International Journal of Public Health Asia Pacific
Open Access: e-Journal
ISSN: 2822-0587(Online)

Quality of life among humanitarian aid workers in Thai-Myanmar border

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ABSTRACT

Background: Humanitarian aid workers (HAWs) are crucial frontline responders in helping the crisis-affected population. Since they are under constant pressure to perform effectively in an unstable environment, HAWs are always in need to be prepared both physically and mentally.

Objectives: To determine the quality of life and its associated factors among humanitarian aid workers along the Thai-Myanmar border.

Methods: An analytical cross-sectional study was conducted among 424 HAWs, using multistage random sampling across 4 provinces along the Thai-Myanmar border with a structured questionnaire interview. The WHOQOL-BREF was used to measure quality of life (QOL). Descriptive statistics were used to describe participant characteristics and multiple logistic regression analysis was employed to determine the factors associated with the QOL of HAWs. A P-value of <0.05 was considered statistically significant.

Results: More than half of the respondents (62.03%; 95% CI: 57.29% – 66.54%) had moderate to poor QOL. After controlling for covariates, the study observed that moderate to poor QOL was strongly associated with having acute illness within the past month (Adj. OR = 2.49, 95% CI: 1.04-5.96, P-value 0.041), severely dysfunctional family relationships (Adj. OR = 2.8, 95%CI: 1.16-7.21, P-value 0.008), a family monthly income of ≤ 10,000 THB (Adj. OR = 2.26, 95%CI: 1.34-3.81, P-value 0.002), and one or more chronic conditions (Adj. OR = 3.53, 95%CI: 1.64-7.56, P-value 0.001).

Conclusion: More than half of humanitarian aid workers along the Thai-Myanmar border have a moderate to poor quality of life. Personal and health factors, as well as family relationships were found to be associated with a reduced QOL. Hence, periodic psychosocial support as well as health promotion, prevention, and interventions for humanitarian aid workers will enhance their QOL effectively.

Keywords: Humanitarian aid worker, Quality of life, Thai-Myanmar border

1. Introduction

Humanitarian crises, such as disease outbreaks, natural catastrophes, and conflicts, affect millions of people annually. In response, governmental and non-governmental groups offer victims of these crises both short-term and long-term support [1, 2]. Humanitarian aid workers play a crucial role in assisting those in need but often struggle to address issues fully in low resource settings, leading to distress and frustration, especially when working with diverse communities [3]. Moreover, due to the nature of their work HAWs often encounter continuous demands at different settings and so, the majority experience increased risk to suffer prolong stress, overburden of work, negative impacts on mental and physical health, and frequent security incidents [4-8].

HAWs along the Thailand-Myanmar border are in a unique situation where they are providing assistance to Myanmar people on the Thailand side. Since 1976, Thailand has hosted Myanmar refugees and migrants fleeing conflict [9]. The situation worsened after the 2021 coup with over 20,000 new refugees and 54,017 long-term refugees in camps, alongside 680,903 migrant workers in Tak Province alone [10, 11]. Therefore, HAWs at the Thailand-Myanmar border face a significant workload providing assistance to these populations [12].

Often, HAWs face significant challenges that can impact their overall well-being and quality of life. Quality of life, as defined by World Health Organization, comprises physical health, psychological well-being, social relationships, and environment [13]. It however depends on the circumstances where HAWs are in where lower QOL was found among high-risk professionals at frontline [14].

The lower QOL has also been found to be associated with gender, marital status, lower education level, lower income and having debt [15-19]. Having physical health conditions, including chronic diseases and physical abnormalities, as well as behavior such as smoking, drinking alcohol, insufficient sleep, and inadequate physical activity also contribute to having lower QOL [20-26]. Moreover, having warm, supportive, and positive family relationships has been found to correlated with higher QOL [27].

Given the difficult and complex work situation, the QOL of the HAWs is difficult to determine, especially of those who are working under low-resourced settings. Though research studies have been

conducted in Thailand on QOL in different settings, very few studies have examined the QOL status of HAWs in a stressful situation. Therefore, this present study aimed to determine factors influencing the quality of life of HAWs along Thai-Myanmar border.

2. Methods

2.1 Study Area

This study was conducted from mid-March 2024 to May 2024. The data were collected in both urban and rural areas along Thai-Myanmar border namely Tak, Mae Hong Son, Ratchaburi, and Kanchanaburi where humanitarian assistances are provided to refugees and migrants. These locations were chosen as a study area since many NGOs, CSOs and UN agencies are based along Thai-Myanmar border to provide humanitarian assistance to refugees and migrants, and more recently to address the influx of emergency response.

