

From Crisis to Peri-Urban Precarity: The Dynamics of Place Disutility in Distress Migration

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ABSTRACT

Background and Objectives: Distress migration has grown into a pervasive issue in the Global South, especially in Indonesia, where chronic rural problems, environmental degradation, and constrained opportunities have forced many people to migrate under stressful circumstances. While often treated as a passive response to adversity, this study repositions distress migration as a process of stress transformation, a dynamic negotiation of multidimensional disutility shaped by personal, social, and structural factors. Based on Wolpert's (1965) behavioral migration theory, as well as later contributions from De Jong and Fawcett (1981) and Courgeau (1995), this study investigates how distress migrants cope with their dissatisfaction in seven discrete arenas of life: welfare, status, comfort, stimulation, autonomy, affiliation, and morality. The goals of this research are threefold: (1) conceptualize place disutility as an indicator of migrant stress; (2) compare differences in stress experience pre- and post-migration; and (3) analyze how migrant profiles influence stress typologies in peri-urban Indonesia.

Methodology: The research was conducted in Bogor Regency, which served as the destination area, while Brebes and Sukoharjo were the sending areas. Quantitative data were gathered from 110 informal-sector migrants using structured questionnaires that measured disutility levels in origin and destination settings. Stress thresholds were defined to categorize migrants into four types: Stable Low Stress, Stress Relief, Persistently High Stress, and Stress Escalation. Qualitative data, obtained via in-depth interviews and observations, contextualized the quantitative findings, and enriched the understanding of coping mechanisms and adaptation processes. Data were analyzed using the Wilcoxon signed-rank test, chi-square test, and logistic regression.

Main Results: Positive stress transformation was found in 63.6% of the respondents, with significant well-being, stimulation, and autonomy disutility. Following migration, affiliation- and morality-related stress deteriorated, indicating social and ethical dissonance at the destination. Approximately 28.2% of migrants remained in high-stress conditions (Persistently High), whereas

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8.2% experienced worsening stress (Stress Escalation). Logistic regression results identified household poverty, long working hours, and the absence of administrative inclusion (e.g., KTP domicile) as key predictors of negative stress transformation.

Discussions: This study contests the reductionist approach, which defines migration merely as success or failure. Often, migrants overcome material barriers through migration, but simultaneously face increased social and ethical difficulties. The results suggest that economic benefits are accompanied by alienation, a sense of nonbelonging, and moral decay. Thus, migration should be considered a partial solution to disutility rather than a panacea. Inclusive government, good working conditions, and social protection are essential for ordinary resilience (Masten, 2001). Place disutility, investigated using Courgeau's spatial perception theory, provides a solid theoretical account of distress-driven migration paradoxes.

Conclusions: Peri-urban distress migration in Indonesia is not a simple escape from adversity or guarantee of security. It is a complex process of managing stress that provides economic relief, whereas others remain vulnerable. Policy frameworks must go beyond economic interventions to legal recognition, inclusive social networks, and labor abuse protection. Recognizing distress migrants as active adapters rather than passive victims can improve migration governance.

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Introduction

Background and Rationale

Across history, humans have migrated away from their homes, pushed not only by hardship and instability but also attracted by new possibilities—Indonesia is no exception. Globally, by 2020, the United Nations estimated that 281 million individuals were living outside their countries of birth, and approximately 740 million had moved within their home countries (UN DESA, 2020). For many, particularly the very poor, migration is more a survival strategy than a matter of choice. Although some scholars suggest that the poorest are unable to migrate due to a lack of resources (Dustmann & Okatenko, 2014), other studies stated that migration is typically the only available response to sustained hardship (Deshingkar, 2010; Sangita, 2017).

This phenomenon gives rise to distress migration, which lies between voluntary and forced migration. It is typified by movements undertaken out of necessity as a last resort when all other options are exhausted (Deotti et al., 2016). Such individuals often flee adverse economic conditions, natural disasters, or unbearable social pressures, and they often find themselves in the informal sector of new cities, where employment security and labor rights are minimal (De

Haan & Yaqub, 2010). For some, migration is spurred by crop loss or economic collapse; for others, it is the risk of violence or social exclusion that forces their hand (Deotti et al., 2016).

For distress migrants, relocation is not merely a change in geography—it reconfigures the nature of adversity they endure. At destinations, these adversities frequently take novel forms, including exploitative working conditions, squalid living conditions, and social isolation (Datta, 2020). Even when migration enhances material conditions, it can introduce novel insecurities, especially for women, by altering family relationships and subjecting them to legal and social vulnerabilities (Nooteboom, 2019). Many are denied full citizenship rights, rendering them susceptible to dispossession, illness, and forced migration. Courceau (1995) adds that migration is also shaped by subjective place images, how individuals mentally and emotionally interpret space. These perceptions shape both migration decisions and post-migration adaptation, minimize social contact and erode support networks (Visser et al., 2013).

Thus, it becomes clear that analyzing migration requires looking beyond economic factors to the layers of tension and dissatisfaction in both origin and destination. Wolpert's (1965) behavioral theory of migration developed the concept of place disutility, or the build-up of unease or discontent that prompts individuals to move. This disutility is multifaceted, including not only monetary difficulties but also a series of inadequacies in terms of well-being, status, comfort, autonomy, stimulation, social relationships, and moral values (De Jong & Fawcett, 1981; Wolpert, 1965).

Despite these theoretical insights, few studies explore how stress evolves after migration, who adjusts, who struggles, and what influences these coping pathways. Many current studies often concentrate specifically on push-pull factors or destination challenges, with little empirical attention to stress transformation. Moreover, another aspect of distress migration that has garnered less attention is the selection of destination sites. While much research has largely focused on either rural origins or major urban centers, recent research shows that peri-urban areas are becoming prominent destinations for distress migrants, especially in Indonesia. Ingelaere et al. (2018) note that those facing hardship often opt for smaller settlements, where they can retain links to their rural origins and minimize the risks involved in long and uncertain journeys. This is further compounded by the declining feasibility of agricultural livelihoods in Indonesia, coupled with mounting environmental concerns such as land degradation and climate change, which have made rural living increasingly untenable (Hidayat et al., 2022). Peri-urban areas thus attract migrants in search of alternate subsistence means and greater access to basic services, albeit with the creation of new adversities. They offer more reachable employment prospects and cheaper living expenses (Liu, 2022); yet at the same time, they also subject migrants to precarious housing, weak infrastructure, and compromised access to crucial services like clean water and healthcare (Li & Liu, 2018). Social safety nets are often inadequate, forcing migrants to rely on informal support systems instead of formalized welfare systems (Barglowski & Bonfert, 2023). Many ends up in tenuous, poorly remunerated employment and accumulate overlapping vulnerabilities with the urban poor population (Tacoli et al., 2015), while the increasing wave of migrants heightens local infrastructure pressures and gives rise to forms of marginalization that remain inadequately addressed.

