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The Intentions, Pathways, And Mental Health Consequences of Irregular Migration: Insights from Dire Dawa City, Ethiopia

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Abstract

Background:

Irregular migration is a pressing socio-economic and humanitarian issue in Ethiopia, especially among youth in urban areas such as Dire Dawa City Administration (DDCA). This study examines the psychosocial factors that influence intentions to migrate irregularly, the pathways migrants take, and the mental health consequences associated with this phenomenon.

Methods: The study employed a mixed-methods explanatory sequential design to explore this phenomenon's complexities. Quantitative data were collected from surveys of 367 household heads using stratified and systematic random sampling, while qualitative data came from interviews, focus group discussions, and document analysis. Quantitative data were analyzed using descriptive statistics, Pearson correlation, and stepwise regression. Qualitative insights were derived from focus group discussions (FGD) with potential migrants and returnees, along with key informant interviews (KII), and were analyzed thematically.

Results: The findings revealed that migration intention was closely linked to attitudes ($r = .830, p < .001$), social networks ($r = .710, p < .001$), and perceived behavioral control ($r = .730, p < .001$), while subjective perception showed no significant relationship ($r = .070, p > .05$). This indicates that positive attitudes, social influence, and confidence in one's ability to migrate are crucial factors. Qualitative data highlighted that irregular migration from DDC often involves organized smuggling networks, with routes through Djibouti and Yemen to destinations like Saudi Arabia. Key drivers include economic hardship, unemployment, family expectations, and peer influence. In addition, the regression analysis showed that irregular migration significantly affects mental health ($R^2 = .424, \beta = .653, p < .001$), with notable issues such as Post-Traumatic Stress Disorder (PTSD), anxiety, depression, and stress, along with social isolation and substance abuse. These findings suggest that irregular migration leads to trauma, exploitation, and ongoing psychological distress.

Conclusion: The study concludes that interconnected psychosocial and structural factors and results in serious mental health consequences, driving irregular migration in DDCA. It is recommended that policymakers and stakeholders strengthen local employment opportunities, expand legal migration pathways, provide psychosocial support services, and enhance community awareness regarding the risks of irregular migration.

Keywords: Intention, Irregular migration, Mental health, social networks, Attitude

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Background

Irregular migration is a complex issue with many drivers, routes, and consequences. In addition, the lack of a universally accepted definition of migration across countries makes it difficult to understand and address this problem (1, 2). Hence, migration refers to an individual who crosses an international border or relocates from their place of residence, regardless of their legal status, the reason for their move, or the duration of their stay (1, 3). However, different countries and institutions have varying definitions of migration, with regional and global laws also playing a role (4). Irregular migration, also known as "illegal" migration, involves crossing international boundaries without legal authorization from the destination state, due to social, economic, and political factors (6). A considerable number of young individuals who choose to migrate to Middle Eastern countries are driven by the desire to secure better economic opportunities and improve their standard of living (7).

According to Willekens (8) study the theory of planned behavior components, such as attitude, subjective social norms, and perceived behavioral control, can predict individuals' intention to migrate. In addition, Assfaw and Minaye (9) explained that the intention of migrants to leave their countries is a key variable in the study of migration. Researchers have been focusing on how well this intention predicts actual migration, making it an important factor to consider in understanding migration patterns (10). Research by Jasko (11) indicates that intention is a strong predictor of future migration. Another research finding pointed out that individuals showing an early intention to migrate are more likely to do so (12). Both males' and females' migration intentions are influenced by subjective social norms and significant others' expectations (13). Young people's perceptions of subjective social norms also play a role in migration intention and behavior (9, 14). Likewise, the most significant predictor of the intention to migrate is the attitude toward migration, which is justifiable by an increase in the individual's and their family's material standard of living (9).

Studies suggest that certain migrant groups may have higher rates of specific mental disorders. A meta-analysis by Blackmore and Boyle (15) found that asylum-seekers and refugees had elevated rates of depression (31.5%) and post-traumatic stress disorder (31.46%), persisting for many years. Conversely, anxiety and psychosis rates were lower. Another review by the WHO (16) found similar rates of mood, psychotic, and substance use disorders in migrants and host populations, except for higher PTSD rates among migrants. Migration has numerous

implications for migrants, including their access to medical and mental health services. However, research on the mental health of migrants is challenging due to the diverse populations involved (17). Likewise, a review by Garcini and Murray (18) found that undocumented migrants to the United States experienced stress and psychological distress, but there was limited data on specific mental disorders.

Approximately 35,000 people have died or gone missing due to risky migration routes since 2014 (3). Nearly half of these tragedies occurred during journeys from North Africa to Italy. Additionally, around 7,400 individuals have lost their lives while attempting to cross the Sahara Desert since 2014 (19). In recent years, there has been a significant increase in the number of Ethiopians migrating to Gulf countries. Despite the migrant returnee crisis, particularly from Saudi Arabia, it is crucial to understand why young people choose irregular migration to escape poverty (3). For instance, Kuschminder and Siegel (7), claim that most migrants in Ethiopia are young individuals, including children and women. Annually, 75,000 to 100,000 people migrate from Ethiopia to nearby nations. Additionally, many Ethiopian migrant workers seek employment in Saudi Arabia through legal and illegal means (20, 21).

Obtaining a visa for their desired country is challenging for Ethiopians, with their passport ranking 81 out of 90 for limitations (22). This has led to increased illegal border crossings by Ethiopian youth (2). Popular migrant destinations for Ethiopian migrants include the Middle East, South Africa, Europe, and North America (7). Migration rates are higher in cities like Addis Ababa, Adama, Dire Dawa, Shashemene, Jimma, and Dessie compared to Mekelle, Bahirdar, and Hawassa (23, 24). Many young individuals from Ethiopia migrate to the Middle East for better economic opportunities (7). It is also influenced by the factors of social networks and a positive attitude toward migration. However, those choosing irregular migration often face serious challenges (7).

Therefore, the research aims to gain a deeper understanding of the migration intentions that lead to irregular migration in the study area. Likewise, it seeks to explore the migration pathways and the mental health consequences for irregular migrants during and after irregular migration. Additionally, the study analyzes the impression of significant life events on their overall experiences, including the reasons behind their decision to migrate and the psychological difficulties they may encounter along their pathways.

