant death threat of trauma types at the transit stage was positively associated with both depression and PTSD. This result differs somewhat from previous studies in two points of view: trauma types and migration stages [14,15]. First of all, according to a previous study dealing with the relationship between trauma types and mental disorders [15], the predominant death threat was insignificant. However, victimization trauma type was significant for both PTSD and depression. This is because the previous study was conducted for the general population, with little traumatic experiences,

especially the predominant death threat, compared to NK refugees. In the current study, the predominant death threat is the only significant variable for PTSD and depression at the transit stage. One of the possible reasons for this may be that the predominant death threat is the most common trauma type in the transit stage for NK refugees, as seen from descriptive statistics. Moreover, the predominant death threat negatively impacts mental health more than other types of traumatic events do. That is, the predominant death threat may involve additional consequences such as loss of loved ones, deprivation, or exposure to violence, which may compound the effects of subsequent resettlement and acculturative stressors [35,36].

Third, the predominant death threat does not affect other migration stages, only the transit stage in this study. One of the possible reasons for this may be that access to medical care is limited due to language differences in the transit stage. According to a previous study dealing with the relationship between trauma experience at different stages and mental disorders of Latino refugees [14], trauma exposure in the transit stage was not significant. However, trauma exposure in the post-migration stage was significant for PTSD of Latino refugees. The previous study differs from the current study result because the country is different at the stage where Latino refugees and NK refugees migrate. The country where Latino refugees migrate is the United States (post-migration stage), which uses other languages, but the country where NK refugees migrate is South Korea (post-migration stage) which uses the same language. Unlike Latino refugees, it is relatively comfortable for NK refugees to appeal even if trauma occurs in South Korea. However, China is the country that NK refugees usually choose for the transit stage, and even if the trauma occurred, it is difficult to complain of difficulties due to different languages. In addition, since they are illegal aliens in the country of transit stage (China), there is a risk of being repatriated to North Korea if caught by the China police during treatment [12]. So, it seems that NK refugees are enduring symptoms no matter how severe it is. According to descriptive statistics, given that the average time spent in South Korea is seven years, the trauma experienced in the transit stage has a long-lasting effect on their mental health.

Fourth, among the control variables, gender, age, duration of stay in the post-migration, and family members left behind in a pre-migration country did not significantly affect PTSD and depression in the current study. Previous studies have shown inconsistent results depending on the two dependent variables. That is, previous studies reported that gender, age, duration of stay in post-migration, or family members left behind in a pre-migration country significantly affected PTSD [5,6,13,14,17]. However, some of these variables have no significant effect on depression [10,19,20]. These results seem to be because previous studies analyzed it without considering the intercorrelation of PTSD and depression. Especially in this study, the duration of stay in a post-migration country was not significant for PTSD and depression. It implies that their mental illness cannot be addressed without appropriate intervention, even if NK refugees live for a long time in South Korea, where the quality of life is relatively better [10,37]. However, it is necessary to clarify the relationship through other research models in a follow-up study.

Therefore, it is required to use a transdiagnostic approach as an alternative intervention that considers PTSD and depression together for NK refugees. In the existing approach, the same criteria as the DSM-5 were applied to diagnose the disorder, and the therapeutic approach was carried out based on the diagnosis name [10]. However, the transdiagnostic approach focuses on the common factors or processes in mental illnesses such as PTSD and depression [11]. As mentioned earlier, PTSD and depression share risk factors and symptoms, and effective intervention is possible if shared things are initially intervened [10,38]. Previous research has shown that trans-diagnostic approaches are practical for trauma-related disorders with comorbidities, such as comorbidity of PTSD and depression. One of the transdiagnostic approaches, the common element treatment approach, was effective for the trauma exposure group and helpful even in a primary care setting [38]. In other words, it is necessary to address the shared problem of PTSD and

depression, rather than a single mental disorder, to intervene effectively for traumatized NK refugees.