Objectives of the Study

1. To conceptualize place disutility as an indicator of migrant stress.
2. To compare differences in stress experience pre- and post-migration; and

3. To analyze how migrant profiles influence stress transformation typologies in peri-urban Indonesia.

Literature Review

Defining Distress Migration and Its Drivers

Distress migration has developed as a crucial concept in migration studies, spanning the gap between voluntary and forced migration (Bag & Toppo, 2021; Tripathy, 2021). Unlike voluntary migrants, who move by choice for better opportunities, or forced migrants, who escape due to acute dangers such as war or natural disaster, distress migrants are pushed to relocate owing to chronic hardship and the absence of viable alternatives in their place of origin (Samantaray, 2016). This category is characterized by restricted agency, with migration typically being a last resort for survival rather than a proactive effort for betterment (Deotti et al., 2016; Zuccotti et al., 2018).

Distress migration has multiple causes (Deotti et al., 2016; Zuccotti et al., 2018). At the macro level, contextual issues such as rural poverty, food insecurity, and environmental degradation are prevalent. Chronic poverty and declining agricultural crop yields, which often exacerbated by climate change, limit livelihood opportunities in rural areas, frequently forcing communities to migrate in search of better prospects (Nagendiran & Sathya, 2024; Hidayat et al., 2022). Climate change, including unpredictable weather, prolonged drought, and reduced marine and agricultural productivity, has destabilized livelihood structures, particularly for landless labor and smallholder farmers (Nagendiran & Sathya, 2024). Although such incremental stressors do not always translate to overt displacement, they reduce the sustainability of staying put, hence pushing households into involuntary migration as adaptation rather than through careful consideration. At the meso level, household characteristics, including extreme poverty, absence of productive assets, and exclusion from social protection, further exacerbate vulnerability (Tripathy, 2021). At the micro level, individual constraints such as low education and skills hinder access to local prospects, strengthening the urge to migrate (Bag & Toppo, 2021).

Recent research indicates that distress migration is motivated not only by economic deprivation but also by intense social constraints, such as discrimination, violence, and entrenched inequalities (Samantaray, 2016). Furthermore, institutional deficits, such as inadequate infrastructure, limited access to financing, and insufficient public services, compound these vulnerabilities, especially in isolated rural areas (Deshingkar, 2010). The junction of these causes often leads to irregular or illegal migration, exposing migrants to heightened risks of exploitation and marginalization (Deshingkar, 2010; Tripathy, 2021).

Social Networks, Adaptation, and Migrant Well-Being

Social networks are crucial for distress migrants, especially those with limited finances and access to institutional help. Ties with relatives, friends, or fellow villagers in destination areas help reduce both the financial and psychological costs of migration by offering information, shelter, job leads, and emotional support (Massey et al., 1993; Mulyoutami et al., 2016). These networks form the backbone of early adaptation, promoting survival and stability in unfamiliar environments. In Indonesia, migration networks also operate as essential sources of pre-departure information, often enhanced by digital platforms that boost relationships and improve decision-making among internal migrants (Novriawati & Nasrudin, 2023). Such informal

infrastructures are crucial for low-skilled and seasonal migrants, for whom bonding and bridging capital may be their only stable resource for navigating difficult urban environments.

The ability of migrants to draw on social networks during times of transition is strongly connected to broader individual and communal capacities for adaptation, as expressed in the idea of ordinary resilience. Ordinary resilience, as described by Masten (2001), refers to the normative and daily capacity of individuals to cope with suffering through accessible adaptive mechanisms, such as positive familial ties, helpful peers, and community groups. For distress migrants, this type of resilience is not an amazing effort but comes from the normal mobilization of personal and social resources, such as sustaining relationships, seeking practical and emotional assistance, and reconstructing daily routines amid change. Masten's perspective shows that resilience is frequently built on the reliable functioning of social and communal contexts, reinforcing how migrants are typically able to withstand and recover from adversity when such supports are in place.

Beyond logistical aid, social networks play a key role in boosting migrants' well-being. Emotional support from family and friends helps buffer distress, whereas social connectedness and community participation are highly linked to improved life satisfaction and psychological stability (Song et al., 2025). In Indonesian cities, such as Jakarta, diverse migrant groups display varying capacities for collective adaptation, with cross-neighborhood social ties and collaboration with local institutions strengthening resilience, particularly in the face of climate and livelihood shocks (Wannewitz & Garschagen, 2024). However, not all social links are good; fragmented networks or exclusionary norms could raise vulnerability and limit social integration. Recognizing the dual character of social networks—as both protective and possibly limiting—is vital for building inclusive support systems that increase migrants' well-being and autonomy.

Theoretical Perspectives: Place Disutility and Stress Transformation

Wolpert's (1965) behavioral theory of migration introduced the concept of place disutility, highlighting how accumulated dissatisfaction across life domains, such as welfare, status, comfort, autonomy, affiliation, and morality (De Jong & Fawcett, 1981), can trigger migration when it exceeds an individual's tolerance threshold. At the center of this concept is the migrant's subjective perception, which is impacted by personal attributes, home conditions, and access to information. This aligns with Courgeau's (1995) attention to the complex dimensions of the decision to migrate, framing personal choice within larger spatial and social relationships. As such, the decision to migrate is shaped not just by disutility but by the means through which the environment is subjectively appraised through cognitive, institutional, and territorial perspectives. In distressing circumstances, migration becomes a coping mechanism rather than a purposeful approach. However, moving away from disutility does not ensure its resolution. For many, particularly those in informal labor and peri-urban contexts, stress is often reshaped into new forms, such as exploitative work, unstable housing, and reduced social bonds (Tacoli et al., 2015).

