European International University, EIU-Paris

# Master's Thesis

**Title:**

*Investigating the Relationship Between Basic Psychological Needs Satisfaction and Frustration and Motivation Among Humanitarian Aid Workers in Afghanistan: The Self-Determination Theory Perspective*

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**ABSTRACT**

The satisfaction of basic psychological needs increases motivation and the overall well-being of individuals; for humanitarian aid workers, this satisfaction is an important complement to their coping with the challenges they experience in providing humanitarian responses while they are mostly exposed to high-stress conditions during their work. We studied how basic psychological needs satisfaction and frustration impact motivation levels among humanitarian aid workers in Afghanistan. The research was grounded by Self-Determination Theory (Ryan & Deci, 1985, 2000), with the Basic Psychological Need Satisfaction and Frustration Scale (BPNSFS; Chen, Vansteenkiste, et al., 2015) employed, involving 430 humanitarian aid workers across Afghanistan, with 54.8% male and 45.2% female participants, representing diverse age groups ranging from 18 - 64 years, preserving the diversity and integrity of the investigation. The study assessed the role of organizational support as a moderator (leadership, resources, career advancement) and examined its effect on motivation. Lastly, it compared and contrasted intrinsic and extrinsic motivation in high-stress humanitarian settings.

The study found that:

1. The basic psychological needs satisfaction increases intrinsic motivation ($\beta = 0.55$, $p < 0.001$).
2. The basic psychological needs frustration decreases intrinsic motivation ($\beta = -0.40$, $p < 0.001$).
3. Organizational support increases intrinsic motivation ($\beta = 0.425$, $p < 0.001$).
4. Organizational support does not significantly moderate the effect of PNS on IM in the current model ($\beta = -0.08$, $p = 0.207$).
5. Further descriptive analysis reveals a relatively high Mean for the basic psychological needs satisfaction (Mean = 4.2), intrinsic motivation (Mean = 4.01), and organizational support (Mean = 4.00), contrasting with lower extrinsic motivation (Mean = 2.6) and lower frustration levels (Mean = 2.1).

The findings presented from the study recommend policy interventions to increase motivation, job satisfaction, retention, and resilience of humanitarian aid workers working in crisis-affected areas.

***Keywords:*** *Basic Psychological Needs Satisfaction, Frustration, Motivation, Humanitarian Aid Workers, Self-Determination Theory, Afghanistan*

## 1.0 INTRODUCTION

In areas affected by crises, aid workers are crucial in providing short-term as well as long-term aid to development Rose & Claudia Milena Adler, (2024). They frequently respond to emergencies, armed conflicts-affected areas, and natural disasters in extreme environments Thenkabail, (2024). However, their motivation and overall well-being are highly impacted by the psychological challenges of the job, which include trauma exposure, insecurity, and resource constraints Hydinger et al., (2024). Maintaining substantial efforts to motivate aid workers is essential because of how effectively they are directly affecting the productivity of the lifesaving programs Dreher et al., (2024). Realising the root psychological factors that either increase or decrease motivation is crucial for maintaining continuing participation in this field Bandhu et al., (2024).

Deci and the Ryan (1985, 2000) Theory of Self-Determination, which separates intrinsic and extrinsic motivations into two categories, offers a strong foundation for studying motivation Ehsan Namaziandost et al., (2024). Basic Psychological Needs, including autonomy, competence, and relatedness, are the bases of the Self-Determination theory. When intrinsic motivation is satisfied, overall well-being improves; otherwise, burnout and detachment may stem Kim et al., (2024). Depending on support from organizations, autonomy in their jobs, and the relationships within their teams, humanitarian workers who frequently work in challenging conditions may experience varying degrees of needs satisfaction and frustration Dagher et al., (2024).

Afghanistan, a country characterized by prolonged political instability, security threats, and limited infrastructure, present unique challenges for humanitarian workers Ahmadzai & Ye, (2025). The continuous exposure to physical threats, bureaucratic restrictions, and cultural barriers can impact their sense of autonomy and competence, leading to motivation shifts Le & Barboza-Wilkes, (2023). Research has shown that individuals working in humanitarian settings often struggle with maintaining intrinsic motivation with the increased constraints, such as funding limitation, high workload, social alienation, poor leadership, and emotional exhaustion Abikova, (2025). The need

to examine how psychological need satisfaction and frustration influence motivation within this specific context is therefore of great importance Richards et al., (2023).

The Basic Psychological Needs Satisfaction and Frustration Scale (BPNSFS; Chen, Vansteenkiste et al. (2015) is a validated tool to assess both satisfaction and frustration of basic psychological needs Huang et al., (2025). In this study, BPNSFS is used to examine how humanitarian aid workers in Afghanistan experience autonomy, competence and relatedness in their work and how these factors are related to their motivation levels Valachová & Lisá, (2024). Organizational support, leadership and resource availability are also identified as potential moderators that may affect the relationship between the need satisfaction/frustration and motivation Yeom & Lee, (2024). Thus, in examining these relationships, this study offers practical implications for the broader conversation on humanitarian workers' sustainability and well-being. Results of this study will be useful for humanitarian organizations, policymakers, and mental health professionals to develop strategies to enhance motivation and well-being among humanitarian aid workers; and, thus, while ensuring the satisfaction of the psychological needs of aid workers will not only enhance their job satisfaction and retention, but also the effectiveness of humanitarian programs in Afghanistan and other conflict affected areas globally.

### 1.1 Contributions

The contributions of this study are:

1. This paper contributes new insights to the literature on the motivation of humanitarian aid workers in the time of crisis by examining how psychological needs satisfaction and frustration affect the motivation of these workers.
2. The role of organizational support is explored to further understand motivation and well-being in high stress humanitarian environments.
3. We further develop the application of Self Determination Theory to examine its relevance to the well-being and motivation of humanitarian workers.
4. We provide practical recommendations for humanitarian organizations to enhance job satisfaction, well-being, and motivation through their interventions by directing them towards the psychological needs of their workers.

## 2.0 RESEARCH QUESTIONS

1. How are humanitarian aid workers intrinsically motivated?
2. What is the relationship between the satisfaction of basic psychological needs (autonomy, competence, relatedness) and the motivation of humanitarian aid workers?
3. What is the relationship between the frustration of basic psychological needs and the motivation of humanitarian aid workers?
4. Does organizational support (leadership, resources, career advancement, etc.) mediate the relationship between basic psychological needs satisfaction and motivation for humanitarian aid workers?

### 2.1 Research Objectives

The novel objectives of this research study are:

1. To investigate intrinsic motivation among humanitarian aid workers.
2. To find the relationship between the satisfaction of basic psychological needs (autonomy, competence, relatedness) and motivation among humanitarian aid workers.
3. To find the relationship between the frustration of basic psychological needs (autonomy, competence, relatedness) and motivation among humanitarian aid workers.
4. To assess the moderating role of organizational support (leadership, resources, career advancement, etc.) in the relationship between the satisfaction of basic psychological needs and motivation among humanitarian aid workers.

### 2.2 Research Hypotheses

1. Humanitarian aid workers are motivated by intrinsic motivation.

$$\boldsymbol{H_0: \beta_1 = 0}$$
$$\boldsymbol{H_A: \beta_1 < 0}$$

$\boldsymbol{\beta_1}$ *represents the significance of intrinsic motivation.*

2. The motivation of humanitarian aid workers is positively associated with the satisfaction of basic psychological needs (autonomy, competence, relatedness).

$$\boldsymbol{H_0: \beta_2 = 0}$$
$$\boldsymbol{H_A: \beta_2 < 0}$$

$\boldsymbol{\beta_2}$ *represents the positive effect of PNS on motivation.*

3. Frustration of basic psychological needs is negatively associated with the motivation of humanitarian aid workers.

$$\boldsymbol{H_0: \beta_3 = 0}$$
$$\boldsymbol{H_A: \beta_3 < 0}$$

$\boldsymbol{\beta_3}$ *represents the negative effect of autonomy, competence, and relatedness frustration on motivation.*

4. Organizational support (leadership, resources, career advancement, etc.) moderates the relationship between needs satisfaction and motivation

$$\boldsymbol{H_0: \beta_4 = 0}$$
$$\boldsymbol{H_A: \beta_4 \neq 0}$$

$\boldsymbol{\beta_4}$ *represents the moderating effect of organizational support on the relationship between needs satisfaction and motivation.*

## 2.3 Research Gaps

Despite extensive research on the subject, there are still many unanswered questions about how the satisfaction of psychological needs and frustration affect the motivation of humanitarian aid workers in crisis-affected areas. Previous researches have examined the role of basic psychological needs in many areas, such as career resilience, precarious employment, and high-pressure decision-making environments. However, as opposed to addressing the difficulties faced by humanitarian employees, these analyses mostly concentrate on corporate environments, military transitions, refugee learning, and intelligence analysis.