Several studies have investigated the causes and consequences of migration, human trafficking, and the empowerment of returned migrants. However, there has been limited research on the migration intention, pathways, and mental health consequences of irregular migration. It has only been briefly mentioned in a few studies (9, 13, 21, 25-32). Additionally, Ethiopian migrants often move to Middle Eastern countries, South Africa, Europe, and North America (7). However, the study didn't address irregular migration pathways from Dire Dawa to abroad.

Thus, the main goal of this study was to thoroughly explore the intentions, pathways, and mental health consequences of irregular migration in the study area. This research aims to clarify the complex issue of migration and actively contribute to strategies that can fully support all stakeholders involved in addressing the prevention of irregular migration. The research concentrates on various theories, notably the theory of planned behavior, used to analyze the migration intentions, pathways, and mental health consequences of irregular migrants that are overlooked in policy discussions. The methodology utilized in this research was distinguished from previous studies on this topic. Moreover, this study highlights the urgent need to address intervention gaps by advocating for integrated strategies that combine prevention, mental health support, and sustainable development initiatives.

Research questions

This study was designed to answer the following basic research questions:

1. Do social networks, attitudes, subjective perceptions, and perceived behavioral control have relationships with irregular migration intentions of householders in Dire Dawa City Administration?
2. What are the most frequent pathways used by irregular migrants from Dire Dawa City Administration to migrate abroad?
3. What are the mental health consequences of irregular migration in Dire Dawa City Administration?

Theoretical and conceptual framework

The conceptual framework of this study is crafted by integrating relevant theoretical perspectives, primarily the Theory of Planned Behavior (41), along with social network theory and select psychological theories related to mental health and stress. Together, these frameworks offer a nuanced understanding of the factors influencing irregular migration from the Dire Dawa City Administration (DDCA) and the associated mental health repercussions.

The Theory of Planned Behavior (41) serves as the cornerstone of the framework, explaining how the intention to migrate is shaped by attitudes toward migration, subjective norms, social networks, and perceived behavioral control. Individuals who perceive migration as advantageous, receive social encouragement from their networks, and believe they have the capacity to migrate are more likely to express strong intentions to engage in irregular migration. Moreover, social network theory underscores the vital role of interpersonal relationships and migration networks in facilitating irregular migration. These networks provide critical access to information, financial resources, and logistical support, which help to diminish perceived barriers and reinforce migration intentions. The framework further integrates psychological theories, including mental health theory, acculturation stress theory, attachment theory, and chronic traumatic stress theory, to elucidate the mental health consequences of irregular migration. Migrants often encounter stressful and traumatic experiences during their journeys and upon arrival, including exploitation, violence, and social isolation. Such experiences can lead to detrimental mental health outcomes such as post-traumatic stress disorder (PTSD), anxiety, depression, suicidal ideation, stress, and difficulties in social adjustment.

In summary, this study is based on the Theory of Planned Behavior by incorporating mental health outcomes and structural migration factors. As a result, it provides a more comprehensive understanding of irregular migration and its psychosocial implications, as illustrated in Figure 1.

