

# The Influence of Sleep Disorders and Nightmares on Mental Health: A Study of Former Kurdish Peshmerga in Resettlement Countries

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## ABSTRACT

**Background:** Sleep disorders and nightmares are often rooted in post-traumatic stress and have a significant impact on the quality of mental health. There is an obvious relationship between war trauma and a higher frequency of nightmares and insomnia symptoms.

**Aim:** To study sleep disorders among former Kurdish Peshmerga (soldiers) and its impact on their mental health.

**Material and Methods:** Five focus group interviews were conducted with 24 former Peshmerga in Scandinavian countries, between December 2014 and April 2015. The majority were males (n=19) aged between 32-62 years (M= 51.6 years) but some were females (n=5) aged 41-58 years (M=49.3 years). They had lived in Sweden between 16 and 40 years. A qualitative content analysis method was used for analysis and interpretation of the collected data.

**Results:** Former Kurdish Peshmerga reported a number of difficulties related to sleep disorders. The impact of insomnia and nightmares on the participants' mental health was indicated. Difficulty falling asleep and nightmares were two main areas that were mentioned as problematic by the participants. The impact of the sleep disorders in daily life and its impact on psychological health were addressed by the participants in the present study.

**Conclusion:** Decreased mental health among former Kurdish Peshmerga was related to sleep disorders rooted in post-traumatic stress disorder. Difficulty falling asleep and nightmares negatively affected the participants' daily lives and their mental health.

**Key words:** Sleep disorder, mental health war trauma, Kurdish Peshmerga, nightmare

## INTRODUCTION

Since World War I, sleep disorders and nightmares have been addressed as complications of war trauma that affect human beings and their mental health. The relationship between war trauma and insomnia has been indicated by previous studies. <sup>[1,2]</sup> Nightmares that are often rooted in post-traumatic stress influence the quality of sleep, as well as physical, psychosocial and mental health. <sup>[3,4]</sup> In a study of war

veterans in Finland, a higher frequency of nightmares and symptoms of insomnia, depression and anxiety have been reported by participants with war experiences compared to participants without such experiences. <sup>[5]</sup> According to a study about Gulf War veterans, there is a strong association between war trauma and poor sleep quality, as well as depression and psychological distress. <sup>[2]</sup>

Due to the ethnic conflict between Kurdish people and countries governing the divided Kurdistan, a large number of Kurdish people have been forced to leave their own land and resettle in other countries. According to previous studies, many of the Kurdish refugees that have resettled in resettlement countries are suffering from post-traumatic stress syndrome and other mental disorders. [6-8] Kurds, who live in the Middle East in an area divided between Turkey, Iran, Iraq and Syria, are the largest non-state nation in the world, with a population of somewhere above 30 million in terms of ethnic origin. Division of the Kurdistan region occurred when the allied countries divided the defeated Ottoman territories among themselves after World War I. [9] After the division of Kurdistan, Kurdish resistance and their fight for an independent Kurdistan caused enormous forced emigration from Kurdistan to other parts of the world. [10] Around 7-8% of all Kurds live outside their region of origin. [11] The literature on refugee migration and war trauma suggests that war-wounded refugees constitute a high-risk group for mental health problems. [12] Due to the Kurdish resistance in the Kurdistan regions in Iran, Iraq, Syria and Turkey during the last decades, many Kurds were forced to join the Kurdish military forces (Peshmerga) which resulted in many of them coming to Sweden as refugees. [13] The aim of the present study was to explore the relationship between war trauma and insomnia, as well as its effect on mental health.

## **MATERIALS AND METHODS**

Of the fifty-five persons who were invited to participate in the study, forty-three initially agreed to participate and five of the participants declined participation for practical reasons. Of those who responded positively, a total of 24 persons participated in the interview. The majority were males (n=17), aged between 32-62 years (M= 51.6 years) and a few were (n=4) females, aged 41-58 years (M=49.3 years) who had lived

in Sweden between 16 and 40 years (Table 1). All contacts with the informants were arranged through Kurdish culture centres in Scandinavian countries. Information concerning the aim of the study was sent to participants by cultural associations via electronic post in their mother tongue. The same information was provided once again in print, and explained orally before the interview started.