This emphasizes the relevance of stress transformation, the idea that stressors do not dissipate through migration but evolve in response to new settings. Migrants may trade one form of hardship for another as structural vulnerabilities intersect with their limited coping resources. In peri-urban areas, for example, long working hours and inadequate infrastructure sometimes duplicate earlier forms of disutility (Tacoli et al., 2015; Visser et al., 2013). Likewise, cyclical migrants from India who are laboring in Singapore endure chronic precarity despite relocation

(Datta, 2020). Integrating these concepts provides a clearer understanding of how distress migrants handle layered vulnerabilities amid persistent volatility.

Method

Research Approach and Design

This study adopted a mixed methods approach, combining quantitative and qualitative research methodologies to investigate distress migration in peri-urban settings. The mixed methods design blends the strengths of both approaches while reducing their respective limitations, which is particularly helpful for complex social phenomena such as distress migration, which includes numerous variables.

This study adopted a multistage mixed methods design consisting of three sequential phases: (1) exploratory qualitative inquiry in the destination area, (2) quantitative survey in the destination area, and (3) qualitative follow up in the origin and destination areas. This design enabled the researchers to initially study the phenomenon through qualitative inquiry, the findings of which were used to develop a survey instrument for the quantitative study. The second phase applied quantitative methods to measure prevalence, and the third phase used qualitative investigation to increase contextual understanding.

Study Area and Sample

The primary research site was Bogor Regency, a peri-urban zone in West Java that borders the Jakarta metropolitan area. Bogor functions as a key transition area, drawing in migrants through informal employment opportunities and relatively affordable living conditions. Three subdistricts were selected, namely Dramaga, Ciampea, and Ciomas, based on high in-migration rates and proximity to IPB University, which indirectly fuels urbanization.

The secondary sites were two sending regions: Brebes (Central Java) and Sukoharjo (Central Java), identified as major origins of migrants residing in the primary study sites. Migrants from Brebes were known for diverse informal work, while those from Sukoharjo often clustered in Bogor as sellers of traditional herbal drinks (jamu) or meatballs (bakso), reflecting occupational specialization and social embeddedness.

Respondents were selected using non-probability accidental sampling based on predefined criteria: they were born outside Bogor, had been working and residing in Bogor for at least six months, and were employed in the informal sector. The final sample comprised 110 respondents. Because the exact size of the distress migrant population is unknown, probability-based sampling was not feasible; sample adequacy was therefore assessed in relation to analytical requirements. Following Mantra et al. (2014), the sample size exceeds the minimum thresholds for cross-tabulation analyses and non-parametric tests such as the Wilcoxon test. From an initial 120 respondents across three subdistricts, 10 cases were excluded during screening due to migration during childhood, educational motives, or lack of independent migration decisions. The quantitative sample was complemented by qualitative data from 33 informants, including 16 distress migrants in the destination area, 10 family members in the origin areas, and 7 village officials and community leaders, collected through purposive and snowball sampling.

Data Collection Methods

Data collection employed triangulation, using multiple techniques simultaneously for broader and deeper understanding. Primary data were collected through structured interviews using questionnaires (quantitative) and participatory observation, in-depth interviews, and documentation (qualitative).

The data collection process followed three main stages: qualitative pre-survey, survey in destination areas and tracing survey in origin areas. This approach aimed to obtain a complete picture of distress migration, as previous studies often focused on either origin or destination areas alone. Secondary data were gathered from Statistics Indonesia (BPS) publications, government reports, and previous research to provide macro-level context.

Measures and Variables

This study operationalizes key variables to systematically capture the background of distress migrants and the transformation of pressures they experience before and after migration. The measurement approach is summarized below.

Migrant Profile

Migrant profiles comprised a set of demographic and socioeconomic characteristics considered relevant for understanding migration decisions and the subsequent transformation of stress experienced by migrants. The variables included gender, educational attainment, ethnicity, household poverty level, social network size, length of stay in the destination area combined with national identity card (KTP) domicile status, working hours per week, and total monthly income.

Stress Transformation

Stress transformation refers to changes in the form and intensity of stress experienced by migrants before and after migration. This is measured using the concept of place disutility, adapted from Wolpert's (1965) place utility framework. Place disutility reflects dissatisfaction with a location, across seven dimensions: (1) welfare, (2) status, (3) comfort, (4) stimulation, (5) autonomy, (6) affiliation, and (7) morality. Respondents rated their dissatisfaction for each dimension, both in their place of origin and current location. Stress is considered present when dissatisfaction exceeds a predetermined stress threshold.

- Stress threshold per dimension: 7.01
- Total place disutility threshold: 48

Respondents whose disutility scores exceed these thresholds in any dimension or in total are categorized as experiencing high stress; those below are categorized as experiencing low stress.

Classification of Distress Migrants Based on Stress Transformation

Migrants are grouped into four categories according to their stress levels in origin and destination areas (Table 1). This typology enables a nuanced analysis of how migration affects well-being and the persistence or transformation of stress among distress migrants.

Table 1

Typology of Distress Migrants Based on Stress Transformation

Category	Stress in Origin	Stress in Destination	Description
Stable Low Stress Migrants	Low	Low	Maintain low stress before and after migration
Stress Relief Migrants	High	Low	Experience relief: high stress reduced by moving
Persistently High Stress Migrants	High	High	Remain under high stress in both locations
Stress Escalation Migrants	Low	High	Stress increases after migration

Data analysis

This study employed both quantitative and qualitative data analysis to examine how stress is transformed through the migration experience of informal-sector workers in peri-urban Indonesia.

Quantitative Data Analysis

Quantitative analysis was conducted in three sequential steps:

1. Testing Stress Transformation. To assess whether stress levels changed after migration, a Wilcoxon signed-rank test was applied to paired disutility scores across the seven dimensions of place utility (welfare, status, comfort, stimulation, autonomy, affiliation, and morality). This non-parametric test was appropriate due to the ordinal nature of the data and its non-normal distribution.