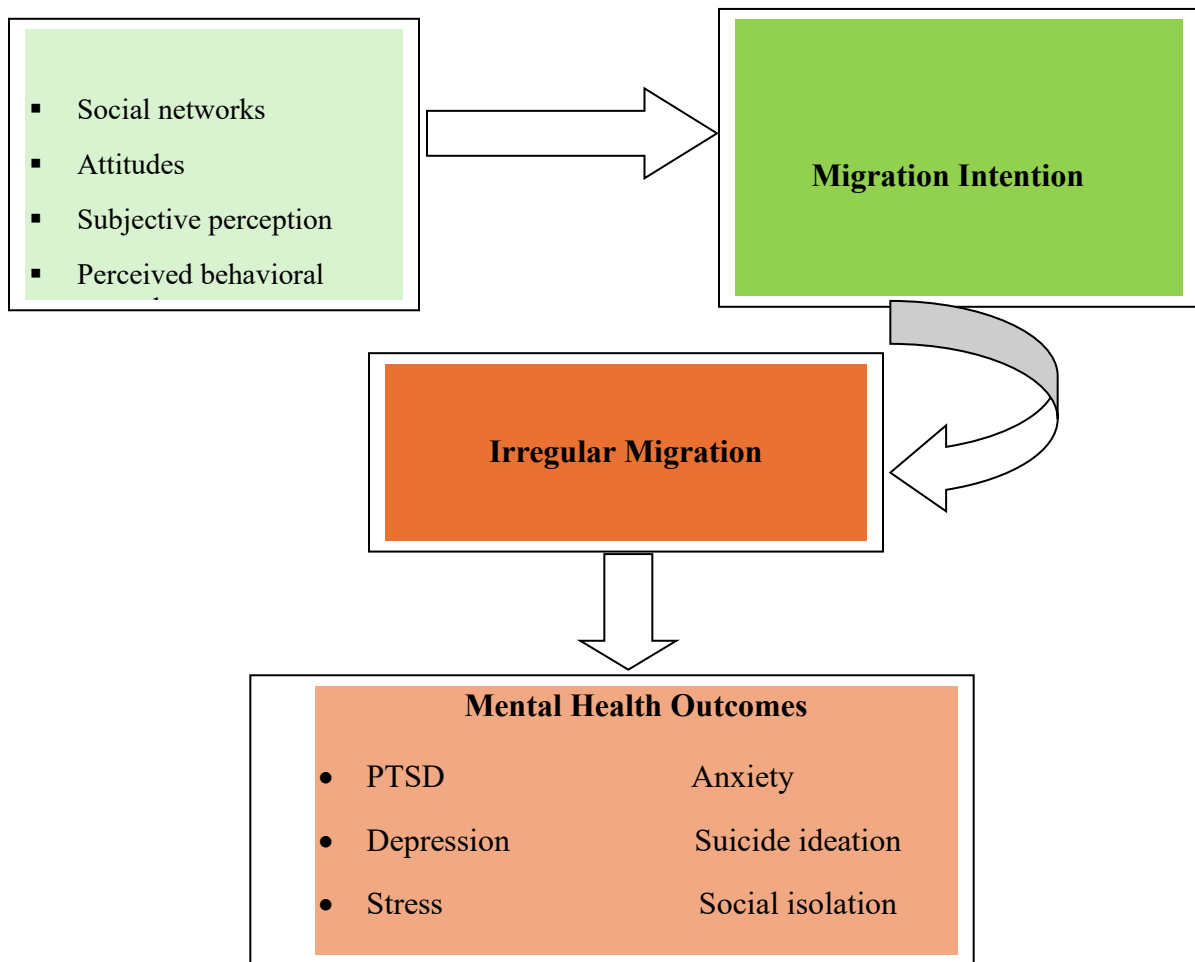


Figure 1. Conceptual Frameworks of the Study

This figure illustrates the conceptual framework developed for this study, adapted from the Theory of Planned Behavior and enhanced with insights from social network and psychological theories. It illustrates how migration intention is impacted by attitudes, subjective norms derived from social networks, and perceived behavioral control. These elements collectively lead to irregular migration and its associated mental health outcomes.

Source: Developed by the author based on the Theory of Planned Behavior (TPB).

Methods

Study design

This study employs a mixed methodology, specifically an explanatory sequential design. Thus, the mixed methods are grounded in the belief that both qualitative and quantitative research paradigms provide valuable insights into understanding complex social phenomena. It is founded on pragmatism, a philosophical perspective emphasizing the use of diverse methodologies to address research questions rather than adhering strictly to qualitative or quantitative paradigms. A specific type of mixed methods research design is called the Explanatory Sequential Design, which has a two-phase approach: the quantitative data are collected and analyzed first, followed by a qualitative study meant to explain the findings (33). The explanatory sequential design offers a broad framework for researchers to study the reasons, processes, and mental health implications involved in irregular migration in the Dire Dawa City context. In this way, data was collected in two stages to analyze the relationship between variables. First, quantitative data were gathered using a systematically designed questionnaire from a representative sample. In the second stage, semi-structured interviews were conducted to obtain qualitative data from a selected group of participants.

Study site and population

The address of the study was Dire Dawa City Administration, which is the second-largest city in eastern Ethiopia (34). Dire Dawa is situated between 9°27' and 9°49' North latitude and 41°38' and 42°19' East longitude. It shares borders with the Somali and Oromia Regional States and is 47 km from Harar, 515 km from Addis Ababa, and 333 km from the port of Djibouti. The region is warm, having a mean temperature of 25°C and relative humidity between 50% and 60%. It has 9 urban and 38 rural kebeles. According to the 2007 survey by the Central Statistical Agency of Ethiopia (CSA), the population was 345,668. Among them, 68.23% resided in urban areas, indicating a trend of migration from rural to urban regions. Hence, 45% are rural, and 55% are from other urban (35). There were 76,815 households counted in 72,937 housing units, with an average of 4.5 persons per household. Urban households contained an average of 4.2 members, while rural households contained an average of 4.9 members (34).

DDCA, located in eastern Ethiopia, is a key trading center and transportation hub that plays a significant role in migration flows. Being the closest city to the Djibouti port, it serves as a

primary source and transit point for irregular migration to the Middle East, Gulf States, and Europe. The local labor market and the aspirations of migrants influence their decisions to stay in DDCA or move on to other destinations. The city is particularly relevant for studying migration trends, as it houses numerous irregular migrants, and the researcher is also aware of many returnees. Furthermore, DDCA's vibrant, multicultural environment is rapidly expanding, driven by the movement of people from rural to urban areas. This dynamic makes the city an important focal point for understanding the transformation of migration patterns. The population of the study was all residents and government employees who have worked on migration in the DDCA. The target population of this study was the residents of the selected five kebeles (02, 04, 05, 06, and 08) and the employees of BWCSA, as well as the administrators of the five selected kebeles. The units of analysis for this study were heads of households in the five kebeles, irregular migrant returnees, the experts from BWCSA, the Police office, and the kebele administration.

Sample size and sampling techniques

In 2007, the Central Statistical Agency of Ethiopia reported that the population of DDCA was 345,668, with 68.23% (233,224 people) living in urban areas, reflecting increasing urbanization due to rural-to-urban migration. From the city's nine kebeles, five were purposefully selected for a study, encompassing a population of 65,641, with approximately 51% males and 49% females over 18 years old. The 2023 annual report noted 3,522 irregular migrants in these kebeles (2,875 males and 647 females). To gather representative data, the researcher used stratified and systematic sampling techniques to select household heads, along with purposive sampling for key informants and irregular migrants, both potential and returnees.

Thus, since the target population (householders) exceeds 10,000, the researcher utilizes the formula of Kothari (36) to determine the sample size.

If N is greater than 10,000 ($N > 10000$) we used the formula: $n = \frac{Z^2 pq}{e^2}$, (36)

Where n = Desired sample size

N = Population size

e = Level of statistical significance or margin of error (0.05)

p = Estimate characteristics of the target population (0.5)

q = 1-p non-estimate attributes of the target population

z = the standard normal variable at the required confidence level or z statistic (95%)

To determine the sample size (n) for a population over 10,000 at a 95% confidence level, use p = 0.5 (no estimated characteristics) and q = 1-p = 0.5. The Z statistic for 95% confidence is 1.96, and the desired accuracy is 0.05. Thus, the sample size can be calculated accordingly.

$$N = \frac{Z^2 pq}{e^2} = \frac{(1.96)^2 0.5 * 0.5}{0.05^2} = 384, N > 10,000$$

The study included 384 households, two experts, two police officers, two kebele administrators, and 16 irregular migrants, totaling 406 participants. A systematic sampling technique was employed to select households, ensuring unbiased selection and improving data representativeness. Additionally, according to Kothari (36) the stratified sampling technique, the sample size for different strata is determined in proportion to the population size. Therefore, the sample size for each kebele was determined accordingly.

$$\frac{\text{Number of house hold}}{\text{total target population}} \times \text{sample size}$$

The distribution of the study population and sample size across the selected kebeles is presented in Table 1.

Table 1. Population, sample, and sampling techniques

This table illustrates the population size and the proportionally allocated sample of households in each selected kebele. The sample was determined through stratified and systematic sampling techniques.