The way that motivation levels among humanitarian aid workers who work in extreme conditions are influenced by the satisfaction or frustration of autonomy, competence, and relatedness is not covered in the current literature. On the other hand, although job security, leadership, and organizational support have been linked to motivation in other sectors, their role in maintaining the engagement and well-being of the humanitarian aid workers remains underexplored.

### 2.4 Problem Statement

Humanitarian aid workers are saving the lives of the vulnerable and the deprived populations who survive on this aid; however, various challenges to the aid workers include safety issues, resource limitations, sociocultural barriers, bureaucratic demands, and unpredictable work conditions that influence motivation.

Self-Determination Theory suggests that motivation is improved when basic psychological needs (autonomy, competence, and relatedness) are satisfied, which in humanitarian settings are rather frustrated, thereby resulting in burnout, disengagement, and reduced motivation. How psychological needs satisfaction and frustration affect motivation among humanitarian aid workers in crisis-affected areas, despite an extensive range of research across different sectors is the underexplored topic in academia that needs exploration. Attention has not been paid to how organizational support (leadership, resources, career growth) alleviated frustration and maintained motivation. This study seeks to bridge these gaps by understanding the psychological needs satisfaction, frustration, and motivation relationship in the context of humanitarian aid workers in Afghanistan, thus revealing actionable recommendations to increase motivation, resilience, retention, and overall effectiveness of the humanitarian workers and aid programs in crisis-affected environments.

## 3.0 LITERATURE REVIEW

Existing literature highlights the critical role of basic psychological needs satisfaction and frustration in shaping motivation, well-being, and resilience across various occupational settings, yet its specific impact on humanitarian aid workers in crisis-affected regions is underexplored.

Table 1 shows literature review summary. Raabe et al., (2023) explained the significance of psychological satisfaction during major career transitions, saying that autonomy, competence, and relatedness shape individuals' motivation. In the context of humanitarian aid workers, these psychological needs are key as they engage in stressful environments. The ability to maintain motivation in times of adversity is necessary for effective humanitarian responses. However, the unpredictability of work conditions, security concerns, and limited organizational support create psychological frustration that reduces motivation.

Grüttner, (2024) emphasizes how basic psychological needs must be met in order to promote learning drive and success in demanding educational settings. The same relates to humanitarian workers, who need to be resilient and continuously adapt their skills to stay engaged in their work. Aid workers may experience fluctuating motivational situations, influenced by the degree to which their psychological needs are satisfied or frustrated by their work environment in the crisis-affected areas.

In military sports programs for recovery, where coaching behavior supported or frustrated athletes' basic psychological needs Jordan et al., (2024) emphasizes the significance of external support in maintaining well-being. This finding is applicable to aid workers because their motivation can be affected by the organizational support they receive. Humanitarian aid workers will without doubt, experience need satisfaction that leads to increased motivation and resilience, when they are provided with clear leadership, career development opportunities, and access to necessary resources. On the contrary, a lack of organizational support contributes to frustration, emotional exhaustion, and disengagement in their daily routines. Accordingly, the purpose of this study is to investigate how variations in organizational support affect the relationship between needs satisfaction, frustration, and motivation among humanitarian aid workers in Afghanistan.

Chabursky et al., (2024) explored how displacement and adaptation impact the fulfillment of psychological needs in refugee adolescents. Their study found that well-being and adjustment were significantly impacted by autonomy in decision-making, social support, and competence development. Similar challenges appear when humanitarian workers experience social and cultural barriers, threats to safety, and professional constraints. The Basic Psychological Need Satisfaction and Frustration Scale (BPNSFS; Chen, Vansteenkiste, et al., 2015) serves as a validated tool for assessing the extent to which humanitarian aid workers experience autonomy, competence, and relatedness in their roles. By applying this scale in the Afghanistan humanitarian context, this research aims to provide empirical definitions into the motivational dynamics that shape aid worker's engagement, effectiveness, and long-term retention

Giuseppina Maria Cardella et al., (2024) examine the influence of psychological needs on entrepreneurial intention during crises, reinforcing the notion that psychological resilience and motivation are critical in challenging environments. Similarly, humanitarian aid workers must maintain high levels of intrinsic motivation to sustain their commitment to aid efforts. This study

contributes to the existing literature by bridging the gap between psychological needs satisfaction, motivation, and occupational well-being in extreme work settings. Findings from this research propose humanitarian organizations, policymakers, and mental health practitioners in designing interventions that enhance aid workers motivation, reduce burnout, and increase long term engagement in humanitarian missions in Afghanistan and other crisis-affected areas worldwide.

Sciberas & Fournier, (2024) highlight the impact of lifetime need frustration on personality traits and interpersonal problems, demonstrating that individuals who experience prolonged psychological need frustration often develop maladaptive behaviors. This perspective is crucial when examining humanitarian aid workers, who frequently encounter situations where their autonomy, competence, and relatedness are either supported or undermined. However, their study mostly focused on personality pathology rather than occupational settings where need frustration lead to burnout, reduced motivation, or disengagement. This research is intended to examine the impact of humanitarian aid workers' psychological needs and frustration on their motivation levels in high-stress areas like Afghanistan.

Bhawna et al., (2024) study career resilience and subjective career success in the media field and emphasize the value of commitment to work in increasing motivation and long-term dedication to it. They found that people with high resilience tend to be more successful in difficult working conditions. This study helps understand motivation in the context of corporate organizations, but it does not consider the challenges of humanitarian workers in crisis areas.

Navabi et al., (2025) looked at how precarious employment affects the well-being of Iranian university graduates, emphasizing how job insecurity contributes to stress, social isolation, and mental health problems. Since short-term contracts and uncertain career paths are common for the aid workers, their research emphasizes the broader impacts of unstable working conditions on their mental health. However, their study does not concentrate on how motivation is affected by psychological need satisfaction and frustration in such precarious situations. Building on what they found, this study examines the effects of organizational support, leadership, and workplace autonomy on the motivation and psychological well-being of humanitarian aid workers in Afghanistan.

Wolfberg, (2025) examines the challenges that intelligence analysts face, emphasizing how emotional and cognitive difficulties affect their ability to make decisions. According to the study, people who work in under-pressure settings often struggle with conflicting organizational goals, which causes stress and impairs performance. Although this study focuses on psychological stress in intelligence jobs, and does not consider similar pressures in humanitarian contexts, where aid workers go through resource constraints, socio-cultural barriers, and safety risks.

This study makes a novel addition to the field of study on occupational stress and psychological resilience in crisis response careers by using theoretical frameworks to examine the effects of needs satisfaction and frustration on motivation levels.