2. Classifying Migrants by Stress Transformation Typologies. Based on whether disutility scores at origin and destination were above or below the threshold, migrants were classified into four typologies: Stable Low Stress Migrants, Stress Relief Migrants, Persistently High Stress Migrants, and Stress Escalation Migrants. The distribution of these typologies was summarized using frequency tables and visualized with a bar chart illustrating stress transformation. This bar chart visualization provided an intuitive means to interpret changes in stress levels through migration.

3. Exploring the Influence of Migrant Profiles on Stress Transformation Outcomes. Stress transformation typologies were dichotomized into positive (Stable Low and Stress Relief) and negative (Persistently High and Stress Escalation) categories. Bivariate associations between migrant characteristics and stress outcomes were tested using Chi-square analysis. Variables with significant associations were included in a binary logistic regression to identify predictors of negative stress transformation, with the positive group as the reference category.

Qualitative Data Analysis

Qualitative data from in-depth interviews, participatory observations, and field notes were analyzed thematically to complement and contextualize the quantitative findings. The analysis followed a stepwise approach involving data reduction, open coding, categorization, and pattern interpretation, assisted by matrix displays to trace stress narratives across migrant typologies. The qualitative findings were used to triangulate quantitative patterns and provide

deeper insights into how migrants interpret and navigate shifting stress landscapes in peri-urban settings.

Findings

Respondent Profile

A total of 110 distress migrants participated in this study, offering a complete overview of the demographic and socioeconomic landscape of this vulnerable group in peri-urban Bogor Regency. The gender distribution was considerably skewed, with males representing 79.1% (87 persons) and females 20.9% (23 persons), reflecting the existing gender roles in travel trends. The educational attainment among respondents was relatively low: 73.6% (81 persons) had completed junior high school or less, while only 26.4% (29 persons) had graduated from senior high school or higher. This insufficient educational background may influence both the decision to migrate, and the problems faced when adapting to new contexts. In terms of ethnicity, only 25.5% (28 persons) identified as Sundanese (the local majority) while the majority (74.5%, or 82 persons) were of Non-Sundanese origin. This variability shows the presence of cross-cultural adaptation mechanisms and the potential for both enrichment and problems in social integration.

Economic vulnerability was pronounced: 62.7% (69 persons) were from poor or extremely poor households, whereas only 37.3% (41 persons) were classified as non-poor. This highlights the central significance of economic hardship as a driver of distress migration. Social networks in the destination location were largely limited, with 54.5% (60 persons) reporting restricted social ties compared to 45.5% (50 persons) who had wider networks. The breadth of social networks may affect access to information, shelter, and employment, thereby affecting migrants' adaptation experiences.

A segmented pattern appeared regarding administrative status and length of stay. Only 19.1% (21 persons) had both resided in Bogor for five or more years and updated their identity cards (KTP) to reflect the destination location. In contrast, 50.0% (55 persons) had lived in Bogor for five years or longer but retained KTPs registered in their origin location. Another 30.9% (34 persons) had lived in Bogor for less than five years and likewise held origin-based KTPs. These findings suggest widespread administrative non-integration, which may limit access to social services, formal employment, and legal protections.

Working circumstances were substantially skewed toward long hours. A striking 86.4% of respondents (95 persons) worked more than 48 hours per week, whereas only 13.6% (15 persons) reported ordinary or decreased working hours per week. This research underscores the labor-intensive nature of informal economic engagement among distressed migrants. However, long working hours do not necessarily translate into better pay. In actuality, 76.4% of respondents (84 persons) earned below the local regional minimum wage, while only 23.6% (26 persons) reported salaries over that threshold. This disconnect between labor input and monetary gain underlines the economic fragility and abuse that are sometimes inherent in informal labor agreements. The full breakdown of the respondents' characteristics is shown in Table 2.

Table 2*Demographic and Socioeconomic Characteristics of Distress Migrants in Study Area*

Characteristics	Frequency (n)	Percentage (%)
<i>Gender</i>		
Male	87	79.1
Female	23	20.9
<i>Educational attainment</i>		
≥ Graduated from senior high school	29	26.4
≤ Graduated from junior high school	81	73.6
<i>Ethnicity</i>		
Sundanese (same with local)	28	25.5
Non-sundanese	82	74.5
<i>Household poverty level</i>		
Non-poor	41	37.3
Poor and extremely poor	69	62.7
<i>Social network</i>		
Wide	50	45.5
Limited	60	54.5
<i>Length of stay in Bogor and identity card (KTP) domicile</i>		
≥ 5 years, KTP Bogor	21	19.1
≥ 5 years, KTP origin area	55	50.0
< 5 years, KTP origin area	34	30.9
<i>Working hours per week</i>		
Normal (≤ 48 hours)	15	13.6
Long (> 48 hours)	95	86.4
<i>Total monthly income</i>		
Above the regency minimum wage	26	23.6
Below the regency minimum wage	84	76.4

Note. $n = 110$.

Stress Transformation Pattern

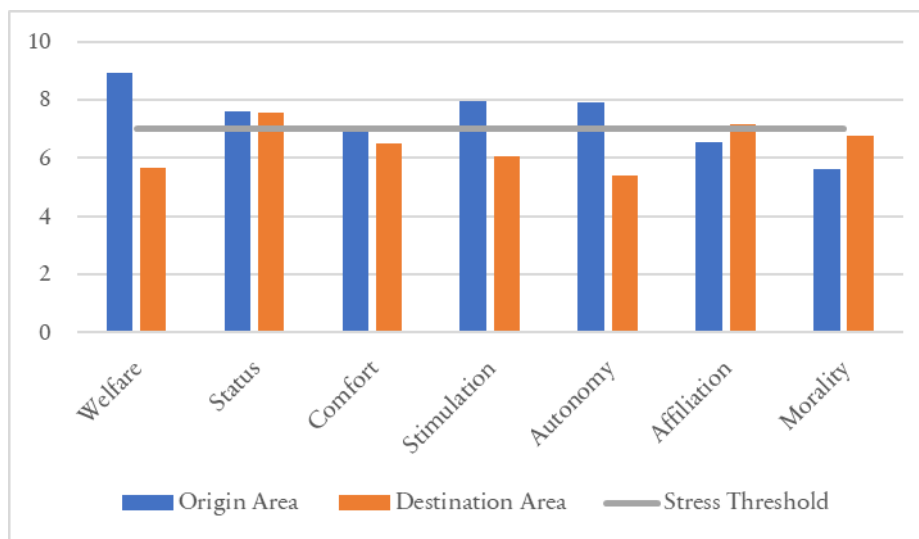
The analysis of the place disutility score reveals differential patterns concerning the change in the levels of stress experienced by migrants in distress before and after migration. As shown in Table 4 and Figure 1, the mean sum of the place disutility score, as an indicator of perceived stress levels, was significantly higher in the origin area ($M = 51.54$) than in the destination area ($M = 45.07$). The Wilcoxon signed-rank test results indicated that this decrease was statistically significant. This overall decrease indicates a general reduction in perceived stress levels after migration.