S/N	Kebele	Targeted Groups	Population (N)	Sample size (n)
1	02	Households	25,510	149
2	04	Households	7,224	42
3	05	Households	5,284	31
4	06	Households	11,031	65
5	08	Households	16,592	97
Total			65,641	384

Source: *Author's computation based on field data, 2025.*

Methods of data collection

The study used both primary and secondary data collection techniques to gather comprehensive insights. For primary data, methods such as questionnaires, interviews, and FGDs were used. Additionally, secondary data was obtained by carefully reviewing relevant organizations' records, minutes, and reports. The psychosocial factors survey questionnaires were modified and adapted from previous studies published in respected journals. The intention of individuals to migrate irregularly was evaluated using an adapted intention scale designed by (37). This scale consists of five items and demonstrates a reliability coefficient, measured by Cronbach's alpha, of 0.742. The social network was evaluated using an adapted scale developed by (38). This scale comprised seven items and achieved Cronbach's alpha of 0.793, indicating high internal consistency. The individual attitude was evaluated using an adapted scale developed by (39). This scale comprised eight items and achieved Cronbach's alpha of 0.808, indicating high internal consistency. The individuals' subjective perception was evaluated using an adapted scale developed by (39). This scale comprised four items and achieved Cronbach's alpha of 0.788, indicating good internal consistency. Similarly, the perceived behavioral control of the individuals toward irregular migration was evaluated using an adapted scale (39). This scale comprised four items and achieved Cronbach's alpha of 0.744, indicating good internal consistency.

Furthermore, participants answered using a 7-point scale ranging from 0 to 6 (I don't know to very high effect) for the impacts of irregular migration on mental health conditions. Hence, the general mental health consequences of irregular migration were examined by utilizing a modified version of the Kessler Psychological Distress Scale (40), which was adapted to consist of eight items. This revised scale exhibited a robust reliability coefficient, as determined by Cronbach's alpha, of 0.895. Two items were excluded due to their inappropriateness in the context of this study.

Method of data analysis

The study employed a comprehensive data analysis approach that combined both quantitative and qualitative methods to thoroughly examine the research objectives. This mixed-methods approach allowed for statistical analyses as well as an in-depth exploration of personal experiences related to irregular migration. In the quantitative phase, descriptive and inferential statistical techniques were applied to summarize key findings and assess relationships among variables. Descriptive statistics, including frequencies and percentages, were utilized to present the demographic characteristics of the respondents and highlight trends in irregular migration. The findings were systematically organized in tables to improve clarity and interpretability. Additionally, correlation analysis was conducted to evaluate the relationships between social networks, attitudes, subjective perceptions, and perceived behavioral control with migration intentions. Furthermore, regression analysis was employed to assess the impact of irregular migration on mental health conditions, offering valuable insights into the psychological consequences of these migration experiences. The quantitative analysis was performed using SPSS software version 27, ensuring accuracy and reliability in the statistical computations.

For the qualitative analysis, data gathered from FGDs, in-depth interviews, and open-ended survey responses underwent thematic analysis to identify recurring patterns and key insights. The data were transcribed and translated from Amharic to English while preserving their original meanings. The researcher utilized coding and categorization techniques to organize the data into thematic clusters, capturing essential aspects such as motivations for irregular migration, perceived risks and benefits, and the effects on individuals and families. The qualitative findings were triangulated with the quantitative results to enhance the validity and contextual understanding of the phenomenon.

To ensure trustworthiness and dependability, the study adhered to rigorous methodological standards. Triangulation was employed to validate findings from multiple data sources, adding credibility to the results. Key participants were invited to review interpretations through member checking, minimizing misrepresentation. Peer debriefing with migration experts further ensured the objectivity of the analysis. An audit trail documented each step from data collection to analysis. Additionally, the researcher employed bracketing and reflexivity to reduce personal biases, grounding the findings in the lived experiences of the participants.

Ethical consideration

Studying irregular migration necessitates a thorough examination of ethical implications. This research distinctly prioritized obtaining informed consent, ensuring that participants fully understood the study's purpose, methods, potential risks, and benefits. We upheld strict confidentiality and anonymity through secure data storage and limited access. Recognizing the inherent vulnerability of irregular migrants, we took proactive measures to protect their safety and well-being by providing support services and ensuring there was no coercion to participate. Data sharing was conducted transparently and in direct alignment with participants' consent, while cultural sensitivities were respected during interviews and focus groups to cultivate a respectful environment. We adhered to ethical oversight through clear approval from the institutional review board and rigorous compliance with ethical guidelines. These measures were deliberately designed to protect participants' rights and maintain the integrity of research on this vital topic. The research ethics committee of Haramaya University approved the study without reservation (Ref. No. DoP.05/2024), and all participants signed informed consent forms.

Results

This section presents and analyzes data collected from primary sources such as surveys, interviews, FGDs, and secondary documents. It aims to assess the intentions, pathways, and mental health consequences of irregular migration from the DDCA to other countries.

Demographic characteristics of respondents

The researcher collected data on the demographic and socio-economic characteristics of respondents, including household heads, key informants, returnees, and potential irregular migrants within the DDCA. The demographic and socio-economic characteristics of respondents are presented in Table 2.

Table 2. Demographic characteristics of respondents

This table illustrates the distribution of respondents by sex, age, marital status, educational level, and kebele in the study area.