**Table 1: Summary of Literature Review**

| Ref No. | Author (Year) | Method | Finding | Research Gap |
|---|---|---|---|---|
| [18] | Raabe et al. (2024) | Qualitative (Thematic Analysis) | Explored the role of psychological needs during military transition. | Limited focus on humanitarian workers in conflict zones like Afghanistan. |
| [19] | Grüttner (2024) | Quantitative (Survey Data Analysis) | Examined basic need satisfaction in refugee education programs. | Does not explore occupational motivation in high-risk humanitarian settings. |

| | | | | |
|---|---|---|---|---|
| [20] | Jordan et al. (2024) | Qualitative (Interviews & Thematic Analysis) | Analyzed how military sports coaching impacts well-being. | Lacks examination of organizational support's role in humanitarian aid. |
| [21] | Chabursky et al. (2024) | Qualitative (In-depth Interviews) | Studied psychological need fulfillment among refugee adolescents. | Does not assess psychological need frustration in humanitarian aid. |
| [22] | (Giuseppina Maria Cardella et al., 2024) | Quantitative (Structural Equation Modeling) | Investigated psychological needs in entrepreneurial intention during crises. | No analysis of humanitarian workers' motivation under prolonged stress. |
| [23] | Sciberas & Fournier (2024) | Quantitative (Multilevel Modeling) | Examined lifetime need frustration and personality traits. | No application of need frustration in occupational settings. |
| [24] | Bhawna et al. (2024) | Quantitative (SEM on Career Resilience) | Analyzed career commitment and success in the media sector. | Lacks investigation of resilience in humanitarian professionals. |

## 4.0 RESEARCH METHODOLOGY

This investigation combined qualitative and quantitative methods to study the relationship between basic psychological need satisfaction and frustration and the resulting motivational impact among humanitarian aid workers in Afghanistan. Data was collected using a survey instrument, the Basic Psychological Needs Satisfaction and Frustration Scale (BPNSFS), which had the three constructs of autonomy, competence, and relatedness in assessment against motivation. A structured survey-based data collection is conducted using random or stratified sampling methods to ensure representation. The study also incorporates moderation analysis to explore the role of organizational support (leadership, resources, career advancement) in influencing motivation. A reduction and analysis of variance are used to test ideas and consider associations among important variables after preliminary processing of data, which includes cleaning, processing, and statistical approvals. To preserve the integrity of the investigation, ethical factors like consent in advance and privacy are guaranteed. The results are intended to offer empirical insights for retentions, job satisfaction, well-being, motivation and resilience in humanitarian contexts.

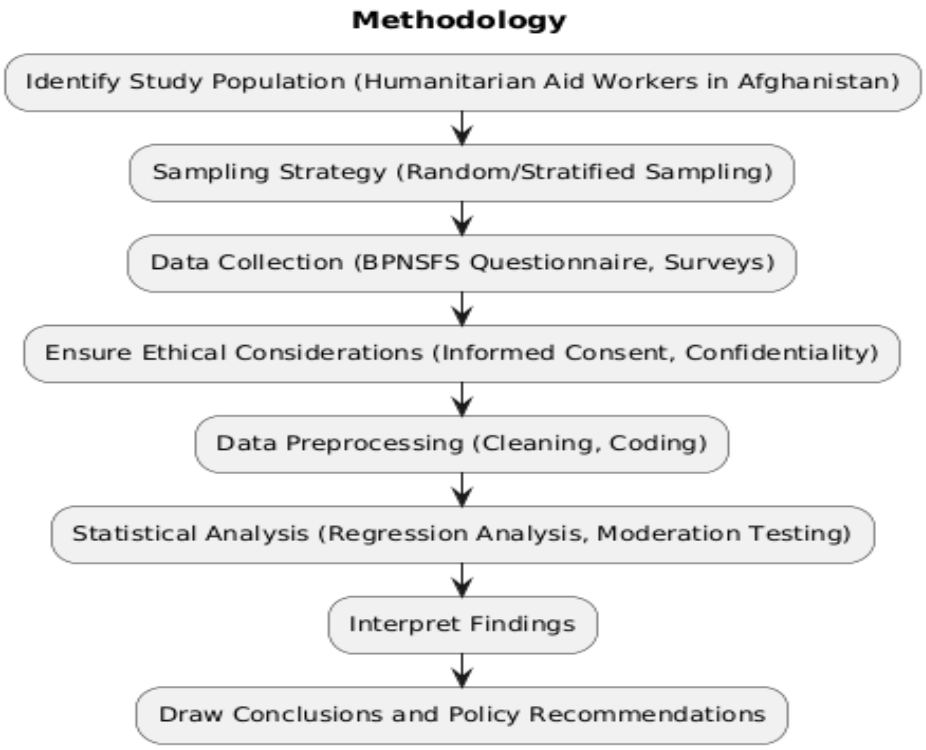



Figure 1: Methodology Flowchart for Investigating Psychological Need Satisfaction and Motivation among Humanitarian Aid Workers

The suggested method flowchart, which is shown in Fig. 1, offers a planned visual depiction of the analysis process by highlighting important steps. The method for collecting data is further explained in the flowchart, which emphasizes the significance of BPNSFS examines to measure psychological satisfaction and frustration. Study reliability is ensured by including ethical considerations, such as consent of the participants and data privacy. Fig illustrates data preprocessing steps such as cleaning and coding, leading to statistical analysis using regression and moderation testing. Finally, the methodology concludes with an interpretation of the findings, as well as policy recommendations that translate to practical insights for motivating, resilience, and well-being of humanitarian aid workers.

### 4.1 Data Collection

The data is collected using a structured questionnaire adapted from the BPNSFS Scale to measure basic psychological needs satisfaction, frustration, and motivation among humanitarian aid workers. The survey consists of 30 Likert-scale questions and 2 open-ended questions designed to collect responses, and the survey questionnaire is distributed online and in-person among humanitarian aid organizations operate in Afghanistan.

**Table 2: Data Collection Method**

| Data Collection Method | Details |
|---|---|
| Instrument Used | BPNSFS Questionnaire |
| Response Type | Likert Scale (1-5) & Open-ended |
| Distribution Mode | Online & In-Person |
| Ethical Considerations | Anonymity, Confidentiality, Informed Consent |

In this study, Table 2 shows the Data Collection Method, which indicates that data gathering took place using more of a systematic approach. The main instrument is the Basic Psychological Need Satisfaction and Frustration Scale (BPNSFS) to measure autonomy, competence, and relatedness among humanitarian aid workers. In this sense, quantitative assessments were answered using a 1-5 scale, for qualitative data obtained through open-ended responses. The distribution method comprises both online and in-person delivery to ensure maximum representation, reaching aid

workers in remote areas while allowing those with limited access to the internet to contribute. This approach enhances response accuracy and diversity, assuring a comprehensive understanding of psychological need satisfaction, frustration, and motivation in high-stress humanitarian settings.

### 4.2 Study Area

The study is conducted in Afghanistan, a country with prolonging humanitarian crises due to political instability, resource and funding constraints, and security and safety issues for the humanitarian aid organizations and I/NGOs. The country is selected since humanitarian aid workers mostly experience extreme working conditions, making it an ideal setting to examine how psychological need satisfaction and frustration influence motivation. The study aims to provide policy-relevant insights that can enhance workforce resilience and relevant strategies in humanitarian organizations to improve the well-being and motivation of humanitarian aid workers.

**Table 3: Study area**

| Why Afghanistan? | Justification |
|---|---|
| High-Stress Humanitarian Environment | Security risks, limited resources, instability |
| Relevance to SDT Framework | High need for autonomy, competence, relatedness |
| Organizational Challenges | Leadership support, career advancement barriers |
| Policy Implications | Enhancing aid worker motivation and retention |

Table 3 shows the study area that focuses the justification for selecting Afghanistan as the research setting. The country presents a very high-stress environment for humanitarians due to security threats, resource shortages, funding problems, and instability in the political landscape, thus offering an environment perfect for examining psychological need satisfaction and frustration. From the Self-Determination Theory (SDT) viewpoint, many issues related to motivation arise in the humanitarian sphere of Afghanistan with respect to autonomy, competence, and relatedness. Organizationally too, poor leadership support and career advancement opportunities further influence workforce retention and employee performance. By studying this country, research provides valuable policy implications which provide actionable strategies to increase motivation, job satisfaction, and long-term retention among humanitarian professionals in conflict and crisis-affected settings.