2.2 Study Design

An analytical cross-sectional study was designed to describe the quality of life among humanitarian aid workers along Thai-Myanmar border and how social determinants have an influence on their quality of life.

2.3 Sample size and sampling

The sample size was calculated using the formula for multiple logistic regressions [28]. To control for overfitting, adjustments were made using a R-squared value of 0.70 and a variance inflation factor (VIF) of 3.33. As a result, the final sample size was calculated to be 423.81, which was rounded to approximately 424. The sampling process was achieved through probability proportional to size (PPS) in the 4 provinces where the majority of humanitarian services are rendered were regarded as sampling units. All districts under each province where humanitarian organizations operate were included. The eligible respondents in each district were further identified by applying simple random sampling, proportional to the population of the target subjects in each district.

2.4 Data Collection

A structured questionnaire was developed based on research questions. The questionnaire was initially created in English then translated into Thai, Burmese, and Karen dialect using forward and backward translation procedures. The questionnaire consisted of 4 parts including: (a) demographic characteristics such as age,

gender, marital status, educational level, people living with, house tenure, family monthly income (Baht/month), family monthly expenditure (Baht/month), and family financial situation; (b) health and behaviour factors such as suffering from acute illness within the last month, having a terrifying accident in the past few months, having chronic disease, having physical abnormality, smoking status, alcohol consuming status, physical activity, and sleep duration (Hour/day); (c) family factors which include family size, having ill-person in the family, and family relationship assessment using APGAR test [29]; (d) WHOQOL-BREF [30]. Pre-testing was done among 30 participants and the findings were calculated for reliability of the study using Cronbach's alpha coefficient. The reliability of Family APGAR questionnaire was equal to 0.84 and reliability for WHOQOL-BREF assessing quality of life was 0.90. The questionnaire also underwent content validation by three experts and was subsequently revised to enhance its validity. Data collection was carried out through in-person interviews.

2.5 Data Analysis

The collected raw data were encoded in Microsoft Excel. To test the hypothesis, statistical logistic regression was used, and data analysis was performed by using the STATA program version 18. Error checking and validation of data were done prior to data encoding by entering the collected data twice, storing it as two different data files to verify accuracy and consistency of the data. Categorical variables were reported in number and percentage (%) while reports on continuous variables were described in mean, standard deviation, median and range (Min: Max). Bivariate analysis was done by applying simple logistic regression to identify the significance of association between the outcome and each of independent variables. Significant factors with a P-value <0.25 from bivariate analysis, other important factors from previous studies, and those factors the researcher suspects are relevant to the context of this study area were included in the multivariable analysis. To quantify the association between the outcome and motivational factors, 95% Confidence Interval (95%CI) and Odds Ratio (OR) were used in multiple logistic regression analysis, while controlling covariates and confounding factors. Factors with P-value <0.05 were considered significant.

2.6 Ethical Clearance

This study was approved by the Centre for Ethics in Human Research, Khon Kaen University (Reference No. HE662274), Khon Kaen, Thailand.

3. Results

Of the total 424 humanitarian aid workers, 66.75% were female and the average age was 33.76 (±8.77) years old, ranging from 19 to 60 years. The majority of respondents (49.29%) had completed high school or equivalence. Most of the respondents (57.08%) were married. Nearly half (47.41%) lived in medium sized households with three to five family members, and the total family income of the respondents ranges from 1,000 to 400,000 Thai Baht (THB), with the median monthly family's income of 4,000 THB (Table 1).

Table 1: Characteristics of humanitarian aid workers in Thai-Myanmar border (n=424)

Characteristics	Number (n)	Percentage (%)
Age (year)		
<25	59	13.91
25 – 44	304	71.70
≥45	61	14.39
Mean (±SD)	33.76 (±8.77)	
Median (Min: Max)	32 (19:60)	
Gender		
Male	141	33.25
Female	283	66.75
Marital Status		
Single	162	38.20
Married	242	57.08
Divorced/Separated/Widow	20	4.72
Educational Level		
Under Highschool Diploma	57	13.44
Highschool or equivalence	209	49.29
Bachelor's degree	131	30.90
Master/Doctoral degree	27	6.37
Family Income (THB per month)		
≤ 10,000	311	73.35
> 10,000	113	26.65
Median (Min: Max)	4,000 (1,000:400,000)	
Family Expenditure (THB per month)		
≤ 5,000	239	56.37
> 5,000	185	43.63
Median (Min: Max)	5,000 (1,000:250,000)	
Had acute illness within the last month		
No	368	86.79
Yes	56	13.21
Had accident in the last month		
No	386	91.04
Yes	38	8.96
Having Chronic Disease		
No	348	82.08