Variable		Frequency	Percent	Cumulative Percent
Sex	Male	211	54.0	54.0
	Female	175	46.0	100.0
	Total	386	100.0	
Age	20-29 Years	102	24.5	24.5
	30-39 Years	110	28.3	52.9
	40-49 Years	141	38.1	91.0
	50-59 Years	33	9.0	100.0
	Total	386	100.0	
Marital status	Single	26	5.2	5.2
	Married	254	67.6	72.8
	Divorced	77	19.3	92.1
	Widowed	29	7.9	100.0
	Total	386	100.0	
Education	Illiterate	28	7.6	7.6
	Primary education	61	15.5	23.1
	Secondary education	133	34.1	57.2
	Tertiary education	164	42.8	100.0
	Total	386	100.0	
Kebele	02	148	38.1	38.1
	04	44	11.4	49.6

05	34	8.7	58.3
06	68	18.0	76.3
08	92	23.7	100.0
Total	386	100.0	38.1

Source: *Author's computation based on field survey data, 2025.*

Table 2 presents data indicating that males constitute 54% of the respondents, reflecting a slight male predominance, while females represent 46%, suggesting a relatively balanced gender distribution. A significant majority of respondents (66.4%) belong to the 30 to 49 age range, with younger participants aged 20 to 29 comprising 24.5% and older respondents aged 50 to 59 accounting for 9%, showcasing a diverse age distribution. Married individuals form the largest demographic group at 67.5%, followed by single respondents at 22.2% and divorced individuals at 10.3%, highlighting a variety of marital statuses. Additionally, a notable portion of respondents (42.8%) have achieved tertiary education, while 34.1% have completed secondary education. Nevertheless, 15.5% hold only primary education, and 7.6% are illiterate, underscoring the urgent need for educational development and literacy initiatives.

The 02 kebele has the highest number of respondents, totaling 141 individuals and representing 38.1% of the overall sample. The 08 kebele follows with 94 respondents, accounting for 23.7% of the sample, and the 06 kebele includes 63 respondents or 18.0% of the total. In contrast, the 04 and 05 kebeles have fewer respondents, contributing 11.4% and 8.7%, respectively. This uneven distribution of respondents across the various kebeles suggests potential disparities in socio-economic conditions, access to services, and infrastructure within the city. The higher concentration of respondents in certain areas may indicate regions with greater population density, better resources and amenities, or distinctive socio-economic characteristics influencing migration intentions.

Relationships between migration intention and key psychosocial factors

The relationship between migration intention and key psychosocial factors was examined using the Pearson correlation coefficient, revealing a complex and interrelated pattern of influences. Table 3 presents the results of the relationship as follows:

Table 3: The relationships between migration intention and key psychosocial factors

This table presents the correlation coefficients between migration intention and key psychosocial variables, including attitude, social networks, subjective norms, and perceived behavioral control.

Variables	1	2	3	4	5
Migration Intention	1				
Attitude	.830**	1			
Social networks	.710**	.885**	1		
Subjective perception	.070	.735**	.723**	1	
Perceived behavioral control	.730**	.778**	.769**	.961**	1

** Correlation is significant at $P < .001$

Source: *Author's computation based on survey data, 2025*

Overall, Table 3 indicates that migration intention is strongly associated with attitude, social networks, and perceived behavioral control, whereas subjective perception does not show a statistically significant direct relationship. However, these variables do not operate independently; rather, they interact in a mutually reinforcing manner that collectively shapes individuals' migration intentions.

The strongest relationship was observed between attitude and migration intention ($r = 0.830$, $p < 0.001$), indicating that individuals with favorable attitudes toward migration are significantly more likely to intend to migrate. This aligns with the widespread belief that migration offers improved economic opportunities, better living conditions, and enhanced social status. Qualitative evidence supports this finding. For example, one returnee participant explained that despite challenges abroad, migration remained preferable to local conditions, stating, "better than staying here with no job" (FGD with returnee migrants, 2024). This illustrates how positive attitudes toward migration persist even in the face of adverse experiences, reinforcing migration intentions.

Similarly, social networks show a strong positive correlation with migration intention ($r = 0.710$, $p < 0.001$), highlighting their central role in shaping migration decisions. Social

networks provide access to information, financial resources, and logistical support, thereby reducing barriers to migration. They also contribute to social expectations and pressures that normalize migration behavior. As one participant noted, “My friends who migrated send money back home, and my family expects me to do the same” (FGD with potential migrants, 2024). This statement reflects how migration decisions are often influenced by familial obligations and peer dynamics, indicating that migration is embedded within a broader social context rather than being solely an individual choice.

Although subjective perception shows no statistically significant direct relationship with migration intention ($r = 0.070$, $p > 0.05$), its indirect influence is substantial. It is strongly correlated with attitude ($r = 0.735$, $p < 0.001$), social networks ($r = 0.723$, $p < 0.001$), and perceived behavioral control ($r = 0.961$, $p < 0.001$). This suggests that individuals’ beliefs about migration, particularly its risks, benefits, and feasibility, shape other psychosocial factors that more directly influence intention. Qualitative findings reinforce this interpretation. Participants emphasized that migration is associated with social recognition and family pride, with one noting that establishing a life abroad “positively reflects on their family” (FGD with potential migrants, 2024). Such perceptions contribute to favorable attitudes and reinforce migration as a socially valued practice.

Perceived behavioral control is also strongly associated with migration intention ($r = 0.730$, $p < 0.001$), indicating that individuals who believe they have the capacity and resources to migrate are more likely to intend to do so. This sense of control is influenced by access to social networks and information, as well as by broader economic conditions. For instance, one participant highlighted the impact of economic hardship, stating that “the rising prices have made it increasingly difficult to support my family... I feel I have no choice but to seek opportunities abroad” (FGD with potential migrants, 2024). This reflects how structural challenges, such as inflation and unemployment, reinforce individuals’ perceptions of migration as both feasible and necessary.

Taken together, these findings demonstrate that migration intention is shaped by an interconnected system of psychosocial factors. Positive attitudes, strong social networks, and a high level of perceived behavioral control collectively outweigh concerns about migration risks. This explains why subjective perception alone does not significantly deter migration intentions, as its influence is mediated by other variables. The overall pattern aligns with the Theory of

Planned Behavior, which emphasizes the combined role of attitudes, social influences, and perceived control in shaping behavioral intentions.

In the context of DDCA, migration is perceived not only as an economic strategy but also as a socially reinforced and culturally valued pathway. Integrating quantitative findings with qualitative evidence shows that individuals' migration decisions are deeply embedded in social expectations, economic realities, and perceived opportunities. Therefore, interventions aimed at addressing irregular migration should move beyond risk awareness and consider the broader psychosocial and structural factors that sustain intentions to migrate.

The Pathways from Dire Dawa City to Irregularly Migrate Abroad

Qualitative findings from focus group discussions (FGDs) and key informant interviews (KIIs) indicate that irregular migration from Dire Dawa City Administration (DDCA) follows structured, socially embedded pathways rather than occurring randomly. These pathways are shaped by organized smuggling networks, economic pressures, and strong social influences.