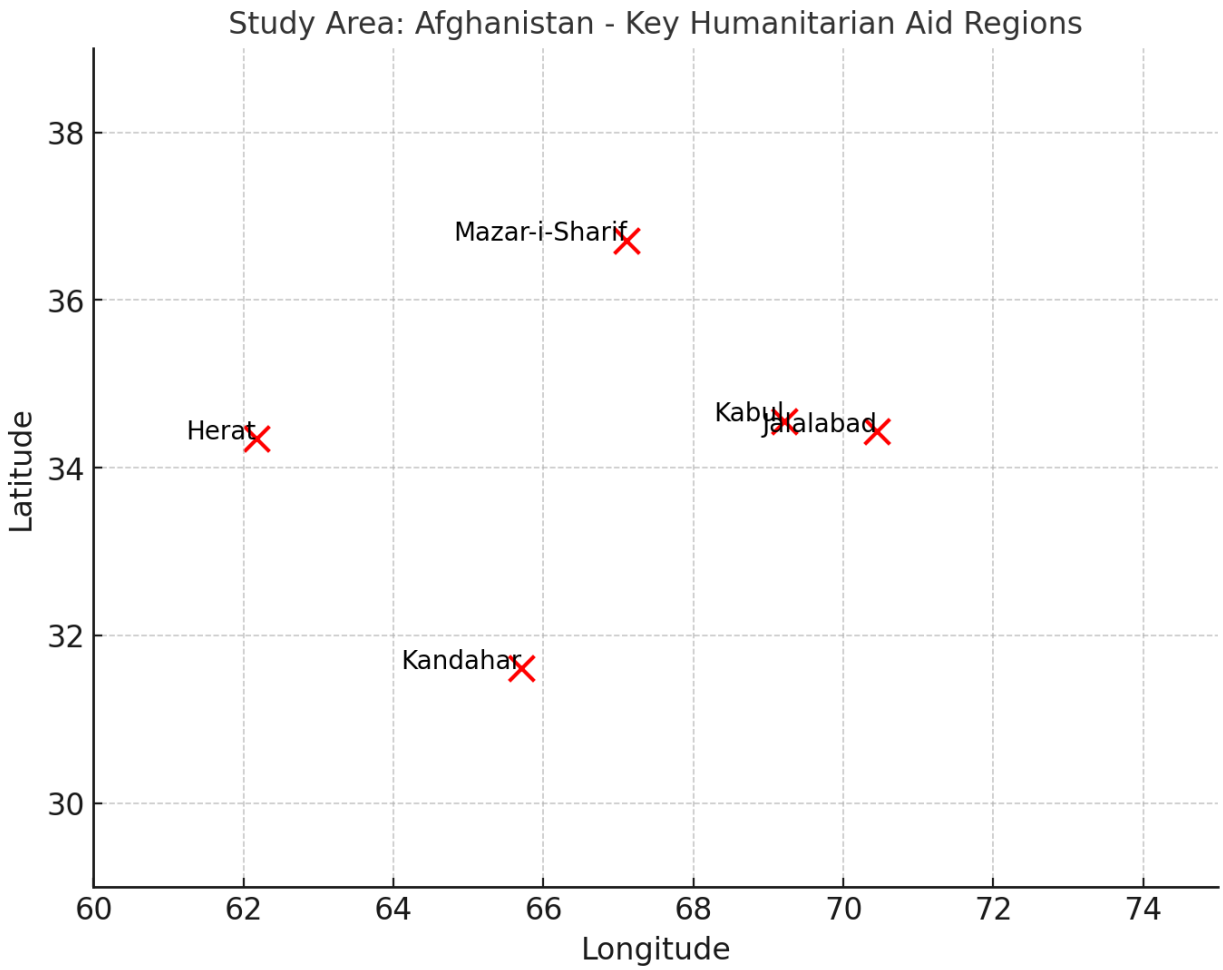



Figure 2: Map of Study Area (Source: Own)

Figure 2 shows the study map for the key humanitarian aid regions in Afghanistan (e.g., Kabul_ Herat_ Kandahar_ Mazar-e-Sharif_ Jalalabad). These regions were selected based on their strategic importance to humanitarian operations and their alignment with the study context to know the psychological needs satisfaction and frustration among aid workers. The map provides a geospatial reference for understanding the distribution of humanitarian activities and serves as a basis for analyzing motivation levels, organizational support, and workplace well-being in these strategic locations.

### 4.2.1 Study Locations

**Table 4: Study Locations**

| City | Latitude | Longitude | Number of Aid Workers Surveyed | Significance in Study |
|---|---|---|---|---|
| **Kabul** | 34.5553 | 69.2075 | 120 | Capital and major humanitarian aid hub |
| **Herat** | 34.3529 | 62.2040 | 90 | Western region, facing refugee and returnee crises and resource scarcity |
| **Kandahar** | 31.6205 | 65.7158 | 75 | Southern region, affected by security challenges and bureaucratic restrictions |
| **Mazar-i-Sharif** | 36.6926 | 67.1180 | 85 | Northern region, key logistical hub for humanitarian organizations |
| **Jalalabad** | 34.4284 | 70.4578 | 60 | Eastern region, key for cross-border humanitarian efforts and returnee crises |
| **Total** | | | **430** | |

Table 4 shows the Study Locations that present the key humanitarian aid regions selected for this study, highlighting their geographical coordinates and strategic significance in humanitarian operations.

With extensive coordination efforts of the humanitarian activities and operational challenges, these locations are best placed to study the basic psychological needs satisfaction, frustration, motivation, and workplace challenges of humanitarian aid workers in Afghanistan.

Table 4 also shows the study Population Distribution that presents the number of humanitarian aid workers surveyed across the selected study locations in Afghanistan. The highest number of participants (120 aid workers) were surveyed in Kabul, given its role as the central hub both for humanitarian operations and policy coordination. Herat (90 aid workers) was selected due to its proximity to returnees' settlements and cross-border relief activities. Kandahar (75 aid workers), to account for aid workers who operate under a very stressful context marked by bureaucratic impediments to motivation and organizational support and somewhat bias against adherence to

humanitarian principles. Mazar-E-Sharif (85 aid workers), being a logistical center and capital of the region, therefore coordinates humanitarian affairs across the neighboring provinces, providing an important site to study aid workers' psychological needs. Finally, Jalalabad (60 aid workers) was chosen for its strategic relevance for cross-border humanitarian efforts and returnees' settlements. In total, 430 aid workers participated in the study, ensuring a diverse and representative sample to analyze psychological needs satisfaction, frustration, and motivation dynamics in high-stress humanitarian environments.

### 4.3 Study Period

As indicated in Table 5, which illustrates the study time frame, the research is carried out over six months, from **November 2024 until end of April 2025,** and covers five major phases. One month given to questionnaire design and obtaining ethical approvals to ensure compliance with research standards. After that, data is collected over two months. Distribution of the questionnaire was done online and in person to enable maximum participation among the aid workers. The next phase involves Data Cleaning & Processing for one month, which is a process that entails validation, coding, and preprocessing into a useful form, ready for analysis to guarantee quality and reliability. The Statistical Analysis phase, lasting one month, includes regression and moderation testing to examine relationships between psychological needs satisfaction, frustration, motivation, and organizational support. Finally, the Report and Conclusion phase is completed in one month, where findings are interpreted, policy recommendations are formulated, and conclusions are drawn to inform strategies for enhancing the humanitarian workforce's motivation and retention.

**Table 5: Study Period**

| Phase | Duration | Activities |
|---|---|---|
| Survey Development | 1 Month | Questionnaire design, Ethical approvals |
| Data Collection | 2 Months | Survey distribution, Participant responses |
| Data Cleaning & Processing | 1 Month | Data validation, Coding, Preprocessing |
| Statistical Analysis | 1 Month | Regression, Moderation Testing |
| Report & Conclusion | 1 Month | Interpretation, Policy Recommendations |

### 4.4 Study Variables

The study examines the relationship between psychological needs satisfaction, frustration, motivation, and organizational support using the following key variables.

**Table 6: Study Variables**

| Category | Variable | Type |
|---|---|---|
| Independent Variable | Psychological Needs Satisfaction (Autonomy, Competence, Relatedness) | Continuous |
| Independent Variable | Psychological Needs Frustration (Autonomy, Competence, Relatedness) | Continuous |
| Dependent Variable | Motivation (Intrinsic & Extrinsic) | Continuous |
| Moderating Variable | Organizational Support (Leadership, Resources, Career Development) | Categorical |

Table 6 outlines the key variables used in the study to examine the relationship between psychological needs satisfaction, frustration, and motivation among humanitarian aid workers. The independent variables involve psychological needs satisfaction and frustration. Measured as continuous variables, indicating the extent to which autonomy, competence, and relatedness are fulfilled or hindered. The dependent variable, motivation, is also continuous, obtaining both intrinsic and extrinsic motivation levels. Lastly, the hypothesized moderating variable, which is organizational support, comprises leadership, resource availability, and career growth opportunities to determine the relationship between psychological needs and motivation.

### 4.5 Study Design

The study follows a cross-sectional survey design, where data is collected as a single point in time to analyze the association between psychological needs satisfaction/frustration and motivation. This design is appropriate for examining the moderating role of organizational support in humanitarian aid settings. This research follows the Self-Determination Theory (SDT) framework, integrating regression analysis and moderation modeling to test hypotheses.