Characteristics	Number (n)	Percentage (%)
Yes	76	17.92
Physical Activity (≥ 150 min of moderate intensity/week or ≥ 75 min of vigorous intensity/week)		
Met global recommendations by WHO	101	23.82
Unmet global recommendations by WHO	323	76.18
Sleep duration at night (Hours)		
<8	221	52.12
≥8	203	47.88
Mean (±SD)	7.33 (±1.21)	
Median (Min: Max)	7 (2:12)	
Number of family members		
≤ 2	82	19.34
3-5	201	47.41
≥6	141	33.25
Mean (±SD)	4.88 (±3.14)	
Median (Min: Max)	4 (1:29)	
Having ill person in the family		
No	310	73.11
Yes	114	26.89
Family Relationship satisfaction		
Highly functional (Score 7 – 10)	213	50.24
Moderately dysfunctional (Score 4 – 6)	151	35.61
Severely dysfunctional (Score 0 – 3)	60	14.15
Mean ±SD	6.49(±2.65(	
Median (Min: Max)	7 (0:10)	
Job Sector		
Health	183	43.16
Education	94	22.17
Protection	134	31.60
UN Agencies	13	3.07
Job Function		
Emergency Response	21	4.95
Direct Client Service Provider/Field staff	297	70.05
Program Management (Manager, Coordinator, Director etc.)	39	9.20
Office staff (Admin, HR, Finance etc.)	67	15.80
Employment duration (months)		
> 12 months	274	64.62
≤ 12 months	150	35.38
Mean (±SD)	46.67 (±54.64)	
Median (Min: Max)	24 (1:480)	

QOL among humanitarian aid workers

The prevalence of overall moderate to poor QOL among humanitarian aid workers on the Thai-Myanmar border was 62.03% (95% CI: 57.29-66.54). Most of the participants (60.61%) had a moderate QOL, 37.97% were found to have a good QOL, and 1.42% had a poor QOL (Table 2).

Table 2: Levels of quality-of-life of humanitarian aid workers in Thai-Myanmar border (n=424)

Quality of Life	Number (n)	Percentage (%)	95% CI
Good (QOL score ≥96)	161	37.97	33.46-42.71
Moderate (QOL score 61-95)	257	60.61	55.86-65.17
Poor (QOL score ≤60)	6	1.42	0.64-3.12
Mean ±SD	91.58 (±12.34)		
Median (Min: Max)	92 (52:130)		

Factors associated with quality of life of humanitarian aid workers: Bivariate Analysis

The result of the crude analysis using simple logistic regression showed that age, gender, educational level, family income, family expenditure, having acute illness within the past month, had accident in the past month, having one or more chronic diseases, physical activity, sleep duration, having an ill person in the family, family relationship, and job function were associated with moderate to poor QOL (Table 3).

Table 3: Bivariate analysis for factors associated with moderate to poor QOL among humanitarian aid workers in Thai-Myanmar border (n=424)

Factors	n	%of poor QOL	Crude OR	95% CI	P-value
Age (Year)					0.010
≥ 30	265	57.36	1		
< 30	159	69.81	1.72	1.13-2.61	
Gender					0.248
Male	141	58.2	1		
Female	283	63.9	1.28	0.84-1.93	
Marital Status					0.352
Married/Divorced/Separated/Widow	262	60.31	1		
Single	162	64.81	1.21	0.81-1.82	
Educational Level					0.013
Bachelor's degree/Master/Doctoral degree	158	53.80	1		
Highschool or equivalence	209	65.07	1.60	1.05-2.44	
Under Highschool Diploma	57	73.68	2.40	1.23-4.69	
Family Income (THB per month)					<0.001
> 10,000	113	47.79	1		
≤ 10,000	311	67.20	2.24	1.44-3.47	
Family Expenditure (THB per month)					0.030
>5,000	185	56.22	1		
≤ 5,000	239	66.53	1.55	1.04-2.29	
Had acute Illness within the past month					0.001
No	368	58.97	1		
Yes	56	82.14	3.20	1.57-6.54	
Had accident in the last month					<0.001
No	386	59.9	1		
Yes	38	86.84	4.48	1.71-11.72	
Having chronic disease					<0.001
No	348	57.47	1		