Participants consistently reported that migration often begins through connections with local smuggling networks, typically accessed via trusted contacts such as friends, relatives, or returnees. As one participant explained, “We rely on people who migrated before us... they connect us with smugglers” (FGD with returnee migrants, 2024). This suggests that migration is facilitated by established social systems in which trust and prior success stories play a crucial role. These networks provide logistical support, including information on routes, transportation, and methods of avoiding authorities.

The findings identify Djibouti as a key transit point, although the journey is described as highly risky. Migrants face police surveillance, detention, and deportation, often traveling secretly at night or through remote areas. One participant noted the need for “extreme caution” due to frequent checks and deportation risks (FGD with returnee migrants, 2024). The journey becomes even more dangerous when crossing into Yemen, where migrants encounter armed conflict, violence, and exploitation. A returnee recalled facing gunfire during the crossing, highlighting the life-threatening nature of this route (FGD with returnee migrants, 2024).

Despite these risks, migrants continue their journeys, often driven by necessity and a lack of alternatives. Throughout the process, they depend heavily on informal support systems formed with fellow travelers. As one participant stated, “We became like a family on the road” (FGD with returnee migrants, 2024), emphasizing the importance of emotional and practical support.

In addition, organizations such as the International Organization for Migration provide critical assistance, including humanitarian support and safe return for migrants in distress.

Key informant interviews further highlight that these migration routes are often controlled by smugglers and traffickers, exposing migrants to exploitation and harsh conditions (KII, 2024). Economic hardship, particularly unemployment and poverty, is identified as a primary driver. At the same time, social influences, including peer pressure, family expectations, and social media, play an increasing role in shaping migration aspirations. Success stories shared within communities create a perception that migration is both achievable and beneficial, often overshadowing the risks.

Similarly, potential migrants reported that inflation, limited job opportunities, and barriers to legal migration push them toward irregular pathways. Many expressed plans to migrate soon, typically via Djibouti and Yemen toward destinations such as Saudi Arabia, viewing migration as a necessary response to urgent economic challenges (FGD with potential migrants, 2024).

Overall, irregular migration from Dire Dawa is shaped by the interaction of social networks, economic necessity, and structural conditions. Migration is not merely an individual decision but a socially reinforced process influenced by community expectations and limited local opportunities. Although migrants are aware of the risks, these are often outweighed by perceived benefits and survival needs.

Mental health consequences of irregular migration

The data presented provides important insights into the perceived effects of irregular migration on individuals in DDCA. By analyzing the responses, we can identify the prevailing responses regarding the mental health impacts of irregular migration. The multiple regression analysis examines the effects of irregular migration, such as depression, stress, anxiety, PTSD, social isolation, suicidal thoughts, and substance abuse, on the mental health conditions of the irregular migrants. A stepwise regression method was employed to assess the significance of irregular migration in predicting these mental health outcomes. The regression analysis of mental health consequences associated with irregular migration is presented in Table 4.

Table 4. The regression coefficients of mental health consequences

This table presents the regression coefficients indicating the effect of irregular migration on selected mental health outcomes, including depression, stress, anxiety, PTSD, social isolation, suicidal ideation, and substance use.

Variables	R Square	Standardized Beta (β)	t- value	Significance (p-value)
Depression	0.357	0.429	7.494	0.000
Stress	0.309	0.431	7.692	0.000
Drug Use	0.183	0.387	5.730	0.000
Anxiety	0.276	0.475	6.462	0.000
Social Isolation	0.090	0.301	5.020	0.000
PTSD	0.372	0.469	7.341	0.000
Suicidal Ideation	0.058	0.240	4.726	0.000

Source: *Author's computation based on survey data, 2025.*

Table 4 implies the impact that irregular migration has on mental health conditions among individuals in DDCA. The findings from the regression analysis provide strong evidence that irregular migration significantly affects mental health outcomes among individuals in DDCA. Among the specific conditions examined, Post-Traumatic Stress Disorder (PTSD) and anxiety disorder emerged as the most strongly affected. PTSD showed a high level of explanation ($R^2 = 0.372$, $\beta = 0.469$), indicating that traumatic migration experiences, including exposure to violence and life-threatening situations, play a critical role in shaping psychological outcomes. Similarly, anxiety ($R^2 = 0.276$, $\beta = 0.475$) reflects the ongoing fear and uncertainty migrants face, particularly regarding legal status, employment, and future stability.

Other significant outcomes include Depression ($R^2 = 0.357$, $\beta = 0.429$) and stress ($R^2 = 0.309$, $\beta = 0.431$), suggesting that prolonged economic hardship, social exclusion, and unstable living conditions contribute to emotional distress. Qualitative findings support these results, as key informants emphasized the high prevalence of depression and anxiety among irregular migrants. One expert noted that “the trauma of their journey and the difficult conditions they encounter often result in significant psychological distress” (KII, 2024), highlighting the cumulative impact of migration-related stressors.

In addition, substance use disorder ($R^2 = 0.183$, $\beta = 0.387$) was identified as a coping mechanism for dealing with stress and emotional hardship. Although Social isolation ($R^2 =$

0.090, $\beta = 0.301$) and Suicidal ideation ($R^2 = 0.058$, $\beta = 0.240$) showed relatively lower explanatory power, they remain critical concerns. Their weaker statistical association suggests that additional factors, such as pre-existing vulnerabilities, cultural attitudes, and availability of social support, may also influence these outcomes. Nevertheless, their presence indicates the broader psychosocial impact of irregular migration.

Overall, the findings demonstrate that irregular migration is closely associated with a wide range of mental health challenges, with stress and PTSD being particularly prominent. The combination of traumatic experiences, economic pressure, and social disconnection creates a high-risk environment for psychological disorders. These results highlight the urgent need for comprehensive interventions, including accessible mental health services, trauma-informed care, substance abuse rehabilitation programs, and community awareness initiatives. Addressing both the psychological and structural dimensions of irregular migration is essential to reduce its long-term mental health consequences in DDC.