**Table 7: Study Design**

| Aspect | Study Design Details |
|---|---|
| Research Approach | Quantitative |
| Study Design | Cross-Sectional Survey |
| Sampling Method | Random/Stratified Sampling |
| Analysis | Regression & Moderation Analysis |

Table 7 shows the Study Design that presents the methodological framework used to investigate the relationship between psychological needs satisfaction, frustration, and motivation among humanitarian aid workers in Afghanistan. The research employs quantitative methodology for statistical evaluation and objective assessment of relevant variables. The cross-sectional design of the survey gathers data at a specific time, enabling an examination of the key factors.

The combined sampling method is a random sample using stratified techniques, which allows for the representation and inclusion of various roles, experiences, and organizational contexts in the sample. Regression and moderation analyses are employed to explore such relationships between need and motivation, with a moderating effect of organizational support. Thus, this structured, data-driven approach will yield evidence-based knowledge to inform policies toward improved motivation and overall well-being within the humanitarian context.

### 4.5.1 Sampling Method

The study employs random and stratified sampling, ensuring a representative sample of humanitarian aid workers across different operational contexts.

#### 4.5.1.1 Random Sampling

With random sampling, every humanitarian aid worker in the study population is given an equal chance of selection, thereby minimizing bias in sampling.

$$P(X) = \frac{1}{N}$$

*Where P(X)* is the probability of selecting an individual, and *N* stands for the population's size.

#### 4.5.1.2 Stratified Sampling

This method ensures proper classification of the population members into strata based on organizational role, region, and employment experience, with equal representation from each stratum.

$$n_h = \frac{N_h}{N} \times n$$

Here $n_h$ represents the sample size of stratum *h*, $N_h$ is the population of stratum *h*, *N* is the total population respectively, and *n* is the total sample size.

This methodological structure addresses diversity while being statistically rigorous in providing findings that can be confidently relied upon as study results.

### 4.5.2 Sampling Analysis

#### 4.5.2.1 Regression Analysis

The relationship between psychological need satisfaction/frustration (PNS/PNF) and motivation (M) is modeled as:

$$N = \beta_0 + \beta_1 PNS + \beta_2 PNF + \varepsilon$$

The equation represents a linear regression model used to examine the relationship between motivation (M) and psychological need factors.

- $M \rightarrow$ Motivation (dependent variable)
- $\beta_0 \rightarrow$ Intercept (baseline level of motivation)
- $\beta_1 \rightarrow$ Coefficient for Psychological Need Satisfaction (PNS)
- $PNS \rightarrow$ Psychological Need Satisfaction (e.g., autonomy, competence, relatedness)
- $\beta_2 \rightarrow$ Coefficient for Psychological Need Frustration (PNF)
- $PNF \rightarrow$ Psychological Need Frustration (e.g., lack of autonomy, low competence, lack of relatedness)
- $\varepsilon \rightarrow$ Error term (captures unexplained variability in motivation)

**Interpretation:**

The equation explains how the satisfaction of basic psychological needs affects the motivation of humanitarian aid workers. A **Positive $\boldsymbol{\beta_1}$** means that the more the needs are satisfied, the more the motivation increases, while a **Negative $\boldsymbol{\beta_2}$** means that the frustration of basic psychological needs will decrease motivation. The model defines these relationships in quantifiable terms that can be further modeled statistically.

### 4.5.2.2 Moderation Analysis

To test the moderating role of organizational support (OS), the model extends to:

$$M = \beta_0 + \beta_1 \text{PNS} + \beta_2 \text{OS} + \beta_3 (\text{PNS} \times \text{OS}) + \varepsilon$$

This equation represents a moderation model examining how organizational support (OS) influences the relationship between psychological needs satisfaction (PNS) and motivation (M).

- $M \rightarrow$ Motivation (dependent variable)
- $\beta_0 \rightarrow$ Intercept (baseline level of motivation)
- $\beta_1 PNS \rightarrow$ Effect of Psychological Needs Satisfaction (PNS
- $\beta_2 OS \rightarrow$ Effect of Organizational Support (OS)
- $\beta_3 (PNS \times OS) \rightarrow$ Interaction term, representing the moderating effect of organizational support on the relationship between *PNS and M*
- $\boldsymbol{\varepsilon} \rightarrow$ Error term (captures unexplained variability in motivation)

**Interpretation:**

This model investigates whether the effect of psychological need satisfaction on motivation is influenced by organizational support. The interaction term $\beta_3 (PNS \times OS)$ determines if the presence of organizational support strengthens or weakens the relationship between PNS and motivation.

- If $\beta_3 > 0 \rightarrow$ OS enhances the positive effect of PNS on M.
- If $\beta_3 < 0 \rightarrow$ OS weakens the effect of PNS on M.
- If $\beta_3 = 0 \rightarrow$ OS has no moderating effect.

This analysis helps understand how workplace conditions influence the motivation levels of humanitarian aid workers.

## 5.0 RESULTS AND DISCUSSION

This section presents the results of this study, including data analysis, hypothesis testing, scores distributions and findings. The analysis is conducted using statistical techniques such as regression analysis and moderation testing. The results provide insights into the relationships between basic psychological needs satisfaction/frustration, motivation, and organizational support among humanitarian aid workers in Afghanistan.

### 5.1 Descriptive Statistics

Means with SDs and observed ranges for study variables:

1. **PNS** - High (M = 4.20, SD = 0.84, range = 1.00 - 5.00): This shows mostly satisfaction by aid workers in autonomy, competence, and relatedness.
2. **PNF** - Low (M = 2.10, SD = 1.07, range = 1.00 - 5.00): This shows the results where the PNSs are not fulfilled.
3. **IM** - High (M = 4.01, SD = 0.95, range = 1.00 - 5.00): This confirmed that the intrinsic motivation of aid workers is significant.
4. **EM** - Low (M = 2.60, SD = 1.24, range = 1.00 - 5.00): This also confirmed that the extrinsic motivation of aid workers is insignificant.
5. **OS** - High (M = 4.00, SD = 0.76, range = 1.00-5.00): This ensures that aid workers reported more favorable conditions of work.

**Table 8: Research Variables for Descriptive Statistics**

| Variable | Mean | Std. Dev | Min | Max |
|---|---|---|---|---|
| Psychological Need Satisfaction (PNS) | 4.2 | 0.84 | 1.0 | 5.0 |
| Psychological Need Frustration (PNF) | 2.1 | 1.07 | 1.0 | 5.0 |
| Motivation (Intrinsic) | 4.01 | 0.95 | 1.0 | 5.0 |
| Motivation (Extrinsic) | 2.6 | 1.24 | 1.0 | 5.0 |
| Organizational Support (OS) | 4.0 | 0.760 | 1.0 | 5.0 |

### 5.2 Correlation Analysis

**Table 9: Correlation Matrix**

| Variable | PNS | PNF | Intrinsic Motivation | Extrinsic Motivation | OS |
|---|---|---|---|---|---|
| PNS | 1.000 | -0.41 | 0.43 | -0.02 | 0.2 |
| PNF | -0.41 | 1.000 | -0.54 | 0.17 | -0.40 |
| Intrinsic Motivation | 0.44 | -0.54 | 1.000 | 0.24 | 0.50 |
| Extrinsic Motivation | -0.02 | 0.17 | 0.24 | 1.000 | 0.01 |
| OS | 0.20 | -0.45 | 0.50 | 0.07 | 1.000 |

Table 9 shows the Pearson correlation coefficients calculated among important variables in this study. Psychological need satisfaction (PNS) positively correlated with intrinsic motivation ($r = 0.44$, $p < 0.001$) and OS (organizational support) ($r = 0.20$, $p < 0.001$). The positive values show that there is enough support in the workplace to maintain the intrinsic motivation of individuals when PNS is satisfied. Inversely, and with great dismay, need frustration had a negative correlation with intrinsic motivation ($r = -0.54$, $p < 0.001$), also negative with organizational support ($r = -0.45$, $p < 0.001$) So, it is understood that need frustration correlates to reduced motivation in its context and consideration from the workplace.

Extrinsic motivation has a faintly negative correlation with PNS ($r = -0.03$, $p > 0.05$; ns) and a faintly positive correlation with PNF ($r = 0.17$, $p < 0.01$). This means that in aid workers, extrinsic reward systems are not as strongly correlated to perceived psychological needs as the intrinsic ones are.