A comprehensive review of the seven scales related to the disutility of location, in conjunction with the 7.01 threshold of the stress, reveals substantial complexity (see Figure 1). On the welfare dimension, the highest degree of stress was evident, far surpassing the stress threshold, whereas stimulation and autonomy were equally beyond the threshold. The status dimension was significantly higher than the threshold in the origin area and showed a substantial

increase in the destination area, suggesting ongoing stress related to the individual's status. However, the affiliation dimension evidenced the greatest rise in the level of stress, moving from a position below the threshold in the origin area to a position above the threshold in the destination area. This result indicates that migrants confront mounting societal pressures and challenges in affiliation after moving. On the morality dimension, a substantial rise was evident but below the threshold of the stress, suggesting high, although not serious, moral pressure in the destination area.

Figure 1

Mean Disutility Scores for Origin and Destination Areas Across Seven Dimensions of Place, with Reference to the Stress Threshold (7.01) Among Distress Migrants in Study Area (N = 110)



The data in Table 3 reveal that the largest disutility reductions followed the areas of welfare, stimulation, and autonomy. More specifically, the disutility score of the welfare dimension significantly dropped from 8.92 in the previous dwelling to 5.66 in the later setting. Furthermore, the ratings of stimulation and autonomy dropped from 7.95 to 6.04 and from 7.92 to 5.41, respectively, and the declines in the latter two areas were statistically significant. These results suggest that migration has significantly relieved difficulties in the areas of economic well-being, potential for individual growth, and the feeling of autonomy enjoyed by migrants in the new environment.

Conversely, the measures related to affiliation and moral aspects reflected a significant increase in disutility after migration. The affiliation dimension saw a rise in the disutility score from 6.55 at the origin area to 7.17 at the destination area, while the moral aspect reflected a rise from 5.61 to 6.75. These results imply that, despite the enhancement of material and personal life, migrants face deepened challenges related to social affiliation and moral compatibility in their new settings. This pattern can be attributed to challenges associated with building new affiliation links, accommodating the differing norms of the local community, or reconciling personal values with those that dominate the host society.

Simultaneously, the status and comfort measures showed no statistically significant changes, and their mean values were relatively constant along the origin-to-destination distance.

This means that the migration process did not significantly change migrants' self-assessed societal status or their physical and mental health statuses.

The findings of this investigation reveal a multifaceted and complex process of stress transformation among the affected migrants. While the overall disutility related to place has decreased considerably, mainly due to increased welfare, stimulation, and autonomy, the positive adjustment in these dimensions is partially offset by increased pressures associated with affiliation and moral issues. The continued intensification of stress related to status highlights the challenges embedded in the process of social integration. This complex pattern reveals the importance of considering the material and social-psychological aspects of well-being in measuring the outcomes of distress migration.

Table 3

Mean Place Disutility Scores and Wilcoxon Test Results Among Distress Migrants in Study Area

Dimension	Origin Mean	Destination Mean	Wilcoxon Result
Welfare	8.92	5.66	Significant decrease
Status	7.61	7.55	No significant change
Comfort	6.98	6.48	No significant change
Stimulation	7.95	6.04	Significant decrease
Autonomy	7.92	5.41	Significant decrease
Affiliation	6.55	7.17	Significant increase
Morality	5.61	6.75	Significant increase
Total	51.54	45.07	Significant decrease

Note. $n = 110$.

This study further explored the effect of migration on stress by classifying respondents based on whether their place disutility scores in each dimension exceeded or fell below the predefined stress threshold, following Wolpert's behavioral migration framework (Wolpert, 1965). A dimension-specific stress threshold (7.01) was used to distinguish low and high stress conditions before and after migration, while the aggregate place disutility score was evaluated against a total stress threshold of 48. Based on changes in stress conditions between the origin and destination areas, respondents were classified into four stress transformation typologies: Stable Low Stress (low–low), Stress Relief (high–low), Persistently High Stress (high–high), and Stress Escalation (low–high). Figure 2 illustrates the distribution of these typologies across the seven dimensions of place disutility.

Each dimension revealed a clear pattern of transformation. In terms of welfare, the large majority of respondents (77.3%) reported relief after migrating, as their income, availability of food, housing, and satisfaction of essential needs improved significantly. On the other hand, a relatively low percentage of respondents (5.5%) felt increased economic pressure, while 13.6% always reported low levels of pressure. Similarly, the autonomy and stimulation dimensions also reflected clear patterns of relief from pressure, as 65.5% and 54.5% of the migrants, respectively, changed from high to low-pressure levels. These trends support the fact that, even as necessity frequently motivates migrants, it can also grant them more autonomy and improved avenues of opportunity that were not available in their origin area.

In contrast, the results related to the comfort and status dimensions varied more. Interestingly, a significant percentage of migrants reported stable or improved circumstances;

however, a large proportion also reported increased stress levels. For instance, in the comfort dimension, 30.0% of the respondents were recognized as being more stressed, possibly due to factors such as cramped living arrangements, unpredictable work schedules, or physical challenges related to the new surroundings. In a similar vein, status-related concerns were sustained for many people: more than half of the respondents were classified as either consistently stressed (27.3%) or newly stressed (28.2%) regarding their perceived recognition or social status. These figures suggest that even after geographical dislocation, dissatisfaction with social status can persist or even intensify.