Discussion

This study examines the intentions, pathways, and mental health consequences of irregular migration in the Dire Dawa City Administration (DDCA), guided by an integrated conceptual framework primarily based on the Theory of Planned Behavior (41). The findings provide valuable insights into the psychosocial and structural factors that shape migration intentions and their subsequent mental health outcomes.

Relationship between intention and psychosocial determinants

The results indicate that migration intention is strongly influenced by attitudes, social networks, and perceived behavioral control, which aligns with the core assumptions of the Theory of Planned Behavior (41). Among these factors, attitude showed the strongest association with migration intention, suggesting that individuals who view migration as beneficial are more likely to intend to migrate. Individuals with a positive attitude toward migration are significantly more likely to intend to migrate irregularly (9, 11). The findings highlight a complex relationship between social, cultural, and economic factors that shape attitudes toward irregular migration in the DDCA. A strong desire for economic advancement, social prestige, and family expectations contributes to the normalization of irregular migration within the community. The results of this study align with the work of Assfaw and Minaye (9), which found that an individual's attitude toward migration is the primary factor influencing their migration intentions. This positive attitude is often driven by the belief that migration can significantly improve one's standard of living, particularly in terms of employment opportunities, income levels, and overall well-being. This finding supports previous studies that identify perceived economic opportunities and improved living conditions as key drivers of migration decisions (41, 11). Similarly, this finding supports earlier research by Jasko Jasko (11), which indicates that intention is a strong predictor of actual migration. However, it also emphasizes that attitude alone is insufficient; external conditions play a significant role in shaping migration behaviors.

Additionally, social networks play a crucial role in shaping migration intentions, with a significant positive correlation with migration intention. Individuals who are part of migration-prone communities, especially those with family members or peers who have successfully migrated, tend to have stronger intentions to migrate. This aligns with the social capital theory of migration (42), which suggests that existing migrant networks help reduce the costs and risks associated with migration by offering financial, informational, and logistical support. Government reports on

migration trends in Ethiopia support these findings, highlighting that remittances sent by migrants are vital for sustaining household economies in areas prone to migration. For instance, the IOM (2) report reveals that families receiving remittances. Reports from government migration assessments highlight that perceived behavioral control is often reinforced by informal migration facilitators, such as smugglers and brokers. A report indicates that many migrants place their trust in smugglers and informal agents to help them with their journey (1, 2, 3). Smugglers exploit this trust by promising safe passage and guaranteed employment abroad. Unfortunately, government interventions frequently fail to counter these misleading narratives due to limited enforcement and community resistance (2, 9). This situation emphasizes the need for policy interventions that address the structural drivers of migration, including economic stagnation, a lack of employment opportunities, and deceptive migration narratives. Thus, the result is consistent with the findings of Ryan (43), who states that migration flows are on the rise, primarily due to the existence of migrant networks. These networks are composed of interpersonal connections among migrants, former migrants, and non-migrants, creating a web of relationships in both the countries of origin and the destinations. Additionally, the findings of (9, 44) indicated that emotional and practical support to individuals considering migration makes the process smoother and more accessible. Consequently, as more people engage with these networks, they facilitate and amplify international migration patterns. Such dynamics underscore the critical role that social relationships play in shaping migration trends. The results show a strong social and cultural context in DDCA that encourages migration. The community widely believes that migrating can enhance social status, economic opportunities, and overall quality of life.

Although subjective norms did not demonstrate a statistically significant direct relationship with migration intention, their indirect influence was substantial through their associations with other psychosocial variables. This suggests that social beliefs and perceptions about migration operate indirectly by shaping attitudes and perceived control, consistent with the TPB framework (41). The result of this study was consistent with the findings of (9), which reveal that both male and female participants' intentions to migrate are significantly shaped by subjective social norms, as well as the expectations set by key individuals in their lives, such as family members and close friends. This indicates that the influence of social relationships and cultural contexts is a vital factor in the migration decision process. Furthermore, (12) highlighted that individuals who express a desire to migrate at an early stage are more likely to follow through with that intention. This

suggests that early intentions play a crucial role in the decision-making process regarding migration.

The data highlights the factors that influence perceived behavioral control over irregular migration in DDCA. Additionally, insights from government reports on migration trends in Ethiopia further substantiate these findings by highlighting structural factors that reinforce individuals' perceptions of migration feasibility. Additionally, a report in Ethiopia reveals that nearly 60% of young people in migration-prone regions perceive irregular migration as their only chance for upward mobility, reinforcing the self-efficacy belief that they can succeed abroad despite potential risks (2, 3). Many respondents consider irregular migration to be a viable and socially acceptable option. This perspective is shaped by their awareness of migration routes, their perceived financial resources, and the social support networks available to them. The result of this study is consistent with the findings of Kassaye and Bayiley (45) reveals that many young people view migration as a means of improving their family members' lives, leading to a strong inclination to migrate.

Pathways Used by Irregular Migrants from Dire Dawa City to Migrate Abroad

The qualitative findings from focus group discussions (FGDs) and key informant interviews (KIIs) provide important insights into the pathways through which individuals from Dire Dawa City (DDC) engage in irregular migration. These findings suggest that migration trajectories are structured, socially embedded, and influenced by economic necessity, aligning with broader migration theories such as the Migration Network Theory and the Theory of Planned Behavior. The discussion highlighted the crucial role of community support in migration decisions and the need for resources to help individuals find local opportunities. The findings highlight the urgent need for solutions, including policies to improve local economic conditions, create legal migration pathways, and provide accurate information about the risks of irregular migration, ensuring safer options for potential migrants from Dire Dawa to abroad. Thus, the result of this study is reliable with the findings of IOM (2), (29) the Eastern route is a popular migration pathway for irregular migrants from Ethiopia, especially for those traveling through Dire Dawa to Djibouti. Additionally, Mulugeta and Makonnen (24) highlighted that Dire Dawa is the primary transit point for irregular migrants. People from rural and urban communities across the country converge in Dire Dawa to migrate to Djibouti or continue their journey to Yemen and Saudi Arabia. Likewise, as per Kuschminder and Siegel's (7) study, Ethiopian migrants often go

to the Middle East nations, South Africa, Europe, and North America. Recruiters often target Dire Dawa and its rural areas, offering job opportunities abroad, especially in the Middle East. In addition, the result of this study is reliable with the findings of Index (22), revealing that obtaining a visa for their desired country is challenging for Ethiopians, with their passport ranking 81 out of 90 for limitations.