Moreover, we suggest applying the trauma-informed care (TIC) to Hana Center, the settlement support center for NK refugees, to restore the mental health of NK refugees due to trauma exposure. The Hana Center, the first settlement after migration, is an essential gateway to assess NK refugees' mental health status. Moreover, it is the most realistic place to support trauma-related disorders [10]. Currently, the Hana center offers mental health services for NK refugees. Still, there is a limitation in that the center cannot deal with complex mental health problems related to trauma as focusing on a single mental illness [2,37]. The TIC is a comprehensive approach. This is because trauma screening is provided to all clients, professionals are trained in evidence-based treatment approaches for trauma, and the institutional partnership is made with community mental health agencies [39]. TIC seems appropriate for NK refugees with a high risk of mental disorders due to trauma at various migration stages. When applying the TIC to the Hana center, A training course is required for Hana Center staff and experts to understand that NK refugees go through various traumatic experiences in the migration stage (pre-migration stage, transit, pre-migration stage). In addition, it is necessary to evaluate and priorly intervene with NK refugees who have experienced the predominant death threat at the transit stage, which affects PTSD and depression simultaneously. When NK refugees enter South Korea, they receive an initial screening examination by a mental health specialist, and after they settle down, they can continue to be treated at a local mental health center [6,40]. However, NK refugees tend to be reluctant to visit mental health care services because of the social stigma about mental illness [40]. For this reason, it is necessary to include in the mental health care plan to educate NK refugees on mental illness and provide correct information so that their symptoms do not worsen.

4.3. Limitations and Future Research Directions

Alongside its contributions to a growing literature, several limitations of the current study should be noted. First, the findings of this study cannot confirm a causal relationship between trauma types at different stages and mental health problems (i.e., PTSD and depression) because cross-sectional data were used. Future studies using longitudinal data can clarify the extent of this causal relationship. Second, non-probability sampling may have reduced the generalizability of this study's findings to NK refugees in other countries. However, the results may still be generalizable to NK refugees in South Korea, as the survey geographically covered South Korea. The sample characteristics adequately represent the NK refugees of the country in terms of gender, age, and residential area. However, follow-up research using probability samples from more diverse post-migrant countries can provide more representative interpretations. Third, the potential for recall bias must be acknowledged as the survey inquired about the experienced trauma types in the pre-migration stage but was administered at the post-migration stage. So, this study result should be interpreted carefully. Fourth, this study did not include family-related variables (changes in family structure or family relationships at each stage of migration) in the model due to the limitation of secondary data analysis. Since these variables are known to have a negative impact on the NK refugees' mental health and on their future generation's health [19,41], follow-up research needs to include the variables. Last, all measures were self-reported; thus, given the social stigmas in traumatic experiences and mental disorders, it is assumed that both exposures (traumatic experiences) and outcomes are likely underreported. Therefore, future research needs to be conducted using objective measures.

5. Conclusions

This study investigated the interrelationship (comorbidity pattern) between depression and PTSD for NK refugees. It also determined whether trauma types at different stages significantly affected both depression and PTSD. Depression and PTSD have a strong

positive interrelationship. In addition, the predominant death threat of trauma type at the transit stage had a positive relationship with depression and PTSD simultaneously. Therefore, a transdiagnostic approach that considers both PTSD and depression is needed. Moreover, it is necessary to apply trauma-informed care to NK refugees who suffered from various traumas in the migration stage, especially the predominant death threat trauma at the transit stage.

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Institutional Review Board Statement: This study's ethical review and approval were waived using a secondary dataset from the National Human Rights Commission of Korea (NHRCK). The participants were deidentified for this dataset. This study did not require formal consent. The NHRCK ethics statement and IRB approvals can be found here: <https://www.humanrights.go.kr/site/program/board/basicboard/view?menuid=001003001004&pagesize=10&boardtypeid=16&boardid=7602341> (accessed on 19 April 2022).

Informed Consent Statement: Not applicable.

Data Availability Statement: Restrictions apply to the availability of these data. Data were obtained from the Korea Social Science Data Archive: <https://doi.org/10.22687/KOSSDA-A1-2017-0012-V1.0> (accessed on 11 March 2022) with the permission of the National Human Rights Commission of Korea.

Conflicts of Interest: The author declares no conflict of interest.

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