Five focus group interviews, according to the guidelines for this method, [13] were carried out with participants between September 2014 and May 2015. The discussion began with general open-ended questions, following an interview guide for the qualitative research method. [14] The main question was: "Could you please describe your experiences regarding the relationship between war trauma and insomnia as well as its impact on your mental health"? In the course of the discussion, deepening of the content, clarification and consideration were achieved by means of more target questions (Table 3).

The interviews were in groups; the groups varied between four and six persons, and were held in the Kurdish culture centres in the respective countries. Participants were encouraged to speak freely using their own words, and the interviewer encouraged the informants to respond to questions as comprehensively as possible. The interviews were carried out in the participant's mother tongue. The interviews lasted between 105 and 120 minutes, and were recorded digitally and transcribed verbatim. A qualitative content analysis method [15] was used for analysis and interpretation of the collected data. The transcripts were read carefully in order to identify the informants' experiences and conceptions.

Analysis proceeded by extracting meaning units consisting of one or several words, sentences or paragraphs, containing aspects related to each other and addressing a specific topic throughout the collected data. Meaning units that related to each

other through their content and context were abstracted and grouped together in order to transfer them into a condensed meaning unit. The next step was to condense the text into a more abstracted issue and label it with a code. Afterwards, codes that addressed

similar issues were grouped together, with the intention of identifying subcategories, categories and themes. [15] The last step was presentation of the results with direct quotations from the interviews (Table 2).

**Table 1. Background data of the study group (n=23)**

| Nr | Age (Years) | Occupation in Scandinavia | Residency in Scandinavia(No. of years) | Job experiences (No. of years) |
|----|-------------|---------------------------|--|--------------------------------|
| 1  | 53          | State employee            | 22                                     | 14                             |
| 1  | 62          | Jobless                   | 21                                     | -                              |
| 2  | 58          | Taxi driver               | 23                                     | 9                              |
| 3  | 48          | State employee            | 9                                      | 18                             |
| 4  | 53          | Taxi driver               | 23                                     | 10                             |
| 5  | 54          | Assistant Nurse           | 25                                     | 16                             |
| 6  | 52          | Teacher in mother tongue  | 24                                     | 15                             |
| 7  | 41          | Nurse                     | 11                                     | 4                              |
| 8  | 32          | Jobless                   | 6                                      | -                              |
| 9  | 61          | Taxi driver               | 27                                     | 19                             |
| 10 | 48          | State employee            | 15                                     | 8                              |
| 11 | 59          | State employee            | 21                                     | 13                             |
| 12 | 52          | Jobless                   | 25                                     | -                              |
| 13 | 50          | State employee            | 18                                     | 14                             |
| 14 | 58          | Taxi driver               | 26                                     | 19                             |
| 15 | 48          | Engineer                  | 15                                     | 8                              |
| 16 | 47          | Assistant Nurse           | 15                                     | 5                              |
| 17 | 48          | Jobless                   | 12                                     | -                              |
| 18 | 50          | State employee            | 21                                     | 10                             |
| 19 | 44          | Worker                    | 23                                     | 15                             |
| 20 | 56          | Worker                    | 20                                     | 11                             |
| 21 | 45          | State employee            | 8                                      | 2                              |
| 22 | 47          | Own Company               | 9                                      | 3                              |
| 23 | 49          | State employee            | 7                                      | 1                              |
| 24 | 43          | Jobless                   | 8                                      | -                              |