The mental health consequences of irregular migration in Dire Dawa City

Beyond migration intentions, the study revealed significant mental health consequences associated with irregular migration. The regression analysis indicated that conditions such as post-traumatic stress disorder (PTSD), anxiety, depression, and stress are strongly linked to migration experiences. These findings align with prior research showing that exposure to traumatic migration journeys, violence, and uncertainty significantly increases the risk of mental health disorders among migrants (15,16, 46).

Specifically, PTSD and anxiety emerged as the most prominent mental health challenges, reflecting the cumulative effects of trauma and instability throughout the migration process. Furthermore, depression and stress highlight the long-term psychological burden linked to irregular migration, while social isolation and suicidal ideation point to broader psychosocial vulnerabilities (16, 17, 46). Additionally, insights from key informants reveal that irregular migrants in the DDCA face significant psychological challenges, including PTSD, depression, stress, substance use, social isolation, and suicidal ideation. These conditions are closely linked to irregular migration, indicating a heightened risk for severe mental health issues. This underscores the need for targeted mental health interventions, community support programs, and policies that address the specific challenges faced by this population. Thus, the result of this study is reliable to the findings of a meta-analysis by (15), who found that asylum-seekers and refugees had elevated rates of depression (31.5%) and post-traumatic stress disorder (31.46%), persisting for many years. Conversely, anxiety and psychosis rates were lower. Another review by (17) found similar rates of mood, psychotic, and substance use disorders in migrants and host populations, except for higher PTSD rates among migrants.

Importantly, these findings extend the TPB framework by demonstrating that migration is not only a behavioral decision influenced by cognitive and social factors but also a process with significant psychological consequences. By integrating mental health outcomes into the

conceptual framework, this study offers a more comprehensive understanding of irregular migration as both a decision-making process and a lived experience.

The findings also underscore the role of structural factors, including migration pathways and socioeconomic conditions, in shaping both migration intentions and outcomes. Migration from DDCA is influenced not only by individual motivations but also by systemic factors such as economic hardship and established migration routes (2, 9).

Generally, the results emphasize that irregular migration is a multifaceted phenomenon driven by the interplay of cognitive, social, and structural factors, with significant implications for mental health.

Conclusion

Based on the key findings of the study, several conclusions can be drawn. The primary result indicates that unemployed young adults view migration as a more favorable opportunity than pursuing job creation initiatives. While this challenge is particularly pronounced within this age group, individuals from other age demographics are also negatively affected by the desire to migrate. The study highlights that irregular migration from Dire Dawa is not solely driven by economic necessity. It is a complex phenomenon influenced by social networks, attitudes, and perceived behavioral control. Social networks play a crucial role in facilitating migration and normalizing the practice within communities. While economic hardship and a lack of local opportunities serve as primary motivators, favorable attitudes and subjective perceptions about migration, coupled with a sense of perceived behavioral control, further encourage individuals to embark on irregular migration pathways.

In this context, DDCA serves as a source and critical transit hub, frequently traversed by irregular migrants embarking on perilous journeys. These individuals often find themselves relying on established smuggling networks, navigating dangerous routes that pose grave risks to their safety. Such dynamics resonate with the broader patterns documented in regional reports concerning migration corridors in Eastern Africa (2). Moreover, the phenomenon of irregular migration is not merely a logistical challenge; it inflicts profound mental health problems on those involved. This is consistent with global research highlighting the mental health struggles faced by migrants (46). Many returnees grapple with persistent stigma in their communities and experience painful family disintegration. The insignificance of subjective perceptions in this context emphasizes the

urgent need to prioritize structural factors, such as pervasive poverty and the strength of social networks over individual cognitive elements in the study of migration. Understanding these dynamics is essential for addressing the complex challenges faced by migrants and for developing more effective support systems.

In conclusion, it is important to ensure that theoretical frameworks and model testing, along with psychosocial intervention methods, are part of effective policy implementation. This should be achieved through an integrated approach that considers economic, social, and psychological dimensions. Comprehensive strategies involving government agencies, community leaders, and international organizations are crucial for addressing the factors driving irregular migration and for supporting the well-being of individuals and communities affected by this issue.

Limitation

This study has several limitations that may affect the interpretation of its findings. It focused solely on the DDCA, which might not represent the broader dynamics of irregular migration in other regions of Ethiopia or similar contexts globally. With the stratified and purposive sampling methods, certain demographic groups, such as women and marginalized communities, may have been underrepresented in this study. To address this, the researcher conducted targeted outreach and collaborated with local organizations to ensure a more diverse participant pool. The sensitive nature of irregular migration made it challenging to obtain honest responses, as participants may have feared stigma. To promote openness, the researcher ensured confidentiality and employed anonymous data collection methods.

Additionally, reliance on self-reported data posed risks of bias, which the researcher countered by using both qualitative interviews and quantitative surveys for a more comprehensive understanding. A lack of sufficient secondary data also posed challenges. The researcher supplemented primary data with available reports from local NGOs and government sources to enhance the richness of the data. Some respondents were reluctant to complete questionnaires, but the researcher offered flexible scheduling and participation incentives to improve response rates. The policy recommendations from this study are specific to the DDCA and may need adaptation for other regions or national implementation. The researcher suggests that future studies focus on regional variations to develop tailored recommendations.

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Authors' Contribution

All authors reviewed and approved the final version of the manuscript. DA was responsible for conceptualization, tool development, and writing both the original and final drafts. YA and GA supervised comprehensive data collection and manuscript preparation. WT contributed to editing the final draft. In conclusion, all authors reviewed and endorsed the completed manuscript.

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Data availability

The data supporting the findings of this study are available upon request from the corresponding author.

Declarations

Ethics approval and consent to participate

The research ethics committee of Haramaya University approved the study without reservation (Ref. No. DoP.05/2024). All participants signed informed consent forms, and the procedures followed ethical standards set by the Department of Psychology at Haramaya University. This research was methodically and ethically approved by the Department of Psychology's research ethics committee.

Consent for publication

Not applicable

Competing interests

The authors declare no competing interests

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