### 5.3 Hypothesis Testing

Regression analysis is conducted to test the hypotheses regarding the impact of psychological needs, motivation, and organizational support.

**Table 10: Regression Analysis Results**

| Model | Predictor | Coefficient (β) | Std. Error | t-value | p-value |
|---|---|---|---|---|---|
| Model 1 | PNS | 0.54 | 0.05 | 10.06 | <0.001 |
| | PNF | -0.40 | 0.02 | -13.39 | <0.001 |
| Model 2 | OS | 0.42 | 0.03 | 12.19 | <0.001 |
| | PNS × OS | 0.08 | 0.06 | -1.26 | =0.207 |

The results from the regression models can be viewed in Table 10. Model 1 presented evidence regarding the fact that motivation has a significant positive relationship with PNS ($\beta = 0.54$, $p < 0.001$), while PNF showed a significant negative impact on motivation ($\beta = -0.40$, $p < 0.001$). Organizational support (OS), included in Model 2, was found to yield a substantively significant positive effect on motivation ($\beta = 0.42$, $p < 0.001$). On the other hand, the interaction between PNS and OS is not statistically significant ($\beta = 0.08$, $p = 0.207$). On this note, it may be concluded that in the current model, organizational support reportedly does not significantly moderate the relationship between psychological need satisfaction and motivation.

### 5.4 Moderation Analysis

We further analyze the interaction plots, assessing the moderating effect of organizational support on the relationship between satisfaction of psychological needs and motivation.

The model in Figure 3 explicates the relationship between psychological need satisfaction (PNS) and organizational support (OS) regarding motivation. The figure shows that motivation increases with higher levels of PNS across all levels of OS. However, contrary to expectations, the interaction effect turned out to be statistically insignificant ($\beta = -0.08$, $p = 0.207$), indicating that the strengths of relations between PNS and motivation do not differ under varying levels of OS. Nevertheless, comparatively higher organizational support views greater motivation, hinting at a positive role of OS in motivation, except for being an insignificant moderator.

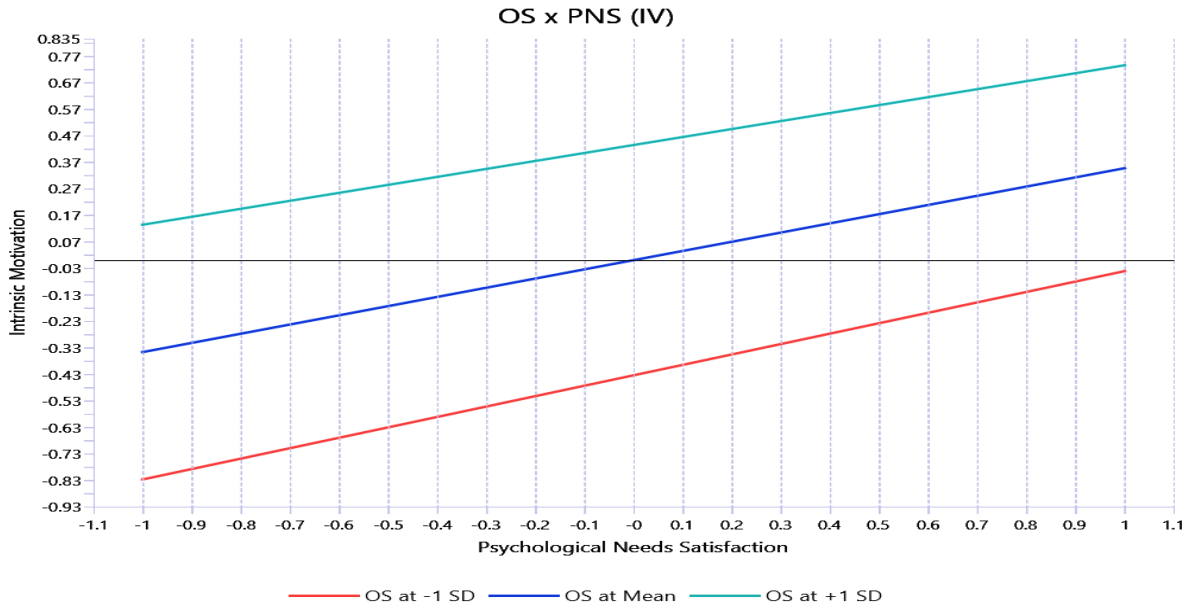



Figure 3: Moderation Effect of Organizational Support on Psychological Need Satisfaction and Motivation

*(Generated plot showing the interaction between PNS and OS on motivation)*

## 5.5 Score Distributions

### 5.5.1 Psychological Needs Satisfaction Distribution

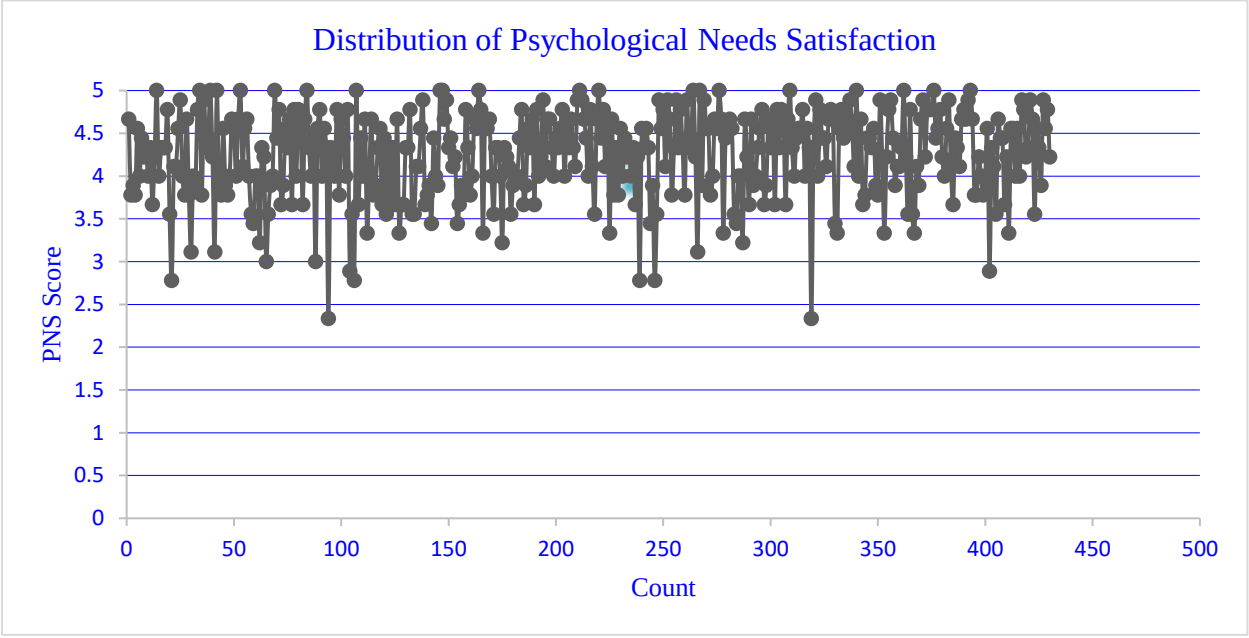



Figure 4: Distribution plots of Psychological Needs Satisfaction (PNS)

*(Distribution plots showing the distribution of PNS)*

The key observation from Figure 4:

- Shows a left-skewed (negatively skewed) distribution with most scores above 4.0
- The bulk of scores concentrates between 3.5 and 4.5
- Very few scores fall below 3.0
- The distribution suggests that most participants report high levels of psychological needs satisfaction

The left-skewed distribution of PNS, where most scores above 4.0 suggest that participants generally report high levels of satisfaction with psychological needs. This high-end aggregation in the scale of 3.5 to 4.5 demonstrates that the organizational environment successfully meets the basis for the fulfillment of psychological needs, and that of autonomy, competence, and relatedness. The minimal representation of scores below 3.0 further reinforces that severe psychological needs deficits are rare within the sample. This positive skew might reflect effective organizational practices that support employee psychological well-being.

