
Personas and Scenarios to Design Technologies for North Korean Defectors with Depression

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Abstract

Depression among North Korean defectors is becoming more common in South Korea. Our goal was to design technologies for North Korean defectors with depression. To identify the needs of our target population, we created personas and scenarios by incorporating known factors from previous studies. The findings from our work highlight that North Korean defectors may have special needs due to their special backgrounds. With these special requirements, we will attempt to produce a solution by designing technologies to support the defectors experiencing depression.

Author Keywords

Personas; scenarios; user-centered design; needs assessment

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Introduction

Major challenges for North Korean defectors residing in South Korea are psychological stressors such as depression and post-traumatic stress disorder. Our work will solely focus on the rates and reasons for

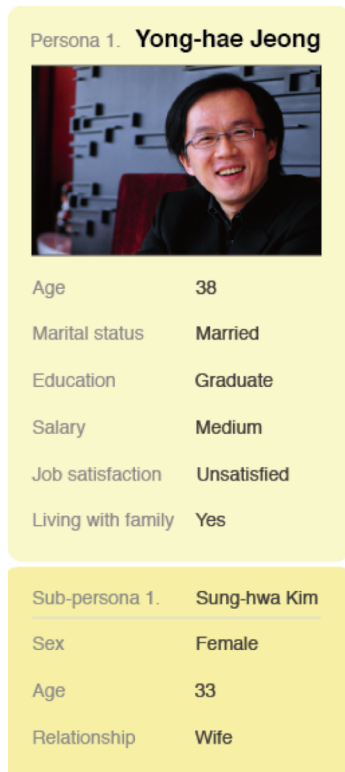


Figure 1: Jeong is a 38-year-old man who was a doctor in North Korea. His wife, Kim, defected to South Korea alone first. She then persuaded and helped Jeong to leave North Korea as well. (Photo credit to Forgemind ArchiMedia. <http://tinyurl.com/photocredit1>)

depressive symptoms. The number of defectors has increased in the last five years and is still growing. It is reported that 33% of defectors are experiencing clinical depression which has negative effects on their mental health and emotional well-being [3]. One study found that "the most influential cause of depression among North Korean defectors is acculturation stress, followed by anxiety, social support, and self-esteem." [5]. The meta-analysis of previous studies revealed that they focused on North Korean defectors aged between 21 and 75 years old to discuss difficulties related to mental health, anxiety disorders, and loneliness [5].

A persona is a "hypothetical archetype that represents a person who will interact with an information technology or system" [1]. Researchers utilize personas in order to find the needs of the user being studied. Usually, scenarios are created using the personas. Through scenario analysis, researchers use personas to better understand the user group requirements and needs. Persona and scenario analysis has some limitations as research methods, but it is useful when gathering generalized information.

Smartphone applications such as Moodkit¹ and Depression CBT² have been used to informally diagnose and help treating those with depression. However, defectors who use these apps may not obtain appropriate results because their needs differ from non-defectors. Thus, it is crucial to identify their special needs. Creating personas and scenarios could be one of

the most appropriate and effective design materials to identify the needs of defectors experiencing depression.

After reviewing previous work, we identified the following two gaps. First, little is known about the special needs of North Korean defectors with depression who are 50 years or older. Second, no prior studies used personas to identify the needs of North Korean defectors who were 50 years or older, who were not satisfied with their job or occupation, and who were not living with biological family member(s). In our study, we created three personas and scenarios. Using them, we identified the needs of the North Korean defectors with depression to inform design implications.

Method


After reviewing prior studies, we identified six major factors such as age, sex, marital status, education level, job satisfaction, and monthly salary rates that cause acculturative stress. Among these factors, we found that three factors—age, job satisfaction, and living with biological family member(s)—were statistically significant ($p\text{-value} < 0.05$) [4]. Also, we found that the majority of North Korean defectors who are aged 50 or older and/or did not live with biological family member(s) were more likely to experience acculturative stress. People who were satisfied with their current jobs were less likely to experience acculturated stress [4].

Based on the findings, we created three different personas (see Figures 1, 2, and 3). Since the actual number of female defectors in South Korea is two times

¹ <https://itunes.apple.com/us/app/moodkit-mood-improvement-tools/id427064987?mt=8>

² <https://play.google.com/store/apps/details?id=com.excelatlife.depression&hl=en>

Persona 2. **Sook-hee Kim**



Age	55
Marital status	Married
Education	High school
Salary	Medium
Job satisfaction	Satisfied
Living with family	Yes