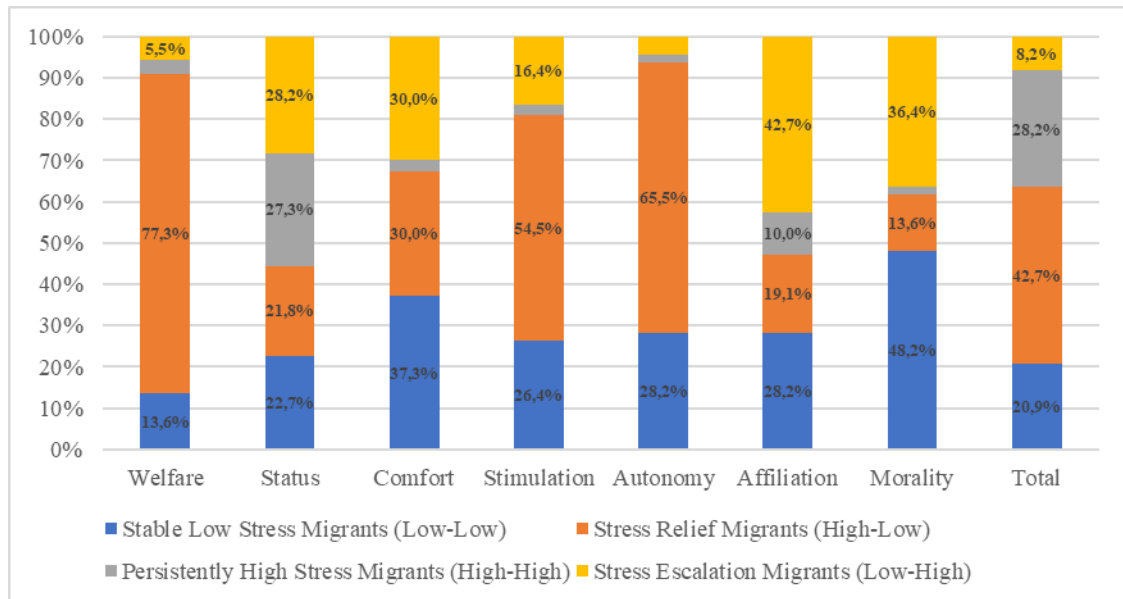
The above trends also indicate serious concerns in the areas of affiliation and morality, which correspond to higher levels of social and cultural health. In terms of affiliation, 42.7% of the participants reported increased stress levels, while only 19.1% felt relief, indicating that social isolation, reduced trust, and vulnerable relationships within society are common themes among migrants. The same trend was observed in the moral category, with 36.4% of respondents reporting increased stress levels from low to high, compared to only 13.6% reporting any improvement. These findings imply that for many migrants, settlement at the peri-urban fringe might erode previously established moral structures, making individuals vulnerable to value systems that can seem discordant or alienating.

A comparison of aggregate place disutility measures across all seven domains revealed complex and multifaceted patterns. As can be seen in the last column of Figure 2, 42.7% of migrants reported decreased overall stress (Stress Relief), and 20.9% reported consistently low stress at both their places of origin and destinations. However, a significant percentage still suffers from this condition. In particular, 28.2% of the respondents were categorized as persistently high-stress migrants (High–High), indicating that more than a quarter of the migrants remained in high-stress settings after migrating. This specific population of migrant merits specific intervention, as they are assumed to be suffering from prolonged challenges that were not subdued through the act of migration, presumably due to the presence of sustained structural limitations, unstable employment opportunities, and mental weakness. Another 8.2% of migrants fell under Stress Escalation (low–high), which means they suffered from a decline in their situation after they migrated. Although the percentage is somewhat lower, it occurs among people who have encountered novel or amplified stressors due to the process of migration, such as alienation, failed expectations, or increased vulnerability to risks at their destinations.

The findings of this study show a multifaceted and varied model for comprehending variations in stress. While migration relieves pressure for many individuals—especially in economic and personal terms—it can also engender social and ethical discontent for others. This is a strong call for more holistic and human-oriented migration policies that cover not only economic concerns but also the psychosocial and cultural nature of life after migration.

Figure 2

Distribution of Migrant Typologies Across Seven Place Disutility Dimensions Among Distress Migrants in Study Area (N = 110)



Note. Percentages below 5% are not labeled to maintain visual clarity

Predictors of Stress Transformation

To identify the major sociodemographic predictors of the change in stress among stressed migrants, this study applied bivariate and multivariate analytical methods. Respondents were categorized into two groups based on their overall place disutility scores: those who experienced positive transformation of stress (i.e., Stable Low and Stress Relief migrants) and those who experienced negative transformation of stress (i.e., Persistently High and Stress Escalation migrants).

The results in Table 4 show that the preliminary set of three variables correlated significantly with negative stress transformation as follows: household poverty, residence period in combination with KTP re-registration status, and working time. Among the subjects with negative transformation, those who originated from impoverished or deeply impoverished households were significantly dominant, of whom 47.8% suffered from chronic high/worsening stress compared to only 17.1% of respondents from non-impoverished households ($p < .01$). Similarly, a significantly higher frequency of negative stress transformation was noted among migrants who had stayed in Bogor for less than five years but were in possession of original-area KTPs (79.4%), as well as among those who had stayed for a longer period but failed to re-register their local KTP (43.6%). Conversely, only 4.8% of the long-term migrants who successfully re-registered for local KTPs had negative stress transformation ($p < .001$).