Factors	n	%of poor QOL	Crude OR	95% CI	P-value
Yes	76	82.89	3.59	1.90-6.76	
Physical Activity (≥ 150 min of moderate intensity/week or ≥ 75 min of vigorous intensity/week)					0.074
Met global recommendations by WHO	101	54.46	1		
Unmet global recommendations by WHO	323	64.40	1.51	0.96-2.38	
Sleep duration at night (Hour)					0.236
≥ 8	203	59.11	1		
< 8	221	64.71	1.23	0.86-1.88	
Number of family members					0.959
≤ 2	82	60.98	1		
3 – 5	201	62.69	1.08	0.63-1.82	
≥ 6	141	61.70	1.03	0.59-1.80	
Having ill person in the family					0.019
No	310	58.71	1		
Yes	114	71.05	1.73	1.09-2.74	
Family Relationship					<0.001
Highly functional (≥ 7)	213	53.05	1		
Moderately dysfunctional (4-6)	151	66.89	1.79	1.16-2.76	
Severely dysfunctional (≤3)	60	81.67	3.94	1.19-7.99	
Job Sector					0.827
Health	183	60.66	1		
Education	94	61.70	1.04	0.63-1.74	
Protection/UN Agencies	147	63.95	1.15	0.73-1.80	
Job Function					0.033
Program Management (Manager, Coordinator, Director etc.)	39	43.59	1		
Emergency Response/Direct Client Service Provider/Field staff	318	62.89	2.19	1.12-4.30	
Office staff (Admin, HR, Finance etc.)	67	68.66	2.83	1.25-6.41	
Employment duration (months)					0.021
> 12 months	274	58.03	1		
≤ 12 months	150	69.33	1.64	1.07-2.49	

Factors associated with moderate to poor QOL among humanitarian aid workers: Multivariable analysis

After controlling the confounding factors with backward elimination, multivariable analysis indicated that factors associated with moderate to poor QOL were having one or more chronic diseases (Adj. OR = 3.53, 95%CI: 1.64-7.56, P-value 0.001), having family monthly income of ≤ 10,000 THB (Adj. OR = 2.26, 95%CI: 1.34-3.81, P-value 0.002), having severely dysfunctional family relationship (Adj. OR = 2.80, 95%CI: 1.24-6.31, P-value 0.008), and had acute illness within the past month (Adj. OR = 2.49, 95%CI: 1.04-5.96, P-value 0.041) (Table 4).

Table 4: Multivariable analysis for factor associated with moderate to poor QOL among humanitarian aid workers in Thai-Myanmar border (n=424)

Factors	n	%of poor QOL	Crude OR	AOR	95% CI	P-value
Having chronic disease						0.001
No	348	57.47	1	1		
Yes	76	82.89	3.59	3.53	1.64-7.56	
Family Income (THB per month)						0.002
> 10,000	113	47.79	1	1		
≤ 10,000	311	67.20	2.24	2.26	1.34-3.81	
Family Relationship						0.008
Highly functional (≥ 7)	213	53.05	1	1		
Moderately dysfunctional (4-6)	151	66.89	1.79	1.51	0.90-2.52	
Severely dysfunctional (≤3)	60	81.67	3.94	2.80	1.24-6.31	
Had acute Illness within the past month						0.041
No	368	58.97	1	1		
Yes	56	82.14	3.20	2.49	1.04-5.96	

4. Discussion

In the present setting, HAWs along the Thai-Myanmar border exhibited a notably high prevalence of moderate to poor QOL. This result is in contradiction with a study conducted among staff from educational sector in Thailand which reported 49.3% as having high QOL, 50.7% as having moderate QOL, and none had low QOL [31]. The differences in the prevalence of moderate to poor QOL may be due to the target population of the study among educational sector being staff between 50-60 years, where the present study also found that older HAWs tend to report higher QOL. Moreover, the working and living environments as well as socio-cultural settings of those in educational institute are more preferable when compared to that of those working in close to conflict-affected or high exposure risk zones. Though lower rates were found in the present study, this result trend is consistent with the study conducted among healthcare professionals in India [7], where 72% had moderate to low QOL. This study was conducted during COVID-19 pandemic, with healthcare staff responsible for direct COVID-19 care, risking their lives [7, 32]. The working and living environments of those staff had high exposure to being infected with COVID-19 and many were required to be isolated, not getting a chance to be in physical contact with anyone outside the hospital while caring for the patients, affecting them physically and psychologically thus resulting in higher percentage of moderate to low QOL compared to staff at risk-free zones. Similarly, HAWs in the present study operate

in assisting migrants, internally displaced persons and refugees who were victims of conflict at close to conflict affected areas. Their work also bore risk for safety as well as greater risk to physical and psychological distress [3, 8], almost identical to the context as frontline health care workers. These findings illustrate the inconsistently in QOL across the literature [15, 33], likely stemming from the differences in context and condition of work environments of HAWs across various sectors.