**Table 2. Illustration of the analysis process in various stages (modified of Graneheim &, Lundman)**

| Steps      | Description   |
|------------|---|
| <b>I</b>   | <b>Meaning unit.</b><br>The first step is to identify the words, sentences and paragraph that have the same essential meaning and contain aspects related to each other through their content and context.  |
| <b>II</b>  | <b>Condensed meaning unit description close to the text.</b><br>Then meaning units related to each other through their content and context were abstracted and grouped together into a condensed meaning unit, with a description close to the original text. |
| <b>III</b> | <b>More condensed meaning unit interpretation of the underlying meaning.</b><br>The condensed text in the meaning unit was further abstracted and interpreted as the underlying meaning and labelled with a code.   |
| <b>IV</b>  | <b>Subcategories.</b><br>Codes were grouped together based on their relationship and codes that addressed similar issues were grouped together in subcategories.  |
| <b>V</b>   | <b>Categories.</b><br>Subcategories that focused on the same problem were brought together in order to create more extensive conceptions.   |
| <b>VI</b>  | <b>Theme.</b><br>Finally, a theme that covers the analysed text links the categories that appeared and emerged from the text.   |
| <b>VII</b> | <b>Direct quotes</b><br>Presentation of result with direct quotes from the interviews.  |

## RESULTS

The analysis and interpretation of the collected data in the present study resulted in two main categories and four subcategories. There was a high level of agreement in the groups concerning the

relationship between experience of war trauma and a sleeping disorder. The first category dealt with difficulties in falling asleep, and the second was about nightmares and their consequences (Table 3).

### Difficulty falling asleep

#### Impact on both individual and family life

According to the results of the present study, the effect of insomnia on both individual and family life is the most common difficulty that was reported by the majority of the participants. One participant gave insomnia as the main reason for negative thinking and travelling back to

unpleasant moments in previous periods of his life. Another participant confirmed his statement and added, “Of course, during a wedding celebration?” No one thinks about the negative moments of life, but:

*“Insomnia is a negative phenomenon, in this context it could be a reason to drive me back to that negative moment in my life that is often followed by nightmares”.*

**Table 3. Analysis process, codes, subcategories, categories and theme.**

| Theme         | A life in the shadow of horror  |  |  |   |
|---------------|---|--|--|---|
| Categories    | Difficulty falling asleep   |  | Nightmares and its consequences  |   |
| Subcategories | Impact on both individual and family life   | Impact on daily activities   | Awakening  | Psychological and physical strains  |
| Codes         | Toss about in bed<br>Mumble<br>Partner’s irritation<br>Anxiety<br>Headache<br>Stress<br>Fear<br>Negative thoughts | Anxiety<br>Stress<br>Tiredness<br>Sleepiness<br>Irritability<br>Job quality<br>Fear<br>Being grumpy<br>Relationship<br>Fatigue | Crying<br>Risky action<br>Physical movement<br>Partner irritation<br>Bitter memory<br>Back to problems?<br>Anxiety | Palpitations<br>Sweating<br>Dyspnoea<br>Anxiety<br>Headache<br>Shivering<br>Hopelessness<br>Angriness |

Insomnia is described by some of the participants as a problem that brings about a twofold difficulty. One of the participants stated that a person with insomnia has quite a difficult time, as it also negatively affects her/his family members, first of all the sleeping partner (wife, husband). One participant said that when he tosses about in bed and mumbles to himself, his wife reminds him frequently:

*“You know that I must wake up at six o’clock tomorrow and I work hard all day - sleep now, please...please...please”.*

Another participant added:

*“Once I could not sleep. In order to avoid creating any problems for my wife, I went to the kitchen. My daughter came to me and said “I am hungry Daddy” then my wife came to us and a quarrel started.”*

Based on the participants’ experiences, anger, irritation, and quarrelling in the family were some of the other consequences of insomnia that affected persons and family life negatively.