Table 4*Sociodemographic Characteristics and Stress Transformation Among Distress Migrants in Study Area*

Characteristics	Stress Transformation				<i>p-value</i>
	Positive		Negative		
	Transformation		Transformation		
	<i>n</i>	%	<i>n</i>	%	
<i>Gender</i>					
Male	54	62.1	33	37.9	.506
Female	16	69.6	7	30.4	
<i>Educational attainment</i>					
≥ Graduated from senior high school	21	72.4	8	27.6	.252
≤ Graduated from junior high school	49	60.5	32	39.5	
<i>Ethnicity</i>					
Sundanese (same with local)	16	57.1	12	42.9	.408
Non-Sundanese	54	65.9	28	34.1	
<i>Household poverty level</i>					
Non-poor	34	82.9	7	17.1	.001**
Poor and extremely poor	36	52.2	33	47.8	
<i>Social network</i>					
Wide	35	70.0	15	30.0	.205
Limited	35	58.3	25	41.7	
<i>Length of stay in Bogor and identity card (KTP) domicile</i>					
≥ 5 years, KTP Bogor	20	95.2	1	4.8	.001**
≥ 5 years, KTP origin area	35	63.6	20	36.4	
< 5 years, KTP origin area	15	44.1	19	55.9	
<i>Working hours per week</i>					
Normal (≤ 48 hours)	13	86.7	2	13.3	.046*
Long (> 48 hours)	57	60.0	38	40.0	
<i>Total monthly income</i>					
Above the regency minimum wage	20	76.9	6	23.1	.107
Below the regency minimum wage	50	59.5	34	40.5	

Note. *N* = 110. * = $p < .05$, ** = $p < .01$

These associations were supported by the results of multivariate logistic regression analyses (Table 5). In the adjusted Model II, the following statistically significant predictors were detected. First, household impoverishment was detected as a significant predictor; migrants from impoverished households had a risk of adverse transformation of stress more than ten times greater than that of their counterparts from non-impoverished households (AOR = 10.594, $p < .001$). Second, protection appeared to be significant due to the interaction between length of stay and administrative integration. Specifically, migrants who had resided in Bogor for more

than five years but still retained their origin-area KTP faced a 16.5 times higher risk of adverse stress transformation compared to those with the same duration of residence who had completed administrative transfer to a local KTP ($p = .010$). In contrast, among migrants who had stayed in Bogor for less than five years and continued to use their original KTPs, the risk of adverse stress transformation was nearly 60 times higher ($p < .001$). Finally, working hours were also detected as associated, since migrants involved in more than 48-hour work per week reported a risk of adverse transformation more than 7.5 times larger than that of the standard working hour keepers ($p = .021$).

Table 5

Multivariate Logistic Regression Models on the Association Between Sociodemographic Characteristics and Stress Transformation Among Distress Migrants in Study Area

Characteristics	Model I Unadjusted OR	P	Model II Adjusted OR	P
<i>Gender</i>				
Male	1			
Female	1.739	.403		
<i>Educational attainment</i>				
≥ Graduated from senior high school	1			
≤ Graduated from junior high school	.968	.964		
<i>Ethnicity</i>				
Sundanese (same with local)	1			
Non-Sundanese	.997	.997		
<i>Household poverty level</i>				
Non-poor	1		1	
Poor and extremely poor	10.951**	<.001	10.594**	<.001
<i>Social network</i>				
Wide	1			
Limited	1.859	.273		
<i>Length of stay in Bogor and identity card (KTP) domicile</i>				
≥ 5 years, KTP Bogor	1		1	
≥ 5 years, KTP origin area	18.643**	.009	16.499*	.010
< 5 years, KTP origin area	65.121**	<.001	59.725**	<.001
<i>Working hours per week</i>				
Normal (≤ 48 hours)	1		1	
Long (> 48 hours)	7.597*	.026	7.492*	.021
<i>Total monthly income</i>				
Above the regency minimum wage	1			
Below the regency minimum wage	2.202	.228		

Note. $N = 110$. * = $p < .05$, ** = $p < .01$

These findings support the link between institutional exclusion and the presence of structural disadvantage, factors that are relevant and significant to migrants' circumstances. The existence of poverty, the absence of administrative integration, and overly strict labor requirements not only limit material well-being but also heighten psychological and social stress, thereby increasing the risk of adverse stress transformation. Conversely, migrants displaying higher levels of administrative integration, more regular employment, and relatively stable pre-admission economic circumstances are much more likely to cope positively in the new environment.

Discussion

This study improves the understanding of distress migration by explaining the transformation of difficulties encountered by those operating in the informal economy of peri-urban Indonesia, thereby going beyond a simplistic treatment of migration as a mere locational change. Based on Wolpert's (1965) behavioral migration theory and the multi-dimensional place disutility theory by De Jong & Fawcett (1981), the findings show that distress migration is an evolutionary process with changing pressures, which can sometimes dip but can also stick around or develop into other forms of migration. A supplementary behavioral insight is provided by Courgeau (1995), who emphasizes the subjective interpretation of place and emotional representations in shaping migration decisions. This is supported by the vision of distress migration as a process of accommodation in the face of enduring deprivation and poor alternatives rather than as a search for improving conditions (Deotti et al., 2016; Samantaray, 2016; Zuccotti et al., 2018).

It is surprising that a substantial percentage, namely 63.6%, of migrants indicated a positive change in their level of stress, as reflected by significant decreases in total place disutility scores as a consequence of migration. This observation defies prevailing narratives that invariably portray distress migration as an unequivocal setback; rather, it affirms that migrants can reestablish a semblance of agency and improve their conditions of life, even if only minimally. Crucially, what must be underscored is that even as 76.4% of the respondents earn below the minimum set for the administrative area, there were significant decreases in welfare-related disutility, suggesting that migrants most times perceive their present situation as an enhancement of their antecedently vulnerable conditions of environmental distress, fluctuating incomes, and food deprivation. Qualitative accounts support this interpretation; a female migrant from Sukoharjo who has lived in Bogor for nearly two decades described that despite persistent economic precarity and lack of home ownership, "at least here there is money to survive", contrasting this with her origin village where farming had become increasingly unviable due to crop damage and water scarcity. This observation is very close to what already subsists in the literature as the chief drivers of distress migration across global south countries (Deshingkar, 2010; Nagendiran & Sathya, 2024), thereby reiterating that migration is an adaptive response for most people rather than being an expression of an aspiration for enhanced mobility (Bag & Toppo, 2021; Tripathy, 2021).