HAWs with one or more chronic health conditions were 3.53 times more likely to have a moderate to poor QOL than those with no chronic health conditions. HAWs at the Thai-Myanmar border face high-pressure, demanding work environments that leave little time or energy for regular exercise. A sedentary lifestyle, compounded by stress, increases the risk of chronic diseases such as diabetes, hypertension, and cardiovascular issues. HAWs are also engaged in long working hours and challenging living conditions which can lead to chronic sleep deprivation. Poor sleep quality is linked to a higher risk of developing chronic health issues such as obesity, cardiovascular disease, gastrointestinal issues and weakened immune function. A study conducted in China also found that insufficient sleep hours correlated to multiple chronic conditions [34]. This association between having chronic disease and lower QOL was also consistent with comparison conducted between individuals with and without physical chronic disease [35].

In the present study, receiving a monthly family income of 10,000 THB or less was linked to a moderate to poor QOL. Individuals with lower incomes tend to experience lower QOL primarily due to limited access to healthcare, resources, and social support [19]. In the present study, the monthly income of HAWs varied depending on the job station and the type of organization, whether international NGOs, local NGOs, CSO or CBO. HAWs with lower income may experience increased financial stress and reduced access to essential resources, impacting their overall well-being. Limited income can lead to job burnout and reduced social capital, further diminishing QOL [36].

Having severely dysfunctional family relationship was also associated with moderate to poor QOL of HAWs in the present study. Family functionality depends on how family members interact and support each other. When HAWs are having limited

family time, the family members become distanced from each other, and that in turn could result in losing effective emotional and practical support, especially during difficult times. When receiving less support from their family and emotional neglect increases, the QOL of HAWs are negatively affected. This finding is consistent with a study conducted in Malaysia where higher family support was associate with better QOL in all four domains, physical, psychological, social relationships, and environmental QOL [37].

Experiencing acute illness within the last month means that HAWs were having physical discomfort, fatigue, and had a reduced ability to perform daily tasks, which negatively impacted their work performance and overall well-being. With the demanding nature of humanitarian work, which often leads to long hours and insufficient rest, HAWs may experience physical exhaustion, which lowers the body's defences against illness. Furthermore, HAWs in Thai-Myanmar border are required to travel between different regions, and they often travel with varying levels of health and safety standards, which can expose HAWs to a range of pathogens and environmental hazards that contribute to acute illness [5]. Similarly, HAWs working with displaced populations and in areas with outbreaks of infectious diseases face higher risk of exposure to illnesses like respiratory infections, gastrointestinal diseases, and other contagious conditions. Studies conducted in different settings found that lower QOL was more prevalent among people who are sick [38-41]. Therefore, promotion of healthy lifestyle at work, including stress relieving and exercising activities, should be carried out to maintain good health and prevent HAWs from acquiring sickness or chronic health conditions due to prolong sitting with very limited physical movement.

To the best of our knowledge, this is the first study to examine the quality of life among humanitarian aid workers from non-governmental organizations (NGOs) in Thailand. It offers valuable insights for NGOs and policymakers to develop targeted, effective public health policies. A key strength of this study lies in its focus on a previously unexamined population, providing a foundation for future research and interventions aimed at improving the well-being and performance of aid workers in challenging environments.

The nature of cross-sectional study may prevent to precisely interpret the causal

relation between the social determinants and QOL. Secondly, the information used was subjected to potential for recall bias as the obtained information was depended upon ability of HAWs to reminisce about their feelings in the past few weeks. The study included short-term volunteers, interns, and some who have not yet their probation periods thus, the study does not fully represent the findings of permanent staff and long-term volunteers from non-governmental organizations located along Thai-Myanmar border.

5. Conclusion

The poor QOL is more than half among humanitarian aid workers in the Thai-Myanmar border. Personal and health factors as well as family relationships were found to be influential on QOL. As HAWs are recognized as high-risk occupational groups, there is an increasing demand to enhance their QOL. Hence, periodic psychosocial support as well as health promotion, prevention and interventions of the humanitarian aid workers will enhance their QOL.

Acknowledgement

We would like to express our heartfelt gratitude to all the humanitarian aid workers who generously volunteered their time and shared valuable insights, making this study possible.

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