#### Impact on daily activities

The results of the study indicated that insomnia often caused problems such as being sleepy, tired, and irritable during the

day. The majority of the participants in this study mentioned concentration difficulties as well as difficulties in social relationships. Some of the participants mentioned this problem as a risk for job quality and their job status. One of the participants expressed his concern over this as follows:

*“In order to act correctly it is quite important to think correctly. In this context our brain needs to relax, similarly our muscles. Without sufficient hours of sleep the brain never acts correctly and a tired brain make us angry and irritable, which many times leads to conflict and a deficient social relationship”.*

The consequences of insomnia and its impact on the participants’ daily life have been repeated frequently during the group discussion. A participant who has had a long period of insomnia stated:

*“When I have difficulty falling asleep during the night, my main concern is how I will be with my colleagues during the day. I always think about a piece of beautiful poetry by the famous Kurdish poet Maulawi kurd ...//...Emshaw we her hal shew we ro bero Khwa sa merge seher chesh kero...//. It means: Anyway? I am going to pass this*

*night, I wish to die because I do not know what my day will look like tomorrow”*

### **Nightmares and their consequences**

#### **Awakening**

The participants stated that after every nightmare they wake up which was mentioned as problematic for the family, particularly the sleeping partner. Participants believed that waking up during the night was strongly associated with previous traumatic experiences. One of the participants expressed it as follows:

*“Once, in the middle of the night, my wife cried angrily, “What are you talking about? What do you mean? “It is not your turn”.”...//...when I was in jail in Iran there were three persons in the same cell. One of them, who was my friend, was executed. The prison guard, who was a middle-aged soldier, came every morning to me and told me “Now it is your turn””.*

Another participant described a similar story concerning a nightmare that he traced back to previous traumatic experiences. He said when he was a “Peshmerga” during a battle against government soldiers one of his friends was severely injured and lost a large amount of blood. He said that his friend continually asked him for water up until the last second of his life. *“Now sometimes during my nightmare I often cry “Water...water... water”... and my wife often tells me to go and get water myself, “you are not a baby”...ha...ha....”*

#### **Psychological and physical strains**

Based on the results of the study, the majority of the participants reported both physical and psychological problems that were caused by nightmares and abnormal awakening. One participant said she never wanted to fall asleep, because of the fear of nightmares and awakening. She stated that she hated the night, not because of the darkness, but rather because of the horror of nightmares.

*“I cannot remember that I have had one hour of sleep without a nightmare during the last decade of my life. In this context, I hate sleep since it is full of nightmares for*

*me, and at the same time I know that I should sleep because I need to rest, but unfortunately there is no rest during my hours of sleep”.*

Apart from the psychological difficulties mentioned by participants, nightmares and abnormal waking up also caused a number of physical problems. The most common physical symptoms were palpitations, sweating, dyspnoea, headaches and shivering. Nightmares and awakening have led to psychosomatic problems among a large number of participants in the present study.

*“After abnormal waking up I often get palpitations and dyspnoea. If my nightmare and abnormal waking up is in the morning and I must get up and go to work, I will have a headache the entire day and sometimes pain in my stomach”.*

## **DISCUSSION**

### **Comment on the methods**

Since the subject of the study is the experiences of human beings that need to be interpreted rather than translated, the content analysis method [15] was used for analysis and interpretation of the collected data. According to this method, the first step of the analysis should focus on the content and describe the visible elements (manifest content). In the second step, analysis of what the text is about involves an interpretation of the underlying meaning of the text (latent content). Furthermore this method makes it possible to handle large amounts of data in a systematic way as a limited number of content categories, subcategory and codes.