Administrative inclusion is an essential protective measure. Migrants who had obtained Bogor Regency KTP and enjoyed longer residency periods in Bogor showed an observable decline in stress levels, highlighting the crucial significance of official documentation for access to healthcare, schooling, and social protections that are essential for general welfare (Deshingkar,

2010). In cases where formal care is absent, such inclusion operates as a form of protection against hazards that might otherwise be accentuated by institutional failure. Having a standard work week also had an important bearing on well-being, and those who worked 48 or fewer hours weekly reported lower levels of stress. This is consistent with modern research that links undue work demands to lower autonomy, heightened loneliness, and negative psychosocial outcomes among informal workers (Tacoli et al., 2015; Visser et al., 2013).

The synthesized findings show that, although the process of stress relief is usually fragile and dependent on specific conditions, manifesting even in situations with minimal structural support, migrants illustrate what Masten (2001) describes as ordinary resilience by capitalizing on minimal but critical enabling factors to recreate their stability and dignity. Nevertheless, the chronic stress noted in 36.4% of the participants in the "Persistently High" or "Stress Escalation" frameworks poses great challenges to the continued presence of structural barriers to care. When examined by dimension, the highest shares of persistently high stress and stress escalation were found in the affiliation and morality domains. Qualitative narratives indicate that affiliation-related stress is driven primarily by separation from family, loneliness, and difficulties forming social ties in the destination area. Several migrants described enduring sadness and emotional isolation despite improved employment conditions, particularly due to prolonged distance from family and limited social integration. Moral strain was similarly shaped by the peri-urban context, where long working hours, informal employment pressures, and weak social regulation constrain religious practices and family-oriented values. Migrants reported difficulties sustaining moral routines; as one noted, "sometimes I cannot even attend Friday prayers because I am busy selling" (male migrant, Bogor). Meanwhile, a female distress migrant emphasized that children's moral environments were better protected in her origin village than in the urban destination. These accounts explain why material improvement may coexist with moral disutility in peri-urban settings characterized by social anonymity and institutional gaps. Extreme poverty, absence of legal identity, and exploitative labor conditions, especially in crowded informal economies, heighten adversity and impede migrants' adaptation (Bag & Toppo, 2021; Deshingkar, 2010; Tripathy, 2021). The findings validate the intersectional and multidimensional determinants of distress migration, as theorized in the literature, where chronic poverty, social exclusion, and institutional failure converge (Deotti et al., 2016).

Theoretically, this study contributes to the cumulative dissatisfaction concept of Wolpert (1965) by proving that while migration does not eradicate disutility, it changes its nature. Economic hardship can be substituted with hardship regarding belonging, ethics, or loneliness, especially where social networks are weak or cultural assimilation is poor (Deshingkar, 2010; Mulyoutami et al., 2016). Courgeau's framework helps illuminate these transitions by emphasizing that migrants' well-being is not just the sum of tangible indicators, but also of their cognitive-emotional evaluations of life in place. This framework also complements this by framing migration as a dynamic adaptive process shaped by incomplete information and social learning within macro and micro contexts. Migrants with formal status and stronger networks fare better, underscoring their role as active agents negotiating ongoing constraints rather than passive victims. As such, the evaluation of migration success requires consideration of complete and integrated welfare, social networks, belonging, and identity aspects, instead of resorting to narrow economic proxies.

Conclusion and Policy Recommendation

This study reveals that distress migration among informal workers in peri-urban Bogor, Indonesia, is a complex adaptive process involving the transformation of economic, social, and moral stresses. Migration often alleviates material hardship and enhances autonomy but may simultaneously intensify challenges related to social integration and identity. Administrative inclusion, such as possession of national identity cards (KTP) and decent working conditions, play critical roles in reducing migrants' overall stress and fostering resilience. Building primarily on Wolpert, De Jong, and Fawcett's frameworks, with Corgeau's behavioral insights enriching the analysis, the findings highlight migrants as active agents who navigate structural constraints through dynamic adaptation. Effective policy must therefore address not only economic needs but also legal recognition, social belonging, and labor protection to support holistic well-being in rapidly evolving peri-urban contexts.

Based on these results, five policies are suggested to reduce structural disutility and transform the negative impact of stress into a favorable encounter for distressed migrants:

1. Enhance social integration and community support programs by promoting inclusive community spaces and strengthening social networks to alleviate affiliation and moral stresses.
2. Facilitate administrative inclusion and legal identity access through flexible, equitable, and subsidized processes for acquiring documentation such as the KTP to ensure migrants' access to healthcare, education, and social protection.
3. Promote fair and sustainable working conditions by monitoring labor practices, advancing cooperative work models, and providing vocational training to increase job autonomy and economic resilience.
4. Invest resources for targeted poverty reduction programs designed directly for migrant families, including nutrition support, cash transfers, and health-related cash benefits, to break the deprivation cycles brought about by informality-based instabilities.
5. Strengthen psychosocial and health service delivery within the peri-urban environment through community-based counseling and peer support structures to foster mental health and social reconciliation.

The Government of Indonesia should collectively introduce the entire human rights-based framework that recognizes migrants as capable human beings proactively facing numerous strains by promoting their resilience and overall well-being despite recurrent structural challenges across peri-urban Indonesia.

Author Contributions

DN: Conceptualization, Data Curation, Formal Analysis, Investigation, Writing – Original Draft Preparation. S: Conceptualization, Supervision, Writing – Review and Editing. UL: Supervision, Conceptualization, Project Administration, Writing – Review and Editing. AJP: Methodology, Supervision, Writing – Review and Editing.

Declaration of Generative AI

During the preparation of this manuscript, the authors used Grammarly Premium and Paperpal Prime to assist with language editing and polishing of the draft. These tools were used solely to improve clarity, grammar, and overall readability. The authors reviewed and revised the output as necessary and take full responsibility for the content of the manuscript.

Ethics

This study did not require formal ethical approval, as it involved non-experimental research with adult participants and did not address highly sensitive issues. Nevertheless, the study adhered to standard ethical practices in social research. All participants were informed about the purpose of the study, participation was entirely voluntary, and verbal informed consent was obtained prior to data collection. Measures were taken to ensure participants' privacy, confidentiality, and sense of safety throughout the research process. The research was conducted under academic supervision and received official permission from the local government authority (Badan Kesatuan Bangsa dan Politik Kabupaten Bogor [Bogor Regency National Unity and Political Affairs Agency], Indonesia).

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