### 5.5.2 Psychological Needs Frustration Distribution

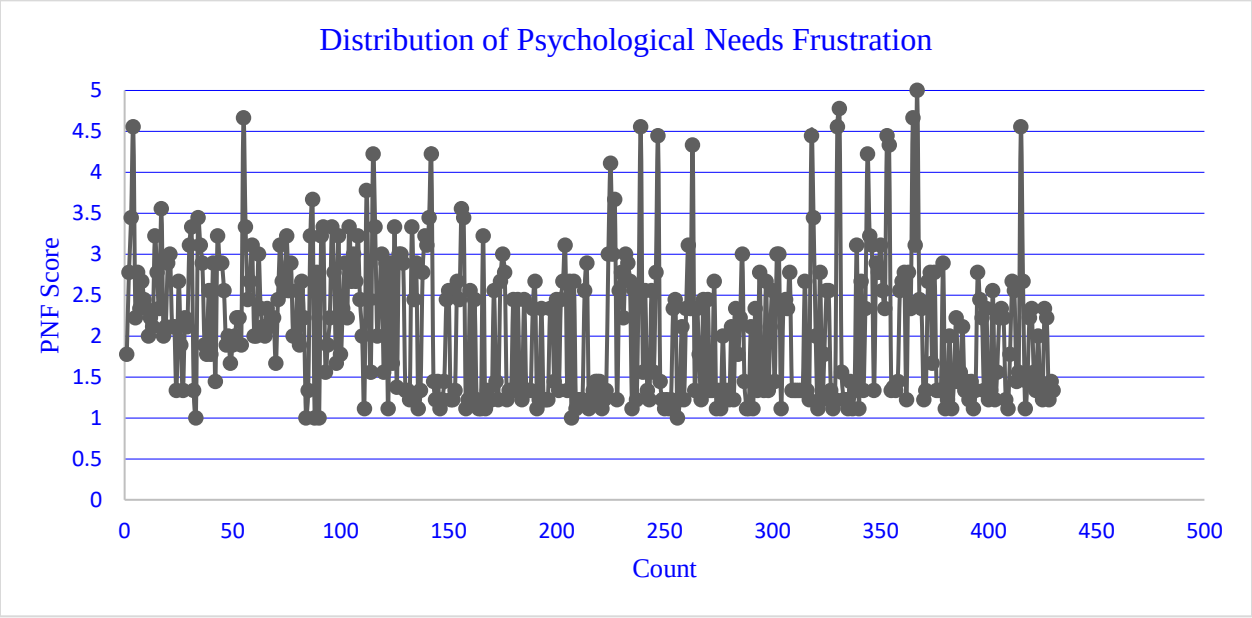



Figure 5: Distribution plots of Psychological Needs Frustration (PNF)

*(Distribution plots showing the distribution of PNF)*

The key observation from Figure 5:

- Right-skewed (positively skewed) distribution
- Most scores cluster between 1.0 and 2.5
- Gradually decreasing frequency towards higher scores
- Few participants report very high frustration levels (above 4.0)

The right-skewed distribution of psychological needs frustration, with most scores clustering between 1.0 and 2.5, presents an encouraging picture. This pattern indicates that the majority of participants experience relatively low levels of psychological needs frustration. The gradual decrease in frequency towards higher scores suggests that intense experiences of needs frustration are uncommon. This distribution complements the PNS findings, providing a coherent picture where needs satisfaction is high and frustration is low. However, the presence of some higher scores (above 4.0) indicates that a small subset of participants experiences significant needs frustration, potentially highlighting areas for organizational intervention.

### 5.5.3 Intrinsic Motivation Distribution

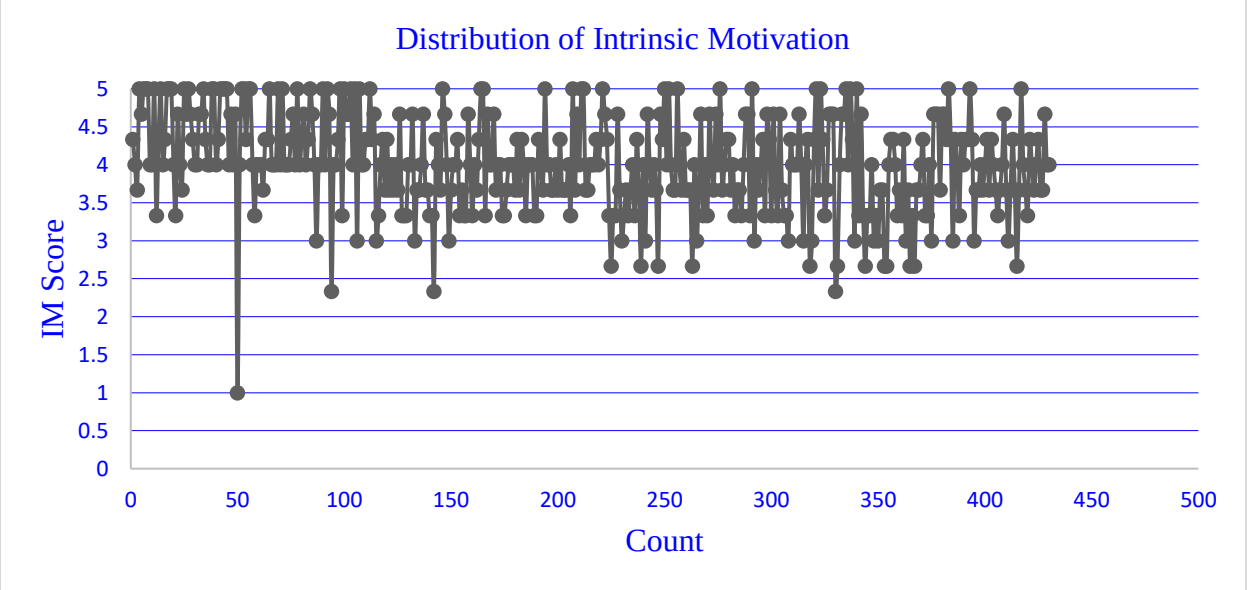



Figure 6: Distribution plots of Intrinsic Motivation (IM)

*(Distribution plots showing the distribution of IM)*

The key observation from Figure 6:

- It presents a bimodal distribution of values that peaks at around 2.0 and 4.0
- It denotes that the scores mostly tend from a minimum of 2.0 to a maximum of 5.0.
- There's a notable dip in frequency around score 3.0
- Some outliers exist at the lower end (near 0)

The distribution pattern of intrinsic motivation appears bimodal, showing two distinct peaks at around 2.0 and 4.0. These results indicate two possible subpopulations within the sample: one that is moderate to high in intrinsic motivation (4.0) and another that is low in intrinsic motivation (approximately 2.0). Furthermore, the infrequent emissions at score 3.0 could have possible indications of the polarization of motivational states due to, perhaps, the different job roles, departments, or individual differences in the internalization of work activities. Outliers near 0 indicate that a small number of participants enjoy little or no intrinsic motivation; hence, it should be investigated further within possible contextual interactions.

### 5.5.4 Organizational Support Distribution

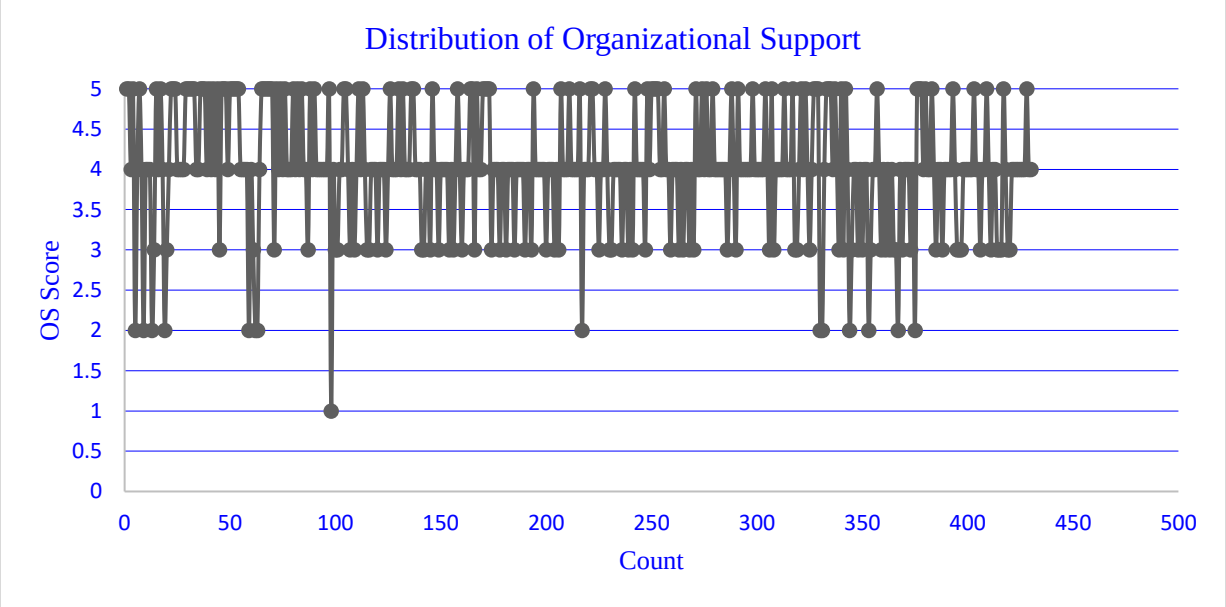



Figure 7: Distribution plots of Organizational Support (OS)