### **Comment on the results**

According to the results of the study, the participants reported a number of physical and psychological difficulties that were mainly related to difficulties in falling asleep, as well as nightmares and their consequences. A majority of the participants in this study highlighted difficulty in falling asleep and its impact on their daily life as the main factor that influenced their mental health. They also stated that insufficient

sleep could lead to an unsatisfactory life, and finally it could result in poor mental health. The relationship between insomnia and mental health problems has been indicated in a previous study. [16] Participants in the present study related that insomnia was often the reason that they thought about unpleasant moments during the time they were active as guerrilla soldiers, which was full of dramatic moments. One of the participants stated that sometimes he felt that his life was meaningless and he wanted to die. Such a statement could be connected to the result of a study in the United States of America that indicated an obvious association between long-term insomnia and suicidal ideation. [17]

The negative effect of insomnia in the participants' daily lives was expressed by the majority of the study groups. They mentioned that insomnia not only influenced their work and productivity, but also negatively affected their social relationships. A study about refugees' social relationship in Scandinavian countries has highlighted the importance of social relationships for psychosocial well-being. [18] One of the participants indicated that when he does not fall asleep he often thinks about dramatic moments that happened in his life, which is finally followed by stress, fear and nightmares. This issue was confirmed previously by another study in Canada that aimed to find out the relationship between poor sleeping and an insufficient quantity of sleep and its impact on activities of daily life. [19] A study about a group of Vietnam veterans indicated that there is a strong relationship between insomnia, psychosocial stress and nightmares. [20] Apart from psychological difficulties, symptoms of physiological problems, such as palpitations, sweating, dyspnea, headaches, shivering, particularly after abnormal waking up, were reported by participants in the present study. Long-term physical problems often result in psychological problems [21] such as long-

term depression, which also has a significant impact on physical health. [22]

#### **Potential sources of bias**

The investigator in the present study belongs to the same ethnic group as the participants, which may be considered a risk factor for bias in the planning, execution and analysis of the research, because of his pre-understanding. [23] Although some bias due to the investigator's background and pre-understanding cannot be ruled out, the degree of openness, depth and confidence obtained in the interview situations probably out-performed potential biases that could not be ruled out completely. Furthermore, bias in the research process was probably limited by the investigators' awareness of the limitations of qualitative methods, and awareness of the impact of the "life-world paradigm" regarding pre-understanding. Additionally, the researcher tried to pay attention to the balance between closeness and distance in the discussions, as suggested for qualitative research methods. [24]

#### **CONCLUSION**

Decreased mental health among former Kurdish Peshmerga was related to sleep disorders rooted in post-traumatic stress disorder. Difficulty falling asleep and nightmares negatively affected the participants' daily lives and their mental health. Negative thinking and travelling back to unpleasant moments in previous periods of his life mentioned as main reason for psychological difficulties and nightmare by participants in the study. Excepting the psychological problems that mentioned by former Kurdish Peshmerga in the present study, abnormal waking up also caused a number of physical problems. The most common physical symptoms were palpitations, sweating, dyspnoea, headaches and shivering.

#### **ACKNOWLEDGEMENTS**

Many thanks to professor Ata Ghaderi at University of Uppsala for his practical and technical support during the analysis of this study.