Sub-persona 2.	Yung-chul Park
Sex	Male
Age	23
Relationship	Son

Figure 2: Kim is a 55-year-old woman who defected South Korea with her 18-year-old son. His son, Park, goes to high school, but has difficulty adopting to the new environment. (Photo credit to Michael Echteld. <http://tinyurl.com/photocredit2>)

larger than that of male defectors, two of the personas are female and one is male. Further, we created a sub-persona for each primary persona in order to address the interaction between one person and his/her closest stakeholder. These sub-personas are used to evaluate the needs of primary personas with more generalized perspectives. The first persona is someone who is experiencing job dissatisfaction. It is important to portray a man who is dissatisfied with his job because that way, he is more prone to depression. The second persona is a case of a woman who is older than 50. By understanding the relationship between her age and the risk of depression, we aimed to find a possible solution. Lastly, the third persona is about a recently graduated university student living by herself. We aimed to find how living without family members affects acculturative stress which leads to depression.

Scenario 1

Jeong (see Figure 1) is a 38-year-old man who was a doctor in North Korea. He defected to South Korea with his wife. He wanted to continue his career as a doctor in South Korea but realized that he had to complete a 6-year-long program at a university. Since Jeong was too old to study and could not afford tuition, he gave up on attending university. Fortunately, he got a job at the same restaurant his wife had been working at. However, since he had no prior work experience at a restaurant, he was clumsy and often made mistakes. He was not satisfied with the job. After several months, he ultimately quit the job. For the next several years, he had various part-time jobs, none of which lasted long. He often regretted defecting because he did not expect to work as a dishwasher as a trade-off for being a doctor.

Scenario 2

Kim (see Figure 2) is a 55-year-old woman who defected to South Korea with her son. Unfortunately, she was not able to bring her husband along to South Korea. While she seemed to adjust well to new environments, she felt guilty since she left her husband alone in North Korea. She tried to find a job, but it was difficult for her as she was old and the range of job opportunities was very limited. Yet, she tried her best for her and her son. Fortunately, she was able to get a job at a nearby restaurant where one of her acquaintances was working. Overtime, she became satisfied with her job. She worked there for the next several years, and made several friends who were also defectors. Many of them, including Hye-ja Park, had remarried in order to overcome depression and loneliness. However, Kim felt she was too old to remarry.

Scenario 3

Lee (see Figure 3) is a 24-year-old woman who graduated from a university in North Korea. She visited the Career Centre at the North Korean Defector Support Foundation for consultations. Fortunately, she could get a job at a small company as a secretary. She was satisfied with an office job, rather than working at a restaurant. For the next several years, she worked as a secretary at different companies. Although she seemed to be doing well in South Korea, she still missed her family and siblings in North Korea. She felt marginalized from the community. For instance, she had no choice but to spend holidays alone while her other co-workers would spend time with their families. Not only that, her close friend was getting married to another defector who had lived in South Korea for five years. Lee constantly compared herself to her friend

Persona 3. Mi-hyang Lee	
	
Age	24
Marital status	Single
Education	Undergraduate
Salary	Medium
Job satisfaction	Satisfied
Living with family	No
Sub-persona 3. Oak-hee Choi	
Sex	Female
Age	24
Relationship	Friend

Figure 3: Lee is a 24-year-old woman who graduated from a university in North Korea. Her friend, Choi, met another male defector few years ago, and she will marry him soon.

which made her feel even lonelier. Due to this, she grew interested in getting married.

Results

After reviewing the completed personas and scenarios, we found two similarities among the needs of three individuals presented in each persona. First, job opportunities were a major concern for the defectors. Although the government funded them for a certain period time, they needed to have a stable job in order to make a living independently. Second, most defectors got help from other defectors. Although there are some government agencies and non-governmental groups to support defectors, many defectors get useful help from other defectors who experience similar problems. Based on the needs, we may design features that match the skillsets to job qualifications to help North Korean defectors find jobs easily. Also, training defectors to access existing online communities may allow them to share information with each other.

Conclusions and Future Work

One of the contributions of our work is that we used prior studies to identify the parameters of personas. Further, we created three personas based on the analysis of previous studies. Lastly, we generated a list of the needs for designers. In order to create personas, we reviewed the meta-analysis of several related studies. We then identified and used the most significant factors ($p\text{-value} < 0.001$) to create three extreme examples of personas. The analysis of the personas and scenarios enabled us to come up with a list of needs of North Korean defectors.

Despite addressing the factors that affect North Korean defectors with depression, our work still has some

limitations. For example, our personas and scenarios were purely based on the analysis of previous studies, rather than based on the qualitative responses from actual participants. As for the future work, we plan to conduct surveys, interviews, and focus groups to identify the special needs (e.g., loneliness) of North Korean defectors. Also, we aim to use a Value Sensitive Design approach [2] by involving other stakeholders (e.g., family members and co-workers), who interact with North Korean defectors for further analysis.

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