*(Distribution plots showing the distribution of OS)*

The key observation from Figure 7:

- Strong left-skewed (negative) distribution
- Dense concentration of scores above 4.0
- Very few scores below 3.0
- The pattern indicates that most participants perceive high levels of organizational support

The strong negative skew in organizational support scores, with a dense concentration above 4.0, reflects highly positive perceptions of organizational support among participants. This distribution pattern suggests that the organization has successfully implemented supportive practices and policies. The scarcity of scores below 3.0 indicates that perceived lack of organizational support is rare. This finding is particularly significant as it aligns with the high PNS scores, suggesting a possible relationship between organizational support structures and psychological needs satisfaction.

### 5.6 Summary of Key Findings

1. Motivation has a positive correlation with PNS and a negative correlation with PNF. PNS positively affects motivation ($\beta = 0.54$, $p < 0.001$), while PNF negatively affects it ($\beta = -0.40$, $p < .001$), which is in line with the Self-Determination Theory (SDT; Deci & Ryan, 1985, 2000)**.**

2. Higher levels of IM (M = 4.01), contrary to EM (M = 2.6), suggest that internal drives such as autonomy, meaning, and purpose sustain motivation more effectively than external rewards do in these contexts.

3. Organizational support indeed adds to motivation. In Model 2, the hypothesis was found for organizational support (OS) being a statistically significant positive predictor of motivation ($\beta = 0.42$; $p < 0.001$). On the contrary, the interaction term of PNS and OS, that is, PNS x OS, turns out not to be statistically significant ($\beta = 0.08$; $p = 0.207$), which therefore confirms that OS does not moderate the relationship between PNS and motivation. This implies that while OS is another factor for enhancing motivation, it does not strongly enhance the PNS-motivation link.

4. Aid workers experience greater frustration of their psychological needs in high-stress environments, but this experience can be buffered from some of its adverse effects by effective organizational leadership and resource availability. This confirms that structural and relational support becomes all the more critical in emotionally charged humanitarian contexts.

5. The findings will also substantiate the field of Self-Determination Theory (SDT; Deci & Ryan, 1985, 2000) with respect to humanitarian work, particularly on the role of the dimensions of autonomy, competence, and relatedness in promoting motivation, resilience, and well-being among aid workers.

The above findings clearly show that the implications would be significant to the real policy and organizational enhancements. The findings probably also guide interventions that in general contribute to improved job satisfaction, motivate enhanced retention in humanitarian aid organizations and well-being of the aid workers.

### 5.7 Implications

1) Organizational Support is Important but Not a Major Moderator. OS has an independent and significant contribution to motivation ($\beta = 0.42$, $p < 0.001$); the intrinsic motivation correlative with OS is positive ($r = 0.50$). The effect of this variable with on IM (PNS x OS) was not statistically significant ($\beta = 0.08$, $p = 0.207$), showing that, even as OS increase motivation independently, but there is little effect on the PNS-motivation relationship.
2) Aid workers reported higher intrinsic motivation ($M = 4.01$, $SD = 0.95$) than extrinsic motivation ($M = 2.60$, $SD = 1.24$). The findings demonstrate the role of autonomy, competence, and the opportunity for purpose-driven work. Also, IM positively correlates with PNS ($r = 0.44$) and OS ($r = 0.50$).
3) Psychological need frustration (PNF) significantly reduces intrinsic motivation ($\beta = -0.40$, $p < 0.001$) and is negatively correlated with intrinsic motivation ($r = -0.54$) and OS ($r = -0.45$). This confirms the need to minimize workplace stressors and to consider the environmental conditions that hinder psychological needs.
4) Improving work conditions provides employee retention. Organizations can take measures to sustain an increase in retention of their employees by introducing career paths that are

very clear, good and strong leadership, and conducive work environments that reduce frustration and support psychological needs.

5) Based on evidence, the policy design should be such - to sustain and increase motivation and performance among aid workers, the policy that humanitarian organizations adopt should be one that encourages autonomy, competence, and relatedness. Strategies would include line staff development, participatory decision-making, and meaningful feedback mechanisms.

## 6.0 CONCLUSIONS

We investigated the interactive effect of psychological need satisfaction (PNS), need frustration (PNF), and organizational support (OS) on the motivation of humanitarian aid workers. PNS was found as a significant positive predictor of intrinsic motivation ($\beta = 0.54$, $p < 0.001$), whereas PNF had a negative impact on it ($\beta = -0.40$, $p < 0.001$). The bivariate correlations supported these findings in such - PNS had a moderate positive correlation with IM ($r = 0.44$) and OS ($r = 0.20$), while PNF was strongly negatively correlated with IM ($r = -0.54$) and OS ($r = -0.45$).

Descriptive statistics also showed higher satisfaction of psychological needs (M= 4.20, SD= 0.84), higher OS (M =4.00, SD =0.76), IM at moderate to high levels (M =4.01, SD =0.95), and low EM (M=2.60, SD=1.24). In Model 2, the OS provision remained a strong straightforward relationship with motivation ($\beta = 0.42$, $p < 0.001$), whereas the interaction term (PNS × OS) was not significant ($\beta = 0.08$, $p = 0.207$). Organizational support did not significantly moderate the PNS-motivation link, yet the importance attached to its independent effect would have strong implications for sustaining aid-worker engagement. Overall, these findings strongly underscore the relevance of Self-Determination Theory (SDT; Deci & Ryan, 1985, 2000) in the humanitarian context, showing how satisfying the basic psychological needs is fundamental to the emergence of motivation, while need frustration is as pertinent. Practically, organizations need to focus their interventions on strengthening autonomy, competence and relatedness through specific training, participative decision-making, and supportive structures in leadership to achieve intrinsic motivation and well-being.

### 6.1 Limitations

The findings obtained from this cross-sectional study could not inform conclusions regarding the directionality and any long-term causal relationships concerning psychological need satisfaction, frustration, organizational support, and motivation. It means that people can not have direct conclusions from cross-sectional studies establishing causation between a factor and the outcome variable. Although these studies mostly indicate relationships and not causations, the psychological need satisfaction, frustration, support from an organization, and motivation are among the factors to be observed within the psychological dimensions.

### 6.2 Future Work

Longitudinal and experimental research designs will have to assess the shifts in motivation and organizational support over time, the establishment of causal relationships, and an evaluation of the actual impact of targeted interventions within humanitarian contexts. Future studies should further investigate the moderating role of organizational support, also looking at different moderating variables using larger datasets with more diversity in different geographies. Furthermore, extensive gender analyses will be instrumental in understanding how organizational dynamics affect different gender groups differently.

## 7.0 QUALITATIVE INSIGHTS

Analysis of the open-ended responses revealed several challenges undermining aid-worker motivation; however, the key challenges and interventions are listed below:

1. Political instability and bureaucratic restrictions.
2. Security and safety concerns, notably mobility limitations for women.
3. Resource constraints, lack of transparency, and favoritism in prioritization.
4. Socio-cultural barriers, ineffective organizational management, and poor leadership.
5. Insufficient community support.

Respondents emphasized that addressing these challenges requires:

1. Better working conditions, including clearly outlined career pathways and fair policies
2. More opportunities for capacity building, including targeted training and professional development
3. Enhanced security measures, tailored to the needs of vulnerable groups especially women with mobility challenges
4. Stronger community engagement, fostering local ownership and trust

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