## REFERENCES

1. Kelly BD. Shell shock in Ireland: The Richmond War Hospital, Dublin (1916-19). *Hist Psychiatry* 2015; 26: 50-63.
2. Chao LL, Mohlenhoff BS, and Weiner MW. Associations between subjective sleep quality and brain volume in Gulf War veterans. *Sleep* 2014; 37: 445-452.
3. Carroll JE, Irwin MR, and Merkin SS. Sleep and Multisystem Biological Risk: A Population-Based Study. *PLoS One* 2015; 10: (2), e0118467. Doi, 10.1371.
4. Harb GC, Thompson R, and Ross RJ. Combat-related PTSD nightmares and imagery rehearsal: nightmare characteristics and relation to treatment outcome. *J Trauma Stress* 2012; 25: 511-518.
5. Sandman N, Valli K, and Kronholm E. Nightmares: Prevalence among the Finnish General Adult Population and War Veterans during 1972-2007. *Sleep* 2007; 36: 1041-1050.
6. Sundelin Wahlsten V, Ahmad A, and von Knorring AL. Traumatic experiences and post-traumatic stress reactions in children and their parents from Kurdistan and Sweden. *Nord J Psychiatry* 2001; 55: 395-400.
7. Mghir R, Freed W, Raskin A, & Katon W. Depression and post-traumatic stress disorder among a community sample of adolescent and young adult Afghan refugees. *J Nerv Ment Dis* 1995; 183: (1),24-30.
8. Ahmad A, Sofi MA, and Sundelin-Wahlsten V. Post-traumatic stress disorder in children after the military operation "Anfal" in Iraqi Kurdistan. *Eur Child Adolesc Psychiatry* 2000; 9: 235-243.
9. Karadaghi P. The Kurds: Refugees in their own land. In: Marcella AJ, Bornemann T, Ekblad S, Orley J (eds). *Amidst peril and pain. The mental health and well-being of the world refugees*. American Psychological Association, Washington, DC, 1994, p 115-124.
10. Alinia M. Spaces of Diasporas: Kurdish identities, experiences of otherness and politics of belonging. Academic Thesis. Department of Sociology, Gothenburg University, Gothenburg. 2004.
11. Taloyan M. Health, migration and quality of life among Kurdish immigrants in Sweden. Academic Thesis. Departments of Neurobiology, Care Sciences and Society, Centre for family and Community Medicine, Karolinska Institute, Stockholm. 2008.
12. Hermansson AC. War-wounded refugees: a prospective study of well-being and social integration. Academic Thesis. Department of Community Medicine, Faculty of Health Sciences, Linköping University, Linköping. 1996.
13. McLafferty I. Focus group interviews as a data collecting strategy. *J Adv Nurs*. 2004; 48: 187-194.
14. Kvale S. Den kvalitativa forskningsintervjun. (The qualitative Research Interview), Student literatur, Lund, Sweden (In Swedish). 1997.
15. Graneheim UH, and Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Educ today* 2004; 24, 105-112.
16. Freeman D. Effects of cognitive behavioural therapy for insomnia on the mental health of university students: study protocol for a randomized controlled trial. *Trials* 2015; 28: 16. 236. Doi, 10.1186/s13063.
17. Woosley JA, Lichstein KL, and Taylor DJ. Insomnia Complaint versus Sleep Diary Parameters: Predictions of Suicidal Ideation. *Suicide Life Threat Behav*. 2015; 6:.. doi: 10.1111/sltb.12173. [Epub ahead of print]
18. Nabi F, and Øyvind Ø. Difficulties and Possibilities in Kurdish Refugees' Social Relationship and its Impact on their Psychosocial Well-Being. *J Family Med Community Health* 2015; 2: 1035.
19. Duclos C, Beauregard MP, and Bottari C. The impact of poor sleep on cognition and activities of daily living after traumatic brain injury: a review. *Aust Occup Ther J* 2015; 62: 2-12.
20. Gehrman PR, Harb GC, and Cook JM. Sleep Diaries of Vietnam War Veterans with Chronic PTSD: The Relationships among Insomnia Symptoms, Psychosocial Stress, and Nightmares. *Behav Sleep Med* 2014; 13: 255-264.

21. Ryan S. Psychological effects of living with rheumatoid arthritis. *Nurs Stand* 2014; 29: 52-59.
22. Trivedi MH. The Link between Depression and Physical Symptoms Prim Care Companion. *J Clin Psychiatry* 2004; 6: 12–16.
23. Nyström M, and Dahlberg K. Pre-understanding openness-a relationship without hope? *Scand J Caring Sci* 2010; 15: (4):339-346.
24. Dahlberg K. *Kvalitativa metoder för vårdvetare. Qualitative methods in the nursing sciences* Lund: Student litteratur Publishing. 1997.

How to cite this article: Fatahi N, Krupic F. The influence of sleep disorders and nightmares on mental health: A Study of former Kurdish Peshmerga in resettlement countries. *Int J Health Sci Res.* 2017; 7(4):